

St. John's College of Liberal Arts and Sciences

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St. John's College has two office locations.

On the Queens Campus, the Dean's Office is located in St. John Hall, Room 145, 718-990-6271.

Objectives

St. John's College of Liberal Arts and Sciences realizes the objectives of the University at large by offering a liberal education in a Catholic atmosphere to students seeking higher learning either for its intrinsic values or as preparation for graduate study or professional careers.

Academic Advisement

The responsibility for arranging an appropriate program and for meeting all degree requirements rests with the student. Academic advisement is offered to assist students in meeting this responsibility. Advisors may give special attention to the student's academic progress and adjustment to college; they may offer direction to the student regarding specific major, minor, core curriculum and/or degree requirements, appropriate use of electives and career goals/opportunities.

First-year students report to the Center for Student Success for advisement. Undecided sophomores should consult the Dean's Office and declared sophomores, juniors, and seniors should consult their respective departments to be assigned to an advisor.

Programs of Study

St. John's College of Liberal Arts and Sciences offers programs leading to the degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Fine Arts.

Degrees, Majors, Minors Available

Bachelor of Arts (B.A.)

Anthropology
Art History
Asian Studies
Communication Studies
Critical Race and Ethnic Studies
Economics
English
Environmental Sustainability and Decision-Making

French
Global Development and Sustainability
Government and Politics
History
Italian
Mathematics
Philosophy
Psychology
Public Administration and Public Service
Sociology
Spanish
Speech-Language Pathology and Audiology
Theology

Bachelor of Science (B.S.)

Biochemistry
Biology
Chemistry
Computing and Machine Learning
Environmental Science
Financial Mathematics
Mathematical Physics
Mathematics
Physical Science
Physics

Bachelor of Fine Arts (B.F.A.)

Fine Arts
Graphic Design
Illustration
Photography

Minors

Africana Studies
American Studies
Ancient Studies
Anthropology
Applied Mathematics
Arabic
Art
Art History
Asian Studies
Biology
Business
Business and Organization Communication
Catholic Studies
Chemistry
Classics
Communication
Computing
Critical Race and Ethnic Studies
Data Science
Economics
English
Environmental Studies
Forensic Psychology
Francophone Studies
French
Global Development and Sustainability
Global Studies
Government and Politics
Graphic Design
History
Interfaith Studies
International Business (Concentration only for French, Italian, and Spanish majors)
Italian

Italian Studies
Law and Government
Linguistics
Machine Learning
Mathematics
Medical Humanities and Ethics
Music
Philosophy
Philosophy of Law
Philosophy of Science
Photography
Physics
Psychology
Public Administration and Public Service
Religious Communication
Rhetoric and Public Address
Social Justice Theory
Social Work
Sociology
Spanish
Speech-Language Pathology and Audiology
Theology and Religious Studies
Urban Studies
Women's, Gender, and Sexuality Studies
Writing

Specific Entrance Requirements

15 high school units
(or appropriate score on GED):
English 4
Mathematics 2
History 1
Science 1
Foreign Language 1
Electives 6

At least three electives must be from the academic grouping.

In addition to these basic admission requirements for all St. John's College degree programs, the following should also be noted:

1. Students seeking admission to a B.F.A. degree program must submit a portfolio of original artwork. Upon submission of a completed admission application, students will be asked to contact the Department of Art and Design to schedule a portfolio review.
2. Students seeking to matriculate for a B.S. degree, a B.A. degree in Mathematics, or who are looking toward careers in Medicine, Dentistry, Osteopathy, or Optometry should include the following courses in their high school programs: Intermediate Algebra and Trigonometry (or 11th year Mathematics), advanced Algebra and Calculus, Physics, and Chemistry.

Transfers

External

The general University policy for students requesting transfer from other colleges or universities is stipulated in the Admissions section of this bulletin. Students accepted by the College will receive an evaluation of their transfer record

listing the courses applicable to their program of study at St. John's College of Liberal Arts and Sciences. Only courses with grades of C or better will be considered for transfer. See the Graduation Requirements section of this bulletin to see how transfer credits impact graduation honors eligibility. Transfer students must contact the Office of Transfer Admission at 718-990-3372 to schedule an interview to plan their academic program.

All external transfer applicants to St. John's College who have been awarded an A.A. or A.S. degree will fulfill the requirements for their baccalaureate in St. John's College after successfully completing a minimum of an additional 60 semester hours including, a) six semester hours in Philosophy and six semester hours in Theology; and b) the requirements for the selected major concentration. The remainder of the student's program is determined under the guidance of an assigned advisor.

All external transfer students seeking admission to the B.A. degree in Speech-Language Pathology and Audiology must have a GPA of at least 3.0.

Credits may be accepted for transfer if it was earned at a college/university that is accredited by an institutional accrediting organization (e.g., Middle States Commission on Higher Education) or if it was earned at a college/university-level institution of a type traditionally accredited by some other type of agency (e.g., in New York State, the Board of Regents). Students with credits from other countries will be asked to provide a World Education Service evaluation before transfer credits are awarded.

Internal

The general University policy for students requesting transfer from other colleges within the University is stipulated in the Admissions section of this bulletin. All applications are subject to the review and approval of the College Admissions Committee.

Upon entry to a St. John's College program of study, students must take all their remaining major courses within their major department.

All internal transfer students seeking admission to the B.A. degree in Speech-Language Pathology and Audiology must have a GPA of at least 3.0.

Advanced Placement/ International Baccalaureate

St. John's College awards transfer credits to those entering first-year students who earn a requisite score on the Advanced Placement tests. Credits will be awarded at the discretion of the Dean's Office.

With respect to credit for students who have earned an International Baccalaureate (IB) Programme Diploma, the following policies are in effect:

1. The College will consider only IB higher level (HL) courses with a grade of 5 or higher. No credit will be awarded for standard level (SL) exams.
2. The College will evaluate IB higher level courses

on a course-by-course basis.

3. Students must submit official transcripts of exam results.

Academic Standing

A full-time student's program may range from a minimum of 12 to a maximum of 18 hours (credits) per semester. First-year programs are usually 15 semester hours (credits). A student who receives a grade of F for a required course must take the course again. Please refer to the Office of the Registrar section of this bulletin for more information.

To remain in good academic standing, a student must maintain a minimum grade point average of 2.0 both cumulatively and in their major area. A student who fails to meet these standards is placed on academic probation and limited to a program of 15 credits (five courses) maximum until he/she attains satisfactory academic standing.

The minimum acceptable performance for continued study at St. John's College is a cumulative index of 1.5 at the end of the first year, 1.75 at the end of the second year and 1.9 at the end of the third year. A cumulative and major grade point average of 2.0 is required for graduation.

Attendance Policy

Regular and prompt attendance is expected of all students and is an individual student's responsibility. Absence from class does not excuse a student from any work missed. Students are responsible for all announced exams and for submitting all assignments on time. Ignorance of such exams and assignments is not an acceptable excuse for failure to complete them. Individual faculty members determine participation requirements and if a makeup exam will be given as stated within their course outlines and requirements.

Several types of courses such as writing courses, science laboratories, global language and culture courses, art studios and speech performance courses are not covered under this general requirement and may have specific attendance requirements. Students are responsible for the published attendance requirements in any course for which they are registered.

Pass-Fail Option

The Pass-Fail Option has been instituted to encourage students to enroll in more challenging courses outside their major area without affecting their grade point average.

The option is available to students with sophomore status who have completed a minimum of 25 credits, and whose current grade point average is at least 2.0. The option is limited to one course per semester and/or term (e.g., Pre-session, Summer Session I, Summer Session II, and Post-Session are considered one combined term) with the total during the three years, not to exceed six courses.

The Pass-Fail Option may not be used in connection with the students' major/minor requirements (including ancillary courses required for the students' degree). The Pass-Fail Option may not be used toward major/minor courses taken as free electives either. This option does not affect the student's grade point index, although a "Pass" is credited toward the degree.

Application for the Pass-Fail Option must be submitted on-line through UIS on SignOn. In any given semester, a student may elect the Pass-Fail Option up to and including the last date designated for withdrawal from class without academic penalty. The Pass-Fail Option is also reversible during the same time period.

Make-up Assessments and Examinations

St. John's College adheres to the general University policies regarding examinations as stated in the Academic Information and Regulations section of this bulletin. Tests, term papers and assignments are given at the discretion of the instructor. Credit is not given for a course unless all assignments have been satisfactorily completed. All work must be submitted no later than the last meeting of the course.

St. John's College does not give "Incomplete" grades to undergraduate students. At their discretion, faculty may issue a special grade of UW (Unofficial Withdrawal) to a student who has stopped attending and has not completed a substantial amount of the assigned work. Faculty may also issue a final grade of F to any student who, in their judgment, has not satisfactorily completed the stated course requirements in an acceptable manner.

A special grade of ABF (Absent from Final) may be given to any student who has completed all course requirements with the exception of the final exam or assignment because of circumstances that are typically beyond the control of the student. Any student receiving an ABF must submit a written explanation, along with substantiating evidence, to their professor immediately. If a student's missed final assignment cannot be made up in exactly the same manner as when administered in class, the instructor may substitute another activity or assignment in order to assess the missed final work. Make-ups must be completed in the most immediate time frame that is reasonable for the circumstances of the case. In no case shall the scheduled make-up be extended past the end of the following term.

Graduate-Level Courses

Graduate courses may be open to qualified undergraduate students with the approval of the Dean's Office. Students who have already been accepted as degree candidates in the B.A./M.A., B.S./M.S., B.A./M.B.A., or B.S./M.B.A. programs must register with the approval of their department's graduate director and the Dean's Office.

Taking Courses at Other Institutions

With permission of the Dean, students may be allowed to take courses at other accredited institutions during the Summer or Winter sessions. Matriculated students in St. John's College are not allowed to take courses at other institutions during the Fall and Spring semesters.

Students must submit a request including the course title and description, the institution, and the proposed time frame via the Outside Institution Course Request form through UIS on SignOn.

Students must have a minimum 2.0 and should inquire in the Dean's Office before they make their request.

Note: grades from courses taken at other accredited institutions will not count towards a student's St. John's University grade-point average, only the credits will transfer. However, the grades will be taken into account when calculating honors for graduation. See the Graduation Requirements section of this bulletin to see how transfer credits impact graduation honors eligibility.

Other Academic Policies

Students must complete at least one major sequence and no more than 12 credits in additional major courses. Students should consult the Dean's Office regarding second majors and/or minors. Credits in a major beyond the 12-credit limit may not be credited toward the degree. All major and minor changes must be approved by the Dean's Office.

To be awarded a St. John's College major, at least 50% of the coursework must be completed by way of St. John's College courses. Previously completed courses may be applied but may not make up more than 50% of the total credit. Students must maintain a minimum GPA of 2.0 in their major to be eligible for graduation.

For all St. John's College students, a maximum of 18 credits of professional courses (education, business, pharmacy, etc.) may be applied to the degree. Professional elective credits beyond the 18-credit limit may not be credited toward the degree.

Minors are not required for graduation but are chosen by students who wish to focus their core requirements and general electives in particular directions. Only one course may be used for both a major and a minor, provided that the minor sequence has at least 18 credits. For minors with fewer than 18 credits, no overlap is possible. To be awarded a St. John's College minor, at least 50% of the coursework must be completed by way of St. John's College courses. Previously completed courses may be applied but may not make up more than 50% of the total credits. The successful completion of a minor (with a minimum index of 2.0) will be noted on students' transcripts.

Honor Societies

Skull and Circle Honor Society

The Skull and Circle Honor Society annually select members from those St. John's College students who have combined outstanding scholarship, a high degree of personal integrity, and a deep devotion to St. John's as manifested in significant contributions to institutional activities. For additional qualification information, students should consult their Dean's Office.

Major Specific Honor Societies

Membership in a number of honor societies is available for students who demonstrate outstanding scholarship in the major areas indicated:

Alpha Kappa Delta: Sociology

Alpha Psi Omega: Theatre

Lambda Pi Eta: Speech Communication Arts and Public Address

Gamma Kappa Alpha: Italian

Lambda Alpha Sigma: Anthropology

Omicron Delta Epsilon: Economics

Phi Sigma Tau: Philosophy

Phi Alpha Theta: History

Pi Delta Phi: French

Pi Mu Epsilon: Mathematics

Psi Chi: Psychology

Roger Bacon: Biology, Chemistry, Mathematics,

Physics, Psychology or Environmental Studies

Beta Lambda: National Slavic Honor Society

Sigma Alpha Eta: Speech-Language Pathology and Audiology

Sigma Delta Pi: Spanish

Sigma Pi Sigma: Physics

Sigma Tau Delta: English

Theta Alpha Kappa: Theology

Academic Awards, Distinctions, and Prizes

Dean's List

Students achieving a cumulative GPA of 3.4 or higher for an academic year will be named on the Dean's List. A notation of this honor will be placed on the student's transcript.

Key Awards

Annually, a Gold Key for academic excellence is awarded to a qualifying senior in each department of St. John's College. The recipient of each award is selected by the chair of the department in consultation with the Dean's Office on the basis of the student's outstanding scholastic achievement in his/her major field, the student's overall academic performance and the recommendations of their department's faculty.

Silver Keys are also awarded to outstanding juniors in each major department, based on similar criteria.

Special Awards

The Carlton Boxhill Award may be presented to a graduating senior who has demonstrated excellence in academic achievement and University and community activities.

The Dr. Gerald E. Fitzgerald Award may be presented to outstanding seniors from the government and politics major and public administration and public service major.

The Charles Lacaille Award may be presented to biological science majors with strong academic credentials and research experience.

The Edward J. Miranda Award may be awarded to an outstanding mathematics major who has demonstrated interest and dedication to the study of mathematics.

The Reverend John B. Murray Award may be presented to a graduating psychology major who has demonstrated academic excellence, research activity and/or service to the University or greater community.

Special Programs

Pathway Programs

B.A./M.A. in Asian Studies

B.S./M.S. in Biology

B.S./M.S. in Biology/Computational Biology and Biostatistics

B.S./M.S. Biochemistry/Computational Biology and Biostatistics

B.S./M.S. Biochemistry/Chemistry

B.S./M.S. in Chemistry

B.S./M.A. in Computing and Machine Learning/ Applied Mathematics, Computing, and Machine Learning

B.A./M.A. in English

B.A./M.S. in French/Library and Information Science

B.A./M.A. in Government and Politics

B.A./M.A. in History

B.A./M.A. in History/Public History

B.A./M.S. in Italian/Library and Information Science

B.A./M.A. in Mathematics/Applied Mathematics, Computing, and Machine Learning

B.S./M.A. in Mathematics/Applied Mathematics, Computing, and Machine Learning

B.A./M.A. in Psychology

B.A./M.A. in Psychology/Criminology and Justice

B.A./M.S. in Psychology/Neuroscience

B.A./M.A. in Public Service and Public Administration/Government and Politics
B.A./M.A. in Sociology

B.A./M.A. in Sociology/Criminology and Justice

B.A./M.A. in Spanish

B.A./M.S. in Library and Information Science

B.A./M.A. in Theology

B.A./M.A. in Theology/Criminology and Justice

B.F.A./M.A. in Fine Arts/Museum Administration

These integrated programs permit qualified students to earn a bachelor's degree and master's degree in five years instead of the usual five-and-a-half or six years required to obtain the two degrees provided students take the undergraduate and graduate courses as advised by their department and the Dean's Office.

Each program is designed to allow students to complete their undergraduate degree requirements in four years. This ensures receipt of the bachelor's degree if the student decides not to continue for the fifth graduate year. Should the

student decide not to continue with the pathway program after the fourth year, he/she can reapply to a master's program at a later date. Note that, graduate courses taken as part of a student's undergraduate degree may not apply to a graduate degree program at St. John's University if the student opts out of the pathway program.

To be considered for a pathway program, applicants must have completed their sophomore year with at least a 3.0 overall index and a 3.0 index in 12 credits applicable to the major. Students should consult the Dean's Office for additional qualification/application information.

Collaborative Programs

B.A./J.D. and B.S./J.D.

This program permits exceptionally qualified students with well-defined professional goals to complete their academic training in six years, earning an undergraduate degree from St. John's College and a Juris Doctorate degree from St. John's School of Law. Students must indicate their interest on their admission application by the December 1 deadline.

B.S./D.O.

This highly competitive accelerated program permits qualified students to earn a Bachelor of Science in Biology from St. John's University and a Doctor of Osteopathic Medicine from the New York Institute of Technology College of Osteopathic Medicine in seven years. This program is open to incoming first-year students with superior academic credentials. Students must indicate their interest on their admission application by the December 1 deadline.

B.S./D.P.M.

This highly competitive accelerated program permits qualified students to earn a Bachelor of Science in Biology from St. John's University and a Doctor of Podiatric Medicine from New York College of Podiatric Medicine in seven years. This program is open to incoming first-year students with superior academic credentials. Students must indicate their interest on their admission application by the December 1 deadline.

B.S./O.D.

This highly competitive accelerated program permits qualified students to earn both a Bachelor of Science in Biology from St. John's University and a Doctor of Optometry from SUNY College of Optometry in seven years. This program is open to incoming first-year students and rising sophomores with superior academic credentials. Students must indicate their interest on their admission application by the December 1 deadline.

B.A./M.B.A., B.S./M.B.A., and B.A./M.S.

B.A./M.B.A. in Anthropology/Business Administration
B.A./M.B.A. in Asian Studies/Business Administration
B.A./M.S. in Asian Studies/Accounting

B.S./M.S. in Financial Mathematics/Finance
B.A./M.B.A. in English/Business Administration
B.A./M.B.A. in French/Business Administration
B.A./M.B.A. in History/Business Administration
B.A./M.B.A. in Italian/Business Administration
B.S./M.B.A. in Mathematical Physics/Business Administration
B.A./M.B.A. in Mathematics/Business Administration
B.S./M.B.A. in Mathematics/Business Administration
B.A./M.S. in Mathematics/Finance
B.S./M.S. in Mathematics/Finance
B.S./M.B.A. in Physics/Business Administration
B.A./M.B.A. in Psychology/Business Administration
B.A./M.B.A. in Sociology/Business Administration
B.A./M.B.A. in Spanish/Business Administration

These programs permit highly qualified students to complete a bachelor's degree from St. John's College and a master's degree from the Tobin College of Business in five years. Students should consult the St. John's College Dean's Office for additional qualification/application information.

B.A./M.S.Ed. and B.S./M.S.Ed.

B.S./M.S.Ed. in Biology/Adolescent Education
B.S./M.S.Ed. in Biology/Childhood Education
B.S./M.S.Ed. in Chemistry/Adolescent Education
B.S./M.S.Ed. in Chemistry/Childhood Education
B.S./M.S.Ed. in Environmental Science/Childhood Education
B.A./M.S.Ed. in Mathematics/Adolescent Education
B.A./M.S.Ed. in Mathematics/Childhood Education
B.S./M.S.Ed. in Physics/Adolescent Education
B.S./M.S.Ed. in Physics/Childhood Education

These programs permit highly qualified students to complete a bachelor's degree from St. John's College and a master's degree from the School of Education in five years. Students should consult the St. John's College Dean's Office for additional qualification/application information.

Independent Study and Readings Guidelines

Student must submit to the Department Chair a contract signed by a faculty member from the student's major department. Contract must include: a brief description of the course of study; a representative and tentative bibliography; the requirements established by the faculty member and the approval of the contract by the Department Chair.

Restrictions: Student must have completed a minimum of 12 credits in the major; achieved a minimum 3.0 GPA in the major; the topic of the assigned readings course must be distinct from the department's course listings in the Bulletin; the course may not be substituted for a major requirement.

Exception: In those departments with a limited number of student majors, the course may be substituted for a requirement in the major with the approval of the Chair.

A student may not take more than two courses of independent research and/or study without the express approval of the Department Chair.

Internships

St. John's College offers supervised practical training through fieldwork and/or placement in public and private agencies/institutions. In some cases, these credit-bearing internships may be taken by qualified non-majors as well as majors. Program qualifications and application procedures vary. Interested students should consult the Dean's Office for more information.

Pre-Professional Advisory Programs

Pre-Law

Most law schools do not require specific subjects for admission, therefore pre-law students may choose any undergraduate major. While students assume responsibility for their choice of academic programs, the Pre-Law Advisory Program provides students with information and advice on courses that are most beneficial in preparing for the Law School Admission Test and eventual entrance into law school. Interested students should contact the Dean's Office.

Pre-Health

Students interested in the medical or health sciences are encouraged to register with the Pre-Health Professions Advisory Committee, which informs students of requirements for admission to health professional schools, and helps them develop the personal qualities necessary for these health professions.

The B.S. degree provides a more thorough training in science, but the following courses in conjunction with any program permit liberal arts students not only to meet minimum requirements for admission to most health profession schools but also to develop broad cultural backgrounds:

Biology (one year)
Biochemistry (one semester)
General Chemistry (one year)
Organic Chemistry (one year)
English (one year)
Mathematics (one year)
Physics (one year)

The committee prepares students for entrance into professional schools by assisting with interview skills, holding on-campus interviews, and inviting guest speakers from the various graduate health professional schools. The committee also recommends qualified students to medical, dental, optometry, osteopathic, podiatric, and veterinary colleges to which they apply.

Preparation for Theological Studies

Students who intend to become candidates for the priesthood are encouraged to pursue a sound liberal arts program which has a special value as a preparation for the study of theology. They may choose to pursue a B.A. or B.S. degree, although Philosophy is considered the most appropriate major. The choice of another major is to be

evaluated according to individual circumstances and needs.

Certain active on-campus organizations may be of assistance in providing pastoral experience with the poor and the alienated, and in studying questions of peace and justice. Spiritual advisors are available for discernment and direction.

Degree Requirements

Bachelor of Arts Core Curriculum and Major Requirements

University Core:

First Year Seminar 1000	3
First Year Writing 1000	3
Speech 1000	3
English 1100	3
History 1000	3
Philosophy 1000	3
Philosophy 3000	3
Theology 1000	3
Theology: Sacred Texts and Traditions	3
Ethics	3
Science/Quantitative Analysis	3
Mathematical, Logical, Quantitative, and Computational Reasoning	3
Social Justice	3
	39 credits

St. John's College Core:

Foreign Language	6
Social Sciences	3
Art or Music	3
Core Elective	3
Core Elective	3
Core Elective	3
	18 credits

Major Requirements: 30 to 46 credits

(see Major Requirements section for specific details)

General Electives: 18 to 33 credits
Graduation total: 120 credits minimum

Bachelor of Science Core Curriculum and Major Requirements

University Core:

First Year Seminar 1000	3
First Year Writing 1000	3
Speech 1000	3
English 1100	3
History 1000	3
Philosophy 1000	3
Philosophy 3000	3
Theology 1000	3
Theology: Sacred Texts and Traditions	3
Ethics	3
Social Justice	3
	33 credits

St. John's College Core:

Foreign Language	6
Social Sciences	3
Art or Music	3
Core Elective	3
Core Elective	3
	18 credits

Additional Math or Science Requirements

Specific to Each Major Field:

Biology	36 credits
Biochemistry	20 credits
Chemistry	16 credits
Mathematics	8 credits
Physics	8–16 credits

Major Requirements: 29 to 60 credits
(see Major Requirements section for specific details)

General Electives: 0 to 24 credits

Graduation total: 120 to 124 credits minimum

Bachelor of Fine Arts Core Curriculum and Major Requirements

University Core:

First Year Seminar 1000	3
First Year Writing 1000	3
Speech 1000	3
English 1100	3
History 1000	3
Philosophy 1000	3
Philosophy 3000	3
Theology 1000	3
Theology: Sacred Texts and Traditions	3
Ethics	3
Science/Quantitative Analysis	3
Mathematical, Logical, Quantitative, and Computational Reasoning	3
Social Justice	3
	39 credits

St. John's College Core:

Social Sciences	3
	3 credits

Major Requirements: 78 credits

General Electives: None

Graduation total: 120 credits minimum

Departments and Divisions of St. John's College

Department of Art and Design

Institute for Asian Studies

Department of Biological Sciences

Department of Chemistry

Department of Communication Sciences and Disorders

Department of Communication Studies

Department of Core Studies

Institute for Critical Race and Ethnic Studies

Department of English

Environmental Studies Program

Department of Government and Politics

Department of History

Department of Languages and Literatures

Department of Mathematics and Computer Science

Department of Philosophy

Department of Physics

Department of Psychology

Department of Sociology and Anthropology

Department of Theology and Religious Studies

Major Requirements

Anthropology (B.A.)

Department of Sociology and Anthropology

30 semester hours including: ANT 1000, 1010, 1020, 4990, SOC 2610, 4270, and 12 semester hours in ANT.

Art History (B.A.)

Department of Art and Design

39 semester hours including: ART 1710, 1720, 1760, 1765, three semester hours in Studio Art in consultation with the department, nine semester hours of Western Art History electives, nine semester hours of non-Western Art History electives, three semester hours of an Advanced Seminar chosen from: ART 3100, 3210, 3215, 3720, 3725, 4000, and three semester hours of a Research Seminar chosen from: ART 4010, 4020.

Asian Studies (B.A.)

Institute for Asian Studies

36 semester hours including: ASC 1300, 2610; twelve semester hours of language courses from Chinese (CHI), Japanese (JPN), or Korean (KOR): 1010, 1020, 2030, 2040 (Students may combine different languages, but must complete at least one course above level three) and eighteen semester hours of non-language courses chosen from any undergraduate Asian Studies courses. Eligible juniors and seniors may take graduate-level Asian Studies or Chinese Studies courses with the approval of the Institute for Asian Studies to fulfill Asian Studies elective courses.

Biochemistry (B.S.)

Interdisciplinary Major

53 semester hours including: CHE 1210 or 1310, 1311L; 1220 or 1320, 1321L; 2230 or 2630, 2631L; 2240 or 2640, 2641L; 3250; BIO 2000, 2001L, 3000, 3001L, 3470, BIO/CHE 3390; CHE 3220 or BIO/CHE 3360, and three biochemistry electives chosen from: BIO 2270, 2280, 3300, 3320, 3460, 3830, 4953; CHE 3210, 3220, 3330, 3340, 3360, 3450, 4351, 4361; CSC 1380.

In addition, biochemistry majors must complete MTH 1210, 1730, 1740; PHY 1930, 1940.

Biology (B.S.)

Department of Biological Sciences

29 semester hours including: BIO 1000, 2000, 2001L, 3000, 3001L, and five BIO upper-level elective courses that account for at least seventeen semester hours. Two of these five BIO elective courses must be 4-credit courses.

In addition, biology majors are required to take CHE 1210, 1220, 2230, 2240; MTH 1210, 1220; and PHY 1610, 1620 or 1930, 1940.

BIO 1050, 1060, 1070, and 1360 are not applicable to the major sequence.

Students are encouraged to take advantage of possibilities for research: BIO 4953 and 4954.

Non-biology majors seeking to take one year of Biology should register for BIO 2000, 2001L, 3000, and 3001L.

Chemistry (B.S.)

Department of Chemistry

46 to 51 semester hours including: CHE 1310, 1311L, 1320, 1321L, 2630, 2631L, 2640, 2641L, 3000; 3210 or 3280; 3220 or 3270; 3250, 3300, 3320, 3340, 3440, and one of the following options:

Option I: B.S. in Chemistry (46-47 credits)

One of the following: CHE 3260, 3290, 3330, 3360, 3390, 3420, 3421, 3431, 3450, 4351, 4361, 4903, or a 100-level graduate CHE course.

Option II: B.S. in Chemistry with American Chemical Society Certification (50-51 credits)

CHE 3390 and one of the following: CHE 3260, 3290, 3330, 3360, 3420, 3431, 3450, 4351, 4361, 4903, or a 100-level graduate CHE course.

Option III: B.S. in Chemistry with a Concentration in Biochemistry (51 credits)

CHE 3390 and BIO 3470. CHE 3290, 3330, 3360, 3450 and BIO 3320 are also highly recommended electives.

In addition, chemistry majors are required to take MTH 1730, 1740; PHY 1930, 1940.

Communication Studies (B.A.)

Department of Communication Studies

36 semester hours including: CMC 1155, 4000; SPE 1000, nine semester hours chosen from: CMC 1015, 2000, 2020, 3130, 3140, and eighteen semester hours chosen from one of the following concentrations:

Communication & Culture:

CMC 2010, 2015, 2030, 2035, 2080, 2100, 2110, 2120, 2150, 3150, 3190.

Organizational Communication & Leadership:

CMC 2025, 2050, 2070, 2170, 2225, 2250, 3140, 3180.

Political Communication & Civic Engagement:

CMC 1010, 2030, 2035, 2040, 2060, 2080, 2100, 2130, 2170, 2200, 3120, 3150, 3160, 3180, 3190.

Computing and Machine Learning (B.S.)

Department of Mathematics and Computer Science

30-32 semester hours including: CSC 1030, 1400, 1410, 2490, 2580, 2590, 2600, 4990; three semester hours chosen from: CSC 2620, 2630; and 6-8 semester hours chosen from: MTH 1125, 2700, 2750, 2800, 3810, CSC 2620, 2630, 2720, 4980.

In addition, computing and machine learning majors are required to take MTH 1020, 1730, 1740, 2790, and 3380.

Critical Race and Ethnic Studies (B.A.)

Institute for Critical Race and Ethnic Studies

33 semester hours including: CRES 1000, 2000, 3000, 3050, 4995; and one course from six of the following seven subject areas:

Arts, Performance, and the Digital

ART 1830; ENG 3560, 3590, 3640; MUS 1210, 1300.

Education and Social Justice

ENG 3420, 3760; FRE 3920; THE 4995.

History, Historicism, Historiography

HIS 3375, 3711, 3712.

Political Economy and Economics, and Accumulation

CRES 3410.

Religion, Law, and Philosophy

PHI 3750; THE 2245, 2255.

Sociology, Social Formation, and Sociogeny

ENG 3645, 3650; FRE 3570, 3820.

STEM: Science, Technology, Engineering, and Math (Natural, Health, Clinical Sciences)

CRES 3510; SOC 1035.

Economics (B.A.)

St. John's College Dean's Office in collaboration with the Tobin College of Business

33 semester hours including: ECO 1301, 1302, 3303, 3341, 3343; BUA 1333, 2334; and four elective courses in the major, selected in consultation with a departmental advisor, from ECO 3306, 3307, 3308, 3313, 3333, 3344, 3346, 3347, 3348, 4340, 4350, 4355, 4399, 4400; FIN 2310, 3312, 3316, 3318.

In addition, economics majors are required to take MTH 1320.

ECO 1320 and ECO 1326 are not applicable to the major sequence. Only one FIN course may apply to the major. Additional FIN courses may be taken as general electives.

Students must complete MTH 1320 and be in junior standing (having 56+ credits completed) to enroll in junior or senior level business courses (courses numbered 3000 or above). ECO majors are also encouraged to take a computer science course, e.g., IS 1332.

Note: Business courses are taught by the Peter J. Tobin College of Business faculty. Students interested in pursuing the Bachelor of Arts Economics major should consult the Peter J. Tobin College of Business section of this bulletin for a list of course offerings.

English (B.A.)

Department of English

36 semester hours including: ENG 1100, 2200, 2300, nine semester hours chosen from ENG courses prior to 1900: ENG 3100-3399, 3520, or ENG 2060 or 2210 with the approval of the instructor and chairperson; a senior capstone seminar, and fifteen semester hours in ENG electives offered by the English department.

Environmental Science (B.S.)

Environmental Studies Program

50 semester hours including: BIO 1000 or ESP 1010; BIO 2000, 2001L; CHE 1210, 1220; ESP 1020, 2410, 2500, 2990, 4990; GEO 2001, MTH 1210; and eleven semester hours of major elective courses in consultation with the Director of the Environmental Studies Program.

Environmental Sustainability and Decision-Making (B.A.)

Environmental Studies Program

45-46 semester hours including: ANT 1120; ESP 1010, 1020, 2410, 2990, 4990; ESP/GOV 2500; GEO 2001; GOV 1030, 2160; one course in applied statistics; and twelve semester hours of major elective courses in consultation with the Director of the Environmental Studies Program.

Financial Mathematics (B.S.)

Department of Mathematics and Computer Science

63 semester hours including: ACC 2338; CSC 1380; ECO 1301, 1302; FIN 2310, 3311, 3312; MTH 1730, 1740, 2750, 2790, 3320, 3810, 3820; RMI 1301; six semester hours chosen from: MTH 2700, 3340, 3350, 3860, 3970; and twelve semester hours chosen from: FIN 3318, 3319, 3388, 4317, 4320, 4321, 4327, 4351

Fine Arts (B.F.A.)

Department of Art and Design

78 semester hours including: ART 1110, 1130, 1105 or 1135, 1200, 1210, 1510, 1630, 1710, 1720, 2120, 2220, 2310, 2320, 2520, 2750, 3115, 3350, 3560, 4112; 1135 or 1105; 4909 (nine-credit internship) or 4125 (nine-credit Creative Thesis); plus nine semester hours from the approved ART elective list as recommended by the Art and Design department.

French (B.A.)

Department of Languages and Literatures

33 semester hours including: FRE 3090, 3100, 3550, 3560, 3870, 3880, and fifteen semester hours in advanced FRE courses.

French majors are urged to study a second foreign language and to take courses in classical civilization among their general electives.

A French major who, in the judgment of the Languages and Literatures department, shows a

deficiency in French grammar shall be required to take FRE 3150 in preparation for FRE 3870, 3880. A French major who, in the judgment of the Languages and Literatures department, shows a deficiency in speaking French shall be required to take one or both terms of FRE 3110, 3120.

Note: FRE courses taught in English do not apply to the French major.

Global Development and Sustainability (B.A.)

Interdisciplinary Major

36 semester hours including: GDS 1000, 2000, 4980, 4990; ANT/CMC 1155; ECO 3346; GOV 3850; one FRE, SPA, or ITA course at the 3000 level (language courses taught in English do not apply) and twelve semester hours chosen from the Social Science Track or the Science Track:

Social Science Track:

ANT 1040, 1100, 2400; COM 3103; ECO 1320; ESP 1020; GOV 2520, 2860; HIS 3110, 3160; PSY 2010 and 2180, SOC 2030, 2100, 2330.

Science Track:

ANT/ESP 1120; ANT 2100; BIO 1070; CHE 1210; ESP 2020; ESP 2410; GEO 1001, 2001, 2002; GOV 2170; PHY 1080, 1090, 1120, 1520.

In addition, global development and sustainability majors are required to take ECO 1302, as it is a prerequisite for ECO 3346.

Government and Politics (B.A.)

