DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

Chair: Myles W. Jackson

MISSION STATEMENT

The Department of Humanities and Social Sciences offers a variety of specialized degree programs and elective courses that investigate the intersections among the natural and social sciences, technology, and the humanities. These provide students with a means to expand their understanding of the technological and scientific society and culture in which they live, and to obtain the skills that will lead to successful and enriching careers.

The department fulfills its mission with interdisciplinary degree programs, and plays an essential role in the education of students specializing in other departments. Today's engineers and scientists need a background in the humanities and social sciences in order to make well reasoned decisions involving human values implicit in technological options, to understand the ways human beings see themselves and the natural and social worlds, and to communicate effectively. Conversely, today's humanists and social scientists need to be fluent in the natural sciences and engineering disciplines if they are to engage in the type of constructive dialogue essential to a well-informed and democratic society.

DEGREES OFFERED

Bachelor of Science

- Integrated Digital Media
- Science and Technology Studies
- Sustainable Urban Environments

Master of Science

- Environment-Behavior Studies
- History of Science
- Integrated Digital Media

Graduate Certificate

- Environment-Behavior Studies
- Integrated Digital Media
- Technical Communication

MINORS

A 15-credit sequence, approved by the department, in any one of the subjects listed below:

- AH Art History
- AN Anthropology
- DM Digital Media (See separate catalog entry for details)

• EC Economics
• EN English/Literature
• HI History
• LW Law and Technology
• MU Music
• PO Political Science
• PS Psychology
• STS Science and Technology Studies (see separate catalog entry for details)
• SO Sociology
• TC Technical Communication/Specialized Journalism

GENERAL EDUCATION REQUIRED COURSES

All humanities and social science courses used to fulfill the graduation requirement are organized according to principles of breadth and depth into three categories:
1. Level I Basic Courses required of all students
2. Level II Elective Courses
3. Level III Elective Courses

To fulfill the general education requirement, students must complete the following:
- Three basic courses (EN 1014/EN 1034, EN 1204 and HI 2104, taken in order)
- Two Level II Elective Courses
- One Level III Elective Course cognate with at least one Level II Course (i.e., which has a Level II Elective Course as a prerequisite)

Courses that carry the following prefixes may be used to fulfill the general humanities/ social science requirements:

AH Art History
AN Anthropology
EC Economics
EN English/Literature
HI History
MU Music
PL Philosophy
PO Political Science
PS Psychology
STS Science and Technology Studies
SO Sociology

Courses that carry the prefix DM (Digital Media) may NOT be used to fulfill the general humanities/ social science requirements.

UNDERGRADUATE ELECTIVE COURSES

All of our courses may be taken as free electives, as provided for in a student's BS or MS degree

program, subject to prerequisites for advanced courses. DM courses may also be used to fulfill a "technical elective" requirement. Consult your home department's academic adviser for details.

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. *Prerequisite: HI 2104.*

AN 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. *Prerequisite: HI 2104.*

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. *Prerequisite: HI 2104.*

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. *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 Science and Technology Studies, Sustainable Urban Environments, or Integrated Digital Media majors only and instructors permission.*

AN 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: Science and Technology Studies or Sustainable Urban Environment seniors only and by departmental permission.*

ART HISTORY

AH 2114 Introduction to Art History 4:0:0:4
An introduction to Western Art in different historical periods, with a focus on pre-twentieth 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 1204/1234.*

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 1204/1234.*

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 traditional 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
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 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 macro-economics, 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. *Prerequisite: HI 2104.*

EC 2514 Microeconomics 4:0:0:4
An advanced course in microeconomics. Theory is presented 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 Technology and Information 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 macro-economy 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.*

EC 3254 Economic Issues 4:0:0:4
Building on the foundation provided in the introductory course in economics, this course examines a number of contemporary economic issues in greater depth. The specific issues studied vary and depend on student interests, professor's 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 have included: government regulation of safety; regulation and testing of pharmaceutical drugs by the FDA; the economic effects of the illegalization of drugs; the potential use of the market for organ transplants; alternative tax proposals; combating poverty; the issue of social security; NAFTA; racial and sexual discrimination; and the economics of national health insurance. *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 characterize capitalist growth in general and the American economy in particular. Course focuses on the period since 1980. 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 budgetary surpluses and 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 4:0:0:4
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: for Science and Technology Studies, Sustainable Urban Environments, or Integrated Digital Media majors only and instructors 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: Science and Technology Studies or Sustainable Urban Environment seniors only and by departmental permission.*

ENGLISH AND LITERATURE
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 words 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 to 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: One 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: One 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: One 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: One 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: One 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: One 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: One 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 signifcant 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 worlds 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 Nan king, Mao Zedong, Deng Xiaoping, 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. *Prerequisite: HI 2104.*

HI 3034 History of the Urban Infrastructure 4:0:04
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 it 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-à-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. *Prerequisite: HI 2104.*

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. *Prerequisites: HI 2104 and permission of the instructor.*

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 media broadsides, 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.*

LAW AND TECHNOLOGY
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
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
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 re- ports 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 activates, and machines, interacting with the environment both outside and inside the city. Through-out 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
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
PL 2014 Symbolic Logic 4:0:0:4
An introduction to the methods and applications of 1st-order symbolic logic, including both sentential logic and predicate logic (up to and including relational predicate logic with identity). The course covers methods of testing arguments for deductive validity and deductive invalidity, as well as methods for identifying tautologies, contradictions and logical equivalences. *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 the 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 relationships between religion and science, and morality and art, both the believer and non-believer may achieve a more sophisticated understanding and appreciation of religions. The class addresses such topics as religious experience, faith and reason, arguments for God's 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? The 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. This class attempts to achieve a systematic understanding of the nature of ethics and what it requires of us. Discussion includes several historical sources (Plato, Aristotle, Hobbes, Mill, 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
Considers 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 will be upon the ways in which our technologically textured world changes human life, individually, socially, and culturally - for better or worse. We will consider several views of technology and several ethical theories for evaluating technology. The aim of this course will be 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 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. The 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. *Offered in either of the following 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. Topics include the history of environmentalism in the U.S., 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. Topics include 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 written report.
Prerequisite: none.

