

LIBERAL STUDIES PROGRAM

Academic Adviser: James P. Lewis
Program Director: Harold Sjursen

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Liberal Studies is an interdisciplinary liberal arts degree that emphasizes the role of technology in world civilization and provides students interested in science and technology a place to pursue a practical degree program with greater breadth and flexibility than is possible in an engineering degree. Working closely with academic advisers, students develop majors or concentrations that reflect their interests and career goals. The core of the Liberal Studies Program is a series of seminars that look at technology from different perspectives—history, the arts, cultural studies, politics, philosophy and literature. Students focus on a concentration of their choice and combine traditional liberal arts learning with technologically focused career education.

The Bachelor of Science in Liberal Studies is offered by the Department of Humanities and Social Sciences. All students must complete an interdisciplinary major that includes a core concentration in one of the following focus areas:

- Digital Media
- History
- History of Technology and Science
- Literature
- Philosophy
- Psychology

All students can choose, with the consultation of an academic adviser, a second major or professional concentration in almost any field represented in the entire Polytechnic curriculum. In addition to the above areas it is possible to concentrate in the following areas of study:

- Behavioral Science
- Information Design
- Interdisciplinary Physics
- International and Global Studies
- Legal and Political Studies
- Technical Communication
- Urban Studies

GOALS AND OBJECTIVES

The objectives of the Liberal Studies Program are to:

- Foster literacy regarding science and technology in their social, cultural and historical settings
- Produce broadly educated citizens ready to assume leadership positions in a technologically driven world
- Provide practical education for nonengineering students that will lead to meaningful and rewarding careers

DEGREE REQUIREMENTS

All candidates for a BS in Liberal Studies are required to complete the Liberal Arts core courses (52 credits), the Interdisciplinary Liberal Arts major (36 credits comprising six focus courses and three seminars) and additional courses to total 128 credits.

Second majors and professional concentrations (40 credits) may be developed by students in consultation with the program academic adviser.

A description of second majors is available from the program adviser. Liberal Studies students may also earn a minor in any of the subject areas.

Liberal Arts Core Program Courses

Course No.	Course Title	Credits
EN 1014/1034	Writing & the Humanities I	4
EN 1204	Writing & the Humanities II	4
HI 2104	Main Themes in Contemporary World History	4
	Liberal Arts Electives	8
	Advanced Liberal Arts Elective	4
CS 1114	Intro. to Programming & Problem Solving	4
MA 1114	Mathematics for Liberal Studies	4
	Natural Science Sequence (CM, PH, LS or others as approved	

by adviser) 8
 LA 1014 Introduction to the History & Philosophy of Technology 4
 LA 1024 Computers, Technology & Values 4
 LA 2014 Technology & the Human Condition 4
 Liberal Studies Focus Courses in the area of primary concentration (as approved by adviser) 24
 Liberal Studies Seminars 12
 Professional concentration or free electives 40

TOTAL 128 credits

UNDERGRADUATE COURSES

ANTHROPOLOGY

AN 3134 Introduction to Physical Anthropology

4:0:0:4

Biosocial bases of human conduct seen in evolutionary perspective; elementary genetic, demographic, and ecological models necessary for understanding human behavior; biology as an evolutionary complex extending from Prosimian revolution through the Neolithic revolution.

AH 3144 North American Indians

4:0:0:4

Social evolution from the hunting and gathering band through state society; consideration of variation and developmental trends in several institutions: kinship, economic organization, warfare, politics, religion and technology.

AN 3404 Chinese Art and Civilization

4:0:0:4

A basic discussion of the structure of Chinese civilization with a review of important art forms from Neolithic times to the present, with emphasis on visual documentation.

AN 3504 Special topics in Anthropology

4:0:0:4

Focus on a special topic in anthropology completed under the guidance of a faculty member. *May be repeated for credit on a different topic. Prerequisite: instructor's permission.*

AN 3604 Independent Study in Anthropology

4:0:0:4

Independent or small group work under supervision of instructor, by special arrangement. *Prerequisites: for Liberal Studies/Integrated Digital Media majors only and instructors permission.*

N 4504 Senior Project in Anthropology

4:0:0:4

In this capstone course, students develop a major project that integrates the knowledge and skills they have acquired through the program. Students manage the project from start to finish under the guidance of their project advisor. In addition, students revise selected projects from previous classes to develop a professional portfolio of writing samples. *Prerequisites: Liberal Studies seniors only and by departmental permission.*

ART HISTORY

The Art History electives are divided into two levels: introductory (2000-level) and advanced (3000-level). The fourth-credit hour for all Art History courses take the form of an increased communication component: at least four graded writing assignments, regular informal writing and individual or group presentations. All Art History electives have a final exam.

AH 2114 Introduction to Art History

4:0:0:4

An introduction to Western art in different historical periods, with a focus on pre- 20th century art. Objectives: to sample important periods and themes in European art history, from archaic Greece to the present; and enhance cultural, social and aesthetic understanding through intensive engagement with a variety of visual forms in different historical periods. *Prerequisite: EN 1204.*

AH 2124 Modern Art

4:0:0:4

Western art from the late 19th century to the present. Objectives: to sample important periods and themes in modern art; and enhance cultural, social and aesthetic understanding through intensive engagement with a variety of visual forms in different historical periods. *Prerequisite: EN 1204.*

AH 3114 Studies in National Traditions in the Visual Arts

4:0:0:4

Study of a particular national tradition or several related national traditions in the visual arts. Objectives: to study the emergence of a national tradition within the visual arts; and enhance cultural, social and aesthetic understanding through intensive engagement with a variety of visual forms in different historical periods. *Prerequisite: one 2000-level AH course.*

AH 3124 Special Topics in Art History

4:0:0:4

Independent or small group work, under supervision of instructor, by special arrangement. *Prerequisites: Liberal Studies majors only and instructor's permission.*

AH 3404 Independent Study in Art History

4:0:0:4

Focus on a special topic in the history of art. May be repeated for credit for different topics. Objectives: to study a particular aspect of art history and enhance cultural, social and aesthetic understanding through intensive engagement with a variety of visual forms in different historical periods. *Prerequisite: one 2000-level AH course.*

AH 4504 Senior Project in Art History

4:0:0:4

In this capstone course, students develop a major project that integrates the knowledge and skills they have acquired through the program. Students manage the project from start to finish under the guidance of their project adviser. In addition, students revise selected projects from previous classes to develop a professional portfolio of writing samples. *Prerequisites: Liberal Studies seniors only and by departmental permission.*

ECONOMICS**EC 2504 Basic Economics**

4:0:0:4

An introduction to the field of economics. Covering both micro- and macroeconomics, it includes such concepts and specific areas of study as supply and demand, income distribution, national output, money and banking, fiscal and monetary policy and international trade. In general, the course introduces the way economists approach economic questions by focusing on five interrelated economic areas: (1) economic theory and methodology; (2) the sources and reliability of economic data; (3) economic institutions, such as the Federal Reserve or the IMF; (4) the role of government in the economy; and (5) the historical contexts of contemporary economic questions.

EC 2514 Microeconomics

4:0:0:4 **EC 3254 Economic Issues**

4:0:0:4

An advanced course in microeconomics. Theory is presented in all its elegance along with a variety of illustrative applications. Designed for students concentrating in economics or management, those intending to go on to graduate programs in economics or business administration and others interested in the field of economics. *Prerequisite: EC 2504.*

EC 2524 Managerial Microeconomics

4:0:0:4

An advanced course in microeconomics for students with appropriate mathematical background. This course presents microeconomic analysis and its application to business decision making. Fundamentals of the theory of the firm, the theory of the consumer and market structure and competition are presented, including both theoretical models and quantitative analysis techniques. Advanced topics in information asymmetries and externalities are presented. *Prerequisite: required for students in the Business and Technology Management Program; MA 1112; does not satisfy general education requirements in Humanities and Social Sciences.*

EC 2534 Macroeconomics

4:0:0:4

An advanced course in macroeconomics. Presents macroeconomic theory and applies it to the US macroeconomy in the post-World War II period. Course focuses on macroeconomic phenomena and macroeconomic problems, including unemployment, inflation and recessions. It pays special attention to the role of government in this area. Finally, it introduces economic data and their inherent problems. Designed for students concentrating in economics or management, those intending to go on to graduate programs in economics or business administration and others interested in the field of economics. *Prerequisite: EC 2504.*

4:0:0:4

Building on the foundation provided in the introductory course in economics, course examines a number of contemporary economic issues in greater depth. The specific issues studied vary and depend on student interests, professors interests and the availability of appropriate reading material. Occasionally a text is used, although usually reading material from a variety of sources is assigned. Issues focused on include: government regulation of safety, regulation and testing of pharmaceutical drugs by the FDA; potential use of the market for organ transplants; alternative tax proposals; and social security "reforms"; NAFTA; racial and sexual discrimination and alternative medical plans. *Prerequisite: EC 2504.*

EC 3264 American Economy: Boom and Bust

4:0:0:4

An advanced macroeconomic course that examines the nature of the fluctuations in aggregate economic activity, the so-called "business cycle", that have characterized capitalist growth in general and the American economy in particular. The course focuses on recent decades, especially the period since 1993. In doing so, it studies the changing features of the American economy since then and the problems that have accompanied these changes, such as unemployment, inflation, recessions and the budget and trade deficits. Within this context, much time is spent in careful analysis of government's role in the economy, in particular, the role of the Federal Reserve, but also the impact of the fiscal policy of the federal government on macroeconomic stability. *Prerequisite: EC 2504.*

EC 3404 Special Topics in Economics

Focus on a special topic in Economics, completed under the guidance of faculty member. May be repeated for credit on a different topic. *Prerequisite: instructor's permission.*

EC 3504 Independent Study in Economics

4:0:0:4

Independent or small-group work, under supervision of instructor, by special arrangement. *Prerequisites: Liberal Studies majors only and instructor's permission.*

EC 4504 Senior Project in Economics

4:0:0:4

In this capstone course, students develop a major project that integrates the knowledge and skills they have acquired through the program. Students manage the project from start to finish under the guidance of their project advisor. In addition, students revise selected projects from previous classes to develop a professional portfolio of writing samples. *Prerequisites: Liberal Studies seniors only and by departmental permission.*

ENGLISH AND LITERATURE

Basic English and Writing Courses:

EN 1080 Reading and Writing in English
EN 1090 Introductory Composition
EN 1014 Writing and the Humanities I
EN 1034 Writing and the Humanities I
EN 1204 Writing and the Humanities II

The English/Literature offerings are divided into two levels: introductory (2000-level) and advanced (3000-level). The introductory literature courses are designed to introduce students to intensive reading and research

in either a particular literary genre or in survey courses.