Department of Government and Politics

36 semester hours including: GOV 1030, 1050, eighteen semester hours in GOV courses, and one course in each of the following areas:

International Relations:

GOV 1610, 2170, 2640, 2810, 3620, 3630, 3670.

Comparative Government:

GOV 1700, 2650, 2660, 2690, 2730, 2750, 3310, 3680, 3710, 3720, 3820, 3850, 3851.

Political Theory:

GOV 1250, 1260, 1270, 1280.

Senior Seminar:

GOV 4991, 4992, 4993, 4994, 4995.

Students are permitted to take a maximum of six semester hours in fieldwork courses. Students may take more than one senior seminar. Eligible seniors may choose up to six semester hours from 100-level graduate courses to fulfill GOV elective courses.

Graphic Design (B.F.A.)

Department of Art and Design

78 semester hours including: ART 1105, 1110, 1115, 1130, 1710, 1720, 2115, 2125, 2130, 2145, 2750, 3110, 3120, 3125, 3130, 3135, 3350, 4120, nine semester hours chosen from: ART 1120, 1200, 1280, 1510, 1630, 1640, 2120, 3015, 3115; 4909 (nine-credit internship) or 4125 (nine-credit Creative Thesis); plus six semester hours from the approved ART elective list as recommended by the Art and Design department.

History (B.A.)

Department of History

36 semester hours including: HIS 1000, 1010, 2990 (in sophomore year), 4990; six semester hours in HIS courses offered by the Department of History, six semester hours in U.S. History, and twelve semester hours in World History from at least three of five categories: Africa, Americas (non-U.S.), Asia, Europe, and Transregional.

U.S. Surveys and Topics

HIS 2700, 2710, 2711, 2740, 2750, 2760, 3375, 3702, 3711, 3712, 3725, 3732, 3795, 3810, 4993, 4994.

Africa Surveys and Topics

HIS 2300, 2302, 3400.

Americas (non-U.S.) Surveys and Topics

HIS 2331, 2332, 2340, 2450, 3300, 3301, 3303, 3900.

Asia Surveys and Topics

HIS 2313, 2314, 2315, 2318, 2320, 2321, 3320, 3321, 3370, 3380.

Europe Surveys and Topics

HIS 2002, 2502, 2520, 2530, 2533, 2541, 2542, 2550, 2560, 3511, 3531, 3540, 3541, 3560, 3561, 3562, 3565, 3650, 3653, 3660, 4991.

Transregional Surveys and Topics

HIS 2007, 2110, 2120, 2130, 2141, 2142, 2316, 2335, 2540, 2810, 2820, 3140, 3190.

Illustration (B.F.A.)

Department of Art and Design

78 semester hours including: ART 1105, 1110, 1115, 1200, 1210, 1270, 1280, 2125, 2220, 2230, 2265, 2280, 2310, 2320, 4112, twelve semester hours of required Art History courses: ART 1710, 1720, 2750, six semester hours chosen from: ART 1510, 2115, 2130, 3570; 4909 (nine-credit internship) or 4125 (nine-credit thesis); plus six semester hours from the approved ART elective list as recommended by the Art and Design department.

Italian (B.A.)

Department of Languages and Literatures

33 semester hours including: ITA 3090, 3100, 3550, 3560, 3870, 3880, and fifteen semester hours in advanced ITA courses.

Italian majors are urged to study a second foreign language and to take courses in classical civilization among their general electives.

An Italian major who, in the judgment of the Languages and Literatures department, shows a deficiency in Italian grammar shall be required to take ITA 3150 in preparation for ITA 3870, 3880. An Italian major who, in the judgment of the Languages and Literatures department, shows a deficiency in speaking Italian shall be required to take one or both terms of ITA 3110, 3120.

Note: ITA courses taught in English do not apply to the Italian major.

Mathematical Physics (B.S.)

Department of Physics

47 semester hours including: CSC 1390; MTH 1730, 1740, 2750, PHY 1930, 1940, 1950, 1970, 2460, 3210, 3330, and three upper level PHY or MTH courses.

PHY 1950 is waived for students having a prior calculus course. PHY 1610, 1620 may be substituted for PHY 1930, 1940 with permission from the chair of the Physics department.

Mathematics (B.A.)

Department of Mathematics and Computer Science

40 semester hours including: CSC 1380 or 1390; MTH 1730, 1740, 2700, 2750, 2790, 3775, 3840, 4830, 4990 and six semester hours of an upper level MTH course.

In addition, B.A. mathematics majors are required to take PHY 1930, 1940.

Mathematics (B.S.)

Department of Mathematics and Computer Science

52 semester hours including: CSC 1380 or 1390; MTH 1730, 1740, 2700, 2750, 2790, 2800, 3775, 3810, 3840, 4830, 4990 and twelve semester hours of upper level MTH courses.

In addition, B.S. mathematics majors are required to take PHY 1930, 1940.

Philosophy (B.A.)

Department of Philosophy

36 semester hours including: PHI 1000, 2200, 3000, 3400, 4990, nine semester hours from: PHI 3500, 3510, 3520, 3530, and twelve semester hours chosen from any other PHI course offerings except PHI 2220 and PHI 2240.

Photography (B.F.A.)

Department of Art and Design

78 semester hours including: ART 1105, 1110, 1130, 1610, 1620, 1630, 1650, 1660, 2650; ART 3560 or ICP 1006; ART 4110 or ICP 1007; ART 4112 or ART 3110 or ICP 1008; ART 3010 or ICP 1009; six semester hours in Art History electives, twelve semester hours in Photography in affiliation with the International Center of Photography (ICP) (one academic semester), ART 4909 (nine-credit internship), or 4125 (fifteen-credit Creative Thesis), plus fifteen semester hours from the approved ART elective list as recommended by the Art and Design department.

Physical Science (B.S.)

Department of Physics

37 semester hours including: PHY 1930, 1940, 1950, 1970, and twenty-three semester hours from upper level PHY courses. In addition, physical science majors are required to take MTH 1730, 1740.

PHY 1950 is waived for students having a prior calculus course. PHY 1610, 1620 may be substituted for PHY 1930, 1940 with permission from the chair of the Physics department.

Physics (B.S.)

Department of Physics

51 semester hours including: PHY 1930, 1940, 1950, 1970, 2010, 2150, 2250, 2460, 3210, 3240, 3330, 3370, and sixteen semester hours from upper level PHY courses with approval from the chair of the department of physics.

In addition, physics majors are required to take MTH 1730, 1740, 2750, 3840.

PHY 1950 is waived for students having a prior calculus course. PHY 1610, 1620 may be substituted for PHY 1930, 1940 with permission from the chair of the department of Physics.

Psychology (B.A.)

Department of Psychology

41 semester hours including: PSY 1000, 2030, 2040, 2150, 2990, 3260, 3800, six semester hours in PSY courses from the Psychology department's course offerings (including those not selected from the four groups mentioned above), and one course from each of the following groups below:

Group 1: Abnormal/Personality/Social
PSY 2200, 2210, 3320.

Group 2: Developmental
PSY 2070, 2080.

Group 3: Experimental
PSY 3270, 3280, 3290.

Group 4: Emerging Areas
PSY 2220, 2240, 2250, 2260, 2270.

Students are required to take all courses in the major in the Psychology department of St. John's College once they declare the major.

Students wishing to pursue graduate training in psychology should take PSY 3040 as one of their electives.

Psychology majors are required to take PSY 1000 as their first course. They are encouraged to take PSY 2030 as soon as possible.

Public Administration and Public Service (B.A.)

Department of Government and Politics

36 semester hours including: PAPS 1030, 1530, 1540, 4923, 4995, fifteen semester hours in PAPS courses, and one course in each of the following areas:

U.S. Government Institutions:
PAPS 2420, 2430.

Subnational Government Institutions:
PAPS 2470, 2480.

Sociology (B.A.)

Department of Sociology and Anthropology

33 semester hours including: SOC 1000, 1170, 2610, 3240, 4270, 4990, and fifteen semester hours in SOC electives offered by the Sociology department.

Spanish (B.A.)

Department of Languages and Literatures

33 semester hours including: SPA 3090, 3100, 3550, 3560, 3870, 3880, and fifteen semester hours in advanced SPA courses.

Spanish majors are urged to study a second foreign language and to take courses in classical civilization among their general electives.

A Spanish major who, in the judgment of the Languages and Literatures department, shows a deficiency in speaking Spanish shall be required to take one or both terms of SPA 3110, 3120.

Note: SPA courses taught in English do not apply to the Spanish major.

Speech-Language Pathology and Audiology (B.A.)

Department of Communication Sciences and Disorders

42 semester hours including: CSD 1710, 1720, 1730, 1740, 1750, 1820, 2710, 2750, 2760, 2770, 2810, 4990, and six semester hours chosen from: CMC 1155; CSD 1155, 1810, 2775, 2780, 3840, 4810, 4953; LIN 1810; PSY 3410.

For certification, the American Speech-Language-Hearing Association requires 3 credits in a biological science, 3 credits in Physics or Chemistry, 3 credits in statistics, and 6 credits in a social or behavioral science. Speech-Language Pathology and Audiology majors are urged to work with departmental advisors to meet these requirements at the undergraduate level.

Theology (B.A.)

Department of Theology and Religious Studies

36 semester hours including: THE 1000, 2110, 2120, 2205; 2210 or 2215; 3010 or 3020; 2501, 2502, 2810, 4990, and six semester hours in the 3000 series.

Note: THE mini courses are not applicable to the theology major.

Minor Requirements

Africana Studies

15 semester hours including: HIS 3400 and twelve semester hours, representing at least three different disciplines, selected from the following: ANT 2445, 2450; ART 1830, 2745; ENG 3300, 3330, 3470, 3475, 3480, 3650; FRE 3820; GOV 2480, 2750, 3680; HIS 2300, 2301, 2302, 2334, 2450, 3410, 3711, 3712, 3750; MUS 1300; PSY 2230; SOC 1190, 2440, 2450.

Note: Independent study courses, special topics courses, and graduate level courses with significant Africana content can be counted for African minor credit with authorization of professor and director of Africana Studies.

American Studies

18 semester hours including: three semester hours in the Capstone ASP Seminar and fifteen semester hours from three different areas, selected from the following:

Humanities Group (six semester hours from different disciplines): CMC 2040; ENG 2060, 3300, 3310, 3320, 3330, 3340, 3350, 3360, 3390, 3470, 3480, 3560; HIS 2700, 2710, 2711, 2712, 2720, 2730, 2740, 2750, 3100, 3150, 3180, 3375, 3701, 3702, 3705, 3711, 3712, 3720, 3725, 3735, 3731, 3732, 3740, 3750, 3760, 3780, 3790, 3795; PHI 3540.

Social Sciences Group (six semester hours from different disciplines): GOV 2160, 2240, 2430, 2510, 3320, 3590, 3800; SOC 1170, 1190, 2410, 2420, 2450, ANT 2750.

Arts, Media, and Technology Group (three semester hours): ART 1830, 1840, 2755, MUS 1230, 1260, 1300.

Capstone ASP Seminar (3 semester hours) Seminar in American Studies: Engaging American Culture

The seminar introduces students to recent developments in American Studies focusing on social justice, community-based research projects, fieldwork, and problem-solving methodologies.

Ancient Studies

18 semester hours chosen under the advisement of the Department of Languages and Literatures from courses dealing with Greek and Roman antiquity. No knowledge of Greek or Latin is required.

Anthropology

15 semester hours including: ANT 1010 or 1020, and twelve semester hours in ANT.

Applied Mathematics

21 semester hours including: MTH 1730, 1740, 2700, 2750, 3390, and nine semester hours chosen from the following: CSC 1380, 2520, 2580, 2600, 2620, 4980; MTH 2390, 2790, 3310, 3320, 3330, 3340, 3350, 3360, 3370, 3380, 3390, 3810, 3840, 3850, 3860, 3970, 4830, 4980.

Note: Credit is only given for CSC 1380 or 1390 not both.

Arabic

18 semester hours chosen under advisement of the Department of Languages and Literatures in ARA.

Art

18 semester hours including: ART 1110, 1130, 1200, and nine semester hours chosen from: ART 1000, 1010, 1020, 1030, 1040, 1050, 1060, 1085, 1090, 1095, 1210, 1270, 1290, 1510, 1610, 1650, 1670A, 1775, 1790A, 2120, 2140, 2220, 2250, 2265, 2310, 2520, 2660, 3010, 3115, 3340, 3565.

Art History

18 semester hours including: ART 1710, 1720, 2750, six semester hours of Art History elective courses and three semester hours of a studio course.

Asian Studies

18 semester hours including: six semester hours of ASC 1300 and 2610; six semester hours of Asian languages courses (CHI, JPN, or KOR), and six semester hours chosen under the advisement of the Institute for Asian Studies.

Biology

20 semester hours including: BIO 1000, 2000, 2001L, 3000, 3001L, plus any two other courses approved by the Department of Biological Sciences for biology majors. *BIO 1050, 1060, 1070, and 1360 are not applicable to the minor sequence. Some of these courses have other prerequisites, such as CHE 1210.*

Business

18 semester hours including: ACC 2320; ECO 1301, 1302; FIN 2310 or RMI 2301; MGT 1301; MKT 2301. *Note: Business courses are taught by the Peter J. Tobin College of Business faculty. Students interested in pursuing the business minor should consult the Peter J. Tobin College of Business section of this bulletin for a list of course offerings.*

Business and Organization Communication

15 semester hours including: SPE 1000; CMC 2020, 2025, and six semester hours of CMC Elec.

Catholic Studies

18 semester hours including: THE 1000, 2000, 2800, and nine semester hours approved by the minor program director; up to six semester hours may be taken outside of the Department of Theology and Religious Studies with the permission of the director.

Chemistry

26 semester hours including: two courses in general chemistry; two courses of organic chemistry and six semester hours of CHE electives above 2640 that are a minimum of 3 credits each.

Classics

18 semester hours including: six semester hours of Latin above LAT 1020, six semester hours of Ancient Greek, and six semester hours in related courses chosen under the advisement of the Department of Languages and Literatures.

Communication

15 semester hours including: SPE 1000; CMC 2020, and nine semester hours from CMC 1155, 2000, 2015, 2025, 2070, 2080.

Computing

15 semester hours including: CSC 1400, 1410, 1470, 2450, 2490.

Note: Students who had Calculus (MTH 1730 or equivalent) can replace any of the CSC 2450 and CSC 2490 with any of the following: CSC 2510/MTH 3340, CSC 2580/MTH 3310, CSC 2590/ MTH 3320.

Critical Race and Ethnic Studies

15 semester hours including: CRES 1000, 2000, 4995; and two courses chosen from any of the following seven subject areas:

Arts, Performance, and the Digital

ART 1830; ENG 3560, 3590, 3640; MUS 1210, 1300.

Education and Social Justice

CMC 2100; CRES 4999; ENG 3420, 3760; FRE 3920; THE 4995.

History, Historicism, Historiography

HIS 3375, 3711, 3712.

Political Economy and Economics, and Accumulation

CRES 3410.

Religion, Law, and Philosophy

PHI 3750; THE 2245, 2255.

Sociology, Social Formation, and Sociogeny

ENG 3645, 3650; FRE 3570, 3820.

STEM: Science, Technology, Engineering, and Math (Natural, Health, Clinical Sciences)

CRES 3510; SOC 1035.

Data Science

16 semester hours including CSC 1380; a Calculus course (MTH 1220, 1730, or equivalent), a Statistics course (MTH 1020, 1210, 3810; PSY 2030; SOC 2610, or equivalent), and six semester hours chosen from: MTH 1040, 3310, 3320, 3330/CSC 2500, 3340/CSC 2510, 3350/CSC 2600, 3360/CSC 2520, 3370/CSC 2620, 3970, 4970, 4980/CSC 4980.

Economics

18 semester hours including: ECO 1301, 1302, and nine semester hours in ECO selected in consultation with a departmental advisor.

In addition, economics minors are required to take MTH 1320.

ECO 2327 is not applicable to the minor sequence.

Students must complete MTH 1320 and be in junior standing (having 56+ credits completed) to enroll in junior or senior level business courses (courses numbered 3000 or above).

Note: Business courses are taught by the Peter J. Tobin College of Business faculty. Students interested in pursuing the economics minor should consult the Peter J. Tobin College of Business section of this bulletin for a list of course offerings.

English

15 semester hours including: ENG 1100 and twelve semester hours in any ENG courses offered by the Department of English.

Environmental Studies

15 semester hours including: ESP 1010, GEO 2001, and nine semester hours of environmental electives in consultation with the Director of the Environmental Studies Program.

Forensic Psychology

18 semester hours including: PSY 2200, 2250, 3320, 4990 and six semester hours from CRJ 2001, 3002; PSY 2210, 4903; SOC 1160, 2120, 2220, 2360.

Francophone Studies

18 semester hours including: six semester hours in French and twelve semester hours from FRE 3901, 3902, 3920, 3921, 3930; LAC 1000 (Only Language and Culture: French will apply).

French

15 semester hours chosen under advisement of the Department of Languages and Literatures in FRE.

Note: FRE courses taught in English do not apply to the French minor.

Global Development and Sustainability

18 semester hours including: GDS 1000, 2000; ANT/CMC 1155; ECO 3346; GOV 3850, and one language course at the 3000 level.

In addition, global development and sustainability minors are required to take ECO 1302, as it is a prerequisite for ECO 3346.

Global Studies

18 semester hours including: three semester hours in a capstone seminar, six semester hours from one course in each of the core categories (Cultural Studies and Political Studies), and nine semester hours from a generalist track (Culture and Society, Global Politics and Environment, International Relations, or Social Development) or specialist track (chosen from a particular region or area of study as approved by the Director of the Global Studies minor):

Core Courses (one course from each category):

Cultural Studies: History, Literature Religion: ENG 3520; HIS 1010; THE 2810. Students may also take any 2000-level or higher language course to satisfy this requirement.

Political Studies: GOV 1610, 3620, 3670; PHI 3660.

Generalist Tracks (three courses from a chosen track):

Culture and Society: CMC 1155; ENG 3520, 3580; GOV 3620; HIS 2300, 2301, 2302, 2311, 2312, 2320, 2321, 2331, 2332, 2450, 2540, 2542, 3130, 3150, 3160, 3180, 3370, 3400, 3501, 3502, 3653, 3660, 3702, PHI 3520, 3530, 3660, 3670, 3680; THE 2810, 3250, 3310, 3810.

Global Politics and Environment: ANT 2400, 1120/ESP 1120; BIO 1070; ESP 3480; GEO 1001, 2001, 2002; GOV 2170, 2520, PHI 3720.

International Relations: ANT 1100, 1155, 2400, 2450, 2740; ECO 3306, 3344, 3346; ENG 3520, 3580; GEO 1001, 2001; GOV 1700, 2170, 2640, 2650, 2660, 2690, 2730, 2750, 2810, 3290, 3570, 3620, 3630, 3670, 3680, 3710, 3720, 3850, 3851; HIS 3160; PHI 3660, 3680; SOC 2100, 2330, 2420, 3660; THE 2810, 3250, 3310.

Social Development: ANT 1100, 1155, 2400, 2450, 2740; ECO 3306, 3344, 3346; ESP 1120; GEO 1001, 2001; GOV 1700, 2520, 2660, 2690, 2730, 2750, 3670, 3680, 3710, 3720, 3850; HIS 2301, 2302, 2311, 2312, 2320, 2321, 2330, 2331, 2332, 2450, 3150, 3180, 370, 3400, 3653; PHI 3660, 3680, 3740; SOC 2100, 2330, 2420, 2470, 2630, 3660.

Government and Politics

18 semester hours in GOV courses.

Graphic Design

9 Semester hours from digital or print media courses approved by the Art and Design Department.

History

15 semester hours including: HIS 1000, 1010, three semester hours in Africa, Americas (non-U.S.), Asia, or Transregional history, and six semester hours of HIS electives in consultation with the Department of History.

Interfaith Studies

18 semester hours including: nine semester hours chosen from: THE 2700, 2710, 2810, 2820, 2830, 2840, 2850 and nine semester hours of THE courses offered by the Department of Theology and Religious Studies.

International Business (For French, Italian, Spanish majors only)

21 semester hours including: ECO 1301, 1302, IB 3341, and twelve semester hours chosen from: ECO 3306; FIN 3318; MGT 3339, 3341, 4310, 4334, 4338; MKT 3317, 4318. No other prerequisites are necessary. Students must first consult with the Language Program Coordinator.

Italian

15 semester hours chosen under advisement of the Department of Languages and Literatures in ITA.

Note: ITA courses taught in English do not apply to the Italian minor.

Italian Studies

18 semester hours including: a maximum of six semester hours in ITA language courses; ART 1250, 1795; CLS 2600; ENG 1076; HIS 2002, 3540; SOC 2410.

Law and Government

21 semester hours including: GOV 1010, 1030 and any five of the following: GOV 2400, 2410, 2490, 2500, 2580, 2600, 3450, 3460, 3570, 3620; HIS 3725; PHI 3420, 3510, 3515, 3650; CMC 2020, 3180; SOC 2360.

Linguistics

18 semester hours including: LIN 1010, 1020, and twelve semester hours of LIN courses chosen under the advisement of the Department of Languages and Literatures.

Machine Learning

15-17 semester hours including: CSC 1030, a Calculus course (MTH 1220, 1260, 1320, 1730, or equivalent), a Statistics course (MTH 1020, 1210, 3810; PSY 2030; SOC 2610, or equivalent), CSC 2590/MTH 3320, and three semester hours chosen from: CSC 2510/MTH 3340, CSC 2580/MTH 3310, CSC 2600/MTH 3350, CSC 2620/MTH 3370, CSC/MTH 4980, CSC2250/MTH 3360, CSC 2630/MTH 3390.

Mathematics

21 semester hours including: CSC 1380 or 1390; MTH 1730, 1740, 2700, 2750, and 2790.

Music

18 semester hours including: MUS 1010; 1020 or 2020; nine semester hours from approved MUS electives, and three semester hours in applied music courses from approved list.

Philosophy

15 semester hours including: PHI 1000, 2200, 3000, and six semester hours chosen from any PHI course offerings.

Philosophy of Law

18 semester hours including: PHI 1000, 2200, 3000, 3650, and six semester hours chosen from: PHI 3400, 3420, 3540, 3660, 3700, 3730, 3740, 3750; CLS 2600.

Philosophy of Science

18 semester hours including: PHI 1000, 2200, 3000, 3800, and six semester hours chosen from: PHI 2320, 3320, 3400, 3720, 3810, 3820, 3830.

Photography

18 semester hours including: ART 1085 or 1610; 1086 or 1620; 1630, 1660, and six semester hours chosen from approved ART electives.

Physics

16 semester hours including: PHY 1610, 1620, or 1930, 1940, and eight semester hours of PHY courses in consultation with the Department of Physics.

Psychology

16 semester hours including: PSY 1000, 2030, and nine semester hours chosen from among the PSY courses offered by the Department of Psychology.

Students interested in minoring in psychology and who are also interested in applying to graduate school in this discipline should consider taking: PSY 2040, 2150, 2200, and/or 3800.

Public Administration and Public Service

15 semester hours including: PAPS 1030, 1530, and nine semester hours in PAPS courses.

Religious Communication

15 semester hours including: SPE 1000; CMC 1155, 3190, and six semester hours from: CMC 2020, 2040, 2060, 3130.

Rhetoric and Public Address

18 semester hours including: SPE 1000; CMC 3130, and nine semester hours from: CMC Electives approved by the department.

Social Justice: Theory and Practice in the Vincentian Tradition

18 semester hours including: THE 3020, 4995, three semester hours chosen from: PHI 2200, 2240; THE 3010, three semester hours chosen from: SOC 1190; ECO 1320, and six semester hours chosen from the following: ART 1830; BIO 1360; CRJ 3005; ESP/GOV 2160; GEO 2001; GOV 2170; HIS 3110, 3740; LES 1018, 1024; PHI 3720; PSY 1019; SOC 1070, 1170, 2100, 2460; CMC 2060, 3150; THE 3310, 3320.

In addition, students must complete a minimum of 40 hours of service-learning in the courses in the minor.

Social Work

15 semester hours including: SOC 1030, 1090, 4530, and six semester hours in SOC courses offered by the Department of Sociology and Anthropology.

Under advisement of the Department of Sociology and Anthropology, HSC courses may apply to the minor. However, all HSC students must take SOC 1030.

Sociology

15 semester hours including: SOC 1000 and twelve semester hours in SOC courses offered by the Department of Sociology and Anthropology.

Spanish

15 semester hours chosen under advisement of the Department of Languages and Literatures in SPA.

Note: SPA courses taught in English do not apply to the Spanish minor.

Speech-Language Pathology and Audiology

21 semester hours including: CSD 1710, 1720, 1730, 1740, 2750, 2760, and 2770.

Theology and Religious Studies

18 semester hours from any THE courses offered by the Department of Theology and Religious Studies.

Note: THE mini courses are not applicable to the theology and religious studies minor.

Urban Studies

15 semester hours chosen from the following: ANT 1120, 3100; ART 2660; ECO 1320, 3323; ENG 3480; ESP 2110; FYS 1000; GOV 2470, 2480; HIS 3760, 3770; ITA 3923; CMC 2090, 2130; THE 3320; SOC 1015, 1030, 1080, 1110, 1170, 1190, 2630, 2460, 2480, 2680.

Note: No more than six semester hours can be from any one discipline and may not take more than six semester hours from mini-session courses.

Women's, Gender, and Sexuality Studies

15 semester hours chosen from the following (maximum of six semester hours may be taken in the same discipline): ANT 1085, 1110; ART 1840, 3100, 3215, 3725; CLS 1240; CRJ 3003; ENG 2750, 3280, 3350, 3475; FRE 3902; GOV 1280, 2860; HIS 3140, 3300, 3460, 3560, 3561, 3562, 3731, 3732, 3735; ITA 3902; PHI 3330, 3580; PSY 2240; SOC 1085, 1150, 1170, 1570, 2110, 2220, 2330, 2430, 2440, 2470; THE 3240.

Internships may also receive course credit with the approval of the director.

Writing

15 semester hours including: ENG 1100 and twelve semester hours of writing courses offered by the Department of English.

Course Descriptions

The availability of the following courses vary per semester and are subject to change.

Anthropology (ANT)

1000 Language and Culture

Communication as it affects and is affected by culture. Barriers to effectiveness. Competent intercultural communication in ethnic, gender, intergenerational, international settings and deaf subcultures. *Credit: 3 semester hours.*

1010 Introduction to Anthropology: Cultural
Anthropology as a comparative cultural approach. Learning about American and world cultures through examination of the whole life experience in cross-cultural perspective. *Credit: 3 semester hours.*

1020 Introduction to Anthropology: Physical
Biological and social aspects of human existence. African fossil evidence and the evolution of the first humans in ecological contexts. Population genetics, and social behavior of primates as clues to ourselves. *Credit: 3 semester hours.*

1030 Introduction to Archaeology
Basic goals, concepts and methods of archaeological excavation and analysis. Study of local sites such as American Indian, colonial cemeteries and Black-American communities. Includes local field trips. *Credit: 3 semester hours.*

1035 Science, Technology & the Human
A survey of critical debates surrounding the relationship between advances and scientific knowledge and technology and contemporary

sociological theories of what it means to "be human." *Credit: 3 semester hours.*

1040 Culture and Global Change

An examination of the diverse social and cultural movements that have and are currently transforming the world. *Credit: 3 semester hours.*

1045 Migration, Labor and Justice

A critical sociocultural analysis of links between national, regional and global social inequalities, with an emphasis on social mobility, labor, migration processes and justice. *Credit: 3 semester hours.*

1100 Food and Culture

An exploration of how culture shapes what, when, and where we eat; the evolution and global diversity of food habits; issues of world hunger. *Credit: 3 semester hours.*

1110 Kinship, Family and Gender

A detailed overview of the anthropological approach to the study of kinship, family and gender cross-culturally through classical and contemporary texts. *Credit: 3 semester hours.*

1120 Human Ecology

A study of the interrelationships between humanity—social and cultural—and the Earth. The nature and impacts of population growth, industry and technological progress are emphasized. *Field trips may be included. Credit: 3 semester hours.*

1155 Language and Intercultural Communication

Communications as it affects and is affected by culture. Barriers to effectiveness. Competent intercultural communication in ethnic, intergenerational, gender, deaf subcultures and international settings. *Credit: 3 semester hours.*

2000 Anthropology of Human Rights

Examines human rights' history and practice in multiple international contexts using anthropology's holistic, comparative lens. Ethnographically investigates the political-moral facets of human rights. *Credit: 3 semester hours.*

2010 Introduction to Linguistics

An introduction to the fundamental principles of phonetics, phonology, morphology, syntax and semantics, with examples drawn from classical and modern languages. *Credit: 3 semester hours.*

2100 Medical Anthropology

Cross-cultural explorations of human health and disease. Review of methods and theories used in the practice of medical anthropology. Emphasis on global health disparities and social justice. *Credit: 3 semester hours.*

2200 Health, Food and Development

Critically evaluates through the lens of social justice the synergistic relationship between health, food, water, and environmental systems in the context of sustainable global development. *Credit: 3 semester hours.*

2220 Anthropology of Pandemics

Examines contemporary and historical pandemics using medical anthropology's holistic, comparative lens. Ethnographically investigates the global economic and environmental contexts of intensifying pandemic. *Credit: 3 semester hours.*

2330 The Anthropology of Music

Comparison of anthropological approaches to the study of music. Emphasis on theories of musical style in relation to local and global social and cultural processes. *Credit: 3 semester hours.*

2400 Anthropology of Development

Survey of anthropological approaches to development. Focus on competing cultural ideas about living standards and economic progress in relation to globalized development strategies. *Credit: 3 semester hours.*

2445 Caribbean Cultures and Identities

Anthropological introduction to the history and culture of the Caribbean. Emphasis on colonial history and legacy and the cultural diversity of the region. *Credit: 3 semester hours.*

2450 African Cultures

Anthropological overview of the cultures and traditions of Africa. Emphasis on the colonial legacy and cultural diversity of the African continent. *Credit: 3 semester hours.*

2510 Immersive Learning – Cultural Understanding

This class will use immersive role simulations to explore cultural approaches to a wide range temporal and international situations using primary texts. *Credit: 3 semester hours.*

2740 Anthropology of Religion

Religions and rituals of societies with primitive and transitional technologies. Study of the forms, functions, and meanings of belief systems and ritual practices. *Credit: 3 semester hours.*

2750 The North American Indian

The history and nature of American-Indian cultures: pre-history and archaeology; contemporary problems of the American Indian as a subculture in modern USA; world industrial expansion and the plight of the American Indian. *Credit: 3 semester hours.*

3100 Social Determinants of African American Health

Provides an overview of social determinants of health among African Americans, with an emphasis on solution-development and intervention. *Credit: 3 semester hours.*

3110 Looters & Poachers – Protecting Heritage

An interdisciplinary exploration of Legal and Ethical Issues and Challenges facing those who work in Archaeology or Environmental Science. *Credit: 3 semester hours.*

4953; 4954 Individual Guided Research

Guided theoretical or empirical research on an individual basis. Chair must give written approval. *Open only to anthropology majors and minors. Credit: 3 semester hours.*

4990 Anthropology Seminar

Prerequisite: ANT 1010, 1020. An integrated analysis of the field of anthropology and a survey of contemporary developments in research and theory. *Open only to students who have completed 15 credits in anthropology or are senior anthropology majors. Credit: 3 semester hours.*

Arabic (ARA)

1010 Arabic, Level I

This course develops basic communication skills in Arabic. Through a progressive use of the four skills, listening, speaking, reading, and writing, students develop oral and written proficiency at a limited level within the context of Arabic culture. *Credit: 3 semester hours.*

1020 Arabic, Level II

Prerequisite: ARA 1010. This course continues to develop basic communication skills in Arabic. Through a progressive use of the four skills, listening, speaking, reading, and writing, students develop oral and written proficiency at a limited level within the context of Arabic culture. *Credit: 3 semester hours.*

2030 Arabic, Level III

Prerequisite: ARA 1020. This course reviews the basic skills learned in ARA 1010 and 1020, and continues building the student's comprehension and speaking abilities through an active exchange of ideas on the part of the students and instructor within the context of the Arab culture. *Not open to native speakers except with the permission of the chair. Credit: 3 semester hours.*

Art (ART)

1000 The Creative Process

A study of creativity as it is manifested in the fine arts: the visual arts, music, theatre and dance. *Museum, theatre, concert visits required. Credit: 3 semester hours. Studio fee: \$50.*

1010 Craft as Visual Art

An introduction to basic craft skills for the general student. Projects may include simple printmaking and book construction, puppet making, fiber techniques and sculpture. Classroom application of these skills is emphasized. *Credit: 3 semester hours. Studio fee: \$50.*

1020 Art in New York (Mini-Course)

An on-site survey of New York City's galleries and museums. Students visit major New York art institutions and view their collections. *Credit: 3 semester hours. Museum fee: \$50.*

1030 The Visual Arts

An overview of art appreciation and history for the general student. Students study selected periods of art while learning the language of vision. *Museum visits required. Credit: 3 semester hours.*

1040 Creative Experiments

Explorations in creativity in the visual arts for the non-major. Drawing, collage, simple printmaking, clay and other two-and three-dimensional materials are used, at the discretion of the instructor, to develop the student's creative potential. *Credit: 3 semester hours. Studio fee: \$50.*

1050 Drawing Experiments

A course in creativity and the language of drawing for the non-major. Line, volume, perspective, space composition, proportion, value and movement are explored, as students confront the outer and inner worlds through the materials of drawing. *Credit: 3 semester hours. Studio fee: \$50.*

1060 Watercolor Workshop (Mini-Course)

An intensive course in the watercolor medium. Projects are structured to teach students visual sensitivity and creativity. *Applicable to major/minor sequences with written permission of the chair. Credit: 3 semester hours. Studio fee: \$50.*

1080 Photography Workshop (Mini-Course)

A workshop course designed to develop a student's ability with the use of the camera as a tool for self expression. *Applicable to major/minor sequences with written permission of the chair. Digital camera required. Credit: 3 semester hours. Studio fee: \$50.*

1085 Introduction to Photography

An introduction to the tools, techniques and creative aspects of the photographic medium. *For non-majors only. Digital camera required. Credit: 3 semester hours. Studio fee: \$50.*

1086 Intermediate Photography

Prerequisite: ART 1080 or 1085. An exploration of intermediate, techniques, aesthetics, criticism and processes of photography. *Digital camera required. Credit: 3 semester hours. Studio fee: \$50.*

1090 Jewelry Design

Principles of two-and three-dimensional design applied to jewelry. Students design ornaments in a variety of materials with emphasis given to cutting, hammering, soldering, braising and waxcasting of copper and brass. *Gallery and museum visits required. Credit: 3 semester hours. Studio fee: \$50.*