PL 2094 Space and Spacetime 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 we 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, Poincare 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?). The course takes the form of a philosophically oriented survey of the history of western science from the Greeks to the Newtonian synthesis. It 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. The course views the key figures in this history as they saw themselves, first and foremost as natural philosophers. Topics 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 equaiton "$E = mc^2$"? 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 "warp-drive" spacetimes. *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.*

PL 3014 Metalogic 4:0:0:4
This course demonstrates the soundness and completeness of first-order 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-/fourth-year mathematics major).*

PL 3034 Critical Theory 4:0:0:4
Critical theory covers the interactions between the explanatory, the normative and the ideological dimensions of social and political thought. It bridges the usual divides between explanation and justification, philosophical and substantive concerns, and theory and practice. The course examines a range of contemporary issues in critical theory, among them the fate and meaning of the ideal of a universal humanity, the standpoint of critique, the fragmentation of culture and politics, the rise in identity politics, the challenge to nationalism, feminist philosophies, race theory and other issues of historic and contemporary theoretical and practical importance. *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, legitimate, governing institutions that promote the ideals of freedom, justice, equality, and happiness. The question is 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 PL course.*

PL 3054 Philosophy of Art 4:0:0:4
Philosophy of Art 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 we understand a work of art? Does art have more to do with emotion than reason? We will examine 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. *Prerequisite: One 2000-level PL course.*

PL 3064 Philosophy of Technology 4:0:0:4

Philosophy of technology 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 our 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. It's 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 PL 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 PL course, or permission of the instructor.*

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 surveys 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 PL 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 general questions concerning the nature of knowledge: What is knowledge? 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 PL course.*

PL 3114 Special Topics 4:0:0:X
Topic to be determined by instructor. Variable credit. *Prerequisite: one 2000-level PL 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 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 decision-making, the allocation of resources and delivery of services. *Prerequisite: HI 2104.*

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: for Science and Technology Studies, Sustainable Urban Environments, or Integrated Digital Media majors only and instructors 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: Science and Technology Studies or Sustainable Urban Environment seniors only and by departmental permission.*

PSYCHOLOGY

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. *Prerequisite: HI 2104.*

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. *Prerequisite: PS 2104.*

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 effect 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. *Prerequisite: PS 2104.*

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 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 - www.iaia.org/modx). Impact assessment is critical in decision making and identifying possible mitigations for negative consequences of projects. *Prerequisite: PS 2104.*

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 answer 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.

PS 3444 Special Topics 4:0:0:4
Focus on a special topic in Psychology completed under the guidance of faculty member. May be repeated for credit on a different topic. *Prerequisite: 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. *Prerequisite: PS 2104.*

PS 3714 It's 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 our 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 Einstein's relativity to modern cosmology. *Prerequisite: PS 2104.*

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. *Prerequisite: PS 2104.*

PS 4114 Senior Research Thesis 4:0:0:4
One- or two-semester research project to be completed under the guidance of a faculty member. *Prerequisite: Agreement of instructor required before registration.*

PS 4124 Guided Readings 4:0:0:4
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.*

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. *Prerequisite: HI 2104.*

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 organizations 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? *Prerequisite: HI 2104.*

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: instructors permission*

TECHNICAL COMMUNICATION

TC 1014 Introduction to Technical Communication I 4:0:0:4
Introduction to the research, writing and design principles and practices of technical communication, particularly in the fields ofspecialized journalism, documentation, advertising and public relations, corporatecommunications, training and instructional design and new media. Emphasis on clarity and control in writing and effective information design; also covers the basic elements of effective document design. The focus is on traditional media. *Prerequisite: EN 1024.*

TC 1024 Introduction to Technical Communication II *4:0:0:4*
Introduction to the research, writing and design principles and practices of technical communication, particularly in the fields of specialized journalism, software documentation,

advertising and public relations, corporate communications, training and instructional design, and new media. Emphasis on clarity and control in writing and effective information design; also covers the basic elements of effective document design. The focus is on the new and digital media. *Prerequisite: EN 1024; course does not require TC 1014, but both courses must be taken before taking 2000-level courses.*

TC 2104 Writing for Engineers and Scientists *4:0:0:4*
Engineers and scientists must become adept at communicating their ideas in writing. In actual business situations, they are called upon to present their work to colleagues and management frequently. This workshop course focuses on the skills that must be acquired to succeed professionally. Course covers proposals, reports, new product reviews, technical descriptions and instructions as well as the basics of successful professional communication in the form of emails and memos. Students learn how to design documents. Style and organization are stressed. *Prerequisite: EN 1204.*

TC 2114 Introduction to Visual Communication Design *4:0:0:4*
An introduction to the principles of design and how to apply these principles for effective visual communication. Students study the physiology and psychology of perception and the psychological, sociological, and educational impact of design. During workshop sessions, students critique and create numerous design projects, including business documents, logos, brochures, and product packages. The fundamentals of desktop publishing are covered. Students begin to develop a portfolio of class projects. *Prerequisites: EN 1024.*

TC 2124 Digital Graphics *4:0:0:4*
An introduction to image creation and editing: Photoshop, Illustrator, and a bit of Flash. Participants learn to optimize files for the Internet, color correct and manipulate digital photographs, and work with vector graphics. *Prerequisite: EN 1204.*

TC 2214 News and Feature Writing *4:0:0:4*
A workshop in basic news and feature writing techniques. Students learn methods of information gathering and interviewing for different types of news articles, including current events, meetings, speeches, human interest, and news analyses. Students also learn the style and structure of news stories and feature stories, how to write effective leads and the basics of libel law and press ethics. Students learn how to write headlines, leads, decks, and subheads for general, technical, and industrial publications. Newspaper, magazine, and online layout and design. The course includes practice in basic copyediting techniques, including editing, revising, and rewriting copy intended for a variety of audiences, publications, and media. Peer and self-editing projects and assignments. *Prerequisite: EN 1024.*

TC 2224 Introduction to Communication *4:0:0:4*
Communication theory is the silent partner of all writing and media professions. It helps people to plan projects that must be communicated. At the same time, it helps people to be more astute readers of communication initiated by others. This course develops strategies for the critical understanding of communication through the study of fundamental topics in its history and theory. Students consider how conceptions of the public sphere, freedom of expression, and intercultural exchange have shaped mass media. Of particular concern is an understanding of

fact, identity, and entertainment in the age of instantaneous communication. Students seek answers to the following questions: What terminology and philosophical frameworks can provide people with a deeper understanding of communication? What is mass media and what are its effects on society? What legal and ethical considerations should be brought to the study of media? How have ideas of copyright and trademark influenced media and what are the effects of global English? How have computers and the age of new media transformed (or failed to transform) communications? *Prerequisite: EN 1204.*

TC 2314 Computer Documentation *4:0:0:4*
Introduction to the field of computer documentation. Students learn systems and software documentation procedures and techniques; computer documentation tools;and the fundamentals of project management, from needs analysis to usability testing. A portion of course is devoted to the fundamentals of online documentation. A major documentation project is required. *Prerequisites: EN 1204.*

TC 2324 Human Factors for Technical Communicators *4:0:0:4*
This course focuses on designing, developing and testing technical information pertaining to the ergonomics of information design. Technical writers rely on a relationship between themselves and the people who use the information they disseminate. This course will teach the techniques human factors engineers take into account. Students learn to consider both the ergonomics of design as well as its cognitive implications. *Prerequisite: EN 1204.*

TC 2414 Technical Presentations *4:0:0:4*
Principles of effective scientific and technical presentations. This skills based course focuses on effective ways to convey technical information to both professional and lay audiences by asking students to prepare weekly presentations they will deliver in class. Audience analysis, research, organization of material, the selection of appropriate media, and the use of graphics are taught. Emphasis is placed on successful strategies for dealing with the presentation of numbers and other technical data. *Prerequisite: EN 1204.*