In a genre course such as poetry, other forms of cultural expression such as painting or nonfiction prose may be considered when appropriate, or the instructor may choose to include poetry from a range of national literatures.

Advanced studies courses are designed to allow students to explore at a more advanced level specific cultural, aesthetic, and historical questions through (1) reading and writing about literary texts from specific national and cultural traditions, or (2) exploring the interrelations between literary expression and other forms of cultural, social and political discourse. May be repeated for credit, provided that the topic differs.

The fourth credit hour for all literature courses takes the form of an increased communication component (at least four graded writing assignments, regular informal writing and individual or group presentations) and an intercultural/interdisciplinary component. For example, in a Shakespeare survey course, the intercultural/interdisciplinary component might be readings in Renaissance philosophy, history or art history. In an American literature survey course, this component might be readings in American and European political history.

All literature courses include a final exam or final project.

GENRE (2000 level) Prerequisite: EN 1204 or EN 1234
 EN 2114 Poetry
 EN 2124 The Short Story
 EN 2134 The Novella
 EN 2144 The Novel
 EN 2154 Drama
 EN 2164 Science Fiction

SURVEY (2000 level) Prerequisite: EN 1204
 EN 2214 World Literature
 EN 2224 English Literature
 EN 2234 American Literature
 EN 2444 Shakespeare

ADVANCED LITERATURE (3000+ level)

Prerequisite: one 2000-level EN course.
 EN 3114 Advanced Studies in World Literature
 EN 3124 Advanced Studies in English Literature
 EN 3134 Advanced Studies in American Literature
 EN 3214 Gender and Literature
 EN 3224 Media Studies
 EN 3234 Science, Technology and Literature
 EN 3244 Literature and the Arts
 EN 3254 Special Topics in Literature
 EN 3404 Independent Study
 EN 4504 Senior Project

EN 1014 Writing and the Humanities I

4:0:0:4

An introduction to the humanities and to effective techniques of college-level writing. The course examines basic concepts, form and techniques of philosophy, art and literature, with emphasis on fluency, precision and imaginative use of source materials in writing. *Prerequisite: SAT essay score (beginning fall 2006) or placement examination administered by the Department of Humanities and Social Sciences, or EN 1090. EN 1080 only with the recommendation of the student's EN 1080 instructor, approved by the director of writing curriculum.*

EN 1034 Writing and the Humanities I (English as a Second Language)

4:0:0:4

An introduction to the humanities and to effective techniques of college-level writing. Designed for students for whom English is a second language. The course examines basic concepts, forms and techniques of philosophy, art and literature, with emphasis on fluency, grammar, syntax, precision and imaginative use of source materials in writing. *Prerequisite: SAT essay score (beginning fall 2006) or placement examination, or EN 1080. EN 1090 only with the recommendation of the student's EN 1090 instructor, approved by the director of writing curriculum.*

EN 1080 Reading and Writing in English as a Second Language

6:0:0:0

An intensive course for non-native speakers of English, taught at the high intermediate level. Students develop grammatical and syntactical control in writing, improve their comprehension of college-level texts and learn to organize an essay in the American academic idiom. The course includes some practice in listening and speaking for academic and professional purposes. *Prerequisite: SAT essay score (beginning fall 2006) or placement examination administered by the Department of Humanities and Social Sciences.*

EN 1090 Introductory Composition

4:0:0:0

An intensive course in reading comprehension and composition skills for students who have not been adequately prepared for college composition and reading. Designed for native speakers of English or non-native speakers with a high-level of experience communicating in American English. Emphasis is on improvement of control of standard grammar and syntax in American English and on fluency in writing. Students develop grammatical and syntactical control in writing, improve their comprehension of college-level texts and learn to organize an essay in the American academic idiom. *Prerequisite: SAT essay score (beginning fall 2006) or placement examination administered by the Department of Humanities and Social Sciences.*

EN 1204 Writing and the Humanities II

4:0:0:4

An introduction to the humanities and to advanced techniques of writing. Thematic emphasis on change and continuity in the humanities is presented, as well as an exploration of the interrelationship of the humanistic disciplines through the study of works of art, philosophy, literature and, in some sections, music. Advanced work is given to stylistic options and more complex forms of writing, including the longer critical study, the formal report, and, especially, the research paper. In some cases, this course may be presented as an introduction to literature. *Prerequisite: EN 1014 or EN 1034. In the interest of maximizing the student's potential for success, advanced placement and transfer credits accepted as prerequisites pending the results of a placement test and approval by the director of writing curriculum. Under no circumstances will transfer credit be given for EN 1204 in the absence of approved transfer credits for its prerequisite, EN 1014 (or EN 1034).*

EN 1234 Writing and the Humanities II (ESL)

4:0:0:4

The student population of this course is limited to students whose first language is not English. These students receive extra support in the grammatical and syntactic structures of English, support not provided in sections of the alternative course, EN 1204. EN 1234 and EN 1204 are fully equal as prerequisites, and both bear 4 credits. Like EN 1204, EN 1234 provides an introduction to the humanities and to advanced techniques in writing. Thematic emphasis on change and continuity in the humanities is presented, as well as an exploration of the interrelationship of the humanistic disciplines through study of great works of art, philosophy, literature and, in some sections, music. Advanced work is given to stylistic options and more complex forms of writing, including

the longer critical study, formal report and research paper. In some cases, this course may be presented as an introduction to literature. *Prerequisite: EN 1034. EN 1014 only with the recommendation of the English Final Examination Grading Committee, approved by the Director of ESL Writing Curriculum. Note: In the interest of maximizing the students potential for success, advanced placement and transfer credits are only accepted as prerequisites pending the results of a placement test and approval by the Director of ESL Writing Curriculum. Under no circumstances will transfer credit be given for EN 1234 in the absence of approved transfer credits for its prerequisite, EN 1034*

EN 2114 Poetry

4:0:0:4

An introduction a range of poetic forms and an exploration of the relation between poetry and other forms of cultural expression. Objectives: to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about a range of poetic forms. *Prerequisite: EN 1204.*

EN 2124 The Short Story

4:0:0:4

An introduction to the themes, structures and techniques of the short story. Objectives: to introduce the short story as a literary form; promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about short fictional texts. *Prerequisite: EN 1204.*

EN 2134 The Novella

4:0:0:4

An introduction to the themes, structures and techniques of the short story. Objectives: to introduce the novella as a literary form; to promote research and critical reading and thinking skills; to promote written and oral communication skills; and enhance cultural, social and aesthetic understanding through intensive reading of and writing about literary texts. *Prerequisite: EN 1204.*

EN 2144 The Novel

4:0:0:4

An introduction to the history, themes, structures and techniques of the novel. Objectives: to introduce the novel as a literary form; to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about literary texts. *Prerequisite: EN 1204.*

EN 2154 Drama

4:0:0:4

An introduction to the themes, structures and techniques of dramatic writing. Objectives: to explore the purpose of theater and investigate techniques of modern drama, its language and its subject matter, and to generate a critical discourse around selected dramatic masterpieces; to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social, and aesthetic understanding through intensive reading of and writing about literary texts. *Prerequisite: EN 1204.*

EN 2164 Science Fiction

4:0:0:4

A survey of science fiction. Definitions and development of the genre, scientific and historical contexts, contemporary and future visions. Promote understanding of the relationship between science and literature and of the conventions and special concerns of this genre. Objectives: to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading and writing about literary texts. *Prerequisite: EN 1204.*

EN 2214 World Literature

4:0:0:4

A survey of forms, ideas and changes in world literature, emphasizing a comparative approach. Objectives: to read literary works from Europe and other continents and explore the meaning of literary traditions through works written in English and in other languages and translated into English; to study the structural differences and parallels of great works of diverse cultures; to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about literary texts. *Prerequisite: EN 1204.*

EN 2224 English Literature

4:0:0:4

A survey of British literature from the medieval period to the present. Objectives: to introduce the themes, forms and historical contexts of British literature; to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about literary texts. *Prerequisite: EN 1204.*

