

H&SS Interdepartmental Majors

When addressing complex issues in society, pursuing research in industry, in government, or at the university, and in many other contexts, we often rely on approaches that take advantage of a variety of relevant disciplines. The College houses the special category of "Interdepartmental Majors" for programs where this interdisciplinary spirit is most pronounced and in which the varied disciplinary perspectives are more fully integrated. These majors are presented separately, rather than as departmentally-based options, to reflect and underscore their sponsorship by more than one H&SS department, and the unique flavor that follows from this structure.

Interdepartmental majors are administered by the academic department of the major's faculty advisor.

The Major in Economics and Statistics

Faculty Advisor: Oded Meyer

Office: Baker Hall 232C

The major in Economics and Statistics provides an interdisciplinary course of study aimed at students with a strong interest in the empirical analysis of economic data. Jointly administered by the Department of Statistics and the Undergraduate Economics Program, the major's curriculum provides students with a solid foundation in the theories and methods of both fields. Students in this major are trained to advance the understanding of economic issues through the analysis, synthesis and reporting of data using the advanced empirical research methods of statistics and econometrics. Graduates are well positioned for admission to competitive graduate programs, including those in statistics, economics and management, as well as for employment in positions requiring strong analytic and conceptual skills – especially those in economics, finance, education, and public policy.

Curriculum

I. Prerequisites 74 Units

1. Writing Prerequisite 9 units

Choose one:

- 73-270 Professional Writing for Economics
- 76-270 Writing in the Professions
- 76-271 Intro to Professional and Technical Writing

2. Mathematical Foundations 38 units

- 21-120 Differential and Integral Calculus
- 21-122 Integration, Diff Equations, and Approximations
- 21-256 Multivariate Analysis and Approximation
- 21-241 Matrix Algebra

3. Economics Foundations 9 units

- 73-100 Principles of Economics

3. Statistical Foundations 18 units

- 36-201 Introduction to Statistical Reasoning and Practice*

and one of the following:

- 36-202 Introduction to Statistical Methods
- 36-208 Regression Analysis (cross listed as 70-208)
- 36-309 Experimental Design for Behavioral & Social Sciences

* Acceptable equivalents for 36-201 are 36-207, 36-220, and 36-247.

II. Disciplinary Core 111 units

1. Economics Core 39 units

- 73-150 Microeconomics
- 73-200 Macroeconomics
- 73-252* Advanced Microeconomic Theory
- 73-253* Advanced Macroeconomic Theory
- 73-261 Econometrics

* Mini courses

2. Statistics Core 36 units

- 36-225 Introduction to Probability and Statistics I
- 36-226 Introduction to Probability and Statistics II
- 36-401 Modern Regression
- 36-402 Advanced Data Analysis (Project Course)

3. Economics Electives 18 units

Choose two advanced courses (numbered 73-100 through 73-495)

4. Statistics Electives 18 units

Choose two courses at the 36-300 level or above.

Total number of units for the *major* 185 units

Total number of units for the *degree* 360 units

Sample Program

The following sample program illustrates one (of many) ways to satisfy the requirements of the Economics and Statistics Major. Keep in mind that the program is flexible and can support other possible schedules (see comment following the schedule).

Year	Fall	Spring
Freshman	21-120 36-201 -----** ----- -----	21-122 36-202 73-150 ----- -----
Sophomore	21-256 36-225 73-200 ----- -----	21-241 36-226 73-252/3 ----- -----
Junior*	36-401 73-261 Writing Req. Econ Elective -----	36-402 Stats Elective ----- ----- -----
Senior	Stats Elective ----- ----- ----- -----	Econ Elective ----- ----- ----- -----

* A student could spend, for example, year 3 abroad and move year 3 courses to year 4.

** In each semester, ----- represents other courses (not related to the major) which are needed in order to complete the 360 units that the degree requires.

Additional Major in Environmental Policy

Peter Madsen, Faculty Director
Office: Baker Hall 161F

The additional major (only) in Environmental Policy focuses attention on the interaction of humans with the environment from a multitude of perspectives. Human activities have had and continue to have large-scale and long-term consequences for environmental quality. Environmental quality relates to the quality of our daily lives, to our physical health, and to the future vitality and even survival of human society. The Additional Major in Environmental Policy is designed to provide students with the interdisciplinary background and skills necessary to understand environmental issues. It emphasizes three general areas: (1) humanities and the arts; (2) social sciences; and (3) natural science and technology. The humanities emphasis concerns the ethical, legal, and historical basis of environmental concerns as well as their aesthetic manifestations. The social science area concentrates on the economic and political nature of environmental problems and possible policy options and responses. The natural science and technology focus includes the exploration of ecology as well as the role of technology as both problem creator and problem solver.