1095 Monuments of World Architecture

This course investigates sacred and secular architecture from around the globe, dating from the beginning of civilization to the present. *Credit: 3 semester hours.*

1105 Introduction to Graphic Design I

A studio introduction to the fundamentals of visual communication. Course includes formal application of design principles as well as exposure to tools, computer technology, methodology and visual analysis involved in the nature of message design. *Credit: 3 semester hours. Studio fee: \$50.*

1110 Foundation Design

A basic course in the elements of design and the principles of composition, pictorial space and structure as they relate to image making. *Credit: 3 semester hours. Studio fee: \$50.*

1115 Introduction to Graphic Design II

Prerequisite: ART 1105. Continued exploration and exposure to visual communication problems and principles. Experimental opportunities with symbol design, form and progression problems, typography and analysis of the visual language of representation and interpretation. *Credit: 3 semester hours. Studio fee: \$50.*

1120 Social Media for the Arts

Prerequisite: ART 1105 or permission of chair. Students will use social media to develop and disseminate creative projects working with a variety of platforms. *Credit: 3 semester hours.*

1130 Foundation Design II

This course extends the exploration of the fundamental language of the visual arts, begun in Foundation Design I, by emphasizing color, advanced illusions of space and movement, as well as introducing the principles of time. *Credit: 3 semester hours. Studio fee: \$50.*

1135 Digital Media I

Introductory course exploring the use of computers as a tool in the visual arts. Students will use computers to solve visual problems, and create digital images. *Credit: 3 semester hours. Studio fee: \$50.*

1200 Introduction to Drawing I

Black and white drawing materials, such as pencil, pen, brush and ink, conté, charcoal and chalks, are explored. Students are guided by problems in direct observation, linear and elliptical perspective, space, composition, modeling, and line quality. *Credit: 3 semester hours. Studio fee: \$50.*

1210 Introduction to Drawing II

Prerequisite: ART 1200. New drawing materials are introduced as students work toward exploring the visual world with increasing technical facility, emotional expressiveness and imagination. *Credit: 3 semester hours. Studio fee: \$50.*

1250 Italian Sketchbook (Abroad)

A studio course in drawing and watercolor techniques, using the architecture, landscape and people of Italy as subject. *Credit: 3 semester hours.*

1270 Illustration I

An introductory illustration course that provides students with a basic overview of visual perception; using materials, techniques and the creative application of the principles of art to illustrative problem solving. *Credit: 3 semester hours. Studio fee: \$50.*

1280 Digital Illustration

An introduction to working on illustration in a software-driven, media environment. Students will make narrative art developed initially using traditional methods and then take comprehensive drawings through to finish using the Adobe software environment. *Credit: 3 semester hours. Studio fee: \$50.*

1290 Introduction to Cartooning

A studio course in cartoon and caricature. Students receive experience in the use of materials and techniques in their creative application. *Credit: 3 semester hours. Studio fee: \$50.*

1510 Printmaking I

This course introduces the methodologies and concepts of relief and intaglio printmaking processes. These processes include linoleum and wood cut, found objects, dry point etching and variations of intaglio. *Credit: 3 semester hours. Studio fee: \$50.*

1610 Photography I

An introduction to the tools, techniques and creative aspects of the photographic medium. *DSLR camera recommended. Credit: 3 semester hours. Studio fee: \$50.*

1620 Photography II

Prerequisite: ART 1610 or 1085 with permission of chair. This course will emphasize the critical analysis and development of the student's personal photographic work, and the refinement of basic techniques. *DSLR camera recommended. Credit: 3 semester hours. Studio fee: \$50.*

1630 Advanced Digital Photography and Imaging

Prerequisite: ART 1105, or 1610, or 1085 with permission of chair. An in-depth look at the central features and functions of Adobe Photoshop and Lightroom. *Credit: 3 semester hours. Studio fee: \$50.*

1640 Introduction to Video Art

Prerequisite: ART 1115. Introduction to video as a fine art medium addressing historical and conceptual background as well as the techniques and tools for developing works. *Credit: 3 semester hours. Studio fee: \$50.*

1650 Analog Photography and Experimentation

An introduction to film and photographic darkroom printing and image-making processes. *Credit: 3 semester hours. Studio fee: \$50.*

1660 History of Photography

An historical survey of the evolution of photography from its beginnings to the present time. *Credit: 3 semester hours.*

1710; 1720 The History of Art I; II

This course surveys the history of painting, sculpture, and architecture from the prehistoric era to the twentieth century. *Credit: 3 semester hours per semester.*

1760 Reading About Art

Readings about art, including criticism, research, and interpretation employing art historical methods and theories. *Credit: 3 semester hours.*

1765 Writing About Art

A writing-based curriculum for art historians, artists and anyone who wants to write about art from any perspective with any level of experience. *Credit: 3 semester hours.*

1775A Art and Architecture in France (Abroad)

An overview of painting, sculpture, and architecture in rural France and the city of Paris from Roman Gaul through the 19th century. *Credit: 3 semester hours.*

1790A Survey of Art and Architecture in Italy (Abroad)

A comprehensive survey course in the history of the visual arts and architecture on the Italian peninsula from ancient times to the modern era. *Credit: 3 semester hours.*

1795 The City of Rome (Abroad)

A study of the city of Rome through its art, historical periods, literary and cultural movements, and physical structure. *Credit: 3 semester hours.*

1810 The Art of Film I

This course introduces the student to the study of film as an academic discipline by defining the basic components of film practice, their historical developments and their specific applications in

conveying meaning and ideological premises. *Credit: 3 semester hours.*

1820 The Art of Film II

This comparative study of the classical Hollywood cinema and modes of cinematic representation in other national cinemas and the avant-garde analyzes the cinema's relationship to culture's dominant ideological formations. *Credit: 3 semester hours.*

1830 Racism in Film

Examines some of the causes and effects of racism within culture and analyzes how films organize their formal properties into strategies that promote and/or reinforce racist values and belief systems. *Credit: 3 semester hours.*

1840 Sexism in Cinema and Television

This course analyzes the manner in which sexism functions as an ideological institution within American culture in and through cinema and television. *Credit: 3 semester hours.*

2025 Renaissance Art and Baroque Art in Europe

After briefly considering the Byzantine and Gothic legacy, the course will examine painting, sculpture, architecture, and to a lesser extent, crafts of Italy during the fourteenth, fifteenth, and sixteenth century. *Credit: 3 semester hours.*

2115 Graphic Production

Prerequisite: ART 1115. This course is designed to prepare the student for professional work as a graphic designer by giving the student a thorough understanding of packaging design and print production. Students will be confronted with a variety of design problems that will facilitate the understanding of the design process and the environmental and social ramifications of producing design outputs. *Credit: 3 semester hours. Studio fee: \$50.*

2120 Three-Dimensional Design

The principles of design as applied to three-dimensional structural form. Additive, subtractive, constructive and kinesthetic processes are explored. *Credit: 3 semester hours. Studio fee: \$50.*

2125 Typography

Prerequisite: ART 1115. In this course, students will explore the history, evolution, and use of type in design, through projects and class lectures. Emphasis will be placed on the use of typography in design studio projects. *Credit: 3 semester hours. Studio fee: \$50.*

2130 Motion Graphics

Prerequisite: ART 1115. The fundamentals of design in motion. Using video, still imagery and sound, students will study techniques of dubbing, assembling and inserting visuals to create graphics for television, the Web, and cinema title design. *Credit: 3 semester hours. Studio fee: \$50.*

2145 History of Visual Communications

A comprehensive overview of the history of humanity's effort to give visual form to ideas and concepts, to store knowledge and give order and clarity to information through design and illustration. *Credit: 3 semester hours.*

2205 Medieval Art and Architecture

Medieval art and architecture across nearly one thousand years, from 400 to 1300 CE. *Credit: 3 semester hours.*

2220 Anatomy and Figure Drawing I

The human skeleton and musculature are studied while drawing from the model. Basic proportions and movement of the figure in space are emphasized. *Credit: 3 semester hours. Studio fee: \$50.*

2230 Anatomy and Figure Drawing II

Prerequisite: ART 2220. The figure is studied in detail and used as the basis for experiments in space composition. Students work for emotional expressiveness as well as fluent accuracy and technical facility. *Credit: 3 semester hours. Studio fee: \$50.*

2240 Drawing for Design

This course is designed to introduce students to digital and analog drawing techniques used to create visuals for Illustration and Graphic Design. *Credit: 3 semester hours. Studio fee: \$50.*

2265 Global Sketchbook

Prerequisite: ART 1050 or ART 1200. An online drawing course that uses as its subject the local sites particular to each student regardless of global location. *Credit: 3 semester hours.*

2280 Illustration II

Prerequisite: ART 1270. A course in advanced illustration that expands upon concepts and techniques acquired in ART 1270. Emphasis on specialized application of illustrative skills: medical, technical, product, anthropological, natural science illustration and illustration as journalism. *Credit: 3 semester hours. Studio fee: \$50.*

2310 Painting I

An introduction to painting composition emphasizing the development of various technical skills. Projects are observation-based and employ perspective, color theory, and process. *Credit: 3 semester hours. Studio fee: \$50.*

2320 Painting II

Prerequisite: ART 1200, 2310. This course builds on the principles of Painting I encouraging investigation into painting's conceptual, material, and expressive possibilities. *Credit: 3 semester hours. Studio fee: \$50.*

2520 Printmaking II

This course introduces the methodologies and concepts of planographic methods of printmaking processes. These processes include stencils, screen-printing, transfer methods, monoprints and variety of newer adaptations, such as polyester plate lithography. *Credit: 3 semester hours. Studio fee: \$50.*

2650 The Photograph as Document

Prerequisite: ART 1610; 1080 or 1085 can also serve as prerequisite with permission of chair. Documentary approaches to photographic images that articulate issues of social justice and interpersonal issues. *The student must have access to a camera. DSLR camera recommended. Credit: 3 semester hours. Studio fee: \$50.*

2660 Urban Documents

A study of urban society, social justice and culture through photographic documentation and research. *Credit: 3 semester hours.*

2705 Ancient Egyptian and Mesopotamian Art

This course explores ancient Egyptian and Mesopotamian art and archaeology from approximately 3000 BCE to the Classical era. *Credit: 3 semester hours.*

2715 Classical Archaeology

The history of archaeology and its contribution to our knowledge about the ancient world, its history, and civilization. *Credit: 3 semester hours.*

2735 Art of Asia and the Pacific

A general survey of the art and architecture of Asia and the Pacific Islands from ancient prehistory to the industrial age. *Credit: 3 semester hours.*

2745 Art of Africa

A general introduction to the art and architecture of the African continent from ancient prehistory to present. *Credit: 3 semester hours.*

2750 Historical Modernism: 1848-1945

This survey course introduces students to methods of visual, critical, and art historical analysis, focusing on art works, artists and art movements, critical writing and art institutions of the twentieth century, treated in light of socio-political and cultural developments of this period. *Credit: 3 semester hours.*

2765 Islamic Art

This course explores Islamic art and architecture from around the globe, dating from the era of the seventh-century CE foundation of Islam to the present. *Credit: 3 semester hours.*

2780 The Art of Italian Film

Introduces students to the art form of Italian film through an approach that is both thematic and historical. *Credit: 3 semester hours.*

3010 Special Topics in Studio Art

Prerequisite: For junior or senior BFA majors. This course provides opportunities for students to engage in supervised projects that bring variable discipline-specific knowledge and methodological inquiry to bear on the practice of creating visual art. *Credit: 3 semester hours. Studio fee: \$50.*

3015 Special Topics in Design

Prerequisite: ART 2125. This course provides opportunities for students to engage in supervised projects that bring variable discipline-specific knowledge and methodological inquiry to bear on issues in the field of design. *Credit: 3 semester hours. Studio fee: \$50.*

3100 Women in the Arts

A survey of art history through the lens of gender studies, introducing students to an expanded canon of art history and to critical, theoretical, and historical writing on the subject of women in the arts. *Credit: 3 semester hours.*

3110 Professional Portfolio

A pre-professional course in which students with clarified career goals refine and perfect their portfolios by emphasizing the needs and concerns of target markets. Business skills, legal, contractual and taxation issues prepare the student for the professional world. *Credit: 3 semester hours. Studio fee: \$50.*

3115 Book Arts

Prerequisite: ART 1105, 1510. This course will introduce students to the book as an art form. Emphasis is on visual and conceptual structuring of the book that investigates the interplay between idea and form. Various methods of book construction will be taught along with basic printing techniques encompassing traditional and digital methods that focus on the sequencing of images. *Credit: 3 semester hours. Studio fee: \$50.*

3120 Interaction Design I

Prerequisite: ART 1105. This course is specifically structured to introduce art majors to the tools and visual language required for successful web design. *Credit: 3 semester hours. Studio fee: \$50.*

3125 Advanced Typography

Prerequisite: ART 2125. Complex typographical concerns exploring the use of type in a variety of medias, with emphasis on the development of a personal typographical problem solving. *Credit: 3 semester hours. Studio fee: \$50.*

3130 Interaction Design II

Prerequisite: ART 3120. This course is structured to introduce art majors to media rich Web design via coding and the integration of a variety of web tools. This design course allows students to add animation and interactivity to their web design projects. *Credit: 3 semester hours. Studio fee: \$50.*

3135 Junior Design

Prerequisite: ART 3125. This course will emphasize the formal visual and theoretical competencies and skills needed in design problem solving through advanced level studio projects. *Credit: 3 semester hours. Studio fee: \$50.*

3210 Fashion History

History of Western fashion, fashion designers, fashion culture, and dress practices from the late 19th to the late 20th century. *Credit: 3 semester hours.*

3215 Contemporary Fashion

History and current trends of Western fashion, fashion designers, fashion culture, and dress practices from the late 20th century to present. *Credit: 3 semester hours.*

3330 Acrylic Painting

Developing a focus in stylistic and content concerns, this investigation pursues a refinement of the student's directions in painting. *Credit: 3 semester hours. Studio fee: \$50.*

3340 Figurative Painting (Painting III)

Prerequisite: ART 2220. Developing a focus in figurative concerns, this investigation pursues a refinement of the student's directions in painting. *Credit: 3 semester hours. Studio fee: \$50.*

3350 Mixed Media Concerns

An advanced level of research pursuing high standards of studio creativity and application. *Credit: 3 semester hours. Studio fee: \$50.*

3355 3D Printing & Digital Manufacturing

Studio course providing hands on training in the field of 3D printing that surveys the impact of this disruptive technology within our society. *Credit: 3 semester hours. Studio fee: \$50.*

3560 Studio Seminar I

This studio course introduces students to methods for independent creative inquiry and artistic production. The course encourages thematically unified projects that are inventive and topical. *Credit: 3 semester hours.*

3565 The Visual Narrative

Prerequisite: Foundation courses within BFA major must be completed. This course will provide a creative and critical forum in which junior and senior level artists of diverse media can work on their own unique narrative projects simultaneously. *Credit: 3 semester hours.*

3570 Junior Sequential Art

Prerequisite: ART 2220, 2280. This course explores the planning, composition, and methods of narrative art and image creation, focusing on the development of image layout and methods that bring ideas from roughs to finished forms. *Credit: 3 semester hours.*

3720 Global Contemporary Art

This course introduces students to the conceptual, theoretical, and aesthetic themes/debate driving the current production of and discussion about contemporary art in a global context. *Credit: 3 semester hours.*

3725 Gender and Sexuality in Ancient Art

Gender, sexuality, and the body in the art of pre-Christian world cultures. *Credit: 3 semester hours.*

4000 Special Topics in Art History

A study of special themes and topics in art history from the twentieth century to the present. The course is intended to supplement regular course offerings in the Department of Art and Design. *Credit: 3 semester hours.*

4010 Supervised Research/Independent Study in Art History

Student-generated supervised research project that provides training in art historical research methods. *Credit: 3 semester hours.*

4020 Research Seminar in Art History

Training in art historical research methods to produce sophisticated research papers based on primary resources and current approaches in the discipline. *Credit: 3 semester hours.*

4112 Professional Practices for Fine Art and Illustration Majors

This course enhances students' knowledge of career opportunities and facilitates their preparation for the professional working world of the fine artist and illustrator. Students will develop communication skills, preparing artists statements, resumes and professional quality documentation of their work in order to apply for grants, graduate school, gallery/artists representation and other applications. *Credit: 3 semester hours.*

4115 Senior Sequential Art

Prerequisite: ART 3570. This course concentrates on the development, design, and execution of narrative art for publication across media. *Credit: 3 semester hours.*

4120 Senior Design

Prerequisite: ART 3135. The development of theories and practices for communication design exploring social responsibility, sustainability, ethics, client relations, originality and compensation are covered. *Credit: 3 semester hours. Studio fee: \$50.*

4125 Creative Thesis

Restricted registration. Open to senior B.F.A. degree candidates only, upon recommendation of the Chair and Faculty Review Committee. Prerequisite: Completion of 78 ART credits. A written statement of intention by each individual, followed by the creation of a major or related body of work in the area of concentration. *Credit: 9 semester hours. Studio fee: \$50.*

4909 Internship

Restricted registration. Open to senior B.F.A. degree candidates only, upon recommendation of the Chair and Faculty Review Committee. Prerequisite: Completion of all required studio art courses. Students are placed in design studios, advertising agencies, galleries, museums or other institutions concomitant with their career aspirations, where they gain practical experience in real situations under the supervision of working professionals. *Credit: 9 semester hours.*

4953 Independent Study

A semester of independent work in the student's major field of concentration. *Open to BFA candidates only. Permission of the department chair required. Credit: 3 semester hours.*

Asian Studies (ASC)

1250 Contemporary Japan

The political, economic, social and religious development of Japan from the end of World War II to the present. *Credit: 3 semester hours.*

1300 Introduction to the Civilizations of Asia

An introduction to the historical, political, economic and social forces that have shaped and continue to influence the modern civilization of Asia. *Credit: 3 semester hours.*

1330 Contemporary Korea

An introduction to modern Korea from WWII to the present, with special emphasis on the political, social and economic problems facing the divided Korean nation. *Credit: 3 semester hours.*

2610 Discovering China

Introduction to Chinese culture: institutions, philosophical trends, religion, art, literature, family/marriage, science and technology. *Credit: 3 semester hours.*

2710 Governments and Politics of the Far East

The political and institutional developments in the Far East, with major emphasis on China, Japan and Korea, their political backgrounds and present foreign relations. *Credit: 3 semester hours.*

2720 Governments and Politics of South and Southeast Asia

The political and institutional developments of South Asia, emphasizing India, Pakistan, Bangladesh, Sri Lanka and those of Southeast Asia, emphasizing Vietnam, Indonesia and the Philippines. *Credit: 3 semester hours.*

4953 Reading and Research

Restricted Registration. Open to ASC majors only. With permission of the Director, a student conducts research under the guidance of a faculty advisor. *Credit: 3 semester hours.*

Biology (BIO)

1000 Fundamentals of Biology, I: Introduction to Population Biology

Corequisite: BIO 1001L. Evolution, classification and taxonomy, population biology and ecology. *Lecture, 3 hours. Laboratory, 3 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

1050 Human Biology

Aspects of human anatomy and physiology. Included are anatomy, physiology, cell biology, genetics, histology, embryology, growth and development. *Not open to BIO majors. Credit: 3 semester hours.*

1060 Biology and Health

The body in health and disease and a knowledge of the contemporary advances in medicine and allied health fields. *Not open to BIO majors. Credit: 3 semester hours.*

1070 Environmental Biology

Human ecology and evolution; interrelations between humans and environment at the individual, population and ecosystem levels. *Not open to BIO majors. Credit: 3 semester hours.*

1360 Biology and Society

Environmental science and its relation to the human condition, changes in population, resources of the earth, chemicals in the environment and human health. *Not open to BIO majors. Credit: 3 semester hours.*

1600 Field Biology (Mini Course)

General principles of ecology and field sampling techniques to measure parameters that influence the distribution of organisms in various ecosystems. *Field trips required. Credit: 3 semester hours.*

2000 Fundamentals of Biology, II: Introduction to Cell and Molecular Biology

Prerequisite: CHE 1100 or 1110 or 1210 or 1310. Basic principles governing the activities of living organisms at the molecular and cellular levels. *Lecture, 3 hours. Credit: 3 semester hours.*

2001L Fundamentals of Biology II: Laboratory

Corequisite: BIO 2000. The principles and concepts of molecular and cell biology from a laboratory perspective. *Laboratory, 3 hours. Credit: 1 semester hour. Laboratory fee: \$100.*

2250 Introduction to Neurobiology

Prerequisite: BIO 2000, 3000. The nervous systems from invertebrate to mammals focusing primarily on the mechanisms by which the brain functions. *Credit: 3 semester hours.*

2270 Introduction to Virology

Prerequisite: BIO 2280. Introduction to the biology of viruses including structure, replication, disease causation, and host response to infection. *Lecture, 3 hours. Credit: 3 semester hours.*

2280 General Microbiology

Prerequisite: BIO 2000. Corequisite: BIO 2281L. Form and function in prokaryotic and eukaryotic microorganisms; microbial growth, metabolism, genetics, biochemistry and host defenses against microbial infection. *Lecture, 3 hours. Laboratory, 3 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

2290 Immune System in Human Disease

Prerequisite: BIO 2000 or consent of instructor. Introduction into the role of immune system in human diseases. *Lecture, 3 hours. Credit: 3 semester hours.*

2310 Plant Biology

Prerequisite: BIO 1000. Corequisite: BIO 2311L. The biology of plants: their morphology, evolution and classification. *Field trips required. Lecture, 3 hours. Laboratory, 4 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

2510 Aquatic Ecology

Prerequisite: BIO 1000 or consent of instructor. Corequisite: BIO 2511L. Introduction to major ecological principles of freshwater and marine habitats. *Field trips required. Lecture, 3 hours. Laboratory, 4 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

3000 Fundamentals of Biology III: Introduction to Anatomy and Physiology

Prerequisite: BIO 2000. Basic principles of anatomy, physiological function, and developmental processes. *Lecture, 3 hours. Credit: 3 semester hours.*

3001L Fundamentals of Biology III: Laboratory

Prerequisite: BIO 2001L. Corequisite: BIO 3000. Basic principles of anatomy, physiological function, and developmental processes from a laboratory perspective. *Laboratory, 3 hours. Credit: 1 semester hour. Laboratory fee: \$100.*

3100 Advanced Anatomy and Physiology I

Prerequisite: BIO 3000, 3001L. Structure of the integument, skeletal, muscular, central, and peripheral nervous systems. Anatomy of the endocrine, cardiovascular, respiratory, digestive, lymphatic, reproductive, and urinary systems. *Lecture, 3 hours. Credit: 3 semester hours.*

3270 Developmental Biology

Prerequisite: BIO 3000, 3001L. Corequisite: BIO 3271L. How the fertilized egg develops into a complex organism. Both descriptive embryology and experimental analysis of development are studied. *Lecture, 3 hours. Laboratory, 4 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

3300 Advanced Anatomy and Physiology II

Prerequisite: BIO 3100. Function of organ systems. Physiology of the muscular, endocrine, cardiovascular, respiratory, digestive, nervous, lymphatic, reproductive, and urinary systems. *Lecture, 3 hours. Credit: 3 semester hours.*

3301L Advanced Anatomy and Physiology Laboratory

Prerequisite: BIO 3100. Advanced principles of human anatomy and physiology in a laboratory setting. *Laboratory, 3 hours. Credit: 1 semester hour. Laboratory fee: \$100.*

3320 Genetics

Prerequisite: BIO 3000, 3001L. *Corequisite:* BIO 3321L, CHE 2240. The principles of genetics including the consideration of the nature of genetic material, its mode of transmission, modes of expression and mechanisms of gene action. *Lecture, 2 hours. Laboratory, 4 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

3370 Ecology

Prerequisite: BIO 1000 or consent of instructor. *Corequisite:* BIO 3371L. Ecological principles concerning animals and plants, with emphasis on group phenomena, especially the dynamics and evolution of ecosystems, communities and populations. *Field trips required. Lecture, 2 hours. Laboratory, 4 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

3390 Biochemistry

Prerequisite: BIO 3000 and CHE 2230 or CHE 2630. *Corequisite:* BIO 3391L. An introduction to the chemistry of biological compounds; the principles of enzymology; the metabolism of carbohydrates, lipids, proteins and nucleic acids and the control of metabolism. *Lecture, 3 hours. Laboratory, 3 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

3460 Concepts of Immunology

Prerequisite: BIO 3000, 3001L. *Corequisite:* BIO 3461L. Useful background: inorganic and organic chemistry, microbiology. An introduction to the organization and functions of the immune system along with basic experimental methodologies. *Lecture, 3 hours. Laboratory, 4 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

3470 Molecular and Cell Biology

Prerequisite: BIO 3000, 3001L, 3390. *Corequisite:* BIO 3471L. Molecular basis of gene expression in prokaryotic and eukaryotic cells, molecular principles of cell architecture and the cell cycle. *Lecture, 3 hours. Laboratory, 4 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

3490 Dental Preceptorship

Prerequisite: BIO 3000. Clinical observation in general dental practice and selected dental specialties. *Graded on a pass-fail basis only. Credit: 1 semester hour.*

4420 Inquiry-based Genetics

Prerequisite: BIO 2000, 2001L, and consent of instructor. *Corequisite:* BIO 4421L. Genetics with Project Lab in Development, emphasizing team-based participation in a developmental genetics research project. *Lecture, 3 hours. Laboratory, 3 hours. Credit: 4 semester hours. Laboratory fee: \$100.*

4953; 4954 Research in Biology

Prerequisite: 3.0 GPA, approval of the Undergraduate Educational Policy Committee and acceptance from a member of the department faculty for a research project. *Registration in both 4953 and 4954 simultaneously requires explicit approval of the UEPC.* Qualified juniors and seniors majoring in biology may undertake directed research in a chosen field of biology. *Laboratory and Seminars, 4 hours. Credit: 2 semester hours per semester. Laboratory fee: \$100.*

4955; 4956 Internship in Biology

Corequisite: CHE 1102R, CHE 9990. *Prerequisite:* 3.0 GPA, approval of the Undergraduate Educational Policy Committee and acceptance from an off-campus mentor for an internship project. *Registration for both BIO 4955 and BIO 4956 simultaneously requires explicit approval of the UEPC.* Directed off-campus research project in biology for qualified juniors and seniors majoring in biology. *Off-campus research work, 4 hours. Credit: 2 semester hours per semester.*

Chemistry (CHE)**1100 College Chemistry**

A study of some of the basic concepts of chemistry, with an emphasis on chemical stoichiometry and the relationship between the periodic table and the chemical and physical properties of elements and their compounds. A preparatory course for General Chemistry (CHE 1210) for students who have had no prior CHE course, do not pass, or do not take the placement exam. *Lecture, 2 hours. Recitation, 1 hour. Credit: 3 semester hours.*

1110; 1120; 1130 Introduction to General and Organic Chemistry

CHE 1110 is a prerequisite for CHE 1120. CHE 1120 is a prerequisite for CHE 1130. Corequisite: CHE 1111L and 1112R are corequisites for CHE 1110. CHE 1121L and 1122R are corequisites for CHE 1120. CHE 1131L and 1132R are corequisites for CHE 1130. An introduction to the principles and concepts of general and organic chemistry for students planning to pursue the Pharm.D. or P.A. degree in Pharmacy. *Course sequence does not satisfy the CHE requirements for BIO or CHE majors or Pre-Med students. Not applicable to the CHE minor sequence. Lecture, 3 hours. Recitation, 1.5 hours. Laboratory, 3.3 hours. Credit: 4 semester hours per semester. Laboratory fee: \$150 per semester.*

1210 General Chemistry I

Prerequisite: CHE 1100, passing the placement exam, or another prior CHE course. *Corequisite:* CHE 1211L, 1212R. Principles and concepts of chemistry with emphasis place on stoichiometry, atomic and molecular structure and inorganic chemical reactions. In the laboratory, emphasis is placed on quantitative measurements. *Lecture, 3 hours. Recitation, 1.5 hours. Laboratory, 3.3 hours. Credit: 5 semester hours. Laboratory fee: \$150.*

1220 General Chemistry II

Prerequisite: CHE 1110, or 1210, or 1310. *CHE 1221L, 1222R, CHE 9992.* Introductory physical chemistry focusing on equilibrium, kinetics, electrochemistry and properties of matter, including acids and bases. *Lecture, 3 hours. Recitation, 1.5 hours. Laboratory, 3.3 hours. Credit: 5 semester hours. Laboratory fee: \$150.*

1310 Advanced General Chemistry I

Prerequisite: At least one year of chemistry and one year of pre-calculus in high school. *CHE 1311L, CHE 1312, CHE 9991, MTH 1730.* Principles and concepts of chemistry emphasizing quantum mechanics, thermodynamics, physical properties of solids, liquids and gases, equilibria, acids and bases. *Lecture, 3 hours. Recitation, 1.5 hours. Credit: 3 semester hours.*

1311L Advanced General Chemistry I: Laboratory

Prerequisite: At least one year of chemistry in high school. *CHE 1310, CHE 1312, CHE 9991, MTH 1730.* A course whose primary focus is on the procedures and techniques used in the modern chemical laboratory and recitation for the lecture CHE 1310. *Laboratory, 3.3 hours. Credit: 2 semester hours. Laboratory fee: \$150.*

1320 Advanced General Chemistry II

Prerequisite: CHE 1310 or 1110 with consent of instructor or 1210 with consent of instructor. *Corequisite:* CHE 1321L, CHE 1322, CHE 9992. Principles and concepts of chemistry with a study of the elements and their compounds, including acid base chemistry, electrochemistry, transition metals, main group elements and nuclear chemistry. *Lecture, 3 hours. Recitation, 1.5 hours. Credit: 3 semester hours.*

1321L Advanced General Chemistry II: Laboratory

Corequisite: CHE 1320, CHE 1322, CHE 9992. A continuation of 1313L in which the primary focus is on the procedures and techniques used in the modern chemical laboratory and recitation for the lecture, CHE 1320. *Laboratory, 3.3 hours. Credit: 2 semester hours. Laboratory fee: \$150.*

2230; 2240 Organic Chemistry I; II

Prerequisite: CHE 1220 or 1320. *CHE 2230 or CHE 2630 is a prerequisite for CHE 2240. Corequisite: CHE 2231L is a corequisite for CHE 2230. CHE 2241L is a corequisite for CHE 2240.* An introduction to the fundamental principles of organic chemistry in which the synthesis, structure, and mechanisms of reactions of organic compounds are emphasized. *Lecture, 3 hours. Recitation, 1.5 hours. Laboratory, 4 hours. Credit: 5 semester hours per semester. Laboratory fee: \$150 per semester.*

2630; 2640 Advanced Organic Chemistry I; II

Prerequisite: CHE 1320 or 1220 with consent of instructor. *CHE 2630 or 2230 with consent of instructor is a prerequisite for CHE 2640. CHE 2631L, CHE 2632 are corequisites for CHE 2630. CHE 2641L, CHE 2642 are corequisites for CHE 2640.* A comprehensive treatment of the structure, bonding, and reactivity of organic molecules integrating an aggressive approach towards problem solving and pattern recognition. *Credit: 3 semester hours per semester.*

CHE 2631L; 2641L Advanced Organic Chemistry Laboratory I; II

Prerequisite: CHE 2633L is a prerequisite for CHE 2643L. *CHE 2630 is a corequisite for CHE 2631L. CHE 2640 is a corequisite for CHE 2641L. CHE 2640 is a corequisite for CHE 2643L.* Students learn techniques and mindset of a safe, practicing organic chemist. The experiments are data-driven investigations wherein students demonstrate observational, problem-solving, and critical thinking skills. *Laboratory, 4 hours. Credit: 2 semester hours per semester. Laboratory fee: \$150 per semester.*

3000 Chemistry Seminar

Prerequisite: CHE 2230 or 2630. Examination of ethical reasoning, responsible conduct in research, safety in the chemical laboratory, and the dissemination of scientific results. *Credit: 1 semester hour.*

3210 Microscopic Physical Chemistry

Prerequisite: CHE 2240 or 2640, and MTH 1740, and PHY 1620 or 1940. Introduction to quantum mechanics: application to atomic structure, theories of chemical bonding, atomic and molecular spectroscopy, and computational quantum chemistry. Introduction to statistical thermodynamics. *Credit:* 3 semester hours.

3220 Macroscopic Physical Chemistry

Prerequisite: CHE 2240 or 2640, and 3210 or consent of instructor, and MTH 1740, and PHY 1620 or 1940. *Corequisite:* CHE 3320. Thermodynamics of pure substances, mixtures and chemical reactions, with emphasis on processes under non-standard state conditions; chemical kinetics; connecting micro- and macroscopic perspectives via statistical mechanics. *Credit:* 3 semester hours.

3250 Quantitative Analysis

Prerequisite: CHE 1220 or 1320. *Corequisite:* CHE 3251L. Quantitative analytical methods in chemistry. Buffer systems; important polybasic acids; an introduction to spectrophotometric and electrochemical methods. *Lecture, 2 hours. Laboratory, 6 hours. Credit:* 4 semester hours. *Laboratory fee:* \$150.

3300 Instrumental Methods of Chemical Analysis

Prerequisite: CHE 3250, and 3220 or 3280. *Corequisite:* CHE 3301L. Basic electronics, principles of instrumentation, transducers for chemical systems, applications of instrumental measurements and techniques, including infrared, fluorescence, ultraviolet and nuclear magnetic resonance spectroscopy, gas chromatography, liquid chromatography, differential scanning calorimetry, electro-chemical methods. *Lecture, 2 hours. Laboratory, 6 hours. Credit:* 4 semester hours. *Laboratory fee:* \$150.

3320 Experimental Physical Chemistry

Corequisite: CHE 3321L, and 3220 or 3280. A laboratory course designed to correlate the abstract principles and equations of physical chemistry with the experimental observations upon which they are based. *Lecture, 1 hour. Laboratory, 6 hours. Credit:* 3 semester hours. *Laboratory fee:* \$150.

3330 Bioorganic Chemistry

Prerequisite: CHE 2240 or 2640. The application of the principles and tools of organic chemistry to the understanding of biological processes involving proteins, nucleic acids and carbohydrates. *Lecture, 3 hours. Credit:* 3 semester hours.

3340 Advanced Inorganic Chemistry

Prerequisite: CHE 3220 or 3280 and MTH 1740. Nuclear chemistry, atomic theory and periodic properties; covalent, ionic and metallic bonding; introduction to molecular symmetry and point groups; acid-base theories and transition metal chemistry. *Lecture, 3 hours. Credit:* 3 semester hours.