EN 2234 American Literature

4:0:0:4

A survey of American literature from the Puritans to the present. Objectives: to introduce the themes, forms, and historical contexts of American literature; to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about literary texts. *Prerequisite: EN 1204.*

EN 2244 Shakespeare

4:0:0:4

Representative tragedies, comedies, histories. Cultural and literary influences. Textual problems, recent criticism, Elizabethan theater. Objectives: to introduce the works of William Shakespeare and to explore their aesthetic, cultural and historical contexts; to promote research and critical reading and thinking skills; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about literary texts. *Prerequisite: EN 1204.*

EN 3114 Advanced Studies in World Literature

4:0:0:4

Focus on a special topic in world literature; may include comparative and intercultural studies. May be repeated for credit for different topics. Objectives: to promote research and critical reading and thinking skills; to enhance cultural, social and aesthetic understanding through intensive reading of and writing about literature from a non-western and/or non-English-speaking culture. *Prerequisite: 2000-level EN course.*

EN 3124 Advanced Studies in English Literature

4:0:0:4

Focus on special topic in literature of Great Britain. May be repeated for credit for different topics. Objectives: to promote research, critical reading and thinking skills; and to enhance cultural, social and aesthetic understanding through study of texts from Great Britain. *Prerequisite: 2000-level EN course.*

EN 3134 Advanced Studies in American Literature

4:0:0:4

Focus on special topic in literature of the United States. May be repeated for credit for different topics. Objectives: to promote research, critical reading and thinking skills; and to enhance cultural, social and aesthetic understanding through study of particular issues in American Literature. *Prerequisite: 2000-level EN course.*

EN 3214 Gender and Literature

4:0:0:4

Explores literary, philosophical, social, and cultural questions related to gender and sexuality. May be repeated for credit for different topics. Objectives: to promote research, critical reading and thinking skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about texts concerned with gender issues. *Prerequisite: 2000-level EN course.*

EN 3234 Science, Technology and Literature

4:0:0:4

Study of literary texts and other forms of cultural expression in relation to issues in science and technology. May be repeated for credit for different topics. Objectives: to promote research, critical reading and thinking skills; and to enhance cultural, social and aesthetic understanding through intensive reading of and writing about cultural expression in relation to issues in science and technology. *Prerequisite: 2000-level EN course.*

EN 3244 Literature and the Arts
4:0:0:4

Study of the interrelation of literary texts and other forms of cultural expression, particularly music and/or visual arts. May be repeated for credit for different topics. Objectives: to promote research, critical reading and thinking skills; and to enhance cultural, social and aesthetic understanding through study of the possible connections among a variety of representative and aesthetic forms. *Prerequisite: 2000-level EN course.*

EN 3254 Special Topics in Literature
4:0:0:4

Study of a special topic in literature. May be repeated for credit for different topics. Objectives: to promote research, critical reading and thinking skills; and to enhance cultural, social and aesthetic understanding through study of a special topic in literature. *Prerequisite: 2000-level EN course.*

EN 3404 Independent Study in Literature
4:0:0:4

Independent or small group work, under supervision of instructor, by special arrangement. *Prerequisites: Liberal Studies majors only and instructor's permission.*

EN 4504 Senior Project in Literature
4:0:0:4

In this capstone course, students develop a major project that integrates the knowledge and skills they have acquired through the program. Students manage the project from start to finish under the guidance of their project advisor. In addition, students revise selected projects from previous classes to develop a professional portfolio of writing samples. *Prerequisites: Liberal Studies seniors only and departmental permission.*

HISTORY**HI 2104 Modern World History**
4:0:0:4

Required course for all students. An introduction to provide students with a degree of cultural literacy in modern and contemporary history. The course should also provide an understanding of the ways in which historians use sources and shape narratives, and the necessity and pitfalls of using historical analogies to understand the present. *Prerequisites: EN 1204 or LA 1014 or permission of the department*

HI 2214 Introduction to the History of Science
4:0:0:4

General introduction to issues in science and society through the perspective of history. The course's approach is to look at a scientific world view in its varying social contexts as it developed over several hundred years. The mechanical world view emerged during the scientific revolution and led to an understanding of planetary motion, the ability to go to the moon and the power to harness nuclear energy. Topics include social context of the scientific revolution, Copernicus, Galileo, science and the Church, Newton, Bohr and atomic structure and nuclear energy and the decision to drop the atomic bomb. *Prerequisite: HI 2104.*

HI 2224 Science and Industry in the Modern World
4:0:0:4

Examines science and industry in the 19th and 20th centuries, a time when science and technology became very closely bound. Course covers areas where significant advances occurred that brought large societal changes. For example: (1) the development of new forms of communication like the telegraph, radio and telephone and (2) the development of a theoretical

basis for mechanical computing and the computer revolution. Course pays close attention to the political and business contexts of these developments. *Prerequisite: HI 2104 and one of the following: HI 2214, HI 2224, PL 2104, PL 2094, PL 2064, EN 2164 or instructor's permission.*

HI 2314 United States History from Colony to Empire
4:0:0:4

Surveys the history of the United States, focusing on the history of British North America, the American Revolution, the development of capitalism in the early republic, the conflict over slavery caused by the schism between capitalist and liberal values and the resulting cataclysm of southern secession and civil war. How and why did the United States become the world's leading military and industrial power in the 20th century. Topics include the re-unification of the United States as nation-state after the Civil War, the social, technological and economic effects of the "second industrial revolution", the closing of the frontier and the subsequent push for U.S. territorial expansion in the Pacific Ocean and the Caribbean Sea, immigration and nativism, the era of Progressive reform and the catastrophic wars and depressions of 1914-1945. The course reaches into the post-1945 world to explore the Cold War and examine American participation in the wars in Indochina, 1941-1975, and the attempt to create a "new world order" under US leadership. *Prerequisite: none.*

HI 2514 History of the City of New York
4:0:0:4

Advanced level undergraduate course covers the history and development of the city of New York from its exploration by Giovanni de Verazzano in 1524 to the present. Major themes include the evolution of the city's political economy, political and economic influences on the use of land and space and ethnic and class conflict in the urban environment, the consolidation of Greater New York. *Prerequisite: HI 2104.*

HI 2624 American Civil Liberties

4:0:0:4

Examines the development of civil rights beginning with their roots in early modern England, through the latest Supreme Court decisions in the field. Builds on students basic legal research skills by teaching them how to read, discuss and write about complicated constitutional cases, and how to transcend the narrow boundaries of legal discourse by placing cases in historical context. *Prerequisite: HI 2104 or instructor's permission.*

HI 2714 Modern Asia

4:0:0:4

Explores the major civilizations in Asia from the mid-17th century to the present with attention to their interaction with the West. Primary emphasis on Chinese, Indian and Japanese history. Topics include the colonialism and imperialism, the Opium Wars, the 20th-century revolutions in China, India under the British, Gandhi, the modernization of Japan, the rape of Nanking, Mao Zedong, Deng Xiaping, the Asia-Pacific Economic Zone, French Indo-China, Ho Chi Minh and Islamic revolutions in Iran and Afghanistan. *Prerequisite: HI 2104.*

HI 3032 Urban Infrastructure in Antiquity and Today

4:0:0:4

The course will compare urban infrastructure engineering in the ancient city to that in the current city. Topics include health, security, water supply, streets and building.

HI 3034 History of the Urban Infrastructure

4:0:0:4

This course examines the history of New York City's infrastructure, concentrating on water, sanitation and public health, transportation, electrical and communications systems, the development of housing and real estate, the security infrastructure and plans for its future. The broad question the course addresses is how the political economy of the city has shaped its physical environment, and more particularly the technological innovations that have made the city modern, and postmodern. *Prerequisite: HI 2104.*

HI 3064 Global Housing

4:0:0:4

Housing is one of the basic needs of all human beings. Not surprisingly, therefore, a great deal of public and private debates have centered on the form, financing, and allocation of shelter. Housing is about more than four walls and a roof; it is about the idea of "home," about gendered division of labor, and about identity. It has also been fundamentally connected with the health of the construction industry and national banks, the accumulation of domestic savings, and thus with the success or failure of national development. In this class, we will three key questions. First, what are some of the critical issues when designing housing vis--vis the city or countryside? How can design affect use (and vice versa)? How can housing engineer social harmony, stability, and community? Secondly, who has traditionally paid for what kind of housing? Who deserves to be subsidized by whom? Third, what types of housing

exist, and who benefits (or is hurt by) each type? How can identity inform architecture? These three themes will structure our debates and discussions about international housing.

HI 3214 Early Modern Science

4:0:0:4

Covers the development of modern science from the Renaissance through the Enlightenment. Sets the stage for the scientific revolution. Looks at the contribution of the Arab world, the Renaissance in the West and the importance of voyages of discovery to the New World. Takes a comprehensive look at the scientific revolution by considering its revolutionary nature, the social and professional contexts within which it took place and the experimental practices and theoretical ideas that brought it to fruition. Course concludes with the work in electricity and magnetism, chemistry and encyclopedic understanding of the Enlightenment. *Prerequisites: HI 2104 and one of the following: HI 2214, HI 2224, PL 2104 or instructor's permission.*

HI 3224 Science and Ethics in the Twentieth Century

4:0:0:4

Science is often depicted as an intellectual pursuit totally detached from society. The isolated genius working away in the ivory tower has become the romantic emblem of the scientist in his/her noble pursuit of objective, disinterested knowledge. However, a more critical, and historically informed, view reveals the shortcomings of this caricature. Over the past century, scientists have debated the ethical ramifications of their work. And legislation has struggled to keep pace with scientific discoveries and their applications as biomedical research has raised serious ethical challenges. This course will investigate how science generates ethical debates, and conversely

how moral controversies often shape the conduct and context of the scientific enterprise. Students will engage in lively and enlightened debates and improve upon their writing skills. No previous of knowledge of science is required.