TC 2514 Marketing and Public Relations Writing *4:0:0:4*
Almost all businesses depend on effective marketing for their survival. And many organizations seek to increase their visibility, heighten their profile and modify public perception of what they do by mounting public relations campaigns. In this course, students are introduced to, and experiment with, producing a full range of print based marketing and public relations materials, including resumes, brochures, project proposals, newsletters and other direct mail advertising, commercial print advertisements, press releases, and story proposals for the trade press. The course examines the differing goals of marketing versus PR, explores the challenges of successfully "branding" an organization, and emphasizes the importance of strategic, targeted marketing and PR efforts. Connections are made, where appropriate, to marketing and PR writing for electronic and nonprint media. *Prerequisite: EN 1204.*

TC 2524 Copyediting for Technical, Scientific and Business Publications*4:0:0:4*
Copy editors play a crucial role in any media organization that conveys information through text. Beginning with an overview of the editorial process, this course addresses the many skills that copy editors must master to produce clean, readable, internally consistent copy. Topics covered

include using references, imposing editorial style, marking up manuscripts, organizing text, handling proper names and specialized terms, crediting sources, checking facts, and resolving conflicts between an author's voice and that of the editor or publication. Specific issues of grammar, punctuation and style are dealt with in a series of presentations (three or four each week) over the course of the semester. *Prerequisites: EN 1204 and TC 1014.*

TC 3124 Introduction to Visual Communication Design II *4:0:0:4*
The purpose of this course is to apply previously gained knowledge of design and design software to more complex design problems. Students create magazine layouts, package designs, promotional pieces, and multiple page booklets using primarily QuarkXPress and Adobe In Design, along with Adobe Illustrator and Adobe Photoshop. In-class critiques and computer exercises also play an important role in the classroom. Trips to design related exhibits complement ideas discussed in class. *Prerequisites: EN 1204 and TC 2114.*

TC 3134 Interactive Design for the Web and CDROM *4:0:0:4*
An advanced seminar for those seriously interested in web design: interactivity, usability and the quality and appropriateness of look and feel are stressed, but participating students are also expected to develop content and complete a professional quality site for the class. *Prerequisites: TC 2124.*

TC 3224 Critical Writing *4:0:0:4*
Students learn how to research, structure, and write critical, analytic and interpretive texts, including such genres as book reviews, journal articles, product reviews, and scientific reports. For example, they may write about technical, scientific, medical, business, industrial or digital subjects for the lay audience. Particular attention is paid to assessing audience and purpose and constructing analytic arguments. Students hone revision and copyediting skills, as well as learning how to work as peer reviewers, editors and proofreaders. For final project, students research and write text targeted for specific publications. *Prerequisites: EN 1204.*

TC 3324 Writing for New Media *4:0:0:4*
Planning, writing, and designing an effective project for digital or new media formats such as intranet, Internet, newsgroups and kiosks. Students learn HTML and software applications for web-page development, integration of graphics and text, and effective use of hypertext linking and structures. Students examine new media and the effects they have on reading, writing, and information processing. Class is a hands-on lab, supplemented by discussion and short presentations of key writing concepts. Final project required. *Prerequisite: EN 1204.*

TC 4404 Internship *4:0:0:4*
Full- or part-time placement as a technical/ professional communication intern. Intense, practical work experience focusing on students area of specialization. Students work with a professional adviser within the sponsoring organization and a faculty adviser within the department. Weekly progress reports and a final report required. *Prerequisites: for Technical Communication minors only, junior or senior standing, appropriate courses for internship project and approval of the sponsoring organization and the department.*

RESEARCH CENTERS

CENTER FOR HISTORY AND PHILOSOPHY OF SCIENCE STUDIES

The center was established to encourage discussion among philosophers, engineers, computer scientists and other practitioners from the scientific and technological professions on the ethical, political and general cultural connotations of contemporary technological activity, as well as straightforward research in the traditional philosophical questions concerning technology. The center also fosters various types of interdisciplinary education.

By bringing the humanities, communications and social science disciplines closer together and reaching out to other academic departments in the University, the center helps facilitate the exploration of intellectual common ground.

INTEGRATED DIGITAL MEDIA INSTITUTE

The Integrated Digital Media Institute was established to set up and support creative partnerships:

- Between our students and faculty.
- Between Polytechnic University and leading individuals, organizations, and enterprises in electronic media.
- Between the most advanced thinkers and practitioners in the humanities, arts, social sciences, and communications technologies.

FACULTY

PROFESSORS

Jean Gallagher, Professor of English
PhD, City University of New York Graduate Center
Feminist theory, 19th- and 20th-century American literature, composition and rhetoric

Myles W. Jackson, Dibner Family Professor of History of Science and Technology
Ph.D., Cambridge University
History of science and technology

Sylvia Kasey Marks, Professor of English
PhD, Princeton University
Shakespeare, Samuel Richardson, the 18thand 19th-century British novel, public speaking, expository writing

Richard E. Wener, Professor of Environmental Psychology
PhD, University of Illinois at Chicago
Environmental psychology

ASSOCIATE PROFESSORS

Jonathan Bain, Associate Professor of Philosophy of Science
PhD, University of Pittsburgh
Quantum theory, philosophy of space and time

Teresa Feroli, Associate Professor of English
PhD, Cornell University
Renaissance literature, Shakespeare, women's studies

Katherine Isbister, Associate Professor of Digital Media
PhD, Stanford University
Social psychological and affective approaches to human computer interface, with special attention to games and other leisure and social technologies; embodied conversational agents and computer game characters

Francis David Mulcahy, Associate Professor of Anthropology
PhD, University of Massachusetts
Language and culture of China and Spain

Lowell L. Scheiner, Associate Professor of Humanities and Communications
MS, Columbia University Graduate School of Journalism
MA, Columbia University
Technical writing, journalism

Jonathan Soffer, Associate Professor of History
PhD, Columbia University
JD, University of Denver
Twentieth-century American political and foreign relations history, urban history with a specialization in the history of New York City since 1945

Romualdas Sviedrys, Associate Professor of History of Technology
PhD, Johns Hopkins University
Technology forecasting and technology assessment, history of technology and science

ASSISTANT PROFESSORS
Tara Pauliny, Assistant Professor of Rhetoric and Composition
PhD, Ohio State University
Rhetoric and composition

Carl Skelton, Assistant Professor of Digital Media, Director of Integrated Digital Media Institute
MVA, University of Alberta (Canada)
Digital media

INDUSTRY FACULTY
Jerry MacArthur Hultin, Industry Professor of Law, Management and Public Policy; President of Polytechnic University
JD, Yale University
Innovation management, global development, modern university education, technology policy

Noel N. Kriftcher, Industry Professor of Humanities, Executive Director of David

Packard Center for Technology and Educational Alliances
EdD, Hofstra University
Teacher development in math and science

Harold P. Sjursen, Industry Professor of Philosophy
PhD, New School University
History of philosophy, ethics, philosophy of science and technology

LECTURERS
Donald S. Phillips, Lecturer of Psychology
BS, Polytechnic University
Experimental and physiological psychology, physical anthropology, paleontology