3360 Physical Chemistry for Life Sciences

Prerequisite: CHE 1220 or 1320; MTH 1740; PHY 1940. Review of thermodynamics, kinetics, quantum mechanics, and spectroscopy for students in the life sciences. *Credit:* 3 semester hours.

3390 Biochemistry

Prerequisite: BIO 3000, 3001L, and CHE 2230 or 2630, or consent of instructor. *Corequisite:* CHE 3391L. An introduction to the chemistry of biological compounds; the principles of enzymology; the metabolism of carbohydrates, lipids, proteins and nucleic acids and the control of metabolism. *Lecture, 3 hours. Laboratory, 3 hours. Credit:* 4 semester hours. *Laboratory fee:* \$150.

3420 Environmental Chemistry

Prerequisite: CHE 1220 or 1320. The chemical principles which govern environmental quality and environmental regulations are developed using specific examples such as global warming, ozone depletion, water quality and air pollution. *Credit:* 3 semester hours.

3431 Methods in Environmental Chemistry

Prerequisite: CHE 3420. Laboratory work providing hands-on experience with the techniques and instruments used in modern environmental investigations. *Credit:* 3 semester hours. *Laboratory fee:* \$150.

3440 Introduction to Inorganic Synthesis

Prerequisite: CHE 3340. *Corequisite:* CHE 3441L. An introduction to the techniques and methods utilized in the synthesis and characterization of inorganic compounds. *Laboratory, 5 hours. Credit:* 2 semester hours. *Laboratory fee:* \$150.

4351; 4361 Research Participation I; II

Prerequisite: CHE 2240 or 2640 and permission of the professor. Active participation in an ongoing research project of one of the faculty members. Affords first-hand experience in the scientific process of discovering and correlating new knowledge. Students taking these courses for either a major or a minor in chemistry must submit a written research report at the end. Research experience is highly recommended by the American Chemical Society. *Laboratory hours arranged. Credit:* 3 semester hours per semester. *Laboratory fee:* \$150 per semester.

4903 Chemistry Internship

Prerequisite: CHE 2240 or 2640, and consent of instructor. This course provides credit for a well-designed program of research or industrial participation in the chemical sciences. Students enrolled must spend at least 300 hours in academic research or in another activity associated directly with the chemical industry. Students are required to write a comprehensive, scholarly report covering all aspects of their work. *Credit:* 3 semester hours.

Chinese (CHI)

1010; 1020 Elementary Chinese

Prerequisite: CHI 1010 is a prerequisite for CHI 1020. The development of audio-lingual and reading skills through a study of the essentials of grammar, pronunciation and vocabulary. *Credit:* 3 semester hours per semester.

2030; 2040 Intermediate Chinese

Prerequisite: CHI 1020 or placement exam. CHI 2030 is a prerequisite for CHI 2040. A review of the essentials of grammar, extensive vocabulary building and development of writing skills. *Credit:* 3 semester hours per semester.

Classics (CLS)

1210 Classical Mythology

The study of myth, its nature and uses as manifested in the Greek and Western traditions. *No knowledge of classical language is required. Credit:* 3 semester hours.

1320 Greek and Latin Roots of English

An introduction to the Greek and Latin sources of English words, the principles of word formation and the appropriate usage of vocabulary. *No knowledge of Greek or Latin is required. Credit:* 3 semester hours.

1770 Classical Archaeology

The history of archaeology and its contribution to our knowledge about the ancient world, its history and civilization. *No knowledge of classical language is required. Credit:* 3 semester hours.

2600 Roman Law and Society

A study of the society and institutions of ancient Rome as revealed in Roman law. *No knowledge of Greek or Latin required. Credit:* 3 semester hours.

3605 Ancient Comedy

A survey of Greek and Roman comedy with all readings from ancient primary sources. *Credit:* 3 semester hours.

Communication Sciences and Disorders (CSD)

1710 Phonetics

A study of articulatory phonetics, broad and narrow transcription of American English (using the International Phonetic Alphabet); elements of dialects and accents. *Credit:* 3 semester hours.

1720 Anatomy and Physiology of the Speech System

The anatomy and physiology of breathing, phonatory, and articulatory systems as they are used in speech. Introduction to the nervous system, particularly as the controller of the speech mechanism. *Credit:* 3 semester hours.

1730 Language Acquisition

Prerequisite: CSD 1710 or permission of the department. Phonological, morphological, syntactic, semantic, pragmatic and cognitive aspects of language acquisition in the typically developing child are analyzed. *Credit:* 3 semester hours.

1740 Introduction to Hearing Science

Anatomy, physiology and neurophysiology of the hearing mechanisms; theories of hearing, acoustical characteristics to sound and their measurement. *Credit:* 3 semester hours.

1750 Speech Science

Prerequisite: CSD 1710, 1720, 1740, or permission of the department. The acoustic characteristics of speech and their relation to articulatory and perceptual events; introduction to speech perception. *Credit:* 3 semester hours.

1760 Introduction to Sign Language I

Introduction to the basic manual communication skills of the deaf, development of receptive and expressive skill necessary for proficiency in American Sign Language. *Not applicable to the speech-language pathology and audiology major. Credit:* 3 semester hours.

1820 Neurological Bases of Normal Human Communication and Balance

Prerequisite: CSD 1710, 1720, 1730, 1740, or permission of the department. Basic anatomy and physiology of the human neurological system as it pertains to typical communication processes and balance. *Credit:* 3 semester hours.

2710 Writing for Research and Clinical Practice

Prerequisite: CSD 1710, 1720, 1730, 1740, or permission of the department. Writing research, clinical and professional documents in communication sciences and disorders. *Credit:* 3 semester hours.

2750 Introduction to Audiology

Prerequisite: CSD 1740 or permission of the department. Measurement of hearing, including pure tone and speech audiometry, immittance testing, and special tests. Interpretation of audiograms and screening procedures and pathologies of the auditory system. *Credit:* 3 semester hours.

2760 Language Disorders across the Lifespan

Prerequisite: CSD 1710, 1720, 1730, 1740, or permission of the department. Disorders of language in pediatric, adolescent, and geriatric populations. *Credit:* 3 semester hours.

2770 Speech Disorders across the Lifespan

Prerequisite: CSD 1710, 1720, 1730, 1740, or permission of the department. Disorders of speech in pediatric, adolescent, and geriatric populations. *Credit:* 3 semester hours.

2775 Language-Based Learning Disabilities

Prerequisite: CSD 1730 or permission of the department. Language development, disorders, and their relation to learning and reading disabilities. Assessment and intervention strategies for young and older children, and for adolescents with language-based learning disabilities. *Credit:* 3 semester hours.

2780 Aural Rehabilitation for the Hearing Impaired Child

Prerequisite: CSD 1740, 2750, or permission of the department. The effect of hearing loss on the communication skills of children with hearing loss. Theoretical considerations in education, (re) habilitation, speech reading, language therapy, auditory training, and amplification systems. *Credit:* 3 semester hours.

2790 Introduction to Sign Language II

Prerequisite: CSD 1760, or permission of the department. The second level of American Sign Language (ASL II), providing increased knowledge of the gestural language used by deaf persons in the U.S. and Canada, except in Province of Quebec. Not applicable to the speech-language pathology and audiology major. *Credit:* 3 semester hours.

2810 Observation Skills in Speech-Language Pathology and Audiology

Prerequisite: CSD 2710, 2760, or 2770, or permission of the department. Objective identification and written evaluation of assessment and treatment processes in speech-language pathology and audiology; factors affecting service delivery; social implications of the therapeutic process. *Credit:* 3 semester hours.

4810 Clinical Practicum in Audiology

Prerequisite: CSD 1740, 2750, or permission of the department. Measurement of pure tone and speech thresholds, screening procedures, interpretation of audiograms, and special tests for audiological assessment of hearing loss. *Credit:* 3 semester hours.

4953 Independent Study

Study of specific topics in communication sciences and disorders under the guidance of a faculty member. Students must select a mentor for this study and the mentor must agree to the independent study. *Credit:* 3 semester hours.

4990 Seminar

Prerequisite: CSD 2710, 2760, or 2770, or permission of the department. Contemporary issues in communication sciences and disorders. Research tools for advanced study and professional growth; research design, tests and measurements, statistical analysis and computer applications. *Credit:* 3 semester hours.

Communication Studies (CMC)**1005 Interpersonal Communication for the Pharmacist**

The process of interpersonal communication and the skills necessary to communicate effectively with others within professional pharmacy settings. Restricted to College of Pharmacy and Health Sciences students. *Credit:* 3 semester hours.

1010 Debate in Global Contexts

Prerequisite: SPE 1000. Examines the role of formal debate as a worldwide competitive activity focusing on debate practice and the rules, procedures, and styles of several debate formats. *Credit:* 3 semester hours.

1015 Introduction to Interpersonal Communication

The process of interpersonal communication and the skills necessary to communicate effectively with others in all facets of everyday life, i.e., within family, social, educational and business situations. *Credit:* 3 semester hours.

1155 Intercultural Communication

Communication as it affects and is affected by culture. Barriers to effectiveness. Competent intercultural communication in ethnic, intergenerational, gender, deaf subcultures and international settings. *Credit:* 3 semester hours.

CMC 2010: Rhetoric of Sports

Examination of the rhetorical aspects of sports as a civic phenomenon, contributing to political discussions of public policy and conceptions of race, class, and gender. *Credit:* 3 semester hours.

2015 Nonverbal Communication

How nonverbal messages function to communicate culture, race, gender, and personality. Links nonverbal messages to impression formation and management, as well as relational and expressive communication. *Credit:* 3 semester hours.

2020 Persuasion

Prerequisite: SPE 1000. Theory and practice of persuasive communication, including the preparation and delivery of persuasive speeches. *Credit:* 3 semester hours.

2025 Organizational Communication

Research and theories of communication in corporate, service and non-profit organizations. Skills in interviewing, message design, leadership and committee work. *Credit:* 3 semester hours.

2030 Rhetoric of Popular Culture

In this course we will study the intersections between popular culture and rhetoric. *Credit:* 3 semester hours.

CMC 2050 Decision-Making Discussion

Theory of and practice in using discussion as a method of decision making. Discussion organization and leadership. *Credit:* 3 semester hours.

2060 Argumentation: Inquiry and Advocacy

Prerequisite: SPE 1000. The theory and practice of argument including the use of analysis, evidence, reasoning and organization in developing and defending an argumentative position. *Credit:* 3 semester hours.

2070 Business Communication

Prerequisite: SPE 1000. This course provides practice and instruction in business specific rhetorical situations. *Credit:* 3 semester hours.

2080 Media and Culture

Studying the relationship between media, communication, and culture; analyzing the operation of communication technologies and critically questioning the media. *Credit:* 3 semester hours.

2100 Women's Rhetoric

Examines texts produced by feminist movements around the globe through the lens of rhetorical theory and criticism. *Credit:* 3 semester hours.

2120 Race, Communication, and Identity

Race, Communication, and Identity explores how communication creates, maintains, and transforms racial identities within macro and micro contexts and examines race-related social justice issues. *Credit:* 3 semester hours.

2150 Communication in Close Relationships

Introduces students to both classic and cutting edge theory and research dealing with communication in close relationships, including relationship formation, romantic conflict, relationship maintenance, jealousy, romantic termination and other topics in the dark side of communication. *Credit:* 3 semester hours.

2170 Environmental Communication

Explores the role of communication in emerging and established ideologies and practices of environmental communication including climate change, conservation, and sustainability. *Credit:* 3 semester hours.

2200 Political Communication

Examines the performance of politics through communicative practices, including the study of campaign discourse, communication technology, media influence, and political styles in political campaigns. *Credit:* 3 semester hours.

2225 Communicative Leadership Through Conflict Management

Explores the role of communication in emerging and established ideologies in practices of organizational leadership and conflict management. *Credit: 3 semester hours.*

2250 Crisis Communication

Examines the communicative concerns and rhetorical strategies involved in crafting ethical and effective responses—to diverse publics, online and off—before, during, and after crisis. *Credit: 3 semester hours.*

3120 The Free Speech Tradition in the United States

A rhetorical and argumentative investigation into the meaning of the Free Speech Tradition within the United States. *Credit: 3 semester hours.*

3130 Foundations of Rhetorical Theory

Prerequisite: SPE 1000. An examination of the principal developments in rhetoric from the Sophists to Augustine. *Credit: 3 semester hours.*

3140 Rhetorical Criticism

Theory and practice of rhetorical criticism of historical and contemporary communication texts, including speeches, letters, essays, editorials, and persuasive campaigns. *Credit: 3 semester hours.*

3150 Rhetoric of Social Movements

Survey of rhetorical documents associated with American movements, groups, and persons dedicated to social change. *Credit: 3 semester hours.*

3160 Modern Rhetorical Theory

Examination of the development of rhetorical theory in modern history, including modern and postmodern thinkers and communicative issues in modern and postmodern society. *Credit: 3 semester hours.*

3190 Rhetoric of Religion

The role of religious discourse in relation to the rhetorical tradition and contemporary society. The study of the intersection of religious rhetoric and socio-political issues. *Credit: 3 semester hours.*

4000 Special Topics Seminar

Restricted registration. Research and discussion on select topics and problems. *Credit: 3 semester hours.*

4903 Internship in Speech Communication

Restricted registration. Fieldwork (eight hours per week) with practical application in communication or theatre under faculty and professional supervision. *Credit: 3 semester hours.*

4906 Internship in Speech Communication

Restricted registration. Fieldwork (sixteen hours per week) with practical application in communication or theatre under faculty and professional supervision. *Credit: 6 semester hours.*

4953 Independent Study

Restricted registration. Independent research in an area of the student's own selection under the general advisement of a faculty member. *Credit: 3 semester hours.*

4990 Senior Seminar

Survey of contemporary communication research methods from a variety of theoretical perspectives. Recommended for juniors and seniors. *Credit: 3 semester hours.*

Computer Science (CSC)

1000 Introduction to Computing for the Liberal Arts

Computers for the non-specialist with an emphasis on microcomputers. Hardware and software principles; elementary programming in a current language; computer applications involving word processing, spreadsheets, database; personal and social impact of computers. *Not applicable to the CSC major sequence. Credit: 3 semester hours.*

1030 Machine Learning for Everyone

Beginners course in Machine Learning, containing an introduction to the Python programming language. *Credit: 3 semester hours.*

1380 Introduction to Computer and Data Science

Programming and algorithmic thinking. Languages include Python, R. Problem sets inspired by biology, chemistry, and neuroscience. *Credit: 3 semester hours.*

1390 Computer Programming with Calculus Application

Prerequisite: MTH 1730. Corequisite: MTH 1740. Development of basic programming skills with an emphasis on calculus-related algorithms. Introduction to numerical analysis. *Credit: 3 semester hours.*

1400 Computer Science I

Fundamentals of computing; Von Neumann architecture; program design, testing, correctness; object-oriented programming using the C++ programming language; program efficiency. *Laboratory, 1 hour. Credit: 3 semester hours.*

1410 Computer Science II

Prerequisite: CSC 1400. Object-oriented programming, problem correctness, algorithm analysis developed further; introduction to data structures-linked lists, stacks, queues, trees and graphs; overview of operating systems, distributed computing and databases. *Laboratory, 1 hour. Credit: 3 semester hours.*

1470 Advanced Programming

Prerequisite: CSC 1410. Design and implementation of large-scale systems. Documentation, testing and debugging techniques. Top-down structured programming and object-oriented programming and design. *Credit: 3 semester hours.*

2370 Data Communications

Prerequisite: MTH 1740. Overview of data communications, networking, communications architecture and standards, data transmission, data encoding; digital data communications techniques; data link control; networking techniques; packet switching; protocols and architecture; and selected topics. *Credit: 3 semester hours.*

2420 Logical Design and Computer Architecture

Prerequisite: CSC 1410. Number systems and codes; number representation and arithmetic. Basic logic design; combinational and sequential circuits; Boolean algebra; minimization techniques for completely and incompletely specified problems; introduction to computer architecture. *Credit: 3 semester hours.*

2430 Computer Organization

Prerequisite: CSC 1410. Machine and assembly languages; discussion of systems programs, including compilers, assemblers, loaders, editors and interpreters. *Credit: 3 semester hours.*

2450 Programming Languages

Prerequisite: CSC 1410. Formal concepts and structures of programming languages with practice in different types of languages. *Credit: 3 semester hours. Credit: 3 semester hours.*

2470 Operating Systems

Prerequisite: CSC 1410. Aspects of operating systems; memory managements and resource allocation, virtual memory, paging and segmentation, multiprogramming, scheduling, interrupt handling, thrashing, deadlock detection and prevention, and cache memory. *Credit: 3 semester hours.*

2480 Algorithms and Data Structures

Prerequisite: CSC 1410. Data and its representation; advanced treatment of the properties, applications and implementation of linear and non-linear linked links, strings, arrays, stacks, queues, trees, graphs, algorithms for sorting, searching and hashing. Applications. *Credit: 3 semester hours.*

2490 Databases

Prerequisite: CSC 1380 or 1400. Rational, hierarchical and network data base system, file organization and access techniques; query and update languages; data security and integrity. *Credit: 3 semester hours.*

2500 Data Security and Cryptography

Prerequisite: CSC 1380 or 1390 or 1400, or permission of chair. Basics of and history of cryptography; main ideas, methods, and standard approaches to data security and cryptography. Elements of number theory and its applications to cryptography. *Credit: 3 semester hours.*

2510 Foundations of Data Science

Prerequisite: MTH 1220 or 1260 or 1320 or 1730. Dimensionality reduction; singular value decomposition; optimization; sampling; random graphs; random walks; Markov chains; spectral graph theory; clustering. *Credit: 3 semester hours.*

2580 Design and Analysis of Algorithms

Prerequisite: MTH 1220 or 1260 or 1320 or 1730 or permission of chair. Study of the notion of an algorithm, its running time and complexity; general approaches to algorithm design; efficient algorithms for a variety of problems. *Credit: 3 semester hours.*

2590 Introduction to Machine Learning

Prerequisite: One calculus course (MTH 1220, 1260, 1320, or 1730) and one computing course (CSC 1030, 1380, 1390, or 1400) or permission of chair. Machine learning concepts, techniques, algorithms such as classification, linear regression, and emerging topics such as boosting, SVM, Bayesian networks, reinforcement and deep learning. *Credit:* 3 semester hours.

2600 Machine Learning, Neural Networks, and Deep Learning

Prerequisite: One calculus course (MTH 1009, 1220, 1260, 1320, or 1730). Neural Networks and Deep Learning concepts, techniques, algorithms such as perceptron, Neural Networks (NN), backpropagation, convolution NN, recursive NN, autoencoders, deep reinforcement learning. *Credit:* 3 semester hours.

CSC 2630 Introduction to Artificial Intelligence

Prerequisites: Any first calculus course (MTH 1009 or MTH 1220 or MTH 1260 or MTH 1320 or MTH 1730). Overview of concepts, techniques, and algorithms in artificial intelligence, like search, constraint satisfaction, and recent topics such as reinforcement and deep learning. *Credit:* 3 semester hours.

2720 Computability and Automata

Prerequisite: One calculus course (MTH 1009, 1220, 1260, 1320, or 1730). Models of computation, notions of languages, finite state automata, regular languages, context-free languages, pushdown automata. Turing machines, time complexity, NP-completeness. *Credit:* 3 semester hours.

4903 Internship in Computer Science

Restricted registration. Fieldwork (eight hours per week) where students are afforded the opportunity of working in the computer industry under the supervision and counseling of a faculty member. *Credit:* 3 semester hours.

4906 Internship in Computer Science

Restricted registration. Fieldwork (sixteen hours per week) where students are afforded the opportunity of working in the computer industry under the supervision and counseling of a faculty member. *Credit:* 6 semester hours.

4980 Independent Research in Machine Learning and Artificial Intelligence

Prerequisites: MTH 1740, 3320 or equivalent, and six semester hours in MTH or CSC, or approval of chair. Qualified Mathematics /Computing majors, Mathematics minors, Data Science minors, interdisciplinary students undertake directed research in a chosen field of Machine Learning and Artificial Intelligence. *Open to students with at least 3.0 overall GPA. Credit:* 1-3 semester hours.

4990 Seminar in Computer Science

Restricted registration. Reading, discussion, and investigation of special topics in computer science. *Credit:* 3 or 4 semester hours.

Critical Race and Ethnic Studies (CRES)**1000 Introduction to Critical Race and Ethnic Studies**

Students learn critical race and ethnic studies perspectives; analysis of racial/ethnic group formation, discrimination, stratification as central to global forms of modernity. *Credit:* 3 semester hours.

2000 Methods in Critical Race and Ethnic Studies

Examination of methodologies and strategies for including knowledges of Indigenous, Latin American, African, and Asian peoples and their diasporas. *Credit:* 3 semester hours.

3000 Anti-Blackness Around the Globe

Prerequisite: CRES 1000 or permission of instructor. Examines ideologies of Blackness and anti-Blackness across the globe, their spread through social movements and their impact on racial and ethnic formations. *Credit:* 3 semester hours.

3050 Comparative Racializations: Blackness, Indigeneity, Asianness, and Latinidad

Prerequisite: CRES 1000. Provides comparative analyses of race and ethnic group formation as central to structures of gender, sexuality, class, and colonialism through the perspective of critical race and ethnic studies. *Credit:* 3 semester hours.

3410 Racial Capitalism and Political Economy

Covers origins, social consequences, and political implications of contemporary economic systems; and the critical thought and activism of modernity's structurally marginalized populations. *Credit:* 3 semester hours.

3510 BIPOC Feminist Science and Technology Studies

Introduction to field of feminist science and technology studies through BIPOC (Black, Indigenous, People of Color) and Global South feminist scholars. *Credit:* 3 semester hours.

4995 Capstone Seminar in Critical Race and Ethnic Studies

Students learn critical race and ethnic studies perspectives; and analyses of racial/ethnic group formation, discrimination, and stratification as central to global forms of modernity. *Credit:* 3 semester hours.

4999 Internship/Externship

Prerequisite: CRES 1000, 2000. Students develop deeper understandings of structural racism, associated forms of oppression, and elements of racial justice through participation in a social/racial justice organization or institution. *Credit:* 3 semester hours.

English (ENG)**1040 Writing for Business**

An exploration of common professional forms of writing and communication, including critical responses to professional and business-oriented readings. *Credit:* 3 semester hours.

1100 Literature in a Global Context

Students use the methods of cultural studies and research of American literature, film, and media to gain new understandings of race. *Credit:* 3 semester

hours.

2050 First-Year Seminar in English

Introduction to the major for first-year English or undecided majors, offering a variety of literary readings, diverse writing assignments, and advisement in the major's requirements. *Credit:* 3 semester hours.

2060 Introduction to American Literature

A study of various texts, authors, genres, and themes in American literature and culture. May vary according to instructor interest or specialization. *May count toward ENG pre-1900 requirement depending on approval of the instructor and chairperson. Credit:* 3 semester hours.

2100 Race and American Literature and Culture

This course is devoted to the study of the relationship between literature and culture focusing on literary texts connected by common aesthetic, generic, or historical themes. *Credit:* 3 semester hours.

2150 Literature and Culture

This course is devoted to the relationship between literature and culture, focusing on literary texts connected by common aesthetic, generic, or historical themes. *Credit:* 3 semester hours.

2200 Reading and Writing for the English Major

A foundation course introducing majors to disciplinary practices in English. Restricted to English majors and minors. Strongly suggested as first course in the major, not including the university core course, ENG 1100. *Credit:* 3 semester hours.

2210 Introduction to British Literature

A study of various texts, authors, genres, and themes in British literature and culture. May vary according to instructor interest or specialization. *May count toward ENG pre-1900 requirement depending on approval of the instructor and chairperson. Credit:* 3 semester hours.

2300 Topics in Theory

An introduction to critical theory, with emphasis on contemporary literary theory and its applications in the world. Topics may reflect instructor specialization or interests. *Credit:* 3 semester hours.

2400 English, Language Ideologies, and Power

Reading and analysis of scholarly works addressing linguistic diversity, language ideologies, and raciolinguistics, and English with emphasis on local (New York City) and global contexts. *Credit:* 3 semester hours.

2720 Introduction to Creative Writing

An introduction to creative writing, this class will allow students to study poetry, fiction, and nonfiction, from the point of view of the writer. *Credit:* 3 semester hours.

2750 Women and Literature

An exploration of authors and artists who think critically about gender and its relationship to creativity, identity, and politics in both historical and contemporary moments. *Credit:* 3 semester hours.

2795 Literature and Illness

Reading and analysis of literary texts that depict the boundaries and connections between health and illness, the well and the sick. *Credit: 3 semester hours.*

3000 Medieval Romance

An introduction to the genre of medieval romance, one of the most important narrative forms in later medieval literature. *Credit: 3 semester hours.*

3100 Medieval English Literature

Major literary works from Beowulf to the mid-15th century. *Credit: 3 semester hours.*

3110 Chaucer

A study of the poetry of Chaucer, with an emphasis on The Canterbury Tales. *Credit: 3 semester hours.*

3130 Shakespeare: The Elizabethan Plays

A close study of Shakespeare's plays representative of the genres of history, comedy and tragedy and expressive of Shakespeare's early idealism. *Credit: 3 semester hours.*

3140 Shakespeare: The Jacobean Plays

A close study of Shakespeare's plays representative of the genres of tragedy, problem comedy and romance, and expressive of Shakespeare's mature vision. *Credit: 3 semester hours.*

3170 Milton

A study of Milton's poetry and selected prose. *Credit: 3 semester hours.*

3190 Special Topics in Medieval and Renaissance English Literature

A study in special themes and topics in literature and cultural studies, from the beginning of the Middle Ages through Milton and the Puritan revolution. *Credit: 3 semester hours.*

3200 Eighteenth-Century English Literature

A survey of authors, genres, media, and geographies, focused through one or more of the pressing questions that structured the varied textual culture of 1660-1820. *Credit: 3 semester hours.*

3220 Eighteenth-Century Novel

A study of the novel genre and the literary, cultural, and global contexts of its emergence during the 18th century. *Credit: 3 semester hours.*

3230 Nineteenth-Century Novel

A study of the various genres of Romantic and Victorian-era prose fiction, including realism, Gothic, bildungsroman, condition of England, and sensation novels; crime, detective, and science fiction. *Credit: 3 semester hours.*

3240 Romantic Literature

A study of the major figures of the first and second Romantic generations—Blake, Godwin, Wollstonecraft, Wordsworth, Coleridge, Austen, Byron, the Shelleys, Keats—with readings in poetry, prose fiction, journalism, correspondence and literary criticism. *Credit: 3 semester hours.*

3250 Victorian Literature

Victorian poetry, drama, non-fiction, and novel; the culture of the Victorian age (1832-1901) and its enormous social changes. *Credit: 3 semester hours.*

3260 Women Writers of the Nineteenth Century

Nineteenth-century literature written by women—novels, poetry, social criticism, drama, and other forms of non-fiction prose—in their political and cultural contexts. *Credit: 3 semester hours.*

3280 Early English Feminisms

Literary, philosophical, theological, and abolitionist texts on the status of women in Britain and its colonies from the late 17th through early 19th centuries. *Credit: 3 semester hours.*

3290 Special Topics in 18th- and 19th-Century English Literature

A study of special themes and topics in literature and cultural studies, from the early modern period to the threshold of the 20th century (1660–1900). *Credit: 3 semester hours.*

3310 Antebellum American Literature

A study of pre-Civil War American literature, typically focusing on social reform and the antislavery movement. *Credit: 3 semester hours.*

3330 African-American Literature to 1900

A study of African-American literature to 1900, using texts such as slave and travel narratives, fiction, drama and poetry, as well as texts drawn from other disciplines. *Credit: 3 semester hours.*

3350 American Women Writers to 1900

Literature written by women—novels, poetry, social criticism, drama, and other forms of nonfiction prose—in their political and cultural contexts. *Credit: 3 semester hours.*

3375 Environmental Literature

Examines early American writing about nature and the environment. *Credit: 3 semester hours.*

3390 Special Topics in American Literature to 1900

A study of special themes and topics in literature and culture, from the colonial period to 1900. *Credit: 3 semester hours.*

3400 Modernist Literature

A study of the emergence of modernism in the literature and culture of the early 20th century, with an emphasis on the conception of the "modern" as new and distinct from the past and its insistence on experimentation. *Credit: 3 semester hours.*

3410 Modern Fiction

A study of the development of the novel and prose fiction in early 20th-century British and American literature, including such figures as Conrad, Joyce, Woolf, Hemingway, Fitzgerald and Faulkner. *Credit: 3 semester hours.*

3420 Contemporary Fiction

A study of the development of the novel and prose fiction since World War II in America and Great Britain, with an emphasis on the emergence of postmodernism in fiction. *Credit: 3 semester hours.*

3430 Modern Poetry

A study of the great modernist poets of the early 20th century in America and Great Britain, including the works of Yeats, Eliot, Pound, Stevens, Williams and Auden. *Credit: 3 semester hours.*

3440 Contemporary Poetry

Post-World War II poetry and its schools, theoretical underpinnings, modernist and alternative roots, and cultural and historical relevance. *Credit: 3 semester hours.*

3465 Young Adult Literature

Reading and analysis of literary texts from roughly 1950 to the present oriented towards adolescent (12-18 year old) readers. *Credit: 3 semester hours.*

3470 20th-Century African-American Literature

Writers, movements and issues of 20th-century African-American literature, with an emphasis on the relation of literary to oral traditions. *Credit: 3 semester hours.*

3475 African American Women's Rhetorics

This course examines multiple persuasive discourses—written, oral, and visual—of black women in the United States. *Credit: 3 semester hours.*

3500 Classical Literature

A study of Western writers from Homer and the Greek tragedians through the Roman period, ending with St. Augustine. *Credit: 3 semester hours.*

3520 Modern World Literature

Writers in translation from the broad expanse of world literature, focusing on the period from 1776 to 1900, with emphasis on revolutions, empire, and literary realism. *Credit: 3 semester hours.*

3530 The Gothic

An introduction to the history and cultural significance of Gothic genres, forms, styles, and recurrent horrors from the Romantic origins of the Gothic through its modernist and postmodernist representations. *Credit: 3 semester hours.*

3560 American Ethnic Literatures

A study of race, literature, and culture in works by African American, Asian American, Native American, and Chicana writers like Toni Morrison, Maxine Hong Kingston, Leslie Marmon Silko, Gloria Anzaldua, Chang-rae Lee, and others. *Credit: 3 semester hours.*

3570 Women and Literature

An exploration of the categories "women" and "literature," encompassing texts, performances, and media by authors and artists who think critically about gender and its relationship to creativity, identity, and politics. *Credit: 3 semester hours.*

3580 Decolonial Literature

Introduction to poetry, fiction, and creative nonfiction from the formerly colonized nations of Africa, South Asia, and the Caribbean, with an emphasis on how writers deploy voice, symbolism, form, and plot in order to recognize and move past the legacy of colonialism. *Credit: 3 semester hours.*

3590 Literature and the Other Arts

Selected world, English, and/or American literary texts evaluated in relation to works of music, painting, sculpture, dance, theater, writings in the sciences and humanities, fashion, film, performance, and/or other arts. *Credit: 3 semester hours.*

3600 Classical Epic in Translation

An examination of Greek and Roman epics from its oral origins in Homer, through its Alexandrian incarnation in Apollonius of Rhodes, to its use as political instrument in Virgil. *No knowledge of Greek or Latin required. Credit: 3 semester hours.*

3605 Ancient Comedy in Translation

Selected plays of the ancient Greek and Roman playwrights: Menander, Aristophanes, Plautus, and Terence. *Credit: 3 semester hours.*

3610 Classical Drama in Translation

Readings and discussions of the representative plays of the classical Greek and Roman theatre. *No knowledge of Greek or Latin required. Credit: 3 semester hours.*

3610 Classics and Class

Compares the classical curriculum to critical reactions to it at various periods using both primary and secondary sources. *Credit: 3 semester hours.*

3620 Classical Mythology in Translation

A study through literary texts of mythology from Greek and Roman culture. *No knowledge of Greek or Latin required. Credit: 3 semester hours.*

3630 Utopian Fiction

This course introduces intermediate and advanced undergraduates to a range of utopian fiction (and occasional other genres) from the early modern period to the present, depicting ideal societies. *Credit: 3 semester hours.*

3640 Vernacular Literature

Fiction, poetry, and drama written in various forms of non-standard English. *Credit: 3 semester hours.*

3645 Comparative Migration Literature

iction, poetry, drama, and literary nonfiction depicting the process and outcomes of relocating to a new country. *Credit: 3 semester hours.*

3650 Caribbean Literature

Study of the fiction, poetry, essays, and drama of the Caribbean and the Caribbean Diaspora. *Credit: 3 semester hours.*

3660 Race, Colonialism, and the Environment

Reading and analysis of literary texts that depict the impact of slavery, racial capitalism, colonialism, and imperialism on natural environments as well as human experience of the environment. *Credit: 3 semester hours.*

3680 Reading the Body: Race, Gender, Text

Poststructuralist theories of gender, race, the text and the body. *Credit: 3 semester hours.*

3690 Special Topics in Literary and Cultural Studies

A study of special themes and topics in cultural studies. Topics may reflect instructor specialization or interests. *Credit: 3 semester hours.*

3700 The Teaching of Writing

An introduction to composition theory and pedagogy with an emphasis on the multiple contexts in which literacies and writing are used, practiced, learned, and taught. *Credit: 3 semester hours.*

3710 Creative Writing Across Genres

A course designed to help develop creative writing skills, with emphasis on traditional and contemporary forms of poetry, fiction, nonfiction, and drama. *Credit: 3 semester hours.*

3720 Creative Nonfiction Workshop

An introduction to writing various forms of nonfiction. *Credit: 3 semester hours.*

3730 Poetry Workshop: Expression and Experiment

Writing workshop on poetry and poetics. *Credit: 3 semester hours.*

3740 Fiction Writing Workshop

Writing workshop on fiction and fiction theory. *Credit: 3 semester hours.*

3750 Literary Journalism

Students will practice fieldwork and report on social, political, and cultural topics that matter to them. *Credit: 3 semester hours.*

3760 Writing as Social Action

Students engage in creative work that draws direct influence from social action readings. *Credit: 3 semester hours.*

3770 Writing the Short Story

This creative writing class focuses on the short story, its history, and its possibilities. *Credit: 3 semester hours.*

3780 Poetry Workshop: Expansive Practices

This creative writing course focuses on generative, extended poetry practices in a language art studio setting. *Credit: 3 semester hours.*

3790 Professional Writing

A class exploring the literacies, writing practices, and texts of professionals in varied contexts and settings. *Credit: 3 semester hours.*

3795 Writing about Science

This class is for writers interested in science and scientists interested in writing. Students will study, produce, and critique writing by and about the sciences. *Credit: 3 semester hours.*

3830 Topics in Film Authors

A study of films of a single director, and the intersection of those films with the director's historical, cultural, and industrial conditions. *Credit: 3 semester hours.*

3890 Topics in Film Genre

A study of the formal similarities, stylistic and narrative patterns, and mythic values of a particular generic category of film production. *Credit: 3 semester hours.*

3900 Modern Rhetorical Theory

Examination of the development of rhetorical theory from the beginning of the twentieth century to the present including discussion of important thinkers, movements, and issues. *Credit: 3 semester hours.*

4903 Internship in English and Related Fields

Restricted registration. Internship opportunities (8 hours per week) for English majors to gain professional experiences and to develop professional networks. Students may explore an array of fields and industries that may set the foundation for future careers. *Credit: 3 semester hours.*

4906 Internship in English and Related Fields

Restricted registration. Internship opportunities (16 hours per week) for English majors to gain professional experiences and to develop professional networks. Students may explore an array of fields and industries that may set the foundation for future careers. *Credit: 6 semester hours.*

4953 Independent Study

Restricted registration. Independent research in an area of the student's own selection under the advisement of a faculty member. *Credit: 3 semester hours.*

4991 Capstone Seminar in British Literature and Culture

Prerequisite: ENG 2200, 2300. This course invites students bring together the methodologies, skills, and knowledge they developed in the major. Topics may reflect instructor specialization or interests. *Students may take more than one seminar. Students are strongly advised to take the capstone seminar in their final year of study. Credit: 3 semester hours.*

4992 Capstone Seminar in American Literature and Culture

Prerequisite: ENG 2200, 2300. This course invites students bring together the methodologies, skills, and knowledge they developed in the major. Topics may reflect instructor specialization or interests. *Students may take more than one seminar. Students are strongly advised to take the capstone seminar in their final year of study. Credit: 3 semester hours.*

4993 Capstone Seminar in Special Authors, Methods, or Texts

Prerequisite: ENG 2200, 2300. This course invites students bring together the methodologies, skills, and knowledge they developed in the major. Topics may reflect instructor specialization or interests. *Students may take more than one seminar. Students are strongly advised to take the capstone seminar in their final year of study. Credit: 3 semester hours.*

4994 Capstone Seminar in Themes/Genres

Prerequisite: ENG 2200, 2300. This course invites students bring together the methodologies, skills, and knowledge they developed in the major. Topics may reflect instructor specialization or interests. *Students may take more than one seminar. Students are strongly advised to take the capstone seminar in their final year of study. Credit: 3 semester hours.*

English as a Second Language, Speaking (ESLS)**1200 Oral/Aural Communication: Intermediate Level Listening/Speaking**

Prerequisite: Intermediate level on-site test scores. This course provides instruction in listening comprehension and speaking through training in the sounds of English, intonation patterns and techniques of spontaneous conversation. *Grading on pass-fail basis only. Credit: 3 semester hours.*

1300 Oral/Aural Communication: Advanced Level Listening/Speaking

Prerequisite: ESLS 1200 or advanced level on-site test scores. This course provides instruction in listening comprehension and speaking through training in conversational fluency, presentations and error reduction. *Credit:* 3 semester hours.