HI 3234 Biology and Society

4:0:0:4

This lecture course, intended primarily for juniors and seniors, explores the relationship between the biological sciences and society from Enlightenment France to the Human Genome Project and biotechnology in the United States. Although a university-level course in the biological sciences would be most helpful, it is not a prerequisite for the course. *Prerequisite: Junior/Senior status or permission of the instructor.*

HI 3252 History of the Mass Media from Printing to the Internet

4:0:0:2

This course will explore the history of mass mediabroadsides, newspapers, cinema, radio, TV, and the internet from the advent of cheap print in the early modern period to the turn of the twenty-first century. Themes will include the history of mass media technology, the mass dissemination of news and its effects on popular culture, and gender relations, sensationalism, the role of the media in the development of advertising and consumer culture. *Prerequisite: HI 2104 or LA 1014*

HI 3404 Special Topics in History

4:0:0:4

Independent or small group work under supervision of instructor, by special arrangement. *Prerequisites: HI 2104 or instructor's permission.*

HI 3604 Independent Study in History

1–6 variable credit

Independent or small group work under supervision of instructor, by special arrangement. *Prerequisite: Instructor's permission.*

HI 3714 Seminar in American Foreign Relations and International History

4:0:0:4

Examines selected topics in the history of international and transnational relations between Americans and the rest of the world from the early modern period to the present. Students will discuss a variety of methods and interpretations of American foreign policy and public and private interactions abroad, and of the United States place in the world. *Prerequisites: HI 2104 or permission of the department*

HI 4724 Seminar in International History since 1945

4:0:0:4

An advanced interdisciplinary course in international history since 1945 designed as a capstone course in global studies. The course will explore selected topics in international history since 1945 with the goal of a deep understanding of the narratives of the field of cold war studies, the limitations of the cold war paradigm for understanding the post-1945 period and the alternative paradigms. It assumes that students are generally familiar with the historical events under discussion and will require students to complete and report on substantial research projects on topics approved by the instructor on the historiography and history of international and transnational relations since 1945. *Prerequisites: HI 3714 and another 3000 level history course, or instructor's permission.*

The Law and Technology Sequence is an 8-credit sequence designed to fit with the requirements of engineering and computer science majors. It is intended to give undergraduates some exposure to law, legal methods and intellectual property so that they can:

- Better understand the legal implication of their work as computer scientists and engineers
- Evaluate their potential for law school admission and their possible interest in a legal career

The sequence consists of LW 3104 Introduction to Legal Writing and Research and LW 4104 The Law of the Internet.

LW 3104 Introduction to Legal Writing and Research

4:0:0:4

This course acquaints students with a basic knowledge of how laws and regulations are passed and how competing interests are adjudicated by the three branches of government. Emphasis on the administrative and judicial processes. Students learn how to read judicial and administrative decisions and the basics of legal writing. *Prerequisite: none.*

LW 4104 The Law of the Internet

4:0:0:4

This course is a general survey of legal regulation of the Internet, including an outline of intellectual property law relevant to the Internet, the law of commercial transactions on the Internet and computer crime. *Prerequisite: LW 3104.*

LW 4533 Construction Law

3:0:0:3

LAW AND TECHNOLOGY

This course introduces students to the areas of the law that they are most likely to encounter in construction. Following an introduction to the legal system and from of legal analysis, areas to be addressed include contracts, procurement, scope definition, delays and acceleration, site conditions, warranties, termination, tort claims, dispute resolution and ethics. *Prerequisite: students must be enrolled in the Construction Management Program, junior standing*

LIBERAL STUDIES

All liberal studies courses are required for students in the Liberal Studies Program. LA courses can NOT be applied toward a humanities or social sciences course requirement.

LA 1014 Introduction to the History and Philosophy of Technology

4:0:0:4

Introduces students to important issues, historical and contemporary, related to technology from a variety of social, political and philosophical viewpoints. Course serves as a foundation for the interdisciplinary approach of the Liberal Studies Program. *Prerequisite: none.*

LA 1024 Computers, Technology and Values

4:0:0:4

Introductory examination of the social, cultural and political impact of networked computers in the contemporary world. *Prerequisite: none.*

LA 2014 Technology and the Human Condition

4:0:0:4

This course provides an understanding of the human species and human technological output from the interdisciplinary perspectives of biology, psychology, anthropology and

ethics. Through readings, lectures, discussions and field trips, the interrelationship between human growth, development, evolution and technology and the impact and implications of technology for both the human species and the ecosystem are analyzed. *Prerequisite: LA 1014.*

LA 3014 Directed Study

4:0:0:4

Directed study under supervision of faculty advisor in Humanities & Social Sciences. Students are exposed to foundational research techniques under the guidance of a faculty advisor. Library research, written and oral reports required. *Prerequisites: Permission of HuSS faculty advisor and LA 1014, LA 1024, LA 2014.*

LA 3024 The Design of Cities

4:0:0:4

The course is intended to help students discover different ways of looking at and understand what cities are and how they work to effect people and institutions, largely from the perspective of environmental social sciences. Course topics address methodological approaches to observing and studying city spaces, the historical context of urban life, including the role of preservation in maintaining a sense of community. Course addresses sustainable approaches to creating urban spaces, including “smart growth” strategies; the special role of the arts in urban life and development; the relationship between urban settings and natural environments; and the role of design in crime and crime prevention. Students work as teams to conduct a case study of a local urban setting, assessing its context, design and impact as an urban development. *Prerequisite: LA 1014.*

LA 4014 Internship/Study Abroad

4:0:0:4

Students may decide to engage in a service-learning internship project in the local area, or they may choose to participate in a study-abroad program. Internship Option: Supervised semester-long project carried out in community or industry setting. Evaluated on basis of written and oral reports presented to faculty and external project co-sponsors. Students must maintain a course-load equivalent of 16 credits (including the 4 for LA 4014) during this semester. Study-Abroad Option: Semester-long course of study at a foreign institution. Students must maintain a course-load equivalent of 16 credits (including the 4 for LA 4014) during this semester. *Prerequisites for both options: Junior/Senior status and permission of HuSS faculty advisor.*

LA 4024 Capstone Project

4:0:0:4

Research project under supervision of faculty advisor in Humanities & Social Sciences. Library research, written and oral reports required. *Prerequisites: Permission of HuSS faculty advisor, senior status, LA 1014, LA 1024, LA 2014, LA 3014, LA 4014, STS 3014.*

LA 4053 BIOSOMA – Environmental Design of the City of the Future

3:0:0:3

The goal of this course is to improve the engineering design of a city and its components. The course focuses on the city as an entity which concentrates living organisms, societal organizations and activities, and machines, interacting with the environment both outside and inside the city. Throughout the class, a number of essential questions about the future of cities will be examined such as: (1) What does urbanization mean for the future of human-kind in terms of resources, capabilities, ideologies, and culture ?

(2) How can the design of cities affect their future ? (3) What should be the role of the engineer ? (4) How can the engineer of the future be prepared for that role ? (5) What critical engineering interventions are needed to influence the future of today's cities ? Each student will select a project dealing with some aspects of the course, and present its results to the class. *Cross-listed as CE 4053*

MUSIC

The Music electives are divided into two levels: introductory (2000-level) and advanced (3000-level). The fourth credit hour for all music courses takes the form of an increased communication component: At least four graded writing assignments, regular informal writing and individual or group presentations. *Prerequisite: EN 1204.*

MU 2114 Understanding Music

4:0:0:4

A survey of Western classical music from the early Middle Ages through 19th-century Romanticism. Objectives: to introduce students to ways of listening to classical music; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive engagement with musical expression. *Prerequisite: EN 1204.*

MU 2124 Modern Music

4:0:0:4

A survey of modern music, from the Late Romantics to contemporary composers. Objectives: to introduce students to ways of listening to modern music; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive engagement with musical expression. *Prerequisite: EN 1204.*

MU 2134 Introduction to Opera

4:0:0:4

A survey of the opera form. Objectives: to introduce students to ways of listening to opera; to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive engagement with musical expression. *Prerequisite: EN 1204.*

MU 3114 Studies in National Traditions in Music

4:0:0:4

Focus on a particular national tradition in music. Objectives: to promote written and oral communication skills; and to enhance cultural, social and aesthetic understanding through intensive engagement with traditions in national music. *Prerequisite: one 2000-level MU course.*

MU 3124 Special Topics in Music

4:0:0:4

May be repeated for credit for different topics. Objectives: to promote written and oral communication skills, and to enhance cultural, social and aesthetic understanding through intensive engagement with a special topic in music. *Prerequisite: one 2000-level MU course.*

PHILOSOPHY

Course List

The philosophy electives are divided into two levels: introductory (2000-level) and advanced (3000-4000 levels).