INSTRUCTORS
Alph Edwards, Instructor of English
MA, Hunter College
Developmental writing

Alan Goldstein, Instructor of English
BA, University of Denver
Developmental writing, creative nonfiction/personal experience writing, intellectual disability advocate

Sadrul A. Khan, Instructor of History
PhD, Ludwig Maximillian University
World history, Asian history, political science

Christopher Leslie, Instructor of Science and Technology Studies and New Media
PhD, City University of New York Graduate Center
Digital humanities, hypertext and new media, history of technology

James P. Lewis, Instructor of Psychology
MA, Stony Brook University
Humanistic psychology

Elisa Linsky, Instructor of Technical Communication
BA, Wittenberg University
Technical writing, technical presentations, writing across the curriculum

Alan M. Nadler, Instructor of English
MFA, Columbia University
Contemporary poetry, the European novel

Meredith Schuman, Instructor of English
MFA, Brooklyn College
Modern American poetics, 19th and 20th century literature

ADJUNCT FACULTY
Michelle Auster, Adjunct Instructor of English
PhD, SUNY Stony Brook

Austin Dacey, Adjunct Instructor of Philosophy
PhD, Bowling Green University

Katherine Johnson, Adjunct Instructor of English
MA, University of Denver

Martha Kim Robert Kole, Adjunct Instructor of English
PhD, The Graduate Center, CUNY

Marian Lummis, Adjunct Instructor of English

Michael Laderman, Adjunct Instructor of Music
DMA, Stony Brook University

Louis Menashe, Adjunct Professor of History
PhD , New York University

Frank Meola, Adjunct Instructor of English
PhD, University of California, Los Angeles

Rachael Stark, Adjunct Instructor of History and English

Cindy Wishengrad, Adjunct Instructor of English
MA, Hunter College

FACULTY EMERITUS
Lester Bumas
John G. Cavanna
Wolhee Choe
Duane DeVries
Anne Eisenberg
Marvin Gettleman
Helmut Gruber
Louis Menashe
David Mermelstein
Bernard Rechtschaffen
Thomas B. Settle

SCIENCE AND TECHNOLOGY STUDIES (STS)

1. GENERAL INFORMATION

Program Director: Myles Jackson
Program Advisors: Chris Leslie, Jonathan Bain

Science and Technology Studies is an interdisciplinary field of study in which methods of analysis from a wide range of fields in the humanities and social sciences are used to study the relations among science, technology and society. Such methods include historical, philosophical, sociological, psychological, scientific, literary, journalistic, and cultural and media studies approaches. STS creates technology-savvy, ethical, and socially-responsible users, developers, and critics of science and technology. It contributes a key element to the development of well-rounded engineers and scientists capable not only of technical expertise and its dissemination, but also of innovative and creative ways of reasoning and communicating with their fellow citizens. STS graduates have ***the best of both worlds***: broad training in the liberal arts coupled with expertise in science and technology. This makes them stand out and gives them an advantage over graduates of more narrowly focused programs.

At NYU-Poly, STS majors study topics that include:
The History of Science and Technology
The Scientific Revolution significantly altered humankind's conception of itself and the universe. Scholastic methods of reasoning were replaced by new scientific methods of observation and experimentation as evidenced by Galileo's telescope. New tensions arose between religion and science: who had the power to interpret God's universe, philosophers or theologians? STS students study these important events to help understand current scientific controversies and directions.

Biology and Genetics
The fields of biotechnology and genetic engineering raise significant scientific and ethical issues in the areas of new pharmaceuticals, cloning, stem cell research, genetic privacy, and the patenting of human genes. STS students approach these topics from a broad perspective, understanding both the scientific and philosophical issues arising in these important fields so that they can be capable advisors of public policy and thoughtful innovators in the next round of scientific inquiry.

Philosophy of Physics
The field of physics plays an important role in our scientific and technological understanding of the world, but what do the fundamental theories in physics really tell us about the world? What is the relationship between the mathematical descriptions that physicists employ and the nature of physical phenomena such as matter and forces, space and time? STS students obtain firm foundations in both philosophy and physics in order to consider these and other questions related to the role physics plays in both science and technology.

Reasons to Study STS at NYU-Poly:
The resources of New York City's preeminent technological institution.
What better place to study the relations among science, technology, and society than in New York City, the most culturally and socially diverse, technology-driven urban center in the

world? In addition, STS majors take full advantage of the course offerings of the second-oldest engineering research institute in the country as well as the computing and research facilities associated with a premier leader in technology innovation.

The Technology/Science requirement.
STS majors fulfill a tech/sci requirement that is the equivalent of a minor in a particular field of technology or science, with significant exposure to other fields. Tech/Sci offerings include courses in multi-disciplinary subjects such as nanotechnology and biotechnology, as well as interdisciplinary fields in the humanities and social sciences such as the history and philosophy of technology and science, urban studies and sustainable urban environments, environmental psychology, and cultural studies and digital media.

Faculty Mentors
Each STS major is assigned a faculty mentor who assists students in choosing electives, approving the tech/sci minor, and constructing project courses.

Project-Oriented Education and Research
A project-oriented semester studying abroad or engaged in a service-learning internship bridges the gap between academics and the outside world. Directed Studies and Capstone Projects provide students with essential experience in conducting and presenting research at public forums within the university.

Career Tracks
Their training in ***both*** tech/sci and the liberal arts allows STS graduates to pursue:

- Medical school, law school, or business school.
- Employment at high-tech companies or consulting firms.
- Empolyment as science and tech equity analysts.
- Jobs in science journalism and science education.
- Private or public sector jobs involving science and technology policy or research management.
- Graduate school in Science and Technology Studies; Science, Technology, and Environmental Policy; History of Science, or Philosophy of Science; Journalism.

2. BACHELOR OF SCIENCE DEGREE REQUIREMENTS

STS majors take 128 credits, divided into four parts:

2.1. General Education Requirement (13 courses, 52 credits)

EN 1014 or 1034 Writing and the Humanities I
EN 1204 or 1234 Writing and the Humanities II
HI 2104 Modern World History
General Tech Elective
General Math Elective
General Science Elective 1
General Science Elective 2
HuSS Elective 1
HuSS Elective 2
HuSS Elective 3
Free Elective 1
Free Elective 2

Free Elective 3

2.2. Technology/Science Requirement (28 credits)
This requirement gives STS majors the equivalent of a minor in a particular field of technology/science, as well as non-trivial exposure to other fields. All classes must be completed with a minimum GPA of 2.0, unless otherwise indicated.

(A) Introduction to Engineering
EG 1004 - Intro to Engineering and Design (*purpose*: basic exposure to engineering discipline).

(B) Technology/Science Elective Courses
24 Technology/Science credits taken from any of the following general fields. At least 16 credits of which must be from the same field (unless otherwise indicated by minor requirements specific to a given department and/or approved by the advisor).