English as a Second Language, Writing (ESLW)

1200 English as a Second Language: Intermediate Level Reading/Writing

Prerequisite: Intermediate level on-site test scores. This course provides language instruction through reading and writing paragraphs and short essays focusing on development, vocabulary and grammatical skills. *Open to non-native speakers of English only. Grading on pass-fail basis only. Credit:* 3 semester hours.

1300 English as a Second Language: Advanced Level Reading/Writing

Prerequisite: ESLW 1200 or advanced level on-site test scores. This course provides language instruction through a study of complex grammatical structures, writing essays in a variety of rhetorical formats, readings and vocabulary materials through culturally relevant materials. *Credit:* 3 semester hours.

Environmental Studies (ESP)

1010 Introduction to Ecological Principles

Principles governing the relationships between organisms and their environment. Spatial and temporal organization of ecosystems and distribution of biotic communities are emphasized. *Credit:* 3 semester hours.

1020 Methods of Environmental Analysis-Practicum

Prerequisite: ESP 1010. An analytical study of the current methods of environmental analysis focusing on interdisciplinary ecological, geophysical and technological measures. *Campus-based field work required. Credit:* 3 semester hours.

1120 Human Ecology

A study of the interrelationships between humanity, social and cultural evolution and the Earth. The nature and impacts of population growth, industry and technological progress are emphasized. *Field trips may be included. Credit:* 3 semester hours.

2020 Geographic Information Systems: An Introduction to GIS and Remote Sensing

An interdisciplinary exploration of GIS with exposure to various aspects of analysis including: data structure, spatial analysis, data management, data visualization, data retrieval, and GPS. *Credit:* 3 semester hours.

2110 The Coastal Environment

A systematic and regional analysis of the environmental problems caused by use and misuse of the coastal zone: estuaries, wetlands, saltmarshes, beaches, and alteration and pollution of these environments. *Credit:* 3 semester hours.

2160 American Environmental Politics and Policies

An analysis of the evolution of United States environmental policy and the influence of politics on those policies with particular emphasis on the late 20th century. *Credit:* 3 semester hours.

2310 Botany

Prerequisite: BIO 1000, 1001L. *Corequisite:* BIO 2311L. The biology of plants: their morphology, evolution, and classification. *Field trips required. Lecture, 2 hours. Laboratory, 4 hours. Credit:* 4 semester hours. *Laboratory fee:* \$100.

2410 Principles and Practices of Sustainable Development

An analysis of the theoretical underpinnings and practical applications of sustainable development on a global, local and individual level; sustainable practices in areas such as building, waste management, industrial production and energy are included. *Campus-based field work required. Credit:* 3 semester hours.

2500 Environmental Management, Regulation and Decision-Making

Prerequisite: GOV 1030. Analysis of the major federal environmental statutes, their historical development and amendments, and their practical application in today's regulated community. *Credit:* 3 semester hours.

2510 Aquatic Ecology

Corequisite: ESP 2511L. Introduction to major ecological principles of freshwater and marine habitats; interrelationships among organisms; role of physical and chemical parameters at the population community and ecosystem level. *Field trips required. Lecture, 2 hours. Laboratory, 4 hours. Credit:* 4 semester hours. *Laboratory fee:* \$100.

2990 Environmental Studies Seminar

Introduction to the environmental studies major, including the subfields of environmental studies, research methods, communication skills, and understanding career opportunities. *Credit:* 3 semester hours.

3320 Resource Management

An analysis of the goals, principles, methods, and ecological measures currently employed by natural resource managers. *Credit:* 3 semester hours.

3370 Ecology

Prerequisite: BIO 1000 or consent of instructor. *Corequisite:* BIO 3371L. Ecological principles concerning animals and plants, with emphasis on group phenomena, especially the dynamics and evolution of ecosystems, communities, and populations. *Field trips required. Lecture, 3 hours. Laboratory, 4 hours. Credit:* 4 semester hours. *Laboratory fee:* \$100.

3420 Environmental Chemistry

Prerequisite: CHE 1220 or 1320. The chemical principles which govern environmental quality and environmental regulations are developed using specific examples such as global warming, ozone depletion, water quality, and air pollution. *Credit:* 3 semester hours.

3480 Environmental Geology

Prerequisite: Sophomore standing or permission of the instructor. An analysis of the relationships between human beings and the Earth. Geological hazards, evolutionary Earth changes and the power of modern civilization to alter the Earth. *Credit:* 3 semester hours.

4000 Special Topics in Environmental Studies

Special topics will engage students in emerging environmental topics, such as climate change, environmental justice, environmental geography, waste management, and case studies in environmental justice. *Credit:* 3 semester hours.

4903; 4906 Environmental Studies Internship

Prerequisite: Permission of the Director. An internship program with a variety of environmentally concerned public and private agencies; designed to present the practical side of environmental management. *Open to ESP majors only. Credit:* 3 to 6 semester hours.

4953; 4954 Research in Environmental Studies

Restricted registration. Selected environmental studies majors undertake guided research in the application of environmental principles and techniques in participating areas (anthropology, biology, chemistry, geography, government and mathematics). *Open to seniors with a 3.0 GPA and approval of the Director of the Environmental Studies program and area Department Chair. Credit:* 3 semester hours.

4990 Environmental Analysis Senior Seminar

Prerequisite: Junior or senior standing. An interdisciplinary, capstone seminar exploring the methods and current practices of analysis and problem solving in selected environmental fields and professions. *Credit:* 3 semester hours.

First Year Seminar (FYS)

1000 First Year Seminar

Students in the First Year Seminar learn critical thinking, information literacy, and communication skills by studying New York City through a variety of academic disciplines. The course addresses themes such as immigration, race and ethnicity, social and cultural diversity, wealth and poverty, and environmental sustainability. As an integral part of the course, students participate in field-based learning experiences that relate to the academic focus of their class. Community Engaged Learning provides a framework for engagement with the St. John's Vincentian Mission with its dedication to the ideals of service and social justice. *Credit:* 3 semester hours.

First Year Writing (FYW)

1000 First Year Writing

This course focuses on literacy education, challenging students to see writing as a multifaceted activity, and immersing them in multiple and far-ranging experiences with writing. Professors help students gain comfort in writing, through a repertory of practices: pre-writing and generating techniques, multiple approaches for developing and organizing their own message, a variety of strategies for revising and editing their

own original texts, and ways of preparing products for public audiences and for deadlines. The faculty focuses on developing students' reflective abilities and meta-awareness about writing by encouraging students to embrace writing, not simply as a set of strategies for the production of essays, but an exercise in thinking. Students are helped to grow as writers through opportunities to discuss what they are writing about with their peers as well as by attending writing conferences with their professors. The faculty creates spaces for student-writers to experience a web of relationships and craft their own unique identities with texts, writing, and multiple literacies. *Credit: 3 semester hours.*

French (FRE)

1000 Intensive French I/II

This course aims to develop basic communication skills in French. Through a progressive use of four skills, listening, speaking, reading, and writing, students develop oral and written proficiency at a beginner's level within the context of French culture. *Credit: 6 semester hours.*

1010 French, Level I

This course aims to develop basic communication skills in French. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a beginner's level within the context of French culture. *Credit: 3 semester hours.*

1020 French, Level II

Prerequisite: FRE 1010. This course continues to develop basic communication skills in French. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a beginner's level within the context of French culture. *Credit: 3 semester hours.*

2030 French, Level III

Prerequisite: FRE 1020. This course reviews the basic skills learned in French I and II and continues building oral and written proficiency with more intensive reading and conversation within the context of French culture. *Credit: 3 semester hours.*

2040 Intermediate French Conversation

Prerequisite: FRE 2030 or permission of chair. This course reviews the basic skills learned in French I, II and III and continues building oral and written proficiency with more intensive reading and conversation within the context of French culture. *Credit: 3 semester hours.*

3090; 3100 Masterpieces of French Literature I; II

Prerequisite: FRE 2040 or 2050, or permission of chair. FRE 3090: Through lectures and direct textual analysis of major works, this course traces the development of French literature from its origins to the Baroque. FRE 3100: This course traces the development of French literature from the French Revolution to the 20th century. *Credit: 3 semester hours per semester.*

3110; 3120 Advanced French Conversation

Prerequisite: FRE 2040 or 2050, or permission of chair. Drill and practice in conversational French. Topics are selected to meet the requirements of daily life. *Not open to native or fluent speakers. Credit: 3 semester hours per semester.*

3260 History of French and Francophone Cinema

Prerequisite: FRE 2040 or 2050, or permission of chair. This course features the study of the development of French cinema from its beginnings in 1895 through the present day. *Credit: 3 semester hours.*

3550; 3560 Civilization of France I; II

Prerequisite: FRE 2040 or 2050, or permission of chair. The history, geography, arts, science, folklore, politics, and customs that have contributed to the shaping of French civilization and culture. Part I covers the history and civilization of France from the origins to 1789. Part II covers French history and civilization from 1789 to the present. *This course is conducted in French. Credit: 3 semester hours per semester.*

3570 Urban Culture in Contemporary France

Prerequisite: FRE 2040 or 2050, or permission of chair. An examination of literature, music, and the visual arts documenting the emergence of what is now called "urban culture" in France. *Credits: 3 semester hours.*

3820 French Afro-Caribbean Literature and Culture

Prerequisite: FRE 2040 or 2050, or permission of chair. An introduction to the major contemporary writers of the French-speaking Antilles and Sub-Saharan Africa. *Credit: 3 semester hours.*

3830 French and Francophone Women Writers

Prerequisite: FRE 2040 or 2050, or permission of chair. A study of the French and francophone women writers from the 12th century to the present. *Conducted in French. Course is an elective for the Women's and Gender Studies minor. Credit: 3 semester hours.*

3840 Survey of Francophone Literature

Prerequisite: FRE 2040 or 2050, or permission of chair. Survey of contemporary Francophone literature, critical, and theoretical texts to examine various cultures outside of France through a literary lens. *Credit: 3 semester hours.*

3870; 3880 Advanced French Grammar and Composition I; II

Prerequisite: FRE 2040 or 2050, or permission of chair. A thorough study of difficult points of French grammar and syntax with translation of selected passages into idiomatic French and exercises in composition writing and stylistics. *Credit: 3 semester hours per semester.*

3900 Art and Skills of Translation

Prerequisite: FRE 3870 or 3880, or permission of chair. Translation is taught from a theoretical as well as practical point of view. Students are expected to translate a wide range of literary and non-literary texts from French into English. *Credit: 3 semester hours.*

3901 Francophone Literature (ENG)

This course examines the cultures and the literatures of French-speaking countries outside of France, including French Canada, the French Caribbean, French Guiana, Haiti, Mauritius, North Africa and the Middle East, Sub-Saharan Africa and Madagascar, but also Switzerland, and many more. *Course conducted in English and is not applicable to the French major or minor. Credit: 3 semester hours.*

3902 Women Writers in France (ENG)

A study of the rich and diverse literary works of French women writers from the 12th century to the present, the changing sociological and historical context and their common issues and themes that constitute a female tradition. *Course conducted in English and is not applicable to the French major or minor. Course is an elective for the Women's and Gender Studies minor. Credit: 3 semester hours.*

3921 History of French Cinema since WWII (ENG)

This course features the study of the development of French cinema from its beginnings in 1895 through the present day. *Course conducted in English and is not applicable to the French major or minor. Credit: 3 semester hours.*

3923 Urban Culture in France (ENG)

This course examines the development of urban culture in France, including urban music (French and Francophone rap), street art, and urban literature. *Course conducted in English and is not applicable to the French major or minor. Credit: 3 semester hours.*

4903 Internship

Prerequisite: 3110 or 3120, or permission of chair. Total immersion experience in a field of interest chosen by the student in New York where the target language is spoken. *Credit: 3 or 6 semester hours.*

4953 Independent Study

Prerequisite: FRE 2040 or 2050, or permission of chair. Guided undergraduate student research arranged on an individual basis. Permission of the chair and the language area coordinator required. *Credit: 3 semester hours.*

4980 International Internship (France)

Prerequisite: FRE 3110 or 3120, or permission of chair. Total immersion experience in the field of interest chosen by the student. *Credit: 3 or 6 semester hours.*

Geography (GEO)

1001 World Geography

A regional analysis of the principal patterns of the physical, economic and cultural geography of the world's nations and continents. *Credit: 3 semester hours.*

1002 North American Geography

A regional analysis of the principal patterns of the physical, economic and cultural geography of the United States and Canada, with emphasis on the natural resource base of those countries, their problems and developments. *Credit: 3 semester hours.*

2001 Natural Resources and World Development

An analysis of the most pressing natural resource issues of the late 20th century and how human use of the resource base affects both environmental quality and global development. *Credit: 3 semester hours.*

German (GER)

1010 German, Level I

This course aims to develop basic communication skills in German. Through a progressive use of the four skills, listening, speaking, reading, and writing, students develop oral and written proficiency at a limited level within the context of German culture. *Only offered through the College Advantage Program. Credit: 3 semester hours.*

1020 German, Level II

Prerequisite: GER 1010. This course continues to develop basic communications skills in German. Through a progressive use of the four skills, listening, speaking, reading, and writing, students develop oral and written proficiency at a limited level within the context of German culture. *Only offered through the College Advantage Program. Credit: 3 semester hours.*

2030 German, Level III

Prerequisite: GER 1020. This course reviews the basic skills learned in German I and II and continues building oral and written proficiency with more intensive reading and conversation within the context of German culture. *Only offered through the College Advantage Program. Credit: 3 semester hours.*

Global Development and Sustainability (GDS)

1000 Theories in Global and Sustainable Development

Foundation in theories of global and sustainable development. The course includes evaluation of development theories in relation to contemporary best practices in a variety of global contexts. *Credit: 3 semester hours.*

2000 Health, Food, and the Environment

Critically evaluates through the lens of social justice and the synergistic relationship between health, food, water, and environmental systems in the context of sustainable global development. *Credit: 3 semester hours.*

4980 Internship

Fieldwork where students have the opportunity to work in development and sustainability organizations at home or abroad under the supervision and counseling of a faculty member. *Credit: 3 semester hours.*

4990 Capstone Seminar in Global and Sustainable Development

Integrates the academic and experiential learning of each student. Presentation of capstone projects with a conceptual framework. *Credit: 3 semester hours.*

Government and Politics (GOV)

1010 Contemporary Government and Politics

Introduction to the nature and scope of politics. Approaches to the analysis of political behavior and thinking. Major issues and conflicts in the contemporary world. *Credit: 3 semester hours.*

1030 United States National Government

The nature of United States federalism; the structure and work of the national government; the executive branch; the Congress and executive legislative relationship; the federal judiciary with reference to appropriate constitutional cases and the departments and administrative establishment. *Credit: 3 semester hours.*

1050 Research Methods for Government and Politics

Prerequisite: GOV 1030. As a foundation for Government and Politics majors, this course provides introductions to research methods and scholarly writing. *All GOV majors must take 1050 as one of their first four courses in the major. Credit: 3 semester hours.*

1250 Western Political Thought I: Classical and Medieval

A survey of great thinkers and movements from the classical period to St. Thomas. *Credit: 3 semester hours.*

1260 Western Political Thought II: Early Modern

A survey of key works from the Renaissance to the late 19th century, such as Burke, Machiavelli, Hobbes, Locke, Rousseau, Wollstonecraft, and Marx. *Credit: 3 semester hours.*

1270 Western Political Thought III: Recent and Contemporary

Major topics include Hegel, Marxism-Leninism, Fascism, Socialism, democracy, nationalism and Elitism. *Credit: 3 semester hours.*

1280 Feminism and Politics

Designed for students with experience and interest in political theory. This course surveys recent feminist contributions to political theory, emphasizing both the range of feminist views and the basis for commonality. *Credit: 3 semester hours.*

1350 Politics and Religion: The American Experience

Explores the complex relationship between politics and religion in liberal democracy, with a focus on the United States. *Credit: 3 semester hours.*

1530 Introduction to Public Administration

Prerequisite: GOV 1030. The process of government organization, administration, and management; current problems and trends; administrative political relationships. *Credit: 3 semester hours.*

1610 International Relations

The legal and political principles underlying the modern state system; foreign policies of the major powers; fundamental factors and problems in international politics; development of international organizations and cooperation. *Credit: 3 semester hours.*

1700 Comparative Political Systems

The study of the methodology of comparative political analysis and research. Topics include

political institutions; ethnicity and ethnic conflict; regimes and regime change; parties and party systems; and democracy and democratization. *Credit: 3 semester hours.*

2000 Introduction to International Conflict Resolution and Reconciliation

An introduction to theories of conflict analysis, management, and resolution, with emphasis on the application of these theories to address political violence. *Credit: 3 semester hours.*

2160 United States Environmental Politics and Policies

An analysis of the evolution of the United States environmental policy and the influence of politics on those policies with particular emphasis on the late 20th century. *Credit: 3 semester hours.*

2170 Global Environmental Politics and Policies

Analysis of politics and policies with regard to global environmental issues within a larger discussion of development—sustainable and unsustainable. *Credit: 3 semester hours.*

2300 Roots of Modern Ideologies

Prerequisite for non-majors: Consent of instructor. An examination of the interrelationship of certain social, theological and philosophic concepts and their effect on past and present political orders. *Credit: 3 semester hours.*

2400 Introduction of the Study of Law

A critical survey and analysis of materials dealing with legal methodology relevant to the study of law. Readings and discussion of leading legal essays and opinions. *Credit: 3 semester hours.*

2420 Congress: Politics and Policy

Examines the organization of the House and Senate; the evolution of the relationship of Congress with the executive; party politics in the legislative process; contemporary legislative problems. *Credit: 3 semester hours.*

2430 United States Presidency

Explores the evolution of the American Presidency; the roles played by the chief executive; the various concepts of the office; the president's position in the Congress; the president's relationship with Congress. *Credit: 3 semester hours.*

2470 State and Local Government and Administration

Prerequisite: GOV 1030. Socioeconomic and intergovernmental influences on state politics; party and interest-group politics; legislatures, governors, and state agencies; budgeting and economic development issues. *Credit: 3 semester hours.*

2480 Municipal Government and Administration

Prerequisite: GOV 1030. Socioeconomic influences on urban politics; machine, reform and post-reform political organization; systems of urban governance; budgeting and land-use issues. *Credit: 3 semester hours.*

2490 Law Politics and the Individual

Evolution of the laws as a result of the historical, social, political, and economic processes; special emphasis on contemporary American law affecting everyday life. *Credit: 3 semester hours.*

2500 Environmental and Public Law in the United States

Prerequisite: GOV 1030. The political issues surrounding environmental regulation, with an emphasis on bureaucratic and judicial administration of federal legislation governing air, water and land-use. *Credit:* 3 semester hours.

2510 United States Political Parties and Interest Groups

The nature and operation of the political process in the United States; organization and function of the political parties; nominations and elections; voting behavior, the nature of the two-party system; effects of social, economic and cultural forces upon party government; the dynamics of political power. *Credit:* 3 semester hours.

2520 Politics of Environment and Development

An examination of the political dimensions of environmental issues and development issues in selected countries and regions around the world. *Credit:* 3 semester hours.

2580 Judicial Process and Behavior

Evaluation of the operation of the American legal system at the national and state levels. *Credit:* 3 semester hours.

2600 Roman Law and Society

A study of the society and institutions of ancient Rome as revealed in Roman law. No knowledge of classical languages is required. *Credit:* 3 semester hours.

2640 Foreign Policy of the United States

The origin, development and application of the major principles controlling American foreign relations. *Credit:* 3 semester hours.

2670 European Union Politics

Creation of the European Union and the politics of European integration; examines European Union activities and its role in policy development, common market and currency, and foreign affairs. *Credit:* 3 semester hours.

2690 Government and Politics of Latin America

The origin, structures and functions of Latin American governments. *Credit:* 3 semester hours.

2750 Politics of the Caribbean Area

A study of the political development of the Caribbean area, emphasizing the nations of Cuba, Haiti, the Dominican Republic, and Jamaica. Special attention is also given to the patterns of colonial control, the unique position of Puerto Rico and attempted alliance and confederation. *Credit:* 3 semester hours.

2760 The Politics of Puerto Rico

An analysis of the government and politics of the Commonwealth of Puerto Rico; political traditions, the issue of political status and Puerto Rico's relationship with the United States and current political conditions and problems. *Credit:* 3 semester hours.

2810 The Politics of War

The causes of war, with emphasis on the twentieth century; legal and cultural aspects of war; prediction and control of war. *Credit:* 3 semester hours.

2860 Transnational Gender Politics

Theories and practices of gender politics, feminism, and anti-feminism at the international and transnational level. *Credit:* 3 semester hours.

3290 The Politics of Revolution

Empirical theories of revolution through the reading and analysis of major theoretic attempts to delineate the causes, development, and effects of revolution, with examples of revolutions in world history from the classical period to the present. *Credit:* 3 semester hours.

3310 Comparative Diversity, Identity and Governance

Examines the politics of highly diverse societies, analyzing the quality and level of cultural, ethnic, national, religious and linguistic diversity as variables in effective governance. *Credit:* 3 semester hours.

3320 Current Terrorist Movements

An analysis and evaluation of the ideologies, strategies and tactics of the leading revolutionary movements in the world today. An analysis and evaluation of the counterrevolutionary measures commonly used by governments. *Credit:* 3 semester hours.

3340 Arms Races and Arms Control

This course investigates the origins and implications of arms races in the context of international relations theory and values the successes and failures of arms control initiatives throughout history. *Credit:* 3 semester hours.

3520 Public Opinion and American Politics

The process of opinion formation; role of public opinion in politics; propaganda and public relations; measurement of public opinion; role of pressure groups; public opinion and current political issues. *Credit:* 3 semester hours.

3570 Comparative Law

A critical inquiry into the origins, sources and formation of the three major legal traditions: common law, civil law and socialist law. Analysis of selected substantive topics in a comparative setting. *Credit:* 3 semester hours.

3590 United States Government and Business

The relationship of government and business emphasizing industries with seller concentration and their market conduct. Consideration of selected activities and industries: agriculture, inventions and patents, banking and finance, public utilities, and the shaping of public policy. *Credit:* 3 semester hours.

3620 International Law

The nature and scope of international law; the organization of the community of nations; selected substantive roles of international law. *Credit:* 3 semester hours.

3630 Foreign Policy of the Major Powers

Fundamental factors influencing the international political behavior of the major powers in world affairs. *Credit:* 3 semester hours.

3640 Nuclear Strategy in a Complex World

Prerequisite: GOV 1610. Role of nuclear weapons in the national security strategy of states and their impact on the international system. *Credit:* 3 semester hours.

3670 International Political Economy

Theoretical and empirical relationships between politics and economics at the international level. Regional economic cooperation, trade issues, international monetary policies and North-South difference. *Credit:* 3 semester hours.

3680 Politics of Africa

The dynamics of the societies in transition in the developing nations of Africa; analysis of their evolution from colonial dependency and traditional tribal units into modern nation-state systems. *Credit:* 3 semester hours.

3710 Governments and Politics of the Far East

The political and institutional developments in the states of the Far East, with major emphasis on China, Japan and Korea; their political backgrounds and present foreign relations. *Credit:* 3 semester hours.

3720 Governments and Politics of South and Southeast Asia

The political and institutional developments of South Asia, emphasizing India, Pakistan, Bangladesh, Sri Lanka, and those of Southeast Asia, emphasizing Vietnam, Indonesia, and the Philippines. *Credit:* 3 semester hours.

3850 Politics of Developing Countries

The politics of developing countries with a focus on the political economy of development to issues of globalization, national integration, social conflict, the role of the state, civil society, and democratization. *Credit:* 3 semester hours.

3851 Politics of Genocide

Prerequisite: GOV 1010. The political issues surrounding genocide and collective violence. The course will help students to better understand one of the most complex and troubling issues in historical and contemporary political life. *Credit:* 3 semester hours.

4903; 4906 Legislative Politics Internship Program

Prerequisite: Permission of the coordinator. An internship program in the office of a city, state or national legislator or legislative committee. *Periodic consultation with the internship coordinator is required. Credit:* 3 or 6 semester hours per semester.

4913; 4916 Field Work in American Politics

Prerequisite: Permission of the coordinator. An internship program in the field of American politics ranging from campaign work to legal process. *Periodic consultation with the internship coordinator is required. Credit:* 3 or 6 semester hours per semester.

4946 New York State Legislative Internship Program Academic Component

Corequisite: GOV 4949, permission of University liaison and acceptance to New York State Senate or Assembly Internship Program. Comprehensive orientation, classroom lectures, classroom discussion sections, tests, written assignments, a research paper, issue forums and a mock legislative session. *Credit:* 6 semester hours.

4949 New York State Legislative Internship Program Experiential Component

Corequisite: GOV 4946, permission of University liaison, and acceptance to New York State Senate or Assembly Internship Program. Students serve in Albany, New York, under supervision of the Senate or Assembly Internship Director. Credit: 9 semester hours.

4990 Reading and Research

Prerequisite: Nine semester hours in GOV and approval of the chair. Open to juniors and seniors only. Guided research and reading on an individual basis. Credit: 3 semester hours.

4991 Seminar in United States Government and Politics

Prerequisite: At least six credits from among: GOV 1030, 1530, 2400, 2420, 2430, 2470, 2480, 2490, 2500, 2510, 2640, 2950, 3450, 3460, 4933, 4936, 2580, 3590, 2760, 3800. Readings, reports, and discussions on topics in American Government, under supervision of the faculty member. Limited to government and politics majors in their senior year and juniors with permission of the chair. Credit: 3 semester hours.

4992 Seminar in International Relations

Prerequisite: GOV 1610 and at least three credits from among: 2640, 2650, 2660, 2690, 2750, 2810, 3620, 3630, 3710, 3720, 3820. Readings, reports, and discussions on topics in International Relations, under supervision of the faculty member. Limited to government and politics majors in their senior year and juniors with permission of the chair. Credit: 3 semester hours.

4993 Seminar in Comparative Government

Prerequisite: At least six credits from among: 1700, 2650, 2660, 2690, 2750, 3680, 3710, 3720. Readings, reports, and discussions on topics in Comparative Government, under supervision of the faculty member. Limited to government and politics majors in their senior year and juniors with permission of the chair. Credit: 3 semester hours.

4995 Seminar in Public Administration

Prerequisite: At least six credits from among: GOV 2400, 2420, 2430, 2470, 2480, 2500, 2580, 2955, 3450, 3460, 3570, 3590. Readings, reports, and discussions on topics in Public Administration, under supervision of the faculty member. Limited to government and politics majors in their senior year and juniors with permission of the chair. Credit: 3 semester hours.

Greek, Ancient (GRA)

1010; 1020 Elementary Ancient Greek I; II

Prerequisite: GRA 1010 is a prerequisite for GRA 1020. An introduction to classical Greek (Attic); a study of Greek grammar, acquisition of a basic vocabulary and practice in translation. Credit: 3 semester hours.

2030 Intermediate Ancient Greek I

Prerequisite: GRA 1020. A review and continuation of the grammatical structures presented at the elementary level with illustrative readings taken from ancient authors. Credit: 3 semester hours.

4953; 4954 Independent Study

Prerequisite: Permission of chair. Individual guided instruction in either Classical Greek grammar or literature. Credit: 3 semester hours.

Greek, Modern (GRM)

1010 Modern Greek, Level I

This course develops basic communication skills in modern Greek. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a limited level within the context of Greek culture. Credit: 3 semester hours.

1020 Modern Greek, Level II

Prerequisite: GRM 1010. This course continues to develop basic communication skills in modern Greek. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a limited level within the context of Greek culture. Credit: 3 semester hours.

2030 Modern Greek, Level III

Prerequisite: GRM 1020. This course reviews the basic skills learned in Greek I and II and continues building oral and written proficiency with more intensive reading and conversation within the context of Greek culture. Credit: 3 semester hours.

Hebrew, Biblical (HBB)

1010 Biblical Hebrew, Level I

An introduction to Hebrew script, basic grammatical concepts, and biblical vocabulary with examples drawn from the Hebrew Scriptures. Credit: 3 semester hours.

1020 Biblical Hebrew, Level II

Prerequisite: HBB 1010. A continued introduction to the basic grammatical concepts and vocabulary of biblical Hebrew, with examples drawn from the Hebrew Scriptures. Credit: 3 semester hours.