Introductory Level

PL 2014 Symbolic Logic
 PL 2024 Ancient Philosophy (I, II, III)
 PL 2034 Philosophy of Religion (I, II)
 PL 2044 Social Philosophy (I, II)
 PL 2054 Ethical Theories (I, II)
 PL 2064 Ethics and Technology (II, IV)
 PL 2074 Asian Philosophy (I, II, III)
 PL 2084 Science and Society (II, IV)
 PL 2094 Space and Space-time (I, III, IV)

PL 2104 Magic, Medicine and Science (I, III, IV)
 PL 2114 Philosophy of Relativity (III, IV)
 PL 2124 Philosophy of Quantum Mechanics (III, IV)
 PL 2164 Modern Philosophy (I, II, III) Advanced Level
 PL 3014 Metalogic (IV)
 PL 3034 Critical Theory (II, III)
 PL 3044 Political Philosophy (I, II)
 PL 3054 Philosophy of Art (II)
 PL 3064 Philosophy of Technology (IV)
 PL 3074 Philosophy of Mathematics (III, IV)
 PL 3094 Philosophy of Science (III, IV)
 PL 3104 Metaphysics and Epistemology (I, III)
 PL 4052 Business Ethics
 PL 4062 Computer Ethics
 PL 4113 Special Topics

Requirements for the Philosophy Major in the Liberal Studies Program (six courses, 24 credits)

The BS in Liberal Studies allows students to major in philosophy. The following are requirements for such a concentration:

PL 2014 Symbolic Logic

One course from each of the following categories, totaling four courses: (1) history of philosophy, (2) philosophy and society, (3) metaphysics and epistemology, (4) science and technology

One additional course.

Total credit hours: 24

(1) History of philosophy: Ancient Philosophy, Modern Philosophy, Philosophy of Religion; Social Philosophy; Ethical Theories; Asian Philosophy; Philosophy of Space-time; Magic, Medicine and Science; Political Philosophy; Metaphysics and Epistemology

(2) Philosophy and society: Ancient Philosophy; Philosophy of Religion; Social Philosophy; Ethical Theories; Ethics and Technology; Asian Philosophy; Science and Society; Modern Philosophy; Critical Theory; Political Philosophy; Philosophy of Art

(3) Metaphysics and epistemology: Ancient Philosophy; Asian Philosophy; Philosophy of Space-time; Phi-

osophy of Relativity; Philosophy of Quantum Mechanics; Magic, Medicine and Science; Modern Philosophy; Critical Theory; Philosophy of Mathematics; Philosophy of Science; Metaphysics and Epistemology

(4) Science and technology: Ethics and Technology; Science and Society; Philosophy of Space-time; Philosophy of Relativity; Philosophy of Quantum Mechanics; Magic, Medicine and Science; Philosophy of Technology; Philosophy of Mathematics; Philosophy of Science; Metalogic

Introductory Level

PL 2014 Symbolic Logic

4:0:0:4

An introduction to the methods and applications of first-order symbolic logic, including both sentential logic and predicate logic (up to and including relational predicate logic with identity). Logic is the study of arguments; in particular, the study of the conditions under which the premises of an argument adequately support its conclusion; i.e., the conditions under which an argument is valid. There is more than one flavor of validity; the kind of validity courses are concerned with is called deductive validity. Course covers methods of testing arguments for deductive validity and deductive invalidity, as well as methods for identifying tautologies, contradictions and logical equivalence. *Prerequisite: none.*

PL 2024 Ancient Philosophy

4:0:0:4

An introduction to ancient philosophy in the Western tradition. Works covered include the pre-Socratic philosophers, Plato, Aristotle, Seneca, Marcus Aurelius and the Roman Stoics. The goal of this course is to bring these philosophers into dialogue with each other, highlighting their similarities and differences in an attempt to

show their importance in the history of philosophy and their relevance to society today. *Prerequisite: none.*

PL 2034 Philosophy of Religion

4:0:0:4

An investigation of the concepts, belief systems and practices of religions. By analyzing central concepts of religion such as God, faith, revelation, salvation and the relationship between religion and science, morality and art—both the believer and non-believer may achieve a more sophisticated understanding and appreciation of religions. Class addresses such topics as religious experience, faith and reason, arguments for Gods existence, the problem of evil, religious language, life and the after-life and the conflicting claims of different religions. *Prerequisite: none.*

PL 2044 Social Philosophy

4:0:0:4

The social sciences deal specifically with human subjects and institutions rather than the natural world and phenomenon. As opposed to the natural sciences, which are explanatory, the social sciences are interpretive. This interpretive turn raises a number of questions: What exactly is an interpretation? What makes an interpretation correct or better than another interpretation? Are interpretations universal or relative to culture? Class examines the relationship between individuals and societies in order to form a better understanding of who we are, how we should live together, how we investigate societies and social phenomena, what constitutes a personal identity, what constitutes a political identity, what is race, what is gender. *Prerequisite: none.*

PL 2054 Ethical Theories

4:0:0:4

Ethics, or moral philosophy, endeavors to establish rational principles of right conduct that can serve as decision-making guides for individuals and groups. It also prescribes the characteristics and personality traits that enable individuals to live well in communities with others. Class attempts to achieve a systematic understanding of the nature of ethics and what it requires of us. Discussion of historical sources such as Plato, Aristotle, Hobbes, Mill, and Kant, ethical theories (moral relativism, egoism, utilitarianism, justice and rights, virtue, ethics, and feminist transformations of moral theory) and contemporary moral problems (abortion, euthanasia, economic justice, animal rights, the death penalty and affirmative action). *Prerequisite: none.*

PL 2064 Ethics and Technology

4:0:0:4

Students consider how technology shapes and patterns—and, in turn, how it is shaped and patterned by human activities from a moral point of view. The focus of this course is on the ways in which the technologically textured world changes human life, individually, socially and culturally, for better or worse. Students consider several views of technology and several ethical theories for evaluating technology. The aim is to understand the structures of change and transformation and to develop critical forms of thought so as to be able to understand, evaluate, appreciate and criticize technological development. *Prerequisite: none.*

PL 2072 Bioethics

4:0:0:2

Bioethics is a critical, reflective examination of the impact, effects and transformations of biotechnology upon human activities. The use of biotechnology is becoming an increasingly important feature of society. Biotechnologies are more than mere things that

do nothing in themselves; instead they affect the very ways people act, perceive and understand. The class examines the relationship between biotechnology and ethics and politics, questioning the limits of what are its just and appropriate uses. *Prerequisite: none.*

PL 2074 Asian Philosophy

4:0:0:4

Addresses the fundamental questions of philosophy: What is real? What is good? How do we know? - by considering the answers given by philosophers from India, China and Japan. Philosophy in Asia has not been viewed as an abstract academic subject with little or no relevance to daily life. Rather, it has been seen as one of life's most basic and most important enterprises. It is seen as essential to overcoming suffering and improving the quality of human life. There are no rigid distinctions between philosophy and religion in Asian thought. Class examines the Asian philosophical tradition in an attempt to understand both its historical importance and its relevance to society today. *Prerequisite: none.*

PL 2084 Science and Society

4:0:0:4

Investigates the relation between science and society. This course is offered in two forms: (1) Thinking about the environment: a survey of contemporary environmental issues with emphasis on the development of the reasoning skills needed to make informed judgments. In the past, topics covered have included the history of environmentalism in the United States., atmospheric ozone, global warming, acid rain, air pollution, global population growth, pesticides, radon, nuclear power, biodiversity and species extinction and genetically modified crops. (2) Science and pseudoscience: a survey of popular "pseudoscientific" claims with

emphasis on such issues in the philosophy of science as demarcation, evidential warrant, scientific progress, science and public policy and fallacies of reasoning. In the past, topics covered have included UFO sightings and alien abductions, the Nemesis theory of dinosaur extinctions, astrology, creationism, psychic phenomena, theories of intelligence, alternative medicines, global warming and cold fusion. Student input in determining topics to cover is heavily emphasized. Students are required to make a 20-minute presentation on a topic of their choice and submit a follow-up five-page written report. *Prerequisite: none.*

PL 2094 Space and Space-time

4:0:0:4

What is the nature of space? Is it an independently existing substance, or does it merely consist in the relations between physical objects? Can motion be described simply in terms of the relational properties of objects, or must people always define motion with respect to an absolute motionless substratum? Does the existence of left-handed gloves entail the existence of absolute space? This course considers these and other questions about the nature of space and time as they appear in the writings of the following philosophers and scientists: Plato, Aristotle, Descartes, Newton, Leibniz, Berkeley, Kant, Poincaré and Einstein. *Prerequisite: none.*

PL 2104 Magic, Medicine and Science

4:0:0:4

An introduction to basic issues in metaphysics (What does reality consist of?) and epistemology (What is knowledge and how is it obtained?). Investigation takes the form of a philosophically oriented survey of the history of western science from the Greeks to the Newtonian synthesis. Course looks at the metaphysical and

epistemological origins of three grand systems of thought, organic, magical and mechanical, and indicates the extent to which modern science can be seen as arising out of their synthesis. Course views the key figures in this history as they saw themselves first and foremost as natural philosophers. Topics to be covered include pre-Socratic cosmology, Plato, Aristotle, Plotinus, the Hermetic Corpus, Ficino's naturalistic magic, Pico's supernatural magic, Paracelsus and the ontic theory of disease, Copernicus, Galileo, Kepler, Descartes, Hobbes, the Cambridge Platonists and Newton. *Prerequisite: none.*