- Biological Sciences
- Chemistry
- Computer Science
- Digital Media (practice)
- Engineering
- Mathematics
- Physics

2.3. Liberal Studies Requirement (6 courses, 24 credits)

(a) LA Seminar Courses
LA 1014 - Introduction to History and Philosophy of Technology
LA 1024 - Technology, Computers and Values
LA 2014 - Technology and the Human Condition

(b) LA Project Courses
LA 3014 - Directed Study (*purpose*: exposure to research methods in major field).
LA 4014 - Internship/Study Abroad (*purpose*: exposure to life outside Ivory Tower).
LA 4024 - Capstone Project (*purpose*: significant original research in major field).

2.4. STS Requirement (6 courses, 24 credits)
All courses must be completed with a minimum GPA of 2.5.

(a) STS Anchor Seminar
STS 3014 - Science and Technology Studies.

(b) STS Elective Courses
5 STS Electives chosen from the list of STS Electives Courses.

STS Elective Courses
STS electives come from: Science and Technology Studies (STS), History (HI), Philosophy (PL), Psychology (PS), Liberal Studies (LA), English Literature (EN), Media Studies (DM), and Civil Engineering (CE).

CE 4043	Sustainable Cities
CE xxxx	History of the New York City Subways
EN 3234	Science, Tech and Literature
HI 2214	Introduction to History of Science
HI 2224	Science and Industry in the Modern World
HI 2504	Introduction to Urban History
HI 2514	History of the City of New York
HI 3034	History of Urban Infrastructure
HI 3214	Early Modern Science
HI 3224	Science and Ethics in the 20th Century
HI 3234	Biology and Society
LA 3024	Design of Cities
DM 2164	Media Studies 1
DM 3163	Media Studies 2
DM 4163	Media Studies 3
PL 2064	Ethics and Technology
PL 2084	Science and Society
PL 2094	Space and Spacetime
PL 2104	Magic, Medicine and Science
PL 2114	Philosophy of Relativity
PL 2124	Philosophy of Quantum Mechanics
PL 3064	Philosophy of Technology
PL 3094	Philosophy of Science
PS 2714	It's About Time
PS 3444	Reconstructing Dinosaurs
STS 325x	Special Topic in STS
STS 440x	Independent Study in STS

3. STS MINOR

The minor in STS requires 17 credits consisting of:

1. Seminar Requirement. STS 3014 - STS Seminar (4 credits).
2. Project Requirement. STS 4401 - Independent Study (1 credit): a written or oral presentation planned in consultation with an STS faculty advisor. This presentation analyzes the student's own senior project in their major from an STS perspective (such as social, philosophical, political, aesthetic).
3. Elective Requirement. Remaining credit requirements (12 credits) must be satisfied by courses chosen from the STS electives list and/or the STS core courses LA1014, LA1024, LA2014.

The STS seminar and project (requirements 1 and 2) and one of the STS electives (requirement 3) must be taken at Poly; the remaining elective requirements may be met with transfer credits.

The minor in STS is open to all majors. For engineering or natural science majors, benefits of an STS minor include:

- An understanding of the conceptual, historical, and cultural foundations of your major field.
- A rigorous humanistic education essential to the practice of science and engineering in our global society.
- Writing and communication skills that employers seek.

For other majors, benefits of an STS minor include:

- Exposure to key subjects in science and engineering fields and their impact on society, at a broad conceptual, yet non-trivial, level.
- An appreciation of the problem-solving techniques and practices that scientists and engineers engage in.
- Critical reasoning and analytical skills that employers seek.

4. STS DOUBLE MAJOR

A second major in STS can be obtained in part by substituting the three General Education HuSS Electives and the three General Education Free electives that are required of all Poly majors, with the STS Requirement (Section 2.4). In addition, an STS double major must satisfy the LA Seminar and Project requirements (Sections 2.3(A), 2.3(B)).

5. COURSES

STS 3014 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 LA1014, LA1024, or LA2014.*

STS 325x Special Topic in STS *4:0:0:X*

Study of a special topic in STS. 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 STS *4:0:0:X*

Focus on a special topic in STS, 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.*

6. PROJECT COURSES

The courses STS 3013, STS 4003, STS 4014 provide project-oriented educational and research experiences.

STS 3013 Directed Study

Purpose: To train students in research methods in Science and Technology Studies.
Requirements: A substantial research paper on a topic in STS and a proposal for continued research on the topic.
Typical Schedule:
Weeks 1-5: Weekly discussions on foundational readings with faculty mentor.
Week 6: Construction of research plan.
Weeks 7-9: Implementation of research plan.
Week 10: Submission of research paper.
Weeks 11-13: Development of research proposal.

STS 4003 Internship/Study Abroad

Purpose: To introduce students to Science and Technology Studies outside the university. Students choose between an internship, or participation in a study-abroad program.
Requirements: Three written reports and formal presentation.

(a) Internship Option: Students design and implement a project that applies STS methods to an analysis of the workplace. This Internship Project provides students with direct and primary observation of the interactions between science, technology and society.
Typical Schedule:
Week 1: Construction of STS analysis framework in consultation with faculty mentor.
Weeks 2-10: Progress meetings. Submission of three written reports.
Week 11: Formal presentation at STS colloquium.

(b) Study Abroad Option: Students design and implement a project that applies STS methods to an analysis of the host country. This Study Abroad Project provides students with an international perspective on global issues involving science, technology and society.
Typical Schedule:
Prior semester : Construction of STS analysis framework in consultation with faculty mentor.
Semester abroad: Progress updates via email. Submission of three written reports.
Subsequent semester: Formal presentation at STS colloquium.

STS 4013 Capstone Project

Purpose: To support advanced students in substantial, original research in STS culminating in a written thesis that may be used as an academic or professional credential.
Requirements: Written thesis and formal presentation.
Typical Schedule:
1st Half of Semester: Progress meetings with faculty mentor.
2nd Half of Semester: Submission of thesis draft. Formal thesis presentation. Final draft submission during finals week.

7. SAMPLE SCHEDULES

A typical STS semester is split between two tech/science courses and two humanities/social sciences courses. The flexibility of the STS major admits many variations, some with heavier tech/sci concentrations than others. Students work closely with their mentor in constructing an appropriate program of study. The following sample schedules indicate some of the possible Tech/Sci concentrations. Additional sample schedules are available upon request.

STS major, Tech/Sci concentration undefined

Freshman Fall

Course	Course Title	Cr.
EN 1014	Writing and the Humanities I	4
LA 1014	Intro Hist & Phil of Tech	4
EG 1004	Intro Engineering & Design	4
	General Science Elective 1	4

Freshman Spring

Course	Course Title	Cr.
EN 1204	Writing and the Humanities II	4
LA 1024	Technology, Computers, & Values	4
HI 2104	Modern World History	4
	Tech/Sci Elective 1	4

Sophomore Fall

LA 2014	Tech & the Human Condition	4
	STS Elective 1	4
	Tech/Sci Elective 2	4
	General Science Elective 2	4

Sophomore Spring

LA 3014	Project 1: Directed Study	4
	STS Elective 2	4
	Tech/Sci Elective 3	4
	General Math Elective	4

Junior Fall

STS 3014	STS Seminar	4
	STS Elective 3	4
	HuSS Elective 1	4
	Tech/Sci Elective 4	4

Junior Spring

LA 4014	Project 2: Internship/Study Abroad	4
	HuSS Elective 2	4
	Tech/Sci Elective 5	4
	Free Elective 1	4

Senior Fall

	STS Elective 4	4
	Free Elective 2	4
	Tech/Sci Elective 6	4
	General Tech Elective	4

Senior Spring

LA 4024	Project 3: Capstone	4
	STS Elective 5	4
	HuSS Elective 3	4
	Free Elective 3	4

STS major, Biomolecular Science concentration

This program of study is suitable for students with interests in the ethical and societal implications of biotechnology and related fields. (Other BMS concentration variants need not reflect the choices made below.)