History (HIS)

1000 Emergence of a Global Society

In our increasingly globalized society, it is essential to student success to understand our current and past world from global and diverse perspectives. The course provides a historical and contemporary approach to comprehending changing structures and processes of power and their social, economic, political, and cultural contexts and consequences. This includes an appreciation of the factors influencing the historical movements of people, ideas, and things as well as the roles of change over time and contingency in the emergence of a global society. Students will also build key intellectual abilities such as thinking critically, developing information literacy and evaluating evidence, and creating effective and clear reasoned arguments both orally and in writing. *Required for all majors and minors. Credit: 3 semester hours.*

1010 Foundations of World History to 1500

A topical approach to forces and events that shaped the modern world, including ancient empires, Western civilization and Christianity, the impact of Islam, African and pre-Columbian civilizations, and the new learning of the Renaissance and Age of Exploration. *Required for all majors and minors. Credit: 3 semester hours.*

1301 U.S. from Colonial Times to the Civil War

A survey of the main political, economic, social, and religious developments from the Peace of Paris to the Civil War. Counts as a history elective but not as part of the U.S. History requirement for the major. *Credit: 3 semester hours.*

1302 U.S. from Civil War to the Present

A survey of the main political, economic, social, and religious developments from the Civil War to the present. Counts as a history elective but not as part of the U.S. History requirement for the major. *Credit: 3 semester hours.*

1501 13 Ways to Live and Die

Global and historical examination of death, the afterlife, and accompanying rituals, which profoundly impacted the economies, religions, art, and culture of the living. *Credit: 3 semester hours.*

1505 Struggles for Social Justice

Case studies in the ways that ordinary people have changed the course of history by participating in movements for social justice. *Credit: 3 semester hours.*

2002 Ancient Greek and Roman Civilizations

A course on the growth and development of ancient Greece, the Hellenic culture, and the Roman Republic and Empire. *Credit: 3 semester hours.*

2007 Food and History from Ancient to Early Modern Times

The course examines themes in the history of food and drink from early hunting and gathering to the early modern period, including production, procurement, consumption, and cultural representations. *Credit: 3 semester hours.*

2110 Sports in Modern World History

Global history of modern sport, focusing on its intersections with issues of class, race, gender, business, entertainment, fashion, culture, politics, nationalism, and internationalism. *Credit: 3 semester hours.*

2120 Global Histories of Colonialism

Study of the global histories of colonialism to understand the unequal power structures and an analysis of the experiences and responses of the colonized population. *Credit: 3 semester hours.*

2130 Money and Things: Capitalism in History

Examines the development of the world economy from the Early modern period with a focus on consumption. *Credit: 3 semester hours.*

2141 Disease and Treatment in the Premodern World

Illnesses, diseases, their treatments, and theories of health from human origins to 1500CE and their impacts on political, social, cultural, and economic dimensions of global societies. *Credit: 3 semester hours.*

2142 Disease in Modern World History

Effects of epidemic diseases on the political, social, cultural, and economic dimensions of global societies from the Black Death to the present. *Credit: 3 semester hours.*

2300 History of Africa

History of the continent from earliest times to present; pre-history, Mediterranean, Arabic, European, and contemporary re-Africanization; the problem of developing history from both oral tradition and written sources. *Credit: 3 semester hours.*

2302 Contemporary Africa

The African reaction to slavery, colonialism, the birth of nationalism, and the dismemberment of the colonial empires. Problems of nation-building and development in the newly independent states of Africa. *Credit: 3 semester hours.*

2313 History of Colonial South Asia

The social, cultural, and economic history of nineteenth and twentieth century colonial South Asia. *Credit: 3 semester hours.*

2314 History of Contemporary South Asia

This course examines the social, cultural, and economic history of South Asia from 1947 to the present day, with a focus on economic development, gender, and popular culture. *Credit: 3 semester hours.*

2315 History of Resistance in South Asia

Cultures, tactics and effects of popular resistance movements in South Asia and shared connections with resistance movements in United States, Asia and Europe. *Credit: 3 semester hours.*

2316 Globalization in the Indian Ocean Rim

History of the Indian Ocean Rim from 7th century CE to the present. *Credit: 3 semester hours.*

2318 Global South Asians: A Diasporic History

Explores the major historical flows of South Asians to various parts of the globe against the backdrop of colonialism, decolonization, and economic globalization. *Credit: 3 semester hours.*

2320 History of Modern Middle East

Environmental, economic, social and cultural forces that shaped the modern Middle East with emphasis on impact of Ottoman and Western imperialism, Arab-Israeli conflict and the Islamic Revolution. *Credit: 3 semester hours.*

2321 Medieval Middle East

Survey of how the rise of Islam in Arabia affected Arab and Iranian lands from the seventh to thirteenth century A.D. *Credit: 3 semester hours.*

2331 Latin America in the Colonial Period

A survey of Latin American history from pre-Columbian cultures through independence. Topics include Indigenous and Spanish societies before contact, conquest and colonization, the role of the Church, colonial political and economic structures, social and ethnic hierarchies, the Bourbon Reforms, and the roots of independence movements. *Credit: 3 semester hours.*

2332 History of Contemporary Latin America

Independence from Spain; economic, cultural, religious and political struggles; the caudillos; the relationship with U.S.; Castro era. *Credit: 3 semester hours.*

2335 Atlantic Revolutions

Examines interrelated political upheavals and their social and cultural effects from 1776 to 1848. *Credit: 3 semester hours.*

2340 History of Ancient Americas

Survey of pre-Columbian societies emphasizing political, cultural, social, technological, and economic accomplishments of the Maya, Aztec, and Inca civilizations. *Credit: 3 semester hours.*

2450 History of the Modern Caribbean

A survey of Caribbean history spanning from the pre-Columbian era to the turn of the twenty-first history. *Credit: 3 semester hours.*

2502 Late Medieval Europe

The economic, political, intellectual and religious developments in Europe from the 12th to the 15th centuries. *Credit: 3 semester hours.*

2520 Enlightenment and Revolution in Europe

Expansion of early modern European empires and state-building; Enlightenment; French Revolution. *Credit: 3 semester hours.*

2530 Europe in the Nineteenth Century

The Napoleonic Era; the Vienna settlement and the Concert of Europe; the Industrial Revolution; Nationalism; liberalism, conservatism and Socialism as forces in European life; the Revolution of 1848; the unification of Italy and Germany; the New Imperialism. *Students may not take HIS 2530 in conjunction with or after completion of HIS 2531, 2532, or 2533. Credit: 3 semester hours.*

2533 Europe in the Age of Empire, 1871-1914

Institutions, ideologies and developments in the German Empire, the Third French Republic, the Italian Kingdom, and the Habsburg Monarchy; development of the new imperialism and imperial rivalries; the coming of WWI. *Credit: 3 semester hours.*

2540 Twentieth Century Europe in a Global Perspective

Cultural, social, and political interactions between Europe and the wider world as seen through migrations, art, music, film, sport, food, and other historical lenses. *Credit: 3 semester hours.*

2541 Europe: World War I, Hitler, and Stalin

WWI and the disintegration of the German, Habsburg, Russian and Ottoman empires; the Russian Revolution; the Paris peace process and the European state system; Italian Fascism; the Great Depression, Nazi Germany, Stalinist Russia, and economic and political instability in the 1930s. *Credit: 3 semester hours.*

2542 Europe from World War II to the Present

WWII; defeat of the Axis and the destruction of European primacy; Cold War and the division of Europe; economic reconstruction; the fall of Communism; growth of the European Community; and issues in contemporary Europe. *Credit: 3 semester hours.*

2550 History of Eastern Europe

Eastern Europe from the 17th century to the present. Russian, Ottoman, and Habsburg Empires; nationalism; World War I and II; Communism and aftermath. *Credit: 3 semester hours.*

2560 Black Europe

Surveys the presence of people of sub-Saharan African descent in Europe from the early modern period to the present-day. *Credit: 3 semester hours.*

2700 U.S.: Colonial America

The European background; the transplanting of European institutions to the New World; internal development of the colonies; imperial rivalries; evolution of the colonial political system; the coming of the Revolution. *Credit: 3 semester hours.*

2710 U.S.: The Early National Period

Major developments of the political, economic and social history of the United States from the Revolutionary War to the War with Mexico. *Students may not take HIS 2710 in conjunction with or after completion of HIS 2711. Credit: 3 semester hours.*

2711 U.S.: The Revolutionary Age

The progress and outcome of the War for Independence; the Confederation Period; the making of the Constitution; the Federalist Era. *Credit: 3 semester hours.*

2740 U.S.: World War One and the Great Depression

The Age of Reform and empire; problems of neutrality and Wilsonian leadership; WWI; economic expansion and collapse; the Roosevelt era. *Credit: 3 semester hours.*

2750 U.S.: World War II and Post-War America

The U.S. and WWII; the Truman reforms; origins of the Cold War; the Eisenhower years; the 60s; Vietnam and domestic turmoil; Watergate and after. *Credit: 3 semester hours.*

2760 History of American Workers

A survey of U.S. labor and working-class history from the 1830s through the present. *Credit: 3 semester hours.*

2810 Big History

An epic 13.8-billion-year journey through the origins and evolution of our universe, planet, life, and humanity weaving together the hard sciences and the humanities. *Credit: 3 semester hours.*

2820 Small Histories, Global Implications

Study of small-scale microhistories that question, enhance, or complicate global historical trends, and emphasize difference, diversity, agency, and a multiplicity of stories and truths. *Credit: 3 semester hours.*

2990 Sophomore Seminar: Introduction to History

Restricted registration. Workshop in historical research and analysis: historical methods and applications, how to read and write history, culminating in research paper or proposal. *Required of all majors and should be taken in their sophomore year unless extenuating circumstances have been approved by the department chair. Credit: 3 semester hours.*

3140 History of Sexuality

The history of sexuality as it relates to comparative world history. Students analyze how sexuality problematizes the interpretation of historical events, personalities and themes, including colonization, nationhood, war, medicine and social movements. *Credit: 3 semester hours.*

3190 Environmental History

Topics in environmental history; may include animals, climate, energy, ecological change, and the histories of environmental science and activism. *Credit: 3 semester hours.*

3320 Maritime Asia, 1571-1841

East Asia in the "age of silver", from the opening of Manila and Nagasaki to the Opium War; pirates, samurai, and global capitalism. *Credit: 3 semester hours.*

3321 Nomadic Empires after the Mongols

The history of nomads in Eurasia after the Mongol Empire, including China, Russia, Central and South Asia, and the Middle East. *Credit: 3 semester hours.*

3370 Modern Wars in Asia

Modern wars in Asia: World War II, the Cold War, Korea, Vietnam and subsequent conflicts. Emphasis is on causes, aftermaths and "history and memory." *Credit: 3 semester hours.*

3375 Asian American History

The history of Asians in the United States, including historical relations between Asians and other minorities, U.S. foreign policy in Asia and contemporary issues faced by Asian communities in an increasingly globalized and multi-racial American society. *Credit: 3 semester hours.*

3380 History of Iran

A history of Iran focusing on dynastic formation, political consolidation, cultural production, and religious movements. *Credit: 3 semester hours.*

3400 African Civilizations and the African Diaspora

Explores major African civilizations before the 19th century, including ancient Egypt, the Mali Empire, and Great Zimbabwe. Includes the African Diaspora to the new world. *Credit: 3 semester hours.*

3511 History of the British Isles: Celt to Tudors

A survey of English history from the Roman invasion to the early Stuarts, with emphasis on constitutional developments, and on changing political, economic, social, and religious conditions. *Credit: 3 semester hours.*

3531 History of Modern France

History of France from 1789 through present focusing on France as an alternative model for diversity, democracy, and the assimilation of difference. *Credit: 3 semester hours.*

3540 Modern Italian History

Intellectual, religious, economic and political developments in the Italian peninsula from the Risorgimento to the post-World War II era. *Credit: 3 semester hours.*

3541 Italy: Race, Culture, and Identity

Investigates the intersection of race, culture, and national identity in Italy from the movement for unification in the mid-19th century to the present day. *Credit: 3 semester hours.*

3560 Women in Medieval Europe

Thematic survey of women's experiences in medieval Europe, both noble and peasant, religious and secular, with a particular emphasis on women writers. *Credit: 3 semester hours.*

3561 Witches, Wives and Queens: Early Modern European Women

Women and gender in Europe (1500 to 1800); rulership, religion, economic roles, family life, gender norms, witchcraft and early feminism. *Credit: 3 semester hours.*

3562 Women and Gender in Modern Europe

Changes since 1800 in women's work, role in the family, sexuality, education, political rights. Feminist and anti-feminist ideologies. Women in war, revolution, fascism and Communism. *Credit: 3 semester hours.*

3565 History of Crime and Punishment in Modern Europe

History of crime and punishment 16th-21st centuries; use of torture and execution, changing legal codes and types of offenses, rise of the prison and criminology. *Credit: 3 semester hours.*

3650 Russia: A Cultural and Intellectual History

Cultural and intellectual themes and traditions from Kievan Russia to post-Soviet present, including Orthodoxy, Mongol rule, autocracy, territorial expansion, religious schism, Westernization, the intelligentsia, Orientalism, and Communism. *Credit: 3 semester hours.*

3653 Russia: The Soviet Union

The evolution of the Soviet Union from 1917 to 1991: development of the one-party Communist state, the Great Terror, WWII, de-Stalinization, stagnation and reform, nationalism and the dissolution of the Soviet Union. Post-Soviet trends in former Soviet nations. *Credit: 3 semester hours.*

3660 Russia as a Multinational Empire

Russian territorial expansion; Russification and Russian colonialism; Caucasus and the East as themes in Russian culture; Bolshevism, Communism and nationalism, resurgence of nationalism and collapse of the Soviet Union. *Credit: 3 semester hours.*

3702 U.S. Foreign Relations, 1945 to the Present

Origins of the Cold War in Europe and Asia; the Korean War; the German question; the Berlin crises and Germany; the Vietnam War; détente; the second Cold War; U.S. diplomacy in the 1980s. *Credit: 3 semester hours.*

3711 History of African Americans to 1900

This course surveys the social, political, cultural, and economic history of African Americans from the mid-fifteenth century to the beginning of the 20th century. *Credit: 3 semester hours.*

3712 History of African Americans Since 1900

This course surveys the social, political, cultural, and economic history of African Americans from the beginning of the 20th century to the present. *Credit: 3 semester hours.*

3725 Law in American History

Major trends in American legal history, including imperial and provincial origins of American legal culture, politics of constitutional reform, effects of territorial and commercial expansion, majority and minority interests, legal construction of power and legal activism. *Credit: 3 semester hours.*

3732 Women and Gender in Modern America: Civil War to the Present

A survey course which analyzes the socioeconomic, cultural, and political factors that influenced the evolution of American women's history from the Civil War to the present. *Credit: 3 semester hours.*

3795 Technology and Science in 20th-century America

From the age of inventions to the rise of the Internet, the ways in which science and technology shape, and are shaped by, human action and decisions. *Credit: 3 semester hours.*

3810 Oral History & Public History

Prerequisite: HIS 2990. Introduction to the theory and practice of Public and Oral History, and topics include historic preservation, cultural resources management, museum studies, and archival management. *Credit: 3 semester hours.*

3900 History of Canada

A survey of the political, intellectual, cultural, social and economic developments which have shaped the history of Canada from the earliest European discoveries of the North American continent to its current state of domestic and foreign affairs in the 20th century. *Credit: 3 semester hours.*

4903 Internship in History

Restricted registration. Fieldwork (eight hours per week) in selected museums, libraries, historical sites, or other like organizations under coordinated faculty and professional supervision. *Credit: 3 semester hours.*

4906 Internship in History

Restricted registration. Fieldwork (sixteen hours per week) in selected museums, libraries, historical sites, or other like organizations under coordinated faculty and professional supervision. *Credit: 6 semester hours.*

4953 Independent Study

Restricted registration. Independent research in an area of the student's selection under the general advisement of a faculty member. *Credit: 3 semester hours.*

4990 Seminar

Prerequisite: HIS 2990 except in extenuating circumstance of a senior approved by department chair. Restricted Registration. Capstone seminar in historical research and analysis: applies and extends History 2990 through advanced original research and writing. *Required of majors in the junior or senior year. Credit: 3 semester hours.*

4991 Colloquium in European History

Reading and discussion of selected topics in European history. *Credit: 3 semester hours.*

4993 Colloquium in U.S. History

Reading and discussion of selected topics in U.S. history. *Credit: 3 semester hours.*

4994 Seminar in U.S. History

Research and writing on selected topics in U.S. history. *Credit: 3 semester hours.*

4995 Colloquium in World History

Reading and discussion of selected topics in World History. *Credit: 3 semester hours.*

4996 Seminar in World History

Research and writing on selected topics in World History. *Credit: 3 semester hours.*

Italian (ITA)**1000 Intensive Italian I/II**

This course aims to develop basic communication skills in Italian. Through a progressive use of the four skills, listening, speaking, reading, and writing, students develop oral and written proficiency at a limited level within the context of Italian culture. *Credit: 6 semester hours.*

1010 Italian, Level I

This course aims to develop basic communication skills in Italian. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a limited level within the context of Italian culture. *Credit: 3 semester hours.*

1020 Italian, Level II

Prerequisite: ITA 1010 or permission of chair. This course continues to develop basic communication skills in Italian. Through a progressive use of the four skills, listening, speaking, reading, and writing, students develop oral and written proficiency at a limited level within the context of Italian culture. *Credit: 3 semester hours.*

2030 Italian, Level III

Prerequisite: ITA 1020. This course reviews the basic skills learned in Italian I and II and continues building oral and written proficiency with more intensive reading and conversation within the context of Italian culture. *Credit: 3 semester hours.*

2040 Intermediate Italian Conversation

Prerequisite: ITA 2030 or permission of chair. This course reviews the basic skills learned in Italian I, II and III and continues building oral and written proficiency with more intensive reading and conversation within the context of Italian culture. *Credit: 3 semester hours.*

3090; 3100 Masterpieces of Italian Literature I; II

Prerequisite: ITA 2040 or 3080, or permission of chair. ITA 3090: Through lectures and direct textual analysis of major works, this course traces the development of Italian literature from its origins to the Baroque. ITA 3100: This course traces the development of Italian literature from the Age of Enlightenment through the twentieth century. *These two courses may be taken out of sequence. Credit: 3 semester hours per semester.*

3110; 3120 Advanced Italian Conversation

Prerequisite: ITA 2040 or 3080, or permission of chair. Drill and practice in conversational Italian. Topics are selected to meet the requirements of daily life. *Not open to native or fluent speakers. Credit: 3 semester hour per semester.*

3150 Review of Italian Grammar

Prerequisite: ITA 2040 or 3080, or permission of chair. This course is a review of the fundamentals of Italian grammar in preparation for more advanced Italian courses with a focus on reading and writing. *This course may not be taken after the successful completion of 3870 or 3880. Credit: 3 semester hours.*

3260 Italian Cinema, from Neo-Realism to the Present

Prerequisite: ITA 2040 or 3080, or permission of chair. This course focuses on the development of the Italian cinema from World War II to our days. It examines the relationship between the screen and the socio-political and economic structures projected in a literary context. *Credit: 3 semester hours.*

3500 A Cultural History of the Mafia through Writings and Cinema

Prerequisite: ITA 2040 or 3080, or permission of chair. An in-depth look at the portrayal of the Mafia and its cultural ramifications in literature and film, from its emergence in the Modern World to its Globalization. *Credit: 3 semester hours.*

3530 Italian Culture through Food

Prerequisite: ITA 2040 or 3080, or permission of chair. The production, preparation, and consumption of food has played a particularly important role in the development of Italian culture. From the excesses of the Romans "coene," to the elegance of the Renaissance tables, and today's "Slow Food Movement," it is often through food that Italians have asserted and defended their cultural heritage. *Credit: 3 semester hours.*

3550; 3560 Civilization of Italy I; II

Prerequisite: ITA 2040 or 3080, or permission of chair. The history, geography, art, science, music, literature, folklore, politics, habits, and customs that have contributed to the shaping of Italian civilization and culture. *These two courses may be taken out of sequence. Credit: 3 semester hours per semester.*

3600 Contemporary Italy

Prerequisite: ITA 2040 or 3080, or permission of chair. This course studies all aspects of contemporary life in Italy. *Credit: 3 semester hours.*

3770 Dante and the Search for Social Justice

Prerequisite: ITA 2040 or 3080, or permission of chair. Dante's pursuit of social justice in his works. *Credit: 3 semester hours.*

3870; 3880 Italian Advanced Grammar and Composition I; II

Prerequisite: ITA 2040 or 3080, or permission of chair. A study of difficult points of Italian grammar and syntax, intensive composition practice and translation of selected passages into idiomatic Italian. *These two courses may be taken out of sequence. Credit: 3 semester hours per semester.*

3900 Art and Skills of Translation

Prerequisite: ITA 2040 or 3080, or permission of chair. This course addresses translation from theoretical and practical points of view. Students are expected to translate a wide range of texts from Italian into English. *Credit: 3 semester hours.*

3904 Dante and the Search for Social Justice (ENG)

Dante's pursuit of social justice in his works. *Course conducted in English and is not applicable to the Italian major or minor. Credit: 3 semester hours.*

3910 Italian Culture through Fashion (ENG)

The phenomenon of fashion in all its aspects and the role it plays in shaping the Italian culture. *Course conducted in English and is not applicable to the Italian major or minor. Credit: 3 semester hours.*

3922 Studies in Italian Culture (ENG)

A study of the diversified elements comprising the background of the culture and civilization of Italy. *Course conducted in English and is not part of the sequence for the Italian major or minor. Credit: 3 semester hours.*

3923 The City of Rome (ENG)

A study of the city of Rome through its historical periods and its literary and cultural movements. Italy's capital city will be the focal point for broad analyses of the relation of past and present, the classical cultural heritage in Italy, the anti-classical movements of Italian art, architecture, literature, and film. *Site visits are an integral part of this course. Offered in Rome. Course conducted in English and is not applicable to the Italian major or minor. Credit: 3 semester hours.*

4953 Independent Study

Prerequisite: Permission of chair. Guided undergraduate student research arranged on an individual basis. *Permission of the chair and the language area coordinator required. Credit: 3 semester hours.*

4980 International Internship (Italy)

Prerequisite: ITA 3110 or 3120, or permission of chair. Total immersion experience in the field of interest chosen by the student. *Credit: 3 or 6 semester hours.*

Japanese (JPN)**1010; 1020 Elementary Japanese**

Prerequisite: JPN 1010 is a prerequisite for JPN 1020. Reading, writing and conversation through a study of all major types of Japanese sentences. Study of the essentials of grammar, pronunciation, accent, intonation, and vocabulary is emphasized. *Credit: 3 semester hours per semester.*

2030; 2040 Intermediate Japanese

Prerequisite: JPN 1020 or placement exam. JPN 2030 is a prerequisite for JPN 2040. This course increases the student's ability in comprehending, reading, and writing Japanese. *Credit: 3 semester hours per semester.*

Korean (KOR)**1010; 1020 Elementary Korean**

Prerequisite: KOR 1010 is a prerequisite for KOR 1020. The students study the fundamentals of the Korean language with emphasis on the Korean alphabet, spelling, pronunciation and basic grammar. *Credit: 3 semester hours per semester.*

2030; 2040 Intermediate Korean

Prerequisite: KOR 1020 or placement exam. KOR 2030 is a prerequisite for KOR 2040. This course provides a systematic expansion of vocabulary and grammatical forms of standard Korean. Chinese characters, as used in Korean mixed script, are also introduced. *Credit: 3 semester hours per semester.*

Language and Culture (LAC)

1000 Language and Culture (ENG)

An introduction to the study of the nature, evolution, and diversity of human languages and their relationship to the development of culture. *Specific sections may deal with particular languages and anthropology. Credit: 3 semester hours.*

Latin (LAT)

1010; 1020 Elementary Latin

Prerequisite: LAT 1010 is a prerequisite for LAT 1020. An introduction to Latin; reading of Latin authors from the beginning of the course, accompanied by a study of the fundamentals of Latin grammar. *Credit: 3 semester hours per semester.*

2000 Intensive Intermediate Latin I/II

Prerequisite: LAT 1000 or 1020. Review of elementary grammar and introduction to complex structures in Latin with selections from classical and postclassical texts interpreted within their cultural contexts. *Credit: 6 semester hours.*

2030; 2040 Intermediate Latin

Prerequisite: LAT 1020. First Semester: Various prose selections (Nepos, Cicero, etc.) Second Semester: Selections from Vergil. *Credit: 3 semester hours per semester.*

4953; 4954 Independent Study

Individual guided study in Latin of a particular author or authors or of a genre of Latin literature. *Credit: 3 semester hours per semester.*

Linguistics (LIN)

1010 Introduction to Linguistics

An introduction to the fundamental principles of phonetics, phonology, morphology, syntax and semantics, with examples drawn from classical and modern languages. *Credit: 3 semester hours.*

1020 Survey of Linguistics

Prerequisite: LIN 1010. An introduction to the various fields of interest that comprise the modern study of linguistics. *Credit: 3 semester hours.*

1210; 1220 English Grammar I; II

Prerequisite: LIN 1210 is a prerequisite for LIN 1220. A descriptive survey of the grammatical structure of the English language. *Credit: 3 semester hours.*

1320 Greek and Latin Roots of English

An introduction to the Greek and Latin sources of English words, the principles of word formation and the appropriate usage of vocabulary. *No knowledge of Greek or Latin required. Credit: 3 semester hours.*

1810 Introduction to Phonology

An introduction to the study of sound systems found in language and its application to areas such as language acquisition, speech pathology, dialectal variation and historical change. *Credit: 3 semester hours.*

Mathematics (MTH)

1000 Mathematics for Liberal Arts

This course provides a qualitative approach to an understanding and interpretation of mathematics in the contemporary liberal arts. Topics to be discussed are selected from among those which have relevant application in the liberal arts. *Credit: 3 semester hours.*

1020 Applied Statistics I

Prerequisite: High school algebra. An introduction to general statistical methods for all disciplines. *Credit: 4 semester hours.*

1040 Mathematical Models for Decision Making

Prerequisite: Three years of high school mathematics. This course is intended to provide a foundation for practical decision making. Topics selected from finite mathematics, graph theory, probability, Markov chains, theory of voting, game theory. Particularly useful for students in the social sciences. *Credit: 3 semester hours.*

1050 College Algebra and Trigonometry

Corequisite: MTH 1051R. Review of elementary algebra; functions and graphs; sets of linear equations, introduction to exponential and logarithmic functions; trigonometry. *For chemistry, mathematics, and physics majors who have not attained satisfactory grades in advanced algebra and trigonometry in high school. Credit: 3 semester hours.*

1100 Mathematics of Fairness

Mathematical problems arising from the pursuit of justice and democratic procedures; how solutions to these mathematical problems affect decision making. *Credit: 3 semester hours.*

1125 Applied Statistics II: Multivariate Analysis

Prerequisite: MTH 1020. A continuation of the study of general statistical methods including factor analysis, multiple and curvilinear regression and analysis of covariance. *Credit: 4 semester hours.*

1210 Bio-Statistics

Probability and statistics with applications to the natural sciences. *Open to biology, environmental studies majors and pre-med students only. Credit: 4 semester hours.*

1220 Calculus with Biological Applications

Elementary calculus with applications whenever possible to the natural sciences. *Open to biology, environmental studies majors and pre-med students only. Credit: 4 semester hours.*

1250 Statistical Applications for Pharmacy and Allied Health

An introduction to the applications of probability and statistics to the pharmaceutical and allied health professions. *Open to College of Pharmacy and Health Sciences students only. Credit: 3 semester hours.*

1260 Calculus Applications for Pharmacy and Allied Health

An introduction to differential and integral calculus for the pharmaceutical and allied health professions. *Open to College of Pharmacy and Health Sciences students only. Credit: 3 semester hours.*

1300 College Algebra

A review of the real number system, methods of factoring, methods of solving polynomial equations, and an introduction to functions of a single variable. *Course does not satisfy St. John's University Core Curriculum requirements. Not applicable to major or minor sequences. Credit: 3 semester hours.*

1310 Pre-Calculus with Business Applications

Review of algebra; linear, quadratic and other functions with applications to economics and business. *Open to the Peter J. Tobin College of Business and St. John's College of Liberal Arts and Sciences students only. Credit: 3 semester hours.*

1320 Calculus with Business Applications

Prerequisite: MTH 1310. Introduction to calculus. Differentiation and integration of algebraic, exponential, and logarithmic functions of a single variable; introduction to functions of several variables; business and economics applications are stressed throughout. *Open to The Peter J. Tobin College of Business and St. John's College of Liberal Arts and Sciences students only. Credit: 3 semester hours.*

1600 Sports Analytics

An introduction to elementary probability and statistics, as applied to sports. *Open to St. John's College of Liberal Arts and Sciences students and The Lesley H. and William L. Collins College of Professional Studies students majoring in Sports Management. Not applicable to major or minor sequences. Credit: 3 semester hours.*

1730 University Calculus I

Prerequisite: Satisfactory grades in trigonometry and advanced algebra or MTH 1050. Functions; limits; derivatives; differentiation of algebraic and transcendental functions; antiderivatives; integrals; applications of these notions. *Credit: 4 semester hours.*

1740 University Calculus II

Prerequisite: MTH 1730. Definite Integral and Applications. Techniques of Integration. Sequences and Series. Power Series. Analytic Geometry. *Credit: 4 semester hours.*

2390 Introduction to Operations Research

Scientific approaches to decision making involving the operations of organizational systems. Topics include integer programming, probability, stochastic processes, game theory, networks. *Credit: 3 semester hours.*

2490 Databases

Prerequisite: CSC 1380 or 1400. Rational, hierarchical and network data base system, file organization and access techniques; query and update languages; data security and integrity. *Credit: 3 semester hours.*

2700 Introduction to Mathematical Thinking

Prerequisite: MTH 1740. An introduction to the tools of mathematics. How to read and write mathematics; construct examples and counterexamples; elementary mathematical logic; methods of proof. Students will be required to give presentations. *Credit: 3 semester hours.*

2720 Computability and Automata

Prerequisite: Any first calculus course (MTH 1009 or MTH 1220 or MTH 1260 or MTH 1320 or MTH 1730). Models of computation, notions of languages, finite state automata, regular languages, context-free languages, pushdown automata. Turing machines, time complexity, NP-completeness. *Credit:* 3 semester hours.

2750 University Calculus III

Prerequisite: MTH 1740. Vector-valued functions and their derivatives; partial derivatives. Multiple integrals and their applications: Green's Theorem, Stokes' Theorem. *Credit:* 4 semester hours.

2790 Introduction to Linear Algebra

Prerequisite: MTH 1740. Vectors and vector spaces; linear transformations and matrices; characteristic values and characteristic vectors of linear transformations; similarity of matrices. *Credit:* 3 semester hours.

2800 Introduction to Modern Algebra

Prerequisite: MTH 2700, 2750. Elementary theory of groups, rings, integral domains and fields. *Credit:* 3 semester hours.

3310 Design and Analysis of Algorithms

Prerequisite: One calculus course (MTH 1220, 1260, 1320, or 1730) or with permission of chair. Study of the notion of an algorithm, its running time and complexity; general approaches to algorithm design; efficient algorithms for a variety of problems. *Credit:* 3 semester hours.

3320 Introduction to Machine Learning

Prerequisite: One calculus course (MTH 1220, 1260, 1320, or 1730) and one computing course (CSC 1030, 1380, 1390, or 1400) or permission of chair. Machine learning concepts, techniques, algorithms such as classification, linear regression, and emerging topics such as boosting, SVM, Bayesian networks, reinforcement and deep learning. *Credit:* 3 semester hours.

3330 Data Security and Cryptography

Prerequisite: CSC 1380 or 1390 or 1400, or approval of chair. Basics of and history of cryptography; main ideas, methods and standard approaches to data security and cryptography. Elements of number theory and its applications to cryptography. *Credit:* 3 semester hours.

3340 Foundations of Data Science

Prerequisite: MTH 1220 or 1260 or 1320 or 1730. Dimensionality reduction; singular value decomposition; optimization; sampling; random graphs; random walks; Markov chains; spectral graph theory; clustering. *Credit:* 3 semester hours.

3350 Machine Learning, Neural Networks, and Deep Learning

Prerequisite: One calculus course (MTH 1009, 1220, 1260, 1320, or 1730). Neural Networks and Deep Learning concepts, techniques, algorithms such as perceptron, Neural Networks (NN), backpropagation, convolution NN, recursive NN, autoencoders, deep reinforcement learning. *Credit:* 3 semester hours.

3360 Quantum Computing and Quantum Information Science

Prerequisite: One calculus course (MTH 1220, 1260, 1320, 1730) and one computing course (CSC 1030, 1380, 1390, or 1400) or permission of chair. Foundation for understanding what quantum computers do, provides quantum computing experience. *Credit:* 3 semester hours.

3370 Machine Learning for Finance

Prerequisite: One calculus course (MTH 1220, 1260, 1320, or 1730) and one computing course (CSC 1030, 1380, 1390, or 1400) or permission of chair. Neural networks and deep learning concepts and techniques; algorithms such as perception, Neural Networks (NN), back-propagation, convolution NN, recursive NN, auto encoders, deep reinforcement learning. *Credit:* 3 semester hours.

3380 Discrete Mathematics

Prerequisite: MTH 1740 or permission of chair. The application of mathematics to discrete rather than continuous models. *Credit:* 3 semester hours.

3390 Introduction to Artificial Intelligence

Prerequisite(s): Any first calculus course (MTH 1009 or MTH 1220 or MTH 1260 or MTH 1320 or MTH 1730). Overview of concepts, techniques, and algorithms in artificial intelligence, like search, constraint satisfaction, and recent topics such as reinforcement and deep learning. *Credit:* 3 semester hours.

3770 Advanced Calculus I

Prerequisite: MTH 2700, 2750. *Corequisite:* MTH 3771R. Topology of the real line. Limits, continuity, differentiation of functions of one variable. Integration theory. All from a theoretical point of view. *Credit:* 3 semester hours.

3775 Topics in Advanced Calculus

Prerequisite: MTH 2700 and MTH 2750. Construction of the real numbers, topology of the real line, limits, continuity, differentiation. Riemann integral, sequences and series, introduction to metric spaces. *Credit:* 3 semester hours.

3780 Advanced Calculus II

Prerequisite: MTH 3770. *Corequisite:* MTH 3781R. Limits, continuity, differentiability for functions of several variables. Implicit Function Theorem. Series of functions. All from a theoretical point of view. *Credit:* 3 semester hours.

3810 Mathematical Theory of Probability and Statistics I

Prerequisite: MTH 1740. Introduction to probability; sample spaces, random variables, Probability Distributions. *Credit:* 3 semester hours.

3840 Ordinary Differential Equations

Prerequisite: MTH 1740 or with permission of chair. First order equations, existence and uniqueness, Picard iteration, numerical methods. Linear algebra of linear systems and their solutions. Models, phase plane, nonlinear systems, stability. *Credit:* 3 semester hours.

3860 Numerical Analysis I

Prerequisite: MTH 1730 or with permission of chair. Errors; methods of interpolation, numerical solution of algebraic, transcendental and differential equations. *Credit:* 3 semester hours.

3970 Topics in Applied Mathematics

Prerequisite: Consent of instructor. Topics selected from areas such as mathematical physics, integral equations, Fourier analysis. *Credit:* 3 semester hours.

4830 Complex Variables

Prerequisite: MTH 1740 or permission of chair. Analytic functions, power series, complex integration and Cauchy's Theorem, application of Cauchy's Theorem; Laurent Series and the Residue Theorem, evaluation of real integrals. *Credit:* 3 semester hours.

4903 Internship in Mathematics

Restricted registration. Fieldwork (eight hours per week) where students are afforded the opportunity of working in the professional field of mathematics, practice under the supervision and counseling of a faculty member. *Credit:* 3 semester hours.

4906 Internship in Mathematics

Restricted registration. Fieldwork (sixteen hours per week) where students are afforded the opportunity of working in the professional field of mathematics, practice under the supervision and counseling of a faculty member. *Credit:* 6 semester hours.

4910 Introduction to Set-Theoretic Topology

Prerequisites: MTH 1740, 2700. Basic topological concepts; continuous mappings; connectedness and compactness; metric spaces. *Credit:* 3 semester hours.

4950 Concepts of Geometry

Prerequisite: Consent of instructor. Axiomatic systems, projective, affine, Euclidean and non-Euclidean geometries. *For mathematics or education majors with department approval.* *Credit:* 3 semester hours.

4953 Independent Study

Prerequisite: MTH 3780 or consent of instructor. Guided research and reading on an individual basis. Students must submit to the Chair of the department for approval, prior to registration, an outline of subject areas to be researched or read, as well as written acceptance of a faculty member of their choice. *For senior mathematics majors with departmental approval.* *Credit:* 1 to 3 semester hours.

4970 Independent Research in Statistics and its Applications

Prerequisite: MTH 1730, 1740, 3810 or equivalent and nine additional semester hours in MTH, or approval of chair. Qualified mathematics majors or minors or data science minors undertake directed research in a chosen field of applied statistics. *Open only to mathematics majors, mathematics minors, or data science minors with a 3.0 overall GPA.* *Credit:* 1 to 3 semester hours.

4980 Independent Research in Machine Learning and Artificial Intelligence

Prerequisite: MTH 1740, 3320 or equivalent, and six semester hours in MTH or CSC, or approval of chair. Qualified Mathematics /Computing majors, Mathematics minors, Data Science minors, interdisciplinary students undertake directed research in a chosen field of Machine Learning and Artificial Intelligence. *Open to students with at least 3.0 overall GPA.* *Credit:* 1 to 3 semester hours.