PL 2114 Philosophy of Relativity

4:0:0:4

The first part of this course develops the physics underlying special relativity and considers such conceptual questions as: Does Special Relativity prohibit faster-than-light travel? Does it allow a traveling astronaut to age less and return home in the distant future? What is the significance of Einstein's famous equation $E=mc^2$? The second part of the course develops the physics underlying general relativity and considers conceptual issues surrounding such current applications as time machines, wormholes and "warpdrive" space-times. *Prerequisite: none.*

PL 2124 Philosophy of Quantum Mechanics

4:0:0:4

Quantum mechanics is the best-confirmed theory of particle dynamics in existence today. Not only is it the basis for all digital technologies, it also serves as the theoretical foundation for our best-confirmed theories of matter (quantum field theories). On the other hand, since its inception, it has been beset with conceptual problems. In particular, there is no current consensus on just how to interpret it: What would the world be like, if it were true

? This course first develops the theory from a historical perspective, and then canvasses a number of proposals that have been offered as to how it should be interpreted. Other topics include conceptual issues surrounding such current applications as quantum teleportation, quantum computing and quantum cryptography. *Prerequisite: none.*

PL 2164 Modern Philosophy

4:0:0:4

This course examines the central figures and issues of the modern era: 17th and 18th century European enlightenment. The course focuses on issues that were important not only in this modern period but remain important today, including the state of nature and society, epistemology, metaphysics and the role of God in philosophical thinking. Topics covered include the Renaissance and science, Descartes and rationalism, Hume and empiricism and Kant's Copernican revolution. *Prerequisite: none.*

Advanced Level

PL 3014 Metalogic

4:0:0:4

Metalogic is sometimes referred to as the logic of logic. This course demonstrates the soundness and completeness of firstorder logic, the Gödel incompleteness theorem for formal arithmetic, and reviews Turing machines and the notions of computability and undecidability. *Prerequisite: PL 2104 or a strong mathematical background (third- or fourth- year mathematics majors).*

PL 3034 Critical Theory

4:0:0:4

The course covers the interactions between the explanatory, the normative, and the ideological dimensions of social and political thought. Starting

with the founder of critical theory, Karl Marx, the course examines the Western Marxist tradition in philosophy. Among the issues discussed are the problems of domination and exploitation, the relationship between capitalism and democracy, the formation of personal and social identities, the threat of fascism, the role of the media and the impact of technology on social development. *Prerequisite: one 2000- level PL course.*

PL 3044 Political Philosophy

4:0:0:4

Political philosophy is concerned with evaluating the ways people should live together in communities and with finding the appropriate and legitimate governing institutions that promote the ideals of freedom, justice, equality and happiness. The questions are why these institutions have a legitimate authority over their members and what is their role in determining how the benefits and burdens of a society are distributed among citizens. The class starts from two essential historical sources, Locke and Kant, before considering contemporary social-political philosophy, including contractarianism, libertarianism, utilitarianism, communitarianism and democratic socialism. Discussion includes the connections among such issues as democracy, freedom, justice, rights, private property, economic equality, global justice and community. *Prerequisite: one 2000-level course.*

PL 3054 Philosophy of Art

4:0:0:4

The course is concerned with the perception, interpretation, expression and creation of works of art and beauty. It asks: What does it mean to describe anything as aesthetic? What is a work of art? What do artists do? How can people understand a work of art? Does art have more to do with emotion than reason? Course examines the nature of aesthetic experience as well as

works of art, including painting, photography, film, architecture, sculpture, music, literature, theater, dance and popular arts-like television and video programs. *Prerequisite: one 2000-level course.*

PL 3064 Philosophy of Technology

4:0:0:4

The course is a critical, reflective examination of the impact, effects, and outcomes of technologies upon human activities. Above all, it is the study of the nature of the technologically textured ecosystem or "technosystem." The course focuses on the ways in which technologies change human life, individually, socially and culturally. It also considers the effects of human-technology relations on science, culture, democracy and human values. Its aim is to understand the structures of change and transformation, and to help students to develop critical forms of thought so as to be able to understand, evaluate, appreciate and criticize technological development. *Prerequisite: one 2000-level course.*

PL 3074 Philosophy of Mathematics

4:0:0:4

Are the objects of mathematics real? What does it mean to say that a mathematical claim is true? What is the nature of mathematical knowledge? What is the relation between mathematics and the physical world? This course looks at how contemporary philosophers have attempted to answer these and related questions. *Prerequisite: one 2000-level course or instructor's permission.*

PL 3094 Philosophy of Science

4:0:0:4

An advanced introduction to topics in the philosophy of science. The course covers the notions of natural laws, scientific explanation and confirmation, the nature of scientific theories, the realism/antirealism debate, logical positivism and its successors (logical empiricism, historicism, social constructivism, etc.) as well as survey work in one or more of the following (time permitting): philosophy of physics, philosophy of biology, philosophy of psychology, philosophy of social sciences, philosophy of medicine. The objectives are to be introduced to the major fields of study in contemporary philosophy of science and, above all, to gain a firm understanding of the relation between philosophy and science and the important reciprocally enhancing role each has for the other. *Prerequisite: one 2000-level course.*

PL 3104 Metaphysics and Epistemology

4:0:0:4

Metaphysics seeks to answer general questions concerning the nature of reality: What does reality consist of? What are the presuppositions that underlie inquiry into nature? Epistemology seeks to answer the questions: What is knowledge and how is it obtained? This course surveys answers to these and related questions in the works of five important philosophers in the western tradition: Aristotle, St. Aquinas, Leibniz, Kant and Whitehead. *Prerequisite: one 2000-level course.*

PL 3114 Special Topic in Philosophy

4:0:0:X

Topic to be determined by the instructor; variable credit. *Prerequisites: one 2000-level course and instructor's permission.*

PL 3404 Independent Study in Philosophy

4:0:0:4

Focus on a special topic in Philosophy completed under the guidance of faculty member. May be repeated for credit on a different topic. *Prerequisite: instructor's permission.*

PL 4052 Business Ethics

4:0:0:2

This course considers issues of corporate responsibility and the ethical challenges of economic systems. It presents the principles and criteria for making ethical decisions in relation to law, corporate relations, social responsibility, privacy and other contexts. It investigates the influence of technology on the ethics of corporate decision-making. A case study approach is used. *Prerequisite: required for students in the Business and Technology Management Program. Does not satisfy general education requirements in Humanities and Social Sciences. Note: This course meets four hours a week for seven weeks or two hours a week for 14 weeks. All class sessions combine lecture and discussion and focus on actual case studies.*

PL 4062 Computer Ethics

4:0:0:2

This course considers issues of corporate responsibility and the ethical challenges of economic systems. It presents the principles and criteria for making ethical decisions in relation to law, corporate relations, social responsibility, privacy and other contexts. It investigates the influence of technology on the ethics of corporate decision-making. A case study approach is used. *Prerequisite: required for students in the Business and Technology Management Program. Does not satisfy general education requirements in Humanities and Social Sciences. Note: This course meets four hours a week for seven weeks or two hours a week for 14 weeks. All class sessions combine lecture and discussion and focus on actual case studies.*

PL 4504 Senior Project in Philosophy

4:0:0:4

In this capstone course, students develop a major project that integrates the knowledge and skills they have acquired through the program. Students manage the project from start to finish under the guidance of their project advisor. In addition, students revise selected projects from previous classes to develop a professional portfolio of writing samples. *Prerequisites: Liberal Studies seniors only and departmental permission.*

POLITICAL SCIENCE

PO 1404 Introduction to Urban Policy

4:0:0:4

The purpose of this course is to introduce students to the process and some of the major substantive issues in urban policy and politics both in the United States in the world. These include some of the basic issues of any political system: how cities function as part of a global urban network; the structure of decisionmaking, the allocation of resources and delivery of services.

PO 2614 Introduction to Political Science

4:0:0:4

The course introduces the basic topics of political science. The main focus of the course is to give an overview of human polity and its impact and affect as a civil society. It covers different political systems, concepts, political ideology, political process, origins and functions of different types of rights, justice, and equal treatment, duties and responsibilities of states and citizens, libertarianism, policymaking as a process and international systems. *Prerequisite: none.*

PO 3614 Comparative Politics
4:0:0:4

The course focuses on nations and national states and their political relations to each other. The main feature includes the inter-relations and confrontations among the bloc nations, such as first, second, third and fourth worlds. In doing so, major emphasis will be given to advanced as well as underdeveloped nations such as France and Great Britain, the mid-developed nations such as Germany and Japan, late-developed nations, such as Soviet Union and Russia, experimental developed nations such as India and South Africa, and underdeveloped nations such as Afghanistan and Bangladesh. *Prerequisite: PO 2614.*

PO 3704 Special Topics in Politics
4:0:0:4

Focus on a special topic in anthropology completed under the guidance of faculty member. May be repeated for credit on a different topic. *Prerequisite: instructor's permission.*

PO 3804 Independent Study in Politics
4:0:0:4

Independent or small group work, under supervision of instructor, by special arrangement. *Prerequisites: Liberal Studies and Digital Media majors only; instructor's permission.*

PO 4504 Senior Project
4:0:0:4

In this capstone course, students develop a major project that integrates the knowledge and skills they have acquired through the program. Students manage the project from start to finish under the guidance of their project advisor. In addition, students revise selected projects from previous classes to develop a professional portfolio of

writing samples. *Prerequisites: Liberal Studies seniors only and departmental permission.*

PSYCHOLOGY

The fourth credit hour for psychology courses is used for experimental investigations, laboratory work, fieldwork or trips to museums and/or zoos to provide an opportunity to make descriptive observations of subjects. The psychology electives are divided into two levels: introductory (2000-level) and advanced (3000-4000 levels). PS 2104 is a prerequisite for all advanced PS electives for a two or more course sequence.