Freshman Fall

EN1014	Writing and the Humanities I	4
LA1014	Intro Hist & Phil of Tech	4
EG1004	Intro Engineering & Design	4
CM1014	General Chemistry I	4

Freshman Spring

EN1204	Writing and the Humanities II	4
LA1024	Technology, Computers, & Values	4
HI2104	Modern World History	4
CM1024	General Chemistry II	4

Sophomore Fall

LA2014	Tech & the Human Condition	4
HI2214	Intro to Hist of Science (STS1)	4
CM2214	Organic Chemistry I	4
MA1024	Calculus I	4

Sophomore Spring

LA3014	Project 1: Directed Study	4
PL2064	Ethics and Technology (STS2)	4
BMS1004	Intro Cell & Molecular Biology	4
MA1124	Calculus II	4

Junior Fall

STS3014	STS Seminar	4
HI3234	Biology and Society (STS3)	4
BMS2004	Intro Physiology	4
	HuSS Elective 1	4

Junior Spring

LA4014	Project 2: Internship/Study Abroad	4
	HuSS Elective 2	4
	Free Elective 1	4
	Free Elective 2	4

Senior Fall

BMS3214	Microbiology	4
BMS3114	Genetics	4
HI3224	Sci/Ethics 20th Cent. (STS4)	4
	General Tech Elective	4

Senior Spring

LA4024	Project 3: Capstone	4
PL2084	Science and Society (STS5)	4
	HuSS Elective 3	4
	Free Elective 3	4

STS major, Digital Media minor

This program of study offers substantial training in computer game design and its cultural, literary, and technological impacts on society. (Other DM minor variants need not reflect the choices listed below.)

Freshman Fall

Course	Course Title	Cr.
EN1014	Writing and the Humanities I	4
LA1014	Intro Hist & Phil of Tech	4
EG1004	Intro Engineering & Design	4
CS1114	Intro Prog & Prob Solving	4

Freshman Spring

Course	Course Title	Cr.
EN1204	Writing and the Humanities II	4
LA1024	Technology, Computers, & Values	4
HI2104	Modern World History	4
DM1124	Moving Image Studio 1	4

Sophomore Fall

LA2014	Tech & the Human Condition	4
DM2164	Media Studies 1 (STS1)	4
DM2134	3D Graphics Studio 1	4
	General Science Elective 1	4

Sophomore Spring

LA3014	Project 1: Directed Study	4
DM3163	Media Studies 2 (STS2)	4
DM2154	Game Development Studio 1	4
	Math Elective	4

Junior Fall

STS3014	STS Seminar	4
DM4163	Media Studies 3 (STS3)	4
DM3133	3D Graphics Studio 2	4
	HuSS Elective 1	4

Junior Spring

LA4014	Project 2: Internship/Study Abroad	4
DM3153	Game Development Studio 2	4
	HuSS Elective 2	4
	Free Elective 1	4

Senior Fall

EN3234	Sci, Tech, & Literature (STS4)	4
DM4153	Game Development Studio 3	4
	General Science Elective 2	4
	Free Elective 2	4

Senior Spring

LA4024	Project 3: Capstone	4
PL2064	Ethics and Technology (STS5)	4
	HuSS Elective 3	4
	Free Elective 3	4

STS major, Computer Science minor

This program of study offers substantial training in computer science and the ethics of technology. (Other CS minor variants need not reflect the choices made below.)

Freshman Fall

EN1014	Writing and the Humanities I	4
LA1014	Intro His & Phil of Tech	4
EG1004	Intro Engineering & Design	4
CS1114	Intro Prog & Problem Solving	4

Freshman Spring

EN1204	Writing and the Humanities II	4
LA1024	Tech, Computers, & Values	4
HI2104	Modern World History	4
MA1024	Calculus I	4

Sophomore Fall

LA2014	Tech & the Human Condition	4
PL2064	Ethics and Technology (STS1)	4
MA1124	Calculus II	4
	General Science Elective 1	4

Sophomore Spring

LA3014	Project 1: Directed Study	4
HI2224	Sci/Industry in Mod World (STS2)	4
CS1124	Object Oriented Programming	4
MA2012/2132	Linear Algebra I/ODE	4

Junior Fall

STS3014	STS Seminar	4
PL3064	Phil of Tech (STS3)	4
CS2134	Data Structures & Algorithms	4
MA2312/2322	Discrete Math I/II	4

Junior Spring

LA4014	Project 2: Internship/Study Abroad	4
	HuSS Elective 1	4
	HuSS Elective 2	4
	Free Elective 1	4

Senior Fall

HI3224	Sci/Ethics 20th Cent. (STS4)	4
CSxxx4	Open CS course	4
CS2204	Digital Logic	4
	General Science Elective 2	4

Senior Spring

LA4024	Project 3: Capstone	4
PL3094	Philosophy of Science (STS5)	4
	HuSS Elective 3	4
	Free Elective 3	4

STS major, Physics minor

This program of study is suitable for students with interests in the historical and philosophical foundations of modern physics. (Other physics minor variants need not reflect the choices made below.)

Freshman Fall

EN1014	Writing and the Humanities I	4
LA1014	Intro Hist & Phil of Tech	4
EG1004	Intro Engineering & Design	4
MA1024	Calculus I	4

Freshman Spring

EN1204	Writing and the Humanities II	4
LA1024	Technology, Computers, & Values	4
HI2104	Modern World History	4
MA1124	Calculus II	4

Sophomore Fall

LA2014	Tech & the Human Condition	4
PH1004	Introduction to Physics I	4
HI3214	Early Modern Science (STS1)	4
PL2194	Space and Spacetime (STS2)	4

Sophomore Spring

LA3014	Project 1: Directed Study	4
PH2004	Intro to Physics II	4
MA2012/2132	Linear Algebra I/ODE	4
PL2114	Philosophy of Relativity (STS3)	4

Junior Fall

STS3014	STS Seminar	4
PH2344	Modern Physics	4
MA2112/2122	Multivariable Calculus A/B	4
PL2124	Phil of Quant Mech (STS4)	4

Junior Spring

LA4014	Project 2: Internship/Study Abroad	4
	HuSS Elective 1	4
	Free Elective 2	4
	Free Elective 1	4