4990 Senior Seminar

Prerequisite: MTH 3770. Reading and discussion of topics in current mathematics emphasizing the unification of the student's previous coursework. Term project. *Credit: 3 semester hours.*

Music (MUS)

1010 Introduction to Music

An introduction to the art of listening to music through a discussion of the basic musical elements and musical structures. *Credit: 3 semester hours.*

1020 Theory I

Scales, intervals, sight-singing, ear training, melodic dictation, elementary keyboard work, and the explanation of musical terminology. *Credit: 3 semester hours.*

1030 Introduction to Music Composition

An introduction to composition through a series of class projects and exercises that aim to develop a working knowledge of music theory and gain important hands-on experience in the creation of music. *Credit: 3 semester hours.*

1035 Songwriting

An introduction to songwriting in which students will create musical notation, use production software, and write lyrics to create musical compositions. *Credit: 3 semester hours.*

1070 The Opera

Development of the opera from its antecedents prior to the 17th century through to the present, with particular emphasis on the distinct nature of opera as an independent art form. *Credit: 3 semester hours.*

1080 World Music

A survey of the history and development of music as a worldwide phenomenon, utilizing ethnomusicological methodology and cultural analysis as process. *Credit: 3 semester hours.*

1085 Popular Music of the Non-Western World

The course introduces students to ethnomusicology and the cross-cultural study of popular music and culture. It explores music, performance and ideas from around the world. The course explores the role of music in human life. *No musical background is required. Credit: 3 semester hours.*

1210 Twentieth Century Music

An in-depth study of the major musical trends of the 20th century. *Credit: 3 semester hours.*

1240 History of Music in Film

A survey of the history and development of music in films from its earliest use to present inclusion in motion pictures. *Credit: 3 semester hours.*

1260 The American Musical Theatre

The history of the American musical; its early influences, its continued stylistic changes and its current trends. *Credit: 3 semester hours.*

1300 History of Jazz

A survey of the history and development of jazz as a unique American art form; the sociological, folk and primitive backgrounds of jazz, as well as its development as an improvisatory art; the contributions of jazz to concert music. *Credit: 3 semester hours.*

1600; 2600 Piano I; II

Private lessons in piano. *Access to a piano is required. Credit: 1 semester hour per semester. Special fee: \$500 per semester.*

1610; 2610 Guitar I; II

Private instruction in guitar. *Credit: 1 semester hour per semester. Special fee: \$500 per semester.*

1620; 2620 Voice I; II

Private lessons in voice. Instructor's studio or on campus. *Credit: 1 semester hour per semester. Special fee: \$500 per semester.*

1630; 2630 Flute I; II

Private instruction in flute or wind instruments. *Credit: 1 semester hour per semester. Special fee: \$500 per semester.*

1640; 2640 Strings I; II

Private instruction in string instruments: violin, viola, or cello. *Credit: 1 semester hour per semester. Special fee: \$500 per semester.*

2010 Digital Music Production

An introduction to digital technology in music production and composition. *Credit: 3 semester hours.*

2020 Theory II

Prerequisite: MUS 1020. A study of triads, sevenths, ninths, chords and elementary modulations; further practice in ear training, harmonic analysis of compositions with emphasis on the Bach chorales. *Credit: 3 semester hours.*

2501 The Gospel Choir

A select ensemble of singers who explore, learn, and perform an exciting repertoire in the gospel music genre and several sub-genres as participants in Voices of Victory gospel choir. *Audition required. Credit: 1.5 semester hours per semester.*

2502 Jazz Ensemble

A select ensemble of instrumental musicians who will explore, learn, and perform an exciting repertoire in the jazz genre and various contemporary music genres as participants in the Jazz Ensemble. *Audition required. Credit: 1.5 semester hours per semester.*

2503 Chamber Ensemble

Prerequisite: Ability to read music. Chamber Music is a course that focuses on musical collaboration. Small ensembles of instrumentalists/singers explore chamber music repertoire. Includes performance opportunities and master classes. *Audition required. Credit: 1.5 semester hours per semester.*

2504 Mixed Chorus

A select ensemble of singers who learn and perform an exciting repertoire in the classical, sacred, pop, and Broadway choral music genres as participants in the Mixed Chorus. *Audition required. Credit: 1.5 semester hours per semester.*

Philosophy (PHI)

1000 Philosophy of the Human Person

An investigation of the general question "What does it mean to be a human person?" Special emphasis on the nature of human freedom, consciousness and cognition, and the origin and significance of life. Central to the course will be a

discussion of the spirituality, immortality and dignity of the human person. The course begins with an introduction to philosophy and to critical thinking. *Credit: 3 semester hours.*

2200 Ethics

Prerequisite: PHI 1000. Human happiness and the essential means of achieving it; universal and objective morality vs. relativism and subjectivism; principles used in formulating a rational moral judgment; the functions of law and the conscience; prudence and the moral virtues as the heart of the moral life. *Credit: 3 semester hours.*

2220 Ethics and Business

Prerequisite: PHI 1000. The development of the general principles of the moral life in regard to happiness and the means to attain happiness. The objective moral principles which impact on one's life in its various dimensions personal, familial, social and political. Special emphasis is placed on the application of ethical principles to accounting, economics, finance, management, and marketing. *Open to the Peter J. Tobin College of Business students only. Credit: 3 semester hours.*

2240 Ethics and Health Care

Prerequisite: PHI 1000. A discussion of the nature of human happiness and the development of moral principles and their impact on one's life in its various dimensions: personal, familial, social, political and professional. The application of these principles to ethical issues as they arise in medical practice and the practice of pharmacy. *Credit: 3 semester hours.*

3000 Metaphysics

Prerequisite: PHI 1000. An introductory course which attempts to articulate ultimate principles of knowing and being. Central questions to be considered are: Is there evidence of God's existence and correspondingly, is there a solution to the problem of evil? Does human cognition permit of ultimate foundations? Is nature teleological and if so can it serve as an objective standard of value? The course also considers traditional metaphysical aspirations in the context of contemporary challenges from the physical and social sciences. *Credit: 3 semester hours.*

3320 Science and Religion: A Philosophical Analysis

Prerequisite: PHI 1000 and three semester hours in the physical/biological sciences. A study of the relation between science and religion through an examination of the criteria for determining the optimal interrelation, their historical interactions and current debates concerning their interconnection. *Credit: 3 semester hours.*

3330 Introduction to Feminist Philosophy

Prerequisite: PHI 1000. A general introduction to both the past history as well as current concerns of feminist theory. The readings for the course will cover classic feminist texts (Wollstonecraft, Mill, Engels) as well as contemporary Feminist thinkers, covering questions about the experiences of women in the treatment of methodology, metaphysics, theory of knowledge, philosophy of science, and philosophy of mind. *Credit: 3 semester hours.*

3400 Introduction to Logic

A study of the elementary and advanced forms of deductive argumentation in both traditional logic and the modern logic of propositions. *Credit: 3 semester hours.*

3420 Informal Logic

Application of principles of logic to law, politics, arts, science, advertising, ethics and media. Special emphasis on developing skill of detecting informal fallacy. *Credit: 3 semester hours.*

3500 History of Ancient Philosophy

A survey of ancient Greek philosophy from its origin up to the 4th century A.D. Emphasis is on pre-Socratic period, Plato, Aristotle, Scepticism, Epicureanism, Stoicism and neo-Platonism. *Credit: 3 semester hours.*

3510 History of Medieval Philosophy

A survey of the development of medieval philosophy with special emphasis on the principal philosophers: St. Augustine, St. Anselm, St. Bonaventure, St. Thomas Aquinas, John Duns Scotus and William of Ockham. *Credit: 3 semester hours.*

3520 History of Modern Philosophy

Prerequisite: PHI 3000 or permission of instructor. An examination of the central epistemological and metaphysical issues of modern philosophy. *Credit: 3 semester hours.*

3530 History of Contemporary Philosophy

Prerequisite: PHI 3000 or permission of instructor. The development of modern contemporary philosophical thought from Hegel to the present. The fundamental views of such 20th century thinkers as Heidegger, Sartre, Husserl, Russell, Moore, Ayer, Popper, Gilson, Maritain, Wittgenstein and Rorty are introduced. Various philosophic methods and models are analyzed. *Credit: 3 semester hours.*

3540 American Philosophy

Prerequisite: PHI 3000. The classic expressions of the American Pragmatic movement in the writings of C.S. Peirce, William James, and John Dewey are presented with reference to cultural context and subsequent developments. (e.g. Founding Fathers, Emerson, Thoreau, Henry James, Martin Luther King, Jr., Richard Rorty). *Credit: 3 semester hours.*

3550 Existentialism

Prerequisite: PHI 3000. A general survey of the history and the main themes of the Existentialist movement; an analysis of relevant texts by major existentialist philosophers and an attempt at constructing an existentialist philosophy of person. *Credit: 3 semester hours.*

3570 Personalism

Prerequisite: PHI 2200. This course explores some of the leading personalist philosophers of the past one hundred years such as Martin Buber, John MacMurray, Emmanuel Mounier, and Gabriel Marcel. Jacques Maritain's view of person is also discussed. There is an in depth discussion of love, fidelity, promises, vows and the possibility of a life commitment. *Credit: 3 semester hours.*

3590 Confucianism and Taoism

Prerequisite: PHI 1000. This course introduces students to moral and political philosophy in the Confucian and Taoist traditions. The course is divided into two parts. The first will examine key Confucian and Taoist texts in their historical contexts and creative comparison with Western moral and political philosophy. The second is devoted to contemporary literatures that attempt to modernize central Confucian and Taoist teachings in order to produce fresh insights for the modern world. Through this course, students will achieve a substantial understanding of Confucian and Taoist moral and political ideals and how they remain highly relevant to contemporary moral and political issues. *Credit: 3 semester hours.*

3600 Problem of God

Prerequisite: PHI 3000. The background, beginning with the 17th century, of present day opinion concerning the existence of God; the nature of a realistic philosophy of God; the examination of proofs of God's existence; a study of influential atheists and a presentation of a contemporary philosophy of God. *Credit: 3 semester hours.*

3630 Epistemology

Prerequisite: PHI 1000. An examination of the fundamental nature of human knowledge—its mode of existence, sources and validity. Classical, modern and contemporary approaches to knowledge are addressed. *Credit: 3 semester hours.*

3640 Aesthetics

Prerequisite: PHI 1000. A philosophical investigation into the meaning of the transcendental beauty. The nature, principles, and end of artistic work as it related to society, as well as the role of artist and aesthete. *Credit: 3 semester hours.*

3650 Philosophy of Law

Prerequisite: PHI 2200. A critical examination of the central issues in contemporary legal philosophy. Major themes include: the nature of legal reasoning; the relationship of law and morality; the recent development of legal hermeneutics, and the justification of punishment. A central concern of the course is to understand how legal institutions evolve, an evolution which is both faithful and yet progressively responsive to Constitutional ideals. *Credit: 3 semester hours.*

3660 Political Philosophy

Prerequisite: PHI 2200. An investigation of the standards and procedures for political legitimation, including an analysis of the following: the common good of the political community, the greatest good for the greatest number, the promotion of virtue, and agreement resulting from a social contract or ideal discourse. Special attention is given to an examination of the nature, function, and justification of "rights." *Credit: 3 semester hours.*

3670 Modernity in Crisis

Prerequisite: PHI 2200. In a world described as postmodern, a world increasingly marked by violence and irrationality, the traditional philosophical search for meaning and ethical value, and the ideas of truth and rationality have been called into question. This course examines the response to this crisis by recent Continental thought. *Credit: 3 semester hours.*

3700 Contemporary Moral Problems

Prerequisite: PHI 2200. The response to authentic moral values in man's inter-personal existential encounter with modern life and its moral problems. Among the topics treated are: the dignity of the human being, sex, abortion, birth control, sterilization, lying, racial discrimination, free speech, labor unions, Socialism, Communism, war and peace. *Credit: 3 semester hours.*

3720 Environmental Justice

Prerequisite: PHI 2200. A philosophical investigation of the environment and its relationship to the human person. Special emphasis is placed on the moral issues that arise from that relationship such as the moral standing of non-humans and the responsibility of the present generation to future generations. *Credit: 3 semester hours.*

3730 Environmental Ethics

Environmental justice is a movement that seeks to clarify and call attention to the unequal impact environmental degradation has on particular people and communities. The intent of this course is to examine the social and political factors that contribute to various forms of environmental racism, classism, and sexism around the world, as well as to indicate ways in which to address these different forms of injustice. *Credit: 3 semester hours.*

3740 Social Justice

Prerequisite: PHI 2200. An investigation of social justice issues in the contemporary postmodern world. The course discusses how various philosophical theories and historical perspectives can aid or distort our understanding of social justice and its concretization. *Credit: 3 semester hours.*

3750 Philosophy of Race

Prerequisite: PHI 1000. A philosophical examination of the concept of race, tracing the development of the concept from ancient times to the present. This course will demonstrate the philosophical significance of the notion of race and the conceptual frameworks it has been a part of. It will examine the political and ethical significance of these frameworks, as well as the metaphysics and epistemology of race. *Credit: 3 semester hours.*

3800 Philosophy of Science

Prerequisite: PHI 3000 and three semester hours in the physical/biological sciences. The logic and methodology of science with special emphasis on the theory-ladenness of observation, the nature and structure of scientific theories and the verification/falsification of laws and theories. *Credit: 3 semester hours.*

3920 Philosophy and Film

Prerequisite: PHI 1000. An exploration of the philosophy of person and the philosophy of God through the medium of film classics. *Credit: 3 semester hours.*

4953 Reading and Research

Restricted registration. Guided research and reading for the special needs of an individual student which cannot be met by regular scheduled course offerings of the department. Prior to registration, the student must submit to the department chair a written outline of the area(s) to be researched or read, together with the written acceptance of the project by a faculty member of the department. *Open only to juniors and seniors. Approval of the department chair is required. Credit: 3 semester hours.*

4990 Seminar in Philosophy

Prerequisite: PHI 3000. An intense reading, writing, and critical discussion course, based on a central theme in contemporary philosophy, in a seminar format. *This course is for philosophy majors who have completed all other requirements of the major. Offered spring semester only. Credit: 3 semester hours.*

Physics (PHY)

1020 Physics in Words and Pictures

A survey of modern physics without math. Words and pictures illustrate our current concepts of the laws of nature. These are used to explain various everyday phenomena, the scientific view of the cosmos, and elements of modern technology. *No prior study of physics required. Credit: 3 semester hours.*

1030 Principles of Contemporary Science

A non-mathematical treatment of the fundamental scientific principles of the physical world; the nature of matter and energy, atoms and nuclei; fundamentals of our knowledge of the earth and the universe; influence of natural sciences on human thought and society. *No prior study of physics required. Credit: 3 semester hours.*

1060 Introduction to Astronomy

A non-mathematical perspective of astronomy: solar system, stars and their evolution, nebulae and supernovae, galaxies and the universe. *No prior study of physics is required. Credit: 3 semester hours.*

1080 Our Planet

An integrated, descriptive study of our planet, stressing the principles of plate tectonics. The topics include the origin and history of the earth, volcanoes and earthquakes, continental drift, environmental geology and astrogeology. *No prior study of physics required. Credit: 3 semester hours.*

1090 The Science of Weather

The structure of Earth's atmosphere and its energy exchanging processes. Cloud formation, air-masses, cyclones and anticyclones; thunderstorms, tornadoes and hurricanes. Weather prediction and modification. *No prior study of physics required. Credit: 3 semester hours.*

1120 Energy and Environment

A comprehensive study of energy production, distribution, and consumption. Physical principles and technological problems. Environmental aspects; energy crisis, past and future. Future energy sources and their management. *No prior study of physics required. Credit: 3 semester hours.*

1130 Introduction to Solid Works

Introduction to basic AutoCAD commands, tools, multi-view drawing and dimensional techniques to design 3D mechanical and robotic systems. *Credit: 3 semester hours.*

1220 Planet Earth-Historical Geology

Evolution of the earth through time as revealed in fossils, rocks, radioactive materials and other evidence. The planet's history is reconstructed from these clues. *Credit: 3 semester hours.*

1340 Renewable Energy and Applications

This course is designed for undergraduate science and non-science students. It will provide an introduction to energy systems and renewable energy resources, with a scientific examination of different types of energy, alternate energy sources and their technology and application. The class will also discuss the society's present energy needs and future demands, examine conventional energy sources, and then focus on alternate, renewable energy sources such as solar, biomass (conversions), wind power, geothermal, and hydro. *Credit: 3 semester hours.*

1360 Physics for Radiologic Sciences

Prerequisite: MTH 1050 or equivalent. Introductory physics course topics in Biology, Physiology, and Medicine. Basic physical principles from the perspective of life sciences with applications. *For students majoring in Radiologic Sciences. Credit: 3 semester hours.*

1410 Introduction to General Physics

The course is designed to help students with weak background in physics or those who have no prior physics courses. Topics include: Introduction to algebra, calculus, vectors, and selective topics such as mechanics, waves, optics, heat, electricity, and magnetism. *Credit: 3 semester hours.*

1610; 1620 College Physics I; II

Prerequisite: PHY 1610 is a prerequisite for PHY 1620. Corequisite: PHY 1611L and PHY 1612R are corequisites for PHY 1610. PHY 1621L and PHY 1622R are corequisites for PHY 1620. First Semester: An introduction to mechanics, heat, waves and sound. Second Semester: An introduction to optics, electricity and magnetism, atomic and nuclear physics. Appropriate for biology majors. *Not open to chemistry, physics or mathematics majors in St. John's College. Lecture, 3 hours. Laboratory, 2 hours. Recitation, 1 hour. Credit: 4 semester hours per semester. Laboratory fee: \$25 per semester.*

1930; 1940 University Physics I; II

Prerequisite: PHY 1930 is a prerequisite for PHY 1940. Corequisite: MTH 1730 or 1950. PHY 1931L and PHY 1932R are corequisites for PHY 1930. PHY 1941L and PHY 1942R are corequisites for PHY 1940. First Semester: Fundamentals of mechanics, heat, fluids, wave-motion and sound, utilizing calculus. Second Semester: Fundamentals of optics, electricity and magnetism, atomic and nuclear physics, utilizing calculus. *Lecture, 3 hours. Laboratory, 2 hours. Recitation, 1 hour. Credit: 4 semester hours per semester. Laboratory fee: \$25 per semester.*

1950 Mathematics for Physical Science

Corequisite: PHY 1952R. Analytic geometry, differential and integral calculus applied to physics and engineering. *Lecture, 3 hours. Recitation, 1 hour. Credit: 3 semester hours.*

1970 Introduction to Modern Physics

Corequisite: PHY 1620 or 1940, and 1972R. The structure and properties of atoms, molecules, and nuclei, X-rays, gamma rays, natural and artificial radioactivity. Nuclear fission and fusion, nuclear energy production; special relativity and elementary particles. *Lecture, 3 hours. Recitation, 1 hour. Credit: 3 semester hours.*

2000 Introduction to Digital Systems

Prerequisite: PHY 1620 or 1940. Corequisite: PHY 2001. Fundamentals and applications of digital electronic design, including combinational and sequential logic circuits. *Credit: 4 semester hours.* 2001 Introduction to Digital Systems Laboratory *Prerequisite: PHY 1620 or 1940. Corequisite: PHY 2000.* Modeling, simulation, and synthesis of simple digital designs, hardware description language, Verilog/SystemVerilog. *Laboratory, 2 hours. Laboratory fee: \$100.*

2010 Advanced Physics Laboratory

Prerequisite: PHY 1970. Several experiments in modern physics to the students, such as Frank Hertz, Millikan Apparatus, Planck's constant, Zeeman Effect, NMR, ESR, and Hall Effect. *Laboratory, 4 hours. Credit: 2 semester hours.*

2250 Thermal and Statistical Physics

Prerequisite: PHY 1620 or 1940. Corequisite: PHY 1970. Boltzmann and Quantum statistics, laws of thermodynamics, systems of interacting particles, engines, kinetic theory of gases, heat, work, conservation of energy, open, and closed systems. *Credit: 3 semester hours.*

2460 Analytical Mechanics

Prerequisite: MTH 1730, and PHY 1620 or 1940. The fundamentals of classical mechanics. Topics include motion of a particle, conservation of energy, momentum and angular momentum, Lagrange and Hamilton equations, configuration and phase space, orbital mechanics. *Credit: 3 semester hours.*

3100 Biological Physics

Prerequisite: MTH 1730, and PHY 1620 or 1940. The physical laws most relevant to life. Energy and its transformation in organisms; Information and the programming of life processes; Entropy and the creation of order by living systems; Quantum mechanics and its role in chemistry and in the mutability and permanence of life. *Credit: 3 semester hours.*

3210; 3220 Electricity and Magnetism I; II

Prerequisite: PHY 1620 or 1940. PHY 3210 is a prerequisite for PHY 3220. First semester: The study of electrostatics, conductors and dielectrics, using vector algebra and calculus; direct currents and circuit analysis. Second semester: Magnetism, electromagnetic induction, alternating currents; Maxwell's equations, electromagnetic waves. *Credit: 3 semester hours per semester.*

3221 Electricity and Magnetism Laboratory

Prerequisite: PHY 3210. Selected experiments demonstrating the principles and applications of electricity and magnetism. *Laboratory, 4 hours. Credit: 2 semester hours. Laboratory fee: \$25.*

3240 Electronics

Prerequisite: PHY 1450, or 1620, or 1940. *Corequisite:* PHY 3241. Introduction to electronic devices including diodes, transistors, amplifiers, filters, oscillators, LEDs and other electronic systems. Principles of electronic circuit design and analysis. *Lecture, 3 hours. Laboratory, 2 hours. Credit: 4 semester hours. Laboratory fee: \$25.*

3250 Optics

Prerequisite: MTH 1730 or PHY 1950, and PHY 1620 or 1940. The optics of lenses and mirrors, cameras, corrective lenses, telescopes, magnifiers, microscopes. Wave theory of light, with applications: interferometry, diffraction patterns, polarization, spectroscopy, dispersion, fiber optics, holography. *Credit: 3 semester hours.*

3330 Quantum Theory

Description of atomic systems by state vectors; probability amplitudes, superposition and interference; matrices and operators. Topics include: the wave and matrix formulations of quantum physics, commutation relations, symmetries and conservation laws; angular momentum and spin, perturbation theory, and applications. *Credit: 3 semester hours.*

3820 Fluid Mechanics

Prerequisite: MTH 3840 and PHY 2460 or 2110. Fundamentals of fluid statics and dynamics, including: properties and energy relationships of fluids, and flow in closed conduits, and flow measurement. *Credit: 3 semester hours.*

3850 Introduction to Solid State Physics

Prerequisite: MTH 3840, PHY 1940. Properties of static (crystal structure) and dynamic (lattice vibrations) arrangements of atoms, and electronic properties of metals, insulators and semiconductors. *Credit: 3 semester hours.*

3890 Numerical Methods

Prerequisite: MTH 3840, PHY 1940. Numerical techniques to solve physics problems such as roots of linear and nonlinear equations; solution of ordinary differential equations; curve fitting and interpolation. *Credit: 3 semester hours.*

4953 Independent Study

Restricted registration. Guided reading and investigation of an area of science of special interest to a student and faculty member. Before registering for this course a student must obtain assurance of a faculty member's supervision. *Credit: 2 to 4 semester hours.*

Psychology (PSY)**1000 Introductory Psychology**

An introduction to scientific psychology and its methods. The course presents a survey of the major areas within the discipline of psychology, including the psychology of personality, abnormal behavior, learning, sensation and perception, social processes, states of consciousness, individual

differences, thinking, language, and human development. *Credit: 3 semester hours.*

2030 Statistical Methods for the Social Sciences

Prerequisite: PSY 1000. *Corequisite:* PSY 2030L. Methods for describing and evaluating research data including measures of central tendency, dispersion, relationships and hypothesis testing by means of t-tests, Chi Square tests, analysis of variance and some nonparametric tests. A laboratory will accompany this course giving students experience using statistical software. *This course should be taken in the sophomore year. Credit: 4 semester hours.*

2040 Research Methods in Psychology

Prerequisite: PSY 1000, 2030. *Corequisite:* PSY 2040P. An overview of the methods and procedures of psychological science. Students learn to read empirical literature, understand key theories about behavior and psychopathology, develop testable hypotheses, and evaluate appropriate methods for testing these hypotheses. The course teaches methods for assessing the role of observational, survey, correlational, experimental, and quasiexperimental approaches to research. There is a strong emphasis on the development of critical thinking and writing skills essential to understanding research and deploying scientific knowledge in a broad range of situations. Practicum work focuses on studies of human behavior and the writing of research reports using the style manual of the American Psychological Association. *This course should be taken in the semester following the completion of PSY 2030. Credit: 4 semester hours.*

2050 Educational Psychology

A study of intellectual functioning, individual differences, problems of learning and motivation. *Credit: 3 semester hours.*

2070 Child Psychology

A study of the physical, intellectual, emotional, and social aspects of development through childhood, with emphasis on major developmental constructs and theories. *Credit: 3 semester hours.*

2080 Adolescent Psychology

Physical, intellectual, emotional, and social aspects in the development of the individual in the transitional period between childhood and maturity. *Credit: 3 semester hours.*

2150 Physiological Psychology

Prerequisite: PSY 1000. An introduction to the anatomy and physiology of the nervous system, sensory and motor systems and endocrine system in relation to normal and abnormal behavior. *Credit: 3 semester hours.*

2200 Abnormal Psychology

Prerequisite: PSY 1000. An introduction to the features, causes, and treatments of abnormal patterns of behavior or psychological disorders. *Credit: 3 semester hours.*

2210 Theories of Personality

Prerequisite: PSY 1000. An introduction to significant theories of personality and a critical evaluation of these theories. *Credit: 3 semester hours.*

2220 Child and Adolescent Psychopathology

Developmental, clinical-diagnostic, and experimental approaches to child and adolescent psychopathology will be addressed. The developmental course of each disorder and the role of biological, psychological, and sociocultural factors and how they interact with a child's environment will be addressed. Specifically, the course will examine disorders related to anxiety, stress & trauma, mood, schizophrenia, eating and substance abuse, memory and organic dysfunctions, ADHD, and personality in childhood and adolescence. *Credit: 3 semester hours.*

2230 Psychology of the African American Experience

This course explores the contexts that shape the psyche of African Americans. This course examines the effect of the history of psychology and its cultural underpinnings on the psychological study and evaluation of African Americans as a distinct cultural group. The psychological residuals of involuntary immigration, slavery, segregation and discrimination and social trauma will be explored. *Credit: 3 semester hours.*

2240 Psychology of Women

Reviews the relevant psychological theories and empirical research on women and gender throughout the lifespan. The major goals of the course are to understand the biological, cognitive, and psychosocial influences that affect the realities of women's lives in modern society. *Credit: 3 semester hours.*

2250 Forensic Psychology

Prerequisite: PSY 1000. The relationship between psychology, psychopathology, and mental health issues that interact with our legal system. *Credit: 3 semester hours.*

2260 Positive Psychology

Positive psychology studies how human beings prosper in the face of adversity. It attempts to identify and enhance the human strengths and virtues that make life worth living and allow individuals and communities to thrive. *Credit: 3 semester hours.*

2270 Health Psychology

Health psychology focuses on the behavioral, personality, social, cultural, and lifestyle variables that influence the prevention and treatment of physical health, disease onset, stress/coping and intervention strategies, disparities in seeking and having access to health care, and compliance with medical treatments. *Credit: 3 semester hours.*

2280 Introduction to Sport Psychology

Psychological factors affecting sports participation and their role in sports performance. *Credit: 3 semester hours.*

2380 Psychology of Anger, Aggression, Hatred, and Violence

Psychological factors that affect anger, aggression, hate, and violence and the implications for assessment, prevention, and interventions in society and the individual will be explored. *Credit: 3 semester hours.*

2990 Sophomore Seminar

Prerequisite: PSY 1000. Introduction to the psychology major, the subfields of psychology, the methods of discovery, library, and writing skills in the field and understanding career opportunities. *This course should be taken in the sophomore year. Credit: 3 semester hours.*

3040 Experimental Psychology Laboratory

Prerequisite: PSY 2030. Corequisite: PSY 2040 and approval and acceptance from the instructor. Qualified students undertake directed research in a chosen field in psychology with a research team. Students learn to conceptualize problems, design, conduct, and write up a study. *Credit: 3 semester hours.*

3041 Experimental Psychology Laboratory

Prerequisite: PSY 2030, 2040, 3040, and approval and acceptance from the instructor. Qualified students undertake directed research in a chosen field in psychology with a research team. Students learn to conceptualize problems, design, conduct, and write up a study. *Credit: 3 semester hours.*

3260 Introduction to Psychological Measurement

Prerequisite: PSY 1000, 2030. An overview of basic principles of measurement theory with emphasis on psychological testing. *Credit: 3 semester hours.*

3270 Experimental Psychology of Learning

Prerequisite: PSY 1000, 2030. An exposition of contemporary learning theory from the viewpoint of classical and operant conditioning, including interpretation of the role of drives and motives and concepts of generalization, discrimination, emotions, and higher forms of learning. *Credit: 3 semester hours.*

3280 Cognitive Psychology

Prerequisite: PSY 1000, 2030. Examines the scientific study of the acquisition, processing, storage, retrieval, and use of information. Topics include perception, attention, forms of memory, memory effectiveness, imagery, spatial knowledge, language, concepts, reasoning, problem solving, judging, and deciding, expertise, creativity, aging and cognition and unconscious cognitive functioning. *Credit: 3 semester hours.*

3290 Sensation and Perception

Prerequisite: PSY 1000, 2030. PSY 2150 may be taken prior or in conjunction with PSY 3290. Introduction to the concepts, methods, and findings of classical and modern psychophysics as they relate to providing an understanding of the sensory systems and processing of sensory information. *Credit: 3 semester hours.*

3320 Social Psychology

Prerequisite: PSY 1000. Examines the scientific study of how real, imagined or anticipated actions or evaluations by others influence our thoughts, feelings or behavior. Topics include the psychology of research participation, attitudes, attitude change, persuasion, conformity, compliance, stereotypes and prejudice, liking and attraction, intimate relationships, group processes, social perception and cognition, the social self, helping others, hurting others and conflict resolution. *Credit: 3 semester hours.*

3410 Autism and Intellectual Disability

Study of concepts, procedures, and research related to autism, intellectual disabilities, and other developmental disabilities from bio-medical, psychological, and educational perspectives. *Credit: 3 semester hours.*

3420 Applied Behavioral Analysis and Positive Support

The study of concepts and procedures related to applied behavior analysis (ABA) and positive behavioral support (PBS). Learn how ABA/PBS is used to change important behaviors. *Credit: 3 semester hours.*

3500 Special Topics in Psychology

In-depth study of a specialized area in Psychology. *Credit: 3 semester hours.*

3800 History and Systems of Psychology

Prerequisite: PSY 1000 and at least nine additional semester hours in PSY. The evolution of psychology from its philosophical and physiological roots to its current status as science and profession. Review of major schools and theories, contributions of noted investigators and significant advances. *Credit: 3 semester hours.*

4903 Internship in Clinical, Counseling, or School Psychology

Prerequisite: At least twelve semester hours in PSY. Minimum GPA of 3.0 required. Placement in a social service agency for six to eight hours per week of volunteer work. Individual and group meetings with the instructor. Social service agency includes, but is not limited to, psychiatric hospitals, institutions for exceptional children and adults, homes for the elderly, halfway houses, and crisis intervention centers. *Credit: 3 semester hours.*

4904 Internship in Industrial/ Organizational Psychology

Prerequisite: At least twelve semester hours in PSY. Minimum GPA of 3.0 required. Placement in an agency or corporation for eight to ten hours per week of work in psychology related businesses, plus meetings with the instructor. *Credit: 3 semester hours.*

4951 Independent-Guided Study in Psychology I

Prerequisite: PSY major with 3.0 overall GPA, PSY 1000, 2990, and nine additional semester hours in PSY. Prior to registration, the student must prepare a written contract with a department faculty member of the student's choice. This contract shall specify the topic to be studied, the goals of the course, the reading list, the activities to be done, and the final product of the course expected by the faculty member. The department chair must also provide written approval of the agreement before the student can register. Qualified psychology majors undertake directed study on topics of their choice. *Student cannot take this course and PSY 3040, 3041, 4952, 4953, or 4954 in the same semester.*

4952 Independent-Guided Study in Psychology II

Prerequisite: PSY major with 3.0 overall GPA, PSY 1000, 2990, 4951, and nine additional semester hours in PSY. Prior to registration, the student must prepare a

written contract with a department faculty member of the student's choice. This contract shall specify the topic to be studied, the goals of the course, the reading list, the activities to be done, and the final product of the course expected by the faculty member. The department chair must also provide written approval of the agreement before the student can register. Qualified psychology majors undertake directed study on topics of their choice. *Student cannot take this course and PSY 3040, 3041, 4951, 4953, or 4954 in the same semester.*

4953 Independent Research in Psychology I

Prerequisite: PSY major with 3.0 overall GPA, PSY 1000, 2030, 2040, and nine additional semester hours in PSY. Prior to registration, the student must prepare a written agreement with a department faculty member of the student's choice. This agreement shall specify the research topic to be explored, procedures to be followed, and the final product of the course expected by the faculty member. The department chair must also provide written approval of the agreement before the student can register. Qualified psychology majors undertake directed research in a chosen field of psychology. *Student cannot take this course and PSY 3040, 3041, 4951, 4952, or 4954 in the same semester.*

4954 Independent Research in Psychology II

Prerequisite: PSY major with 3.0 overall GPA, PSY 1000, 2030, 2040, 4953, and nine additional semester hours in PSY. Prior to registration, the student must prepare a written agreement with a department faculty member of the student's choice. This agreement shall specify the research topic to be explored, procedures to be followed, and the final product of the course expected by the faculty member. The department chair must also provide written approval of the agreement before the student can register. Qualified psychology majors undertake directed research in a chosen field of psychology. *Student cannot take this course and PSY 3040, 3041, 4951, 4952, or 4953 in the same semester.*

Public Administration and Public Service (PAPS)

1030 American National Government

The nature of United States federalism; the structure and work of the national government; the executive branch; the Congress and executive-legislative relationship; the federal judiciary with reference to appropriate constitutional cases and the departments and administrative establishment. *Credit: 3 semester hours.*

1530 Introduction to Public Administration

Prerequisite: PAPS/GOV 1030. The process of government organization, administration and management; current problems and trends; administrative-political relationships. *Credit: 3 semester hours.*

1540 Research Methods in Public Administration

Prerequisite: PAPS/GOV 1530. An examination of problem definition, developing concepts and variables, hypothesis testing and the use of quantitative techniques in public administration and political science. *Credit: 3 semester hours.*