Prerequisite Psychology Course
PS 2104 Introduction to Psychology

Advanced Electives

PS 3114 Physiological Psychology
PS 3124 Comparative Psychology
PS 3214 Learning and Cognition
PS 3314 Social Psychology
PS 3324 Environmental Psychology
PS 3414 Developmental Psychology
PS 3424 Abnormal Psychology
PS 3434 Personality Psychology
PS 3444 Animal Behavior
PS 3704 Humans and Their Environment
PS 3714 Its About Time
MA2212 Data Analysis I*
MA2222 Data Analysis II*
LA 2014 Technology and the Human Condition

* *Two math courses in statistics (MA 2212 and MA 2222) are required*

Advanced Studies

PS 4114 Senior Research Thesis
One- or two-semester research project to be completed under the guidance of a faculty member. Agreement of instructor required before registration.

Advanced Topics

PS 4124 Guided Readings
Selected problems in psychology. Individual or group studies/ projects under faculty supervision involving guided reading and or research, topics to be arranged. For mature students wishing to undertake specialized independent study under tutorial guidance. *Prerequisite: junior standing or departmental permission. Agreement of instructor required before registration.*

E. Special Topics In Psychology
PS 3444 Special Topics

Focus on a special topic in Psychology completed under the guidance of faculty member. May be repeated for credit on a different topic. Agreement of instructor required before registration.

Undergraduate Courses

PS 2104 Introduction to Psychology
4:0:0:4

The scientific study of behavior and the mind. Topics include experimental design and basic statistics, learning and memory and biopsychology. Also included: the nature of sensation and perception, cognitive, abnormal, developmental, social and environmental psychology. Course consists of lectures, class discussion, films and videos and a number of projects, both in class and on computers.

PS 3114 Physiological Psychology
4:0:0:4

The study of the relationship between the body, especially the brain, and behavior and the mind. Topics include the physiological and biochemical bases for learning, memory, sensation and perception, motor control, hunger, sex, sleep and mental disorders. Lateralization in the brain and its implications, as well as techniques and technologies in neuroscience. Course consists of lectures, class discussion, films and videos and a number of projects, both in class and on computers.

PS 3124 Comparative Psychology
4:0:0:4

Examines behavior and neuroanatomical mechanisms across species providing an investigation of comparative developmental stages, causal mechanisms, evolutionary history and function of animals behavior. Topics include learning and cognition, neuroanatomical and neurochemical controls of behavior, thought and language, sensory and perceptual capacities and the biological bases of social behavior. In addition to course text readings and lectures, students participate in labs (interactive computer programs), in-class demonstrations, field trips and videos that provide hands-on experience and supplementary exposure to examples of concepts and ideas within the area of comparative psychology. *Prerequisite: PS 2104 (PS 3214 is optional).*

PS 3214 Learning and Cognition

4:0:0:4

This course concerns the experimental analysis of cognition and behavior in animals. Most of the discussions focus on laboratory findings with animals, but as viewed from an evolutionary framework concerned with the natural histories of the species. In addition to discussions of established results about cognition and intelligence in animals, an important emphasis is also placed on critiquing the methods of these studies, specifically the logic, evidence and technology used to test and interpret conclusions. *Prerequisite: PS 2104.*

PS 3314 Social Psychology

3:1:0:4

Explores issues of human behavior as it is affected by social interaction and situations. Addresses the nature of social psychological inquiry, with particular emphasis on research methods. Course topics include aggression, altruism, attitudes, attraction, conformity, group

dynamics, perception of self and others, prejudice, social roles, the biological basis of social behavior and interpersonal bargaining. Cultural differences in interpreting social behavior and context are also considered. Students are asked to collect data on social psychological phenomenon for each major topic covered, as the major part of the laboratory requirement. A final term paper is required that contains a review and critical analysis of the research on a topic in social psychology. *Prerequisite: PS 2104.*

PS 3324 Environmental Psychology

3:1:0:4

Course deals with the interactions people have with built and natural environments: how settings affect behavior; how people change environments to fit their needs; how people can become an active part of the environmental design process. It is concerned with the way people use space and the way environmental design meets (or fails to meet) human needs. These concerns are valid for very small scale design problems (as in human factors engineering); mid-size spaces (architecture and interior design); and for large scale spaces (communities, urban areas). The goals of the course are to introduce the student to this subject matter, provide familiarity with research methods associated to studying people and behavior in real world settings and issues in environment and human relations.

PS 3344 Urban Impact Assessment

4:0:0:4

This course is designed to introduce you to theory, methods and practice involved in approaches predicting and evaluating the environmental consequences of a proposed action or undertaking in an urban context. Urban Impact Assessment "Environmental Impact Assessment can be defined

as: The process of identifying, predicting, evaluating and mitigating the biophysical, social, and other relevant effects of development proposals prior to major decisions being taken and commitments made." (IAIA 1999 – <http://www.iaia.org/modx/>). Impact assessment is critical in decision making and identifying possible mitigations for negative consequences of projects.

PS 3414 Developmental Psychology

4:0:0:4

The development of humans across the life-span. The main focus is on the effects of aging on the social and cognitive development of the person. Issue in parenting, child care, education, elder care, death and dying are also discussed. Lab and field examples are used to illustrate main themes in this course. *Prerequisite: PS 2104.*

PS 3424 Abnormal Psychology

4:0:0:4

Covers a variety of different psychological disorders. Common examples are depression, anxiety, schizophrenia and personality disorders. Major theories such as psychoanalytical, behavioral, cognitive, and biological are discussed in terms of why people develop such disorders and how to treat them. *Prerequisite: PS 2104.*

PS 3434 Personality Development

4:0:0:4

The study of psychological theories related to personality theory. Its goal is to ask the question why we think and act the way we do. Exploration of topic through many of the major theories of psychodynamic, behavioral, cognitive, humanistic, trait and biological perspectives. *Prerequisite: PS 2104.*

PS 3444 Animal Behavior

4:0:0:4

This course provides an understanding of the psychological, biological and evolutionary principles guiding animal behavior through an in-depth analysis of concepts and topics such as learning, response to environmental changes in the short and long-term, reproductive behavior, care for offspring, foraging behavior and optimality, navigation and cognition, aggression, affiliative behaviors and sociality. Students learn to use scientific methods as applied in the study of animal behavior via ethological observational or experimental methods. In small, individual research projects, each student practices data collection and appropriate scientific writing style. *Prerequisite: PS 2104.*

PS 3444 Special Topics

Focus on a special topic in psychology completed under the guidance of faculty member. May be repeated for credit on a different topic. Agreement of instructor required before registration.

PS 3704 Humans and their Environment

4:0:0:4

This course addresses ecological understanding of interactions of human with non-human environments through relevant topics: ecosystems, human interaction with ecosystems, human societies as self-regulating systems, attitudes toward nature, case studies in ecological history, present environmental crises and attempts at resolutions.

PS 3714 Its About Time

4:0:0:4

This course is concerned with all aspects of time, including its measurement, time scales in nature, psychological issues and the nature of time

itself. Topics include origin and evolution of calendars and clocks, psychological and physiological basis of time and timing, time in the arts and, finally, the nature of time itself in philosophy and modern physics, from Einsteins relativity to modern cosmology. PS 4114 Senior Research Thesis One- or two-semester research project to be completed under the guidance of a faculty member. *Prerequisite: Agreement of instructor required before registration.*

PS 3724 Psychology of Sustainability

4:0:0:4

The purpose of this course is to review the psychological bases of environmental problems, investigate theories of behavior change as they relate to environmental issues, and introduce practical strategies that foster behavior change. It will focus on identifying the general conditions that encourage or constrain environmental behavior, describing psychological approaches to the study of environmental problems, analyzing a particular target behavior, develop a plan to investigate barriers to this behavior and implement a workaround to overcome these barriers, and integrating some of the necessary foundations of environmental behavior change into their own lives and bring them to others through their communication and teaching.