Senior Fall

PH3234	Electricity and Magnetism	4
PH3124	Thermodyn & Stat Physics	4
	HuSS Elective 2	4
	HuSS Elective 3	4

Senior Spring

LA4024	Project 3: Capstone	4
PH3244	Concepts of Nanotechnology	4
PL3094	Philosophy of Science (STS5)	4
	Free Elective 3	4

SUSTAINABLE URBAN ENVIRONMENTS (SUE)

1. GENERAL INFORMATION

Program Director: Richard Wener
Program Advisors: Richard Wener, Jonathan Soffer

Sustainable Urban Environments provides a balanced liberal arts education with a focus on the social and technical issues that must be addressed to maintain healthy and satisfying urban life for city dwellers. The billions of people living in cities need to have clean water and air, housing, healthy and secure living conditions, adequate transportation and education. City builders must understand the technical challenges and possibilities and the social and historical contexts in which they exist. This program brings together technology, planning, economics, psychology, and history. In addition to **General Education** courses, students take a set of ***Urban Core*** courses to provide breadth in understanding of urban issues; and take courses in an ***Area of Concentration*** (or identify and create their own with their advisor from available courses an independent study options) relating to **Human & Social Systems in the Urban Context.**

Our world is urban. Sustainable urban growth is not a luxury; **it is a necessity**. Some of the most innovative work in the country – whether it be in eco-friendly construction or in creative approaches to economic development – are happening right here in Brooklyn, in New York City.

We live in New York City, one of the **biggest urban laboratories** in the country. Gotham is the penultimate 21st century globalizing city. If you are interested in questions of labor management, financial capitalism, transportation management, skyscraper development, or any other aspect of urbanization, you are in the right place.

We have the **resources** to tackle technical, engineering, *and* historical issues.

Careers you might pursue after a degree in Sustainable Urban Environments:

- Urban planning
- Historical preservation
- Civil engineering
- Architecture
- Law
- Social work
- Education
- Museum curator
- Journalism

2. BACHELOR OF SCIENCE DEGREE REQUIREMENTS

The requirements for the Sustainable Urban Environments major consist of 32 courses, 126 credits, divided into four parts:

2.1. General Education Requirement (17 courses, 68 credits)

EN 1014 or 1034: Writing and the Humanities
EN 1204: Writing and the Humanities II
HI 2104: Modern World History
General Math Elective
General Science Electives (2)
HuSS Electives (3)
Tech Courses (3) [EG1004 and 2 technical electives]
Free Electives (5)

2.2. Liberal Studies Requirement (6 courses, 24 credits)
All HuSS majors sit for the LA seminars. The implementation of the LA project courses is major-specific.

(A) LA Seminar Courses
LA 1014 - Introduction to History and Philosophy of Technology
LA 1024 - Technology, Computers and Values
LA 2014 - Technology and the Human Condition

(B) LA Project Courses
LA 3014 - Directed Study (*purpose*: exposure to research methods in major field).
LA 4014 - Internship/Study Abroad (*purpose*: exposure to life outside Ivory Tower).
LA 4024 - Capstone Project (*purpose*: significant original research in major field).

2.3. Urban Core (5 courses, 18 credits)
Base of 5 courses as orientation to urban issues/approaches
HI 3034: History of the Urban Infrastructure
LA 3024: The Design of Cities
CE 4033: Introduction to Urban Infrastructure Systems Management
CE 4043: Sustainable Cities
PO 1404: Introduction to Urban Policy

2.4. Urban Concentration (4 courses, 16 credits)
Human & Social Systems in the Urban Context
HI 2514: History of New York City
PS 3704: Humans & The Environment
PS 3324: Environmental Psychology
SO 3334: Environmental Sociology
PS 3724: Psychology of Sustainability
HI 3044: Ancient Urban Infrastructure
HI 3064: Global Housing
HI 2504: International Urban History
PS 3344: Urban Impact Assessment
CE 3353: A History of NYC Transit and the Development of NYC
Summer Travel Courses such as… Urban Solutions in New York and Paris

Total 126 credits

3. SAMPLE SCHEDULE

Freshman Fall

Course	Course Title	Cr.
EN 1014	Writing and the Humanities I	4
LA 1014	Intro Hist & Phil of Tech	4
EN 1004	Intro Engineering & Design	4
	General Science Elective 1	4
	Total Credits	16

Freshman Spring

Course	Course Title	Cr.
EN 1204	Writing and the Humanities II	4
LA 1024	Technology, Computers, & Values	4
HI 2104	Modern World History	4
	Urban Core 1	4
	Total Credits	16

Sophomore Fall

LA 2014	Tech & the Human Condition	4
	Urban Core 2	4
	Tech Elective 1	4
	General Science Elective 2	4
	Total Credits	16

Sophomore Spring

LA 3014	Project 1: Directed Study	4
	Urban Core 3	4
	Tech Elective 2	4
	General Math Elective	4
	Total Credits	16

Junior Fall

	Free elective 1	4
	Urban Core 4	4
	HuSS Elective 1	4
	Urban Concentration 1	4
	Total Credits	16

Junior Spring

LA 4014	Project 2: Internship/Study Abroad	4
	HuSS Elective 2	4
	Urban Concentration 2	4
	Free Elective 2	4
	Total Credits	16

Senior Fall

	Urban Concentration 3	4
	Free Elective 3	4
	Urban Core 5	4
	Free Elective 4	4
	Total Credits	16

Senior Spring

LA 4024	Project 3: Capstone	4
	Urban Concentration 4	4
	HuSS Elective 3	4
	Free Elective 5	4
	Total Credits	16

Typical Course of Study for the Bachelor of Science in Mechanical Engineering 2008-2009

FRESHMAN YEAR

Fall Semester Hours/Week

Course	No.	Course Title	Class	Lab	Rec.	Cr.
EG	1004	Introduction to Engineering & Design	1	3	2	4
MA	1024	Calculus I or	4	0	0	4
MA	1324	Integrated Calculus I	4	0	2	4
CM	1004	General Chemistry	3	2	1	4
EN	1014	Writing & Humanities I (2)	4	0	0	4
SL	1010	Freshman Seminar	1	1	0	0
						16

Spring Semester Hours/Week

Course	No.	Course Title	Class	Lab	Rec.	Cr.
MA	1124	Calculus II or	4	0	0	4
MA	1424	Integrated Calculus II	4	0	2	4
PH	1004	Introductory Physics I	4	1½	1	4
ME	1012	Introduction to Mechanical Engineering	2	0	0	2
ME	1112	Computer Aided Design	1	0	3	2
EN	1204	Writing & Humanities II	4	0	0	4
						16

SOPHOMORE YEAR

Fall Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
MA	2012	Linear Algebra I (½semester)	4	0	0	2
MA	2132	Ordinary Diff. Equ.(½semester)	4	0	0	2
PH	2004	Introductory Physics II	4	1½	1	4
MT	2811	Materials Science Lab	½	1½	0	1
MT	2813	Introduction to Materials Science	3	0	0	3
HI	2104	Modern World History	4	0	0	4
						16