2160 American Environmental Politics and Policies

An analysis of the evolution of the United States environmental policy and the influence of politics on those policies with particular emphasis on the late 20th century. *Credit: 3 semester hours.*

2420 Congress: Politics and Policy

Examines the organization of the House and Senate; the evolution of the relationship of Congress with the executive; party politics in the legislative process; contemporary legislative problems. *Credit: 3 semester hours.*

2450 Crisis Management at the Local Level

Policy, planning, and management issues of crises; and examines responsibilities and practices of local government organizations in response to natural and human-made events. *Credit: 3 semester hours.*

2470 State and Local Government and Administration

Prerequisite: PAPS/GOV 1030. Socioeconomic and intergovernmental influences on state politics; party and interest-group politics; legislatures, governors, and state agencies; budgeting and economic development issues. *Credit: 3 semester hours.*

2480 Municipal Government and Administration

Prerequisite: PAPS/GOV 1030. Socioeconomic influences on urban politics, machine, reform, and post-reform political organization; systems of urban governance; budgeting and land-use issues. *Credit: 3 semester hours.*

2500 Environmental and Public Law

Prerequisite: PAPS/GOV 1030. The political issues surrounding environmental regulation, with emphasis on bureaucratic and judicial administration of federal legislation governing air, water, and land-use. *Credit: 3 semester hours.*

4923; 4926 Field Work in Public Administration

Prerequisite: Permission of the coordinator. An internship program in a federal, state, or local government office with a not-for-profit group. Periodic consultation with the internship coordinator is required. *Credit: 3 or 6 semester hours.*

4995 Senior Seminar in Public Administration and Public Service

Prerequisite: At least 6 credits from among: GOV 2400, 2580, 3450, 3570; PAPS 2420, 2430, 2470, 2480, 2500, 3590. *Credit: 3 semester hours.*

Russian (RUS)**1010 Russian, Level I**

This course aims to develop basic communication skills in Russian. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a limited level within the context of Russian culture. *Credit: 3 semester hours.*

1020 Russian Level II

Prerequisite: RUS 1010. This course continues to develop basic communication skills in Russian. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a limited

level within the context of Russian culture. *Credit: 3 semester hours.*

2030 Russian, Level III

Prerequisite: RUS 1020. This course reviews the basic skills learned in Russian I and II and continues building oral and written proficiency with more intensive reading and conversation within the context of Russian culture. *Credit: 3 semester hours.*

Scientific Inquiry (SCI)**1000 Scientific Inquiry**

This course introduces students to the way scientists think about and view the world. Through a specific theme, such as evolution, atomic theory, energy, or plate tectonics, students will develop their critical thinking and quantitative reasoning skills. The historical development of the specific theme is explored to learn how scientific theories change and develop over time as new discoveries occur. Science is empirical in nature. To understand the process of science, students investigate how experiments are designed and the results interpreted. Students learn the logic of the scientific method and how it may be used to solve problems in their everyday lives. They also learn how data may be biased and misinterpreted using historical examples. Finally, because science is not conducted in a vacuum, and it impacts the world around us, the students analyze societal issues that deal with science in terms of values, ethics and responsibilities. *Credit: 3 semester hours.*

Sociology (SOC)**1000 Introduction to Sociology**

The study of human interaction. The influence of groups, organizations and culture on ways of thinking, acting, feeling and on values and lifestyles. Theories and methods for analyzing social issues and predicting social trends. *Credit: 3 semester hours.*

1015 Social Inequality, Mobilization and Social Justice

A critical understanding of inequality based on links between class, race and gender, various forms of social mobilization and different perspectives on social justice and advocacy. *Credit: 3 semester hours.*

1030 The Social Welfare System

Functions and consequences of the American social welfare system (e.g., housing, public assistance, health care, criminal justice), formulation, and evaluation of social policies. *Credit: 3 semester hours.*

1035 Science, Technology, and the Human

A survey of critical debates surrounding the relationship between advances and scientific knowledge and technology and contemporary sociological theories of what it means to "be human." *Credit: 3 semester hours.*

1040 Social Change

Examination of the social and cultural movements that are transforming society. Current debates on feminism, postmodernism, postindustrialism, identity politics, and technoscience are central to this course. *Credit: 3 semester hours.*

1055 Sociology of War

Analysis of the economic, political and social causes and consequences of war and its effects on combatants. *Credit: 3 semester hours.*

1070 Social Problems

Current social issues and policies; race relations, crime, deviance, aging, economic and political trends and their influence on social structures. Alternative strategies to confront current problems are considered. *Credit: 3 semester hours.*

1080 Neighborhoods

This course focuses on neighborhood processes of cohesion, conflict and change. Race, ethnic, religious and gender relations are also discussed. Power at local and city-wide levels and strategies of community organizations are explored. *Credit: 3 semester hours.*

1090 Introduction to Social Work

A survey of social work methods and clinical techniques for problem-solving; rational interviewing and casework, group dynamics, and community intervention. *Credit: 3 semester hours.*

1100 Sociology of Prisons

Prisons are presented within the larger social context of punishment. A comparative approach is emphasized to understand the various patterns of correctional strategies and their implications to policy and management. *Credit: 3 semester hours.*

1110 Criminology

Crime, the criminal, the criminal law and cost of crime. Criminal behavior systems. Explanations for criminal behavior; the police, the courts, probation, sentencing, punishment and parole. *Credit: 3 semester hours.*

1120 Social Psychology

Social experience and its effects on thought, feeling, and behavior. *Credit: 3 semester hours.*

1130 White Collar Crime

Basic analytical concepts in the study of white-collar crime, the major forms of white-collar crime and legal responses to this form of crime. *Credit: 3 semester hours.*

1150 Sociology of the Family

This course examines the institution of marriage and the family. *Credit: 3 semester hours.*

1160 Social Construction of Deviance

Study of the causes of deviance, its diverse forms and patterns, reactions to deviant behavior by social controllers and others as well as consequences of deviance for victims and society. *Credit: 3 semester hours.*

1170 Inequality; Race, Class and Gender

Analysis of the social factors determining class, power and prestige in American society; poverty and the effectiveness of welfare policies; interclass conflicts; the impact of changes in the labor market and in sex roles. *Credit: 3 semester hours.*

1190 Sociology of Poverty in America

An examination of the everyday life of poor people in the U.S. Critical analysis of the development of social policy, social movements and the conditions that would have to be changed if poverty is to be ended. *Credit: 3 semester hours.*

1570 Gender, Violence and the Movies (Mini-Course)

Exploration of the relationship between violence and gender in the cinema. The effect images of violence have on gendered spectators and consciousness formation are examined. *Credit: 3 semester hours.*

2040 Methods in Critical Race and Ethnic Studies

Examination of methodologies and strategies for including the knowledges of Indigenous, Latin American, African, and Asian peoples and their diasporas. *Credit: 3 semester hours.*

2100 Global Poverty

Failures of global policies to substantially change the conditions of the world's poor and conditions that would have to be changed if poverty is to be ended. *Credit: 3 semester hours.*

2110 Women and Crime

The relationship between women and crime: women as offenders, including the nature and seriousness of offenses and women as victims of crime. *Credit: 3 semester hours.*

2120 Juvenile Delinquency

Delinquency theories and their effect on prevention, intervention and control strategies. Development of the American juvenile justice system and the influence of race, gender, family, peers and schools. *Credit: 3 semester hours.*

2220 Domestic Violence

An examination of the social causes of domestic violence, the impact on victims and approaches to their recovery and institutional responses to the problem. *Credit: 3 semester hours.*

2230 Sociology of Latino/as in the U.S

Impact of migration, immigration policies, politics and social movements on Latino/as, their families, gender, cultural identity, race/ethnic relations and experience in social institutions. *Credit: 3 semester hours.*

2330 Human Trafficking

This course studies the historical, economic, political, institutional, legal, and social characteristics of human trafficking. *Credit: 3 semester hours.*

2340 Social Construction of Race in the United States

This course examines the historical and contemporary social processes that have been significant in the development of racial formations in the United States. *Credit: 3 semester hours.*

2350 Social Construction of Race in the Americas

Sociological examinations of the significant historical and contemporary social processes germane to the development of racial formations in Latin America and the Caribbean. *Credit: 3 semester hours.*

2380 Sport and Social Change: Race, Class, and Gender

The role and function of sport, games and play as socializing agents, leisure pursuits and business enterprises; historical, economic and organizational influences on sport and leisure development. *Credit: 3 semester hours.*

2410 Race and Ethnicity in America

American ethnicity in comparative cultural context. Majorities and minorities in terms of stereotyping, prejudice, unequal distribution of goods and services, discrimination and conflict. Major contributions of ethnic groups to American life. *Credit: 3 semester hours.*

2420 Immigration and Inequality in the U.S.

Sociological analysis of immigration focusing on the relationship between birthright, naturalization, immigration laws, citizenship and patterns of racial, ethnic, class and gender inequality. *Credit: 3 semester hours.*

2430 Sociology of Gender and Sexualities

This course focuses on issues related to gender roles in modern society. Inequality between women and men in society, male-female interactions, women's and men's movements and social change are discussed. *Credit: 3 semester hours.*

2450 Sociology of the Black Experience

This course examines the content and nature of African-American experience and how it has changed over time. Economic, cultural, religious, political, and sociological aspects of the Black and African-American experience will be examined. The struggle for equal rights, social justice and empowerment will be central. *Credit: 3 semester hours.*

2460 Social Justice and the City

This course will examine various forms of deprivation, inequality and intolerance in urban areas and will address these issues through sociological discourse, social action and urban policy. *Credit: 3 semester hours.*

2470 Gender and Sexualities in a Global Context

The city and its environs; the complexity of its population residential movements and industrial migration; contrasting values of the city and suburbs, including the transition from modern to the postmodern city. *Credit: 3 semester hours.*

2610 Statistical Methods for the Social Sciences

Introduction to statistical concepts and procedures for social science students. Students are taught basic computer literacy and have access to the Internet. Descriptive and inferential statistics are the focus of this course. *Credit: 3 semester hours.*

2630 The City and Metropolis

The city and its environs; the complexity of its population residential movements and industrial migration; contrasting values of the city and suburbs, including the transition from modern to the postmodern city. *Credit: 3 semester hours.*

2680 Critical Debates in the City

This course will undertake an in-depth analysis of selected, contemporary debates and issues facing cities. It will include opportunities for original research by the students. *Credit: 3 semester hours.*

3000 Anti-Blackness Around the Globe

Prerequisite: CRES 1000. Students learn about ideologies of Blackness and anti-Blackness across the globe, their spread through social movements and their impact on racial and ethnic formations. *Credit: 3 semester hours.*

3240 Sociological Theory

Prerequisite: SOC 1000. Classical sociological theories that influence the analysis of contemporary society. Emphasis on the works of Durkheim, Marx, Weber, Simmel, Mead and other social thinkers. *Credit: 3 semester hours.*

3660 Power, Change, and Conflict

Analysis of the social bases and contexts of political power; political conflict, participation, and nation building; political thought and movements; various forms of political rule. The course deals with power in a broad context from the meta state to everyday life. *Credit: 3 semester hours.*

4270 Research Methods

Prerequisite: SOC 2610. Survey of data gathering procedures including the interview, questionnaires, sampling, scales, aptitude and personality measures, formal and informal observation, content analysis, case study and data analysis. *Credit: 3 semester hours.*

4280 Internship in Social Research

Prerequisite: SOC 4270. Selected research problems are carried out as field projects incorporating the various methods covered in SOC 4270. *Open to sociology majors only. Credit: 3 semester hours.*

4530 Social Work Internship

Prerequisite: SOC 1090 with a grade of B or better, and consultation with instructor prior to registration. Supervised learning experiences in social service agencies dealing with individuals, families and/or groups. *Students are required to put in 100 hours for 3 credits. Credit: 3 or 6 semester hours.*

4953 Individual Guided Research

Guided theoretical or empirical research on an individual basis. The Chair must give written approval. *Open only to sociology majors and minors. Credit: 3 semester hours.*

4990 Sociology Seminar

Prerequisite: SOC 3240 and 4270. Major concepts of sociology discussed. Student interaction represents major contribution to class sessions. Service learning component. *Required for all senior sociology majors. All others by permission of Chair. Credit: 3 semester hours.*

Spanish (SPA)

1010 Spanish, Level I

This course develops basic communication skills in Spanish. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a limited level within the context of Spanish culture. *Credit: 3 semester hours.*

1020 Spanish, Level II

Prerequisite: SPA 1010. This course continues to develop basic communication skills in Spanish. Through a progressive use of the four skills, listening, speaking, reading and writing, students develop oral and written proficiency at a limited level within the context of Spanish culture. *Credit:* 3 semester hours.

2030 Spanish, Level III

Prerequisite: SPA 1020. This course reviews the basic skills learned in Spanish I and II and continues building oral and written proficiency with more intensive reading and conversation within the context of Spanish culture. *Credit:* 3 semester hours.

2040 Intermediate Spanish Conversation

Prerequisite: SPA 2030 or permission of chair. This course reviews the basic skills learned in Spanish I, II and III and continues building oral proficiency with more intensive conversation within the context of Hispanic culture. *Credit:* 3 semester hours.

2050 Readings in Modern Spanish

Prerequisite: SPA 2030 or 2040, or permission of chair. This course is structured to meet the needs and abilities of non-language majors. Conducted in Spanish. *Credit:* 3 semester hours.

3090; 3100 Masterpieces of Hispanic Literature I; II

Prerequisite: SPA 2040 or 2050, or permission of chair. SPA 3090: Through lectures and textual analysis, this course traces the development of Spanish literature from its origins through the 20th century. SPA 3100: Through lectures and textual analysis, this course traces the development of Spanish-American literature from the 16th through the 20th century. *Credit:* 3 semester hours per semester.

3110; 3120 Advanced Spanish Conversation

Prerequisite: SPA 2040 or 2050, or permission of chair. Conversation based on everyday topics and on readings taken from a wide range of literary and non-literary materials. *Not open to native or fluent speakers.* *Credit:* 3 semester hours per semester.

3360 Review of Spanish Grammar

Prerequisite: SPA 2040 or 2050, or permission of chair. Review of Spanish grammar for more advanced courses. *This course may not be taken after the successful completion of SPA 3870 or 3880.* *Credit:* 3 semester hours.

3450 Feminist Themes in Spanish Literature

Prerequisite: SPA 2040 or 2050, or permission of chair. Critical reading and analysis of works in which Spanish women articulate culturally imposed limitations and use fiction as a tool for social change. *Credit:* 3 semester hours.

3550 Civilization of Spain

Prerequisite: SPA 2040 or 2050, or permission of chair. The history, geography, art, science, music, literature, folklore, politics, habits, and customs that have contributed to the shaping of Spanish civilization and culture. *Credit:* 3 semester hours.

3560 Civilization of Spanish America

Prerequisite: SPA 2040 or 2050, or permission of chair. The history, geography, art, science, music, literature, folklore, politics, manners, and customs which have

contributed to the molding of Spanish-American civilization and culture. *Credit:* 3 semester hours.

3600 Contemporary Spain

Prerequisite: SPA 2040 or 2050, or permission of chair. A study of all aspects of contemporary Spanish life. *Credit:* 3 semester hours.

3610 Spanish Golden Age Literature I

Prerequisite: SPA 2040 or 2050, or permission of chair. A study of the major literary genres and the principal writers and works of the period. *Credit:* 3 semester hours.

3690 Contemporary Spanish America

Prerequisite: SPA 2040 or 2050, or permission of chair. Study of all aspects of contemporary Spanish American society and culture. *Credit:* 3 semester hours.

3710 The Essay in Spanish-American Literature

Prerequisite: SPA 2040 or 2050, or permission of chair. A study of the origin and development of the essay in Spanish-American literature. *Credit:* 3 semester hours.

3740 Contemporary Spanish American Poetry

Prerequisite: SPA 2040 or 2050, or permission of chair. The principal developments of the genre in Spanish America with a study of representative authors. *Credit:* 3 semester hours.

3775 Spanish Short Story

Prerequisite: SPA 2040 or 2050, or permission of chair. A study of the development of the modern short story in Peninsular Spanish literature. *Credit:* 3 semester hours.

3870; 3880 Advanced Spanish Grammar and Composition I; II

Prerequisite: SPA 2040 or 2050, or permission of chair. Difficult points of Spanish grammar and syntax with translation of selected passages into idiomatic Spanish. *Credit:* 3 semester hours per semester.

3910 Mystery Novel in Spain (ENG)

Survey of the contemporary mystery novel in Spain as a reflection of historical and cultural circumstances. *Course conducted in English and is not applicable to the Spanish major or minor.* *Credit:* 3 semester hours.

4903 Internship

Prerequisite: 3110 or 3120, or permission of chair. Total immersion experience in a field of interest chosen by the student in New York where the target language is spoken. *Credit:* 3 or 6 semester hours.

4953 Independent Study

Prerequisite: SPA 3090 or 3100, or permission of chair. Guided undergraduate student research arranged on an individual basis. *Permission of the chair and the language area coordinator required.* *Credit:* 3 semester hours.

4980 International Internship (Spain)

Prerequisite: SPA 3110 or 3120, or permission of chair. Total immersion experience in the field of interest chosen by the student. *Credit:* 3 or 6 semester hours.

Speech (SPE)**1000 Public Speaking**

Introduction to the theory and practice of public speaking in a variety of communication contexts. Students will learn and practice the principles of public speaking, including topic selection, audience adaptation, invention and arrangement of arguments, and the incorporation of the appropriate style to the message. Additionally, students will learn techniques in actively listening and message evaluation. *Credit:* 3 semester hours.

Theology (THE)**1000 Perspectives on Christianity: A Catholic Approach**

An introduction to Christianity highlighting belief statements, practices, scripture, rites, theological writings, artistic expressions, and other discourses manifesting and expressing the Christian faith in its various traditions through its development. All students regardless of religious affiliation must take THE 1000. *Credit:* 3 semester hours.

2000 The Catholic Imagination

Prerequisite: THE 1000. Examines the role of Catholic imagination vis-à-vis culture with particular attention to ways it has been manifested in cultural productions such as art, literature, music, and film. *Credit:* 3 semester hours.

2110 Reading the Old Testament

Prerequisite: THE 1000. A survey of the Old Testament/Hebrew Bible, with attention to the history and religion of Israel in the context of the ancient Near East. *Credit:* 3 semester hours.

2120 Reading the New Testament

Prerequisite: THE 1000. A survey of the New Testament, with attention to its historical and literary context, and its theological significance. *Credit:* 3 semester hours.

2200 The Mystery of Triune God

Prerequisite: THE 1000. The Christian theology of the triune God, with its implications for issues such as faith and reason, theological method, theological language, Christian praxis, dialogue among Catholics, Protestants, and Eastern Orthodox, as well as between Christians and other religious traditions. Emphasis will focus on contemporary debates among Christians concerning the doctrine of the Trinity. *Credit:* 3 semester hours.

2205 Jesus in Christian Faith

Prerequisite: THE 1000. A study of the person and work of Jesus as presented in the New Testament, the ancient creeds, later theology and especially contemporary theological reflection with a view toward seeing the significance of recognizing that the Jesus of history is the Christ of faith. *Credit:* 3 semester hours.

2210 Perspectives on the Church

Prerequisite: THE 1000. The theology of the Christian community: its Scriptural warrants and history, issues such as: the role of the Church in salvation, the relation between the local and universal Church, Vatican II, ecumenism, authority. *Credit:* 3 semester hours.

2215 Christian Worship and Sacraments

Prerequisite: THE 1000. This course explores worship, and sacraments especially in the American context. It examines “culture” and its influence on the understanding and experience of the “holy” and “mystery” in Christian rite, time, and place in light of recent developments in sacramental theology and practice. *Credit: 3 semester hours.*

2245 Liberation Theologies

Prerequisite: THE 1000. Examines the ways in which marginalized, oppressed, and poor communities reflect on God in light of their experiences as a method of doing theology. *Credit: 3 semester hours.*

2255 Race and Religion in the United States

Prerequisite: THE 1000. An examination of the critical and mutually interrelated realities of race and religion in the U.S., in particular, the shifting and varied ways in which racial categories have been used to shape and understand religion in the U.S. *Credit: 3 semester hours.*

2340 Women and Theology

Prerequisite: THE 1000. An introduction to women’s voices from throughout the Christian tradition as well as an overview of Christian reflections on gender. *Credit: 3 semester hours.*

2400 Christian Spirituality and Mysticism

Prerequisite: THE 1000. A study of the spiritual dimensions of humanity based on the religious nature of human beings, the Christian tradition, and modern interdisciplinary insights regarding human nature. *Credit: 3 semester hours.*

2410 Spirituality of the Educator

Prerequisite: THE 1000. An introduction for future educators to the spiritual dimensions of the art of teaching focusing on the development of the teacher’s personal spirituality as well as the formative role of teachers in the spiritual development of students. *Credit: 3 semester hours.*

2501 History of Christian Theology I: Origins Through the Middle Ages

Prerequisite: THE 1000. Theology and history of the Catholic Church and its relation to other religious and cultural traditions up until 1500 AD. *Credit: 3 semester hours.*

2502 History of Christian Theology II: Reformations to the Present

Prerequisite: THE 1000. Theology and history of the Catholic Church and its relation to other religious and cultural traditions from 1500 AD to the present. *Credit: 3 semester hours.*

2700 Introduction to Eastern Orthodoxy

Prerequisite: THE 1000. A survey of the churches of the Christian East, their doctrine and spiritual disciplines, and their differences from the churches of the Christian West. *Credit: 3 semester hours.*

2800 Global Catholicism

Prerequisite: THE 1000. A broad historical and theological perspective on contemporary trends shaping global Catholicism and how the Catholic Church could shape the world in the Third Millennium. *Credit: 3 semester hours.*

2810 Introduction to World Religions

Prerequisite: THE 1000. A critical introduction to the study of world religions, exploring the beliefs, rituals and ethical ideals of representative religious manifestations of the past and present. *Credit: 3 semester hours.*

2820 Introduction to Judaism

Prerequisite: THE 1000. Survey of the history of Judaism, with emphasis on its concepts and practices; relationship of Judaism to Christianity; the major theological schools in Judaism. *Credit: 3 semester hours.*

2830 Introduction to Hinduism

Prerequisite: THE 1000. Hindu religion: Its scriptures, theology, philosophy and creeds—Vaisnavism and Saivism, eastern mysticism and yoga, and modern Hindu religious consciousness. *Credit: 3 semester hours.*

2840 Introduction to Buddhism

Prerequisite: THE 1000. The origin of Buddhism in India: its metaphysics, ethics, monastic order, and scriptures. Discussion of the teachings of two schools of Buddhism: the Theravada in Southeast Asia, and the Mahayana and Zen Buddhism in North and Northeast Asia. *Credit: 3 semester hours.*

2850 Introduction to Islam

Prerequisite: THE 1000. A survey of the religion of Islam on the basis of the Qu’ran and Sunnah and its role in the contemporary world. *Credit: 3 semester hours.*

2920 Science and Religion

Prerequisite: THE 1000. Analysis of the relationship between scientific inquiry and Christian theology—particularly how they contribute to understanding the human person and achievement of the common good. *Credit: 3 semester hours.*

3010 Introduction to Christian Ethics

Prerequisite: THE 1000. An overview of Christian ethics, with particular attention to Catholic moral theology, addressing fundamental concepts and selected personal and social ethical issues. *Credit: 3 semester hours.*

3020 Introduction to Catholic Social Teaching

Prerequisite: THE 1000. An exploration of modern Catholic social teaching through attention to economic, political, and cultural moral issues such as poverty, racism, immigration, and the ecological crisis. *Credit: 3 semester hours.*

3100 The Gospels of Matthew, Mark, and Luke

Prerequisite: THE 1000. This course explores the message of and about Jesus of Nazareth found in the oldest written Christian narratives concerning him, the so-called “synoptic gospels.” *Credit: 3 semester hours.*

3105 The Writings of John

Prerequisite: THE 1000. A study of the Gospel of John, its origins, structure and theology, and of the three Letters of John, with a consideration of their relationship to the Fourth Gospel and the Apocalypse. *Credit: 3 semester hours.*

3110 The Letters of Paul

Prerequisite: THE 1000. A study of the New Testament letters attributed to Paul, with attention to the literary, social, and theological issues in the study of these documents and the early Christian communities to which they were addressed. *Credit: 3 semester hours.*

3210 The Human Mystery

Prerequisite: THE 1000. An introduction to theological anthropology; the human person as a historical reality. Various conceptions of humanity in the light of the Judeo-Christian revelation. The problem of nature and grace; human evolution and the hope for eternal life. *Credit: 3 semester hours.*

3215 Theology of Mary and the Saints

Prerequisite: THE 1000. The genesis, historical development and current manifestations of the theology of Mary and the saints and Christian liturgical and devotional practices associated with honoring them. *Credit: 3 semester hours.*

3225 Death and Resurrection in Modern Christian Thought

Prerequisite: THE 1000. An examination of America’s interest in death, contributions of the behavioral sciences; biblical and theological perspectives on death and resurrection; contemporary reflections on how to live with death. *Credit: 3 semester hours.*

3230 Christian Marriage

Prerequisite: THE 1000. An exploration of the theological, psychological and sociological dimensions of marriage and family life. The course places particular emphasis on marriage as a sacrament, on the sacredness of family, and on the challenges related to contemporary family life. *Credit: 3 semester hours.*

3240 Feminist and Womanist Theologies

Prerequisite: THE 1000. Introduction to contemporary global feminist and womanist theologies. *Credit: 3 semester hours.*

3260 Religion and the Arts

Prerequisite: THE 1000. Restricted registration for B.F.A. and Art History majors only. Others may enroll with permission of instructor. An exploration of the relationship that exists among the “fine” arts, spirituality, and religion. More particularly, we focus on the ways that the arts have been and are used in the religious traditions, and more particularly the Christian tradition. *Credit: 3 semester hours.*

3265 Theology and Film

Prerequisite: THE 1000. How film functions vis-à-vis theology and religion; film as a theological and religious text as well as film as it embodies religious stories. *Credit: 3 semester hours.*

3270 Theology in Literature

Prerequisite: THE 1000. Theological interpretations of religious themes, metaphors, and symbols in classic works of imaginative literature, undertaken with the aid of critical literary theory and historical contextualization. *Credit: 3 semester hours.*

3300 Theological Ethics of Healthcare

Prerequisite: THE 1000. Explores personal and social ethical dimensions of health care, with attention to both clinical and public health issues, including equity, access, research ethics, and issues of healthcare practice. *Credit: 3 semester hours.*

3305 Theological Ethics of the Marketplace

Prerequisite: THE 1000. Restricted Registration. An exploration and analysis of moral decision-making as it applies to the world of business. *Open to the Tobin College of Business juniors and seniors only, or with permission of the chairperson. Credit: 3 semester hours.*

3310 Theological Ethics of Peace

Prerequisite: THE 1000. An exploration of theologies of peace, nonviolence, conflict, and war in the Christian and other religious moral traditions. *Credit: 3 semester hours.*

3330 Theological Ethics of Ecology

Prerequisite: THE 1000. An examination of theologies of creation and moral responsibility for the environment, drawing on Christian and other religious traditions. *Credit: 3 semester hours.*

3350 Ethics, Religion, and Global Development

Prerequisite: THE 1000. Examines the influence and role of religion in the ethics of global development with an emphasis on sustainable development, human rights, poverty, and economics. *Credit: 3 semester hours.*

3360 Justice, Spirituality, and Social Justice

Prerequisite: THE 1000. Practice-centered ethics course; engagement and experimentation with social theories, spiritual practices, advocacy strategies, and tactics that promote social change. *Credit: 3 semester hours.*

3410 St. Vincent de Paul and Christian Service

Prerequisite: THE 1000. An examination of the meaning of Gospel service through the spirituality of St. Vincent de Paul, the 17th-century French saint regarded by both Christians and others as a forerunner of modern social service. *Credit: 3 semester hours.*

3810 Anthropology of Religion

Prerequisite: THE 1000. Religions of societies with primitive technologies examined to see various forms religion takes, the functions it serves and the meanings it has for the people believing and practicing it. Consideration of the cultural contexts of religion and its relation to change. *Credit: 3 semester hours.*

3830 Modern Moral Issues in Judaism

Prerequisite: THE 1000. The application of Jewish theological and ethical teachings in working out solutions to moral and religious problems. *Credit: 3 semester hours.*

3910 Faith and Reason in Theology

Prerequisite: THE 1000. A study of selected texts in the philosophy of religion, illustrating the classical philosophical interpretation of ancient Greco-Roman religion, medieval Christian philosophy in the service of the Christian religion, and the analysis and critique of religion by modern, religiously autonomous philosophies. *Credit: 3 semester hours.*

3930 Psychology and Religion

Prerequisite: THE 1000. A survey of the interpretation of religion in major psychological schools and the application of psychological insights by the Christian churches to their ideals of personality and the Christian way of life. *Credit: 3 semester hours.*

4920 Selected Theological Questions

Prerequisite: THE 1000. Course does not satisfy St. John's University core requirements. Open to students who desire to pursue an in-depth study of particular theological subjects of interest to them under the guidance of a member of the Theology faculty. *Credit: 3 semester hours.*

4930 Reading and Research

Prerequisite: THE 1000 and nine semester hours in THE. Course does not satisfy St. John's University Core requirements. Restricted registration. Guided research and reading on an individual basis. Students must submit to the department chair, in writing and prior to registration, an outline of the subject areas to be researched or read together with written acceptance of the project by a faculty member of their choice. *Open to juniors and seniors only. Prior departmental approval required. Credit: 3 semester hours.*

4990 Seminar

Prerequisite: THE 1000. Course does not satisfy St. John's University Core requirements. An in-depth study of particular theological subjects under the guidance of a member of the Theology faculty. *Required for Theology majors and open to Theology minors. Credit: 3 semester hours.*

4995 Integrative Interdisciplinary Social Justice Seminar

Prerequisite: THE 1000. Capstone for the Interdisciplinary Minor in Social Justice: Theory and Practice in the Vincentian Tradition. By integrating the academic and experiential emphases of previous coursework in the minor and by encouraging a research focus on a specific aspect of social justice, the seminar promotes: (1) student understanding of theological, philosophical, economic, sociological, and political concepts of social justice; (2) student analytical skills in evaluating the variety of attempts to develop social justice; (3) active student involvement in the promotion of social justice. *Restricted to students enrolled in the Interdisciplinary Minor in Social Justice except with permission of chair or program director. Credit: 3 semester hours.*

Art and Design

Joseph Adolphe, *Professor*, B.F.A., Alberta College of Art; M.F.A., School of Visual Arts

Elizabeth Albert, *Associate Professor*, B.F.A., Boston University School for the Arts; M.F.A., CUNY, Queens College

Elizabeth DeLuna, *Professor*, B.F.A., San Francisco Art Institute; M.F.A., Yale School of Art

Louis DiGena, *Associate Professor*, B.A., Upsala College; M.F.A., School of Visual Arts

Paul Fabozzi, *Professor*, B.F.A., Alfred University; M.F.A., University of Pennsylvania

Amy Rebecca Gansell, *Associate Professor*, B.A., Barnard College of Columbia University; M.A., Ph.D., Harvard University

Tyreek Jackson, *Assistant Professor*, B.M., Berklee College of Music; M.A., Ed.D., Columbia University

Thomas Kerr, *Associate Professor*, B.F.A., Alberta College of Art; M.F.A., School of Visual Arts

Belenna M. Lauto, *Professor*, B.F.A., St. John's University; M.A., New York University

William A. Morel, *Professor*, B.F.A., St. John's University; M.F.A., Rutgers University

Kyla Paolucci, *Assistant Professor*, B.F.A., Rhode Island School of Design; M.F.A., Vermont College of Fine Arts

Susan Rosenberg, *Professor*, B.A., Brown University; Ph.D., New York University

Claudia Sbrissa, *Professor*, B.F.A., York University, Toronto; B.E., Queens University, Kingston; M.F.A., Cornell University

Aaris Sherin, *Professor*, B.F.A., The School of the Art Institute of Chicago; M.F.A., Rochester Institute of Technology

Heidi Upton, *Associate Professor*, B.M., The Juilliard School; M.M., The Juilliard School; D.M.A., Manhattan School of Music

Biological Sciences

Samira Fargali, *Assistant Professor*, M.S. Polytechnic University, Germany; Ph.D. Helmholtz Center for Infection Research, Germany

Dianella G. Howarth, *Professor*, B.A., University of Pennsylvania; Ph.D., Harvard University

Javier Juarez, *Assistant Professor*, B.Sc., University of Leon, Spain; Ph.D., Complutense University, Spain

Robert Kozol, *Assistant Professor*, B.S., University of Rhode Island; Ph.D., University of Miami

Xue Mei, *Assistant Professor*, B.S., Wuhan University; Ph.D., University of Iowa

Simon Geir Moller, *Professor*, EMBO Young Investigator, *Provost*, B.S., University of Leeds, UK; M.S., The University of London; Ph.D., University of Leeds, U.K.

Emanuel Pepitone, *Associate Professor*, DC, New York Chiropractic College, MS, Molloy College Graduate School of Education

Matteo Ruggiu, *Professor*, B.S., University of Pavia, Italy; Ph.D., Medical Research Council, Edinburgh, U.K.

Juan C. Santos, *Associate Professor*, B.S., Pontificia Universidad Católica del Ecuador; M.S., Ph.D., University of Texas at Austin

Laura Schramm, *Professor*, B.S., SUNY, Stony Brook; M.S., St. John's University; Ph.D., SUNY, Stony Brook

Richard Stalter, *Professor*, B.S., Rutgers University; M.S., University of Rhode Island; Ph.D., University of South Carolina.

Ales Vancura, *Professor*, M.S., Ph.D., The Prague Institute of Chemical Technology

Ivana Vancurova, *Professor*, M.S., Ph.D., The Prague Institute of Chemical Technology; Ph.D., Czech Academy of Sciences

Wan S. Yang, *Associate Professor*, B.S., Ph.D., KAIST, South Korea

Bouchra Zerhouni-Layachi, *Assistant Professor*, *Professor*, M.S., Ph.D., Claude Bernard University, Lyon, France

Yong Yu, *Professor*, B.S., Ocean University of Qingdao, China; Ph.D., Chinese Academy of Sciences

Yan Zhu, *Professor*, B.S., M.S., Wuhan University, China; Ph.D., Robert Wood Johnson Medical School

Rachel Zufferey, *Professor*, B.S., M.S., Ph.D., The Swiss Federal Institute of Technology, Zurich, Switzerland

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