PS 4124 Guided Readings

Selected problems in psychology. Individual or group studies/projects under faculty supervision involving guided reading and or research, topics to be arranged. For mature students wishing to undertake specialized independent study under tutorial guidance. *Prerequisite: junior standing or departmental permission. Agreement of instructor required before registration.*

GRADUATE COURSES

PSYCHOLOGY

PS 905 Psychology: Applied

2.5:0:0:3

This course shows how various problems, particularly in work, can be solved through the judicious use of psychological principles. Phenomena addressed include human-machine interaction and other engineering-behavior interactions, smoking, study habits, memory, creative thinking, group interaction, raising children, influencing people, self-control and specific problems brought up in class by students. Students learn to employ the method of behavioral analysis in gaining an understanding of various problems. They select a problem, do a behavioral analysis and, finally, modify it as a class project. *Prerequisite: PS 2104.*

PS 906 Human Cognition and Information Processing

2.5:0:0:3

Human cognitive capabilities including natural language and information processing. Memory, internal representation of knowledge, concept information, symbol manipulation, language acquisition, reasoning and problem solving. Artificial intelligence approaches to natural language learning and acquisition of cognitive skills. *Prerequisite: PS 2104.*

PS 907 Human-Computer Interaction

2.5:3:0:3

This course introduces students to human behavioral issues in the design and use of interfaces for information systems. Basic issues of behavioral research and evaluation methods are discussed. Sensory systems and memory and learning theory relevant to human factors systems are reviewed and related to specific interface issues, such

as interaction devices, dialogue design and reference material. The focus is on understanding the issues involved in creating systems amenable to human use. *Prerequisite: PS 2104 or equivalent.*

PS 908 Experimental Psychology I

2.5:3:0:3

Theory and methods of measurement of sensory functions in human and animal subjects. Examination of the concept of the threshold and problems of its measurement. Investigation of learning, both motor and verbal, and both simple and complex, including problem solving and creative thinking. Students perform a series of experiments with human and animal subjects. *Prerequisite: PS 2104.*

PS 909 Experimental Psychology II

2.5:3:0:3

Experimental and descriptive methods including quasi-experimental design and large-scale survey techniques used by social, environmental and developmental psychologists to assess human behaviors in laboratory and naturalistic settings. The course focuses upon laboratory and observational methods used to assess environmental effects, attitude measurement, social impact assessment, and theory and psychometric bases of normal personality development and assessment. *Prerequisite: PS 2104.*

PS 910 Theories of Learning

2.5:0:0:3

Programmed learning, behavior therapy, attitude function and social interaction. All students are required to perform one experiment on learning under guidance of instructor. Available to undergraduate majors in social science. *Prerequisite: PS 2104 or equivalent.*

PS 911 Psychology of Language and Communication

2.5:0:0:3

Methodological problems in analysis of language, verbal behavior in animals, anatomical and physiological aspects of speech apparatus, operant and respondent conditioning of verbal behavior, semantics, statistical approaches and mathematical models, contextual factors and pathology of speech. All students are required to perform one experiment under guidance of instructor. Available to undergraduate majors in social science. *Prerequisite: PS 2104 or equivalent.*

PS 912 Sensation and Perception

2.5:0:0:3

Review of different sensory systems: vision, audition, taste, smell, touch, temperature sensitivity, vestibular and kinesthetic senses and their relations to nonsensory controlling stimuli such as states of the organism, learning and social psychological variables. Techniques for obtaining psychophysical data on each sensory system and relations of these techniques to theories of discrimination. Available to undergraduate majors in social science. *Prerequisite: PS 2104 or equivalent or instructor's permission.*

PS 913 Physiological Psychology

2.5:0:0:3

Physiological and anatomical bases of behavior. Memory, motivation, emotion, sleep reward mechanisms, psychosurgery and higher cortical functions. *Prerequisite: PS 2104.*

PS 915 Behavioral and Societal Aspects of Transportation

2.5:0:0:3

Behavioral analyses of transportation decision-making and travel characteristics. User needs in design of transportation systems: crowding, social

isolation, crime, comfort and convenience. Social impacts of transport systems on communities. *Prerequisite: undergraduate introductory psychology course or equivalent.*

PS 920 Proseminar in Psychology

2.5:0:0:3

Major areas of psychology required of all masters candidates. History and systems, sensation and perception, learning, developmental and abnormal.

PS 925 Social Impact Assessment

2.5:0:0:3

How physical changes in urban or rural settings affect social systems and group and individual behavior. Measuring quality of life and social responses to technology; uses of alternative futures paradigms. Students do an analysis of a problem in social impact and report finding to class.

PS 926 Environmental Psychology

2.5:0:0:3

Critical issues in person-environment relations, including privacy, crowding and environmental design. Work includes a term paper and a major research project, emphasizing applications of psychological research methods to practical design problems or specific environmental issues.

PS 928 Advanced Topics in Environmental Psychology

2.5:0:0:3

This course varies from year to year depending on the needs and interests of students and instructors. Potential subjects include social impacts of transportation systems; stress and the environment; aversive environmental factors; laboratory assessment of environmental effects on animal learning; effects of pollution; human factors of software design; assessing the built environment including the office; and applied behavioral analysis.

PS 997 Thesis for Degree of Master of Science

each 3 units

Independent research project demonstrating scientific competence performed under guidance of advisors.

SOCIOLOGY**SO 2014 Technology and Social Change**

4:0:0:4

Given that (at least on a mythic level) technology is the most important force shaping society and culture today, we will concentrate on the dialectical, interactive shaping of societies and technologies. Many approaches, from technological determinism to neo-marxism and postmodernism, are used in examining various social issues having to do with social change. The objective of this course is to provide a survey of the development of sociological theories of societal development and change. In addition, this course surveys the current information and research on the specific impact of modern technology on contemporary society. Issues of social identity, communication, work, inequality, deviance, power and social control are examined in the context of society, technology and social change.

SO 2024 Sociology of Organizations

4:0:0:4

Modern societies are organizational societies. Indeed, nearly all modern work and much play occurs in organizations. As a result, organizations and organizational management have important personal and social effects: organizational experiences can bring pain or pleasure to their members, and managerial decisions can send an organization's profits soaring or plummeting. The course examines the nature and

place of organizations and managerial systems in modern societies. The central questions of the course include: Do organizations pursue goals or do managers use organizations to pursue narrow interests? How do managers control workers and how much control is necessary and optimal? To what extent are managers rational decision makers? Is there a "best way" to structure and manage an organization?

SO 3014 Environmental Sociology

4:0:0:4

Environmental sociology is the study of the reciprocal interactions between the physical environment, social organization and social behavior. Within this approach, environment encompasses all physical and material bases of life in a scale ranging from the most micro level to the biosphere. Two major themes form the focus of this course: (1) Sociology is often described as the study of human communities. Ecology is often described as the study of natural communities. Environmental Sociology is the study of both together. People, other animals, land, water, air are all closely interconnected. Together they form a solidarity that has been called ecology. As in any community, there are also conflicts in the midst of interconnections. Environmental sociology studies the largest of communities with an eye to understanding the origins of, and proposing solutions to, these social and bio-physical conflicts. (2) Environmental problems are problems for problems that threaten our existing patterns of social organization-and of society problems that challenge people to change those patterns of social organization. One of sociology's most basic contributions to the study of environmental problems is to point out the pivotal role of social inequality. Social inequality cannot be understood apart from the communities in which it takes place. Inequality shapes social experience and social experiences shape all

experiences. *Prerequisite: instructor's permission*

SO 3344 Environmental Sociology

4:0:0:4

Environmental sociology is the study of the reciprocal interactions between the physical environment, social organization, and social behavior. Within this approach, environment encompasses all physical and material bases of life in a scale ranging from the most micro level to the biosphere. Two major themes will form the focus of this course: 1) Sociology is often described as the study of human communities. Ecology is often described as the study of natural communities – Environmental Sociology is the study of both together. People, other animals, land, water, air are all closely interconnected. Together they form a solidarity we have come to call ecology. As in any community, there are also conflicts in the midst of interconnections. Environmental sociology studies the largest of communities with an eye to understanding the origins of, and proposing solutions to, these social and biophysical conflicts. 2) Environmental problems are problems for problems that threaten our existing patterns of social organization - and of society problems that challenge us to change those patterns of social organization. One of sociology's most basic contributions to the study of environmental problems is to point out the pivotal role of social inequality. Social inequality cannot be understood apart from the communities in which it takes place. Inequality shapes our social experience and social experiences shape all our experience.

ORGANIZATIONAL BEHAVIOR

This program is offered at Brooklyn MetroTech campus only and is limited to 15 incoming students per

semester. Students who meet all of the course and GPA requirements are formally admitted to the MS in Organizational Behavior in the Department of Management at the end of their junior year.

Requirements for the MS in Organizational Behavior

Core Courses: 9 credits
 Area of Concentration: 18 credits
 Free Electives: 6 credits
 Research Project: 3 credits
 Total: 36 credits

SCIENCE AND TECHNOLOGY

STS 3014 Seminar in Science and Technology Studies

4:0:0:4

Science and Technology Studies is an interdisciplinary field in which methods from a wide range of disciplines in the humanities and social sciences are used to analyze the relations between science, technology and society. This course considers the current state of the field, helping students to understand the range and methods of STS as well as determine their own place within the field. It is designed specifically to bring students with different academic backgrounds into contact with each other in a classroom setting. *Prerequisites: One 2000-level STS elective, or any one of LA 1014, LA 1024, or LA 2014.*

STS 325X Special Topic in Science and Technology Studies

4:0:0:X

Study of a special topic in Science and Technology Studies. May be repeated for credit for different topics. Course serves to research new topics of STS; to develop critical reading, writing, and thinking skills; and to enhance the understanding of the field through study of a special topic in STS. *The course*

may be designed to qualify for 1 to 4 credits. It may be repeated for credit with different topics.

STS 440X Independent Study in Science and Technology Studies

4:0:0:X

Focus on a special topic in Science and Technology Studies, arranged for advanced students capable of undertaking specialized independent study with tutorial guidance. *May be repeated for credit on a different topic. This course may be designed to qualify for 1 to 4 credits. It may be repeated for credit with different topics. Prerequisite: Junior/Senior standing or permission of the instructor.*