Spring Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
MA	2112	Multi. Calculus A (½semester)	4	0	0	2
MA	2122	Multi Calculus B (½semester)	4	0	0	2
MA	2212	Data Analysis I (½semester)	4	0	0	2
ME	2211	Statics Lab	0	0	3	1
ME	2213	Statics	3	0	0	3
ME	2313	Thermodynamics	3	0	0	3
		HU/SS Elective (3)	4	0	0	4
						17

JUNIOR YEAR

Fall Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	3211	Mechanics of Materials Lab	½	1½	0	1
ME	3213	Mechanics of Materials	3	0	0	3
ME	3511	Measurement Systems Lab	½	1½	0	1
ME	3513	Measurement Systems	3	0	0	3
ME	3223	Dynamics	3	0	0	3
		HU/SS Elective (3)	4	0	0	4
						15

Spring Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	3233	Machine Design	3	0	0	3
ME	3311	Fluids Lab	½	1½	0	1
ME	3313	Fluids	3	0	0	3
ME	3411	Controls Lab	½	1½	0	1
ME	3413	Controls	3	0	0	3
MG	3002	Project Management	2	0	0	2
		ME Elective (4)	3	0	0	3
						16

SENIOR YEAR

Fall Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	4112	Senior Design I	2	0	0	2
ME	4214	Finite Element Design, Modeling & Analysis	3	3	0	4
ME	4311	Heat Transfer Lab	½	1½	0	1
ME	4313	Heat Transfer	3	0	0	3
		ME Elective (4)	3	0	0	3
		Free Elective (5)	3	0	0	3
						16

Spring Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	4113	Senior Design II	3	0	0	3
		ME Elective (4)	3	0	0	3
		ME Elective(5)	3	0	0	3
		Technical Elective (4)	3	0	0	3
		HU/SS Elective (3)	4	0	0	4
						16

Total credits required for graduation 128

1. Students who are placed by examination or by an adviser into MA 0902, MA 0912 or MA 0922 must defer registration for MA 1024 or 1324.
2. Students who are placed by examination or by an adviser into EN 1080 or EN 1090 must subsequently register for EN 1034, rather than EN 1014.

3. Approved HU/SS electives are courses with the following prefixes: AH, AN, EC, EN, HI, MU, PL and PS. Two courses must be from Level II. Elective courses in different disciplines and one from Level III Advanced Elective courses.
4. A total of 15 credits are required for ME and Technical electives. Mix of 3 & 4 credits are allowed. Out of the 15 credits, 12 or more must be in ME.
5. A total of 3 credits in Free electives are allowed. Free electives are non-engineering, science based courses that need to have one of the following prefices: AH, AN, EC, EN, HI, MU, PL, PO, PS, MA, PH, CH, or BMS. The approval of the ME Undergraduate Advisor is required.

Typical Course of Study for the Bachelor of Science in Mechanical Engineering with Concentration in Aerospace Engineering 2008-2009

FRESHMAN YEAR

Fall Semester Hours/Week

Course	No.	Course Title	Class	Lab	Rec.	Cr.
EG	1004	Introduction to Engineering & Design	1	3	2	4
MA	1024	Calculus I or	4	0	0	4
MA	1324	Integrated Calculus I	4	0	2	4
CM	1004	General Chemistry	3	2	1	4
EN	1014	Writing & Humanities I (2)	4	0	0	4
SL	1010	Freshman Seminar	1	1	0	0
						16

Spring Semester Hours/Week

Course	No.	Course Title	Class	Lab	Rec.	Cr.
MA	1124	Calculus II or	4	0	0	4
MA	1424	Integrated Calculus II	4	0	2	4
PH	1004	Introductory Physics I	4	1½	1	4
ME	1012	Introduction to Mechanical Engineering	2	0	0	2
ME	1112	Computer Aided Design	1	0	3	2
EN	1204	Writing & Humanities II	4	0	0	4
						16

SOPHOMORE YEAR

Fall Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
MA	2012	Linear Algebra I (½semester)	4	0	0	2
MA	2132	Ordinary Diff. Equ.(½semester)	4	0	0	2
PH	2004	Introductory Physics II	4	1½	1	4
MT	2811	Materials Science Lab	½	1½	0	1
MT	2813	Introduction to Materials Science	3	0	0	3
HI	2104	Modern World History	4	0	0	4
						16

Spring Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
MA	2112	Multi. Calculus A (½semester)	4	0	0	2
MA	2122	Multi Calculus B (½semester)	4	0	0	2
MA	2212	Data Analysis I (½semester)	4	0	0	2
ME	2211	Statics Lab	0	0	3	1
ME	2213	Statics	3	0	0	3
ME	2313	Thermodynamics	3	0	0	3
		HU/SS Elective (3)	4	0	0	4
						17

JUNIOR YEAR

Fall Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	3211	Mechanics of Materials Lab	½	1½	0	1
ME	3213	Mechanics of Materials	3	0	0	3
ME	3511	Measurement Systems Lab	½	1½	0	1
ME	3513	Measurement Systems	3	0	0	3
ME	3223	Dynamics	3	0	0	3
		HU/SS Elective (3)	4	0	0	4
						15

Spring Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	3233	Machine Design	3	0	0	3
ME	3311	Fluids Lab	½	1½	0	1
ME	3313	Fluids	3	0	0	3
ME	3411	Controls Lab	½	1½	0	1
ME	3413	Controls	3	0	0	3
MG	3002	Project Management	2	0	0	2
		Free Elective (5)	3	0	0	3
						16

SENIOR YEAR

Fall Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	4112	Senior Design I	2	0	0	2
ME	4214	Finite Element Design, Modeling & Analysis	3	3	0	4
ME	4311	Heat Transfer Lab	½	1½	0	1
ME	4313	Heat Transfer	3	0	0	3
AE	4603	Compressible Flow	3	0	0	3
AE	4653	Aircraft Flight Mechanics	3	0	0	3
						16

Spring Semester

Course	No.	Course Title	Class	Lab	Rec.	Cr.
ME	4113	Senior Design II	3	0	0	3
AE	4613	Aerodynamics	3	0	0	3
AE	4633	Aerospace Propulsion	3	0	0	3
		ME Elective (4)	3	0	0	3
		HU/SS Elective (3)	4	0	0	4
						16

Total credits required for graduation: 128

1. Students who are placed by examination or by an adviser into MA 0902, MA 0912 or MA 0922 must defer registration for MA 1024 or 1324.

2. Students who are placed by examination or by an adviser into EN 1080 or EN 1090 must subsequently register for EN 1034, rather than EN 1014.
3. Approved HU/SS electives are courses with the following prefixes: AH, AN, EC, EN, HI, MU, PL and PS. Two courses must be from Level II Elective courses in different disciplines and one from Level III Advanced Elective courses.
4. A total of 3 credits are required for ME electives.
5. A total of 3 credits in Free electives are allowed. Free electives are non-engineering, science based courses that need to have one of the following prefices: AH, AN, EC, EN, HI, MU, PL, PO, PS, MA, PH, CH, or BMS. The approval of the ME Undergraduate Advisor is required.