The Environmental Policy major is open to all students as an additional major. It is administered by an interdepartmental committee, with Peter Madsen, of the Philosophy Department, as principal advisor. The major features training in relevant research methods; a set of core courses on environmental issues from several disciplinary vantage points; an elective; and a project course experience.

Prerequisites 47-56 units

Two courses in calculus (e.g., 21-111/112 or 21-121/256)
Two courses in statistics (e.g., 36-201 or the equivalent)
Two courses in biology (e.g., 03-121 and 122, 124 or 130)
or
Two courses in chemistry (e.g., 09-103/104 or 09-105/106)
or
Chemistry 09-103 and 06-100 Introduction to Chemical Engineering

The following courses are recommended, although not required, to complete: 73-100, Principles of Economics or 73/88-110, Experiments with Economic Principles

Research and Analytical Methods 18 units

79-200 Historical Evidence and Interpretation
or
85-340 Research Methods in Social Psychology
73-251 Economic Theory

Theory and Context 54-57 units

Required 45-48 units

66-210 Science and Technology for the Environment
or
79-346 International Environmental Law and Policy
or
90-792 Environmental Decision Making
80-344 Management, Environment and Ethics

Required Electives 9-12 units

Complete one course in one of the following areas:

Science and Technology

12-100 Introduction to Civil and Environmental Engineering*
12-251/252 Introduction to Environmental Engineering
(if not taken in the required category)
12-651 Air Quality Engineering*
12-651 Environmental Engineering: Air Pollution*
19-101 Introduction to Engineering and Public Policy*
19-321 Law and Technology
19-422 Radiation, Health, and Policy
19-448 Science, Technology, and Ethics
19-622 Sustainability (6 units)
19-623 Environmental Management (6 units)
24-424 Energy-Environmental Systems (also listed as 19-424)
42-424 Biological Transport

* particularly extensive prerequisites; not to be taken by students whose primary major is in CIT

Humanities

76-319 Environmental Rhetoric
76-395 Science Writing
76-476 The Rhetoric of Science
79-384 Medicine and Society
80-244 Management, Environment and Ethics

Social Sciences

19-446 Quantitative Risk Analysis
73-251 Economic Theory
73-358 Economics of the Environment and Natural Resources
85-241 Social Psychology
88-220 Policy Analysis I (if not taken in the required category)
88-221 Policy Analysis II
88-223 Decision Analysis and Decision Support Systems
88-302 Behavioral Decision Theory
88-425 Politics of Economic Deregulation
90-765 Cities, Technology and the Environment
90-767 Climate Change, Energy Policy and Sustainable Development
90-773 Technology, Environment and Economic Development
90-789 Sustainable Community Development
90-798 Environmental Policy & Planning

Evaluation and Design 12 units

19-451 Engineering and Public Policy Projects (pre-approved sections);
or
88-222 Policy Analysis III (pre-approved sections);
or
79-410 History and Policy Project (pre-approved sections)

The Major in Ethics, History, and Public Policy

Undergraduate Advisor: Andy Norman, Department of Philosophy
Office: Baker Hall 161F

Preparing students for leadership positions is a vital goal of colleges and universities in every democratic and technologically advanced society. The intellectual challenges facing public and private sector leaders expand dramatically each year, and there will be a compelling need in 21st century America for broadly educated, ethically sensitive, and technically skilled public servants. They will have to demonstrate sophisticated interdisciplinary knowledge, historical understanding of how modern-day problems have evolved, and an operational grasp of clear, rational criteria for ethical decision making. The major in Ethics, History, and Public Policy seeks to provide students with a solid humanistic and social-scientific foundation for developing such high-level leadership capabilities. It also provides ample room for specialization, technical skill development, and internship experience in a wide range of policy areas.

Curriculum

Offered jointly by the Departments of History and Philosophy, the Ethics, History, and Public Policy major is offered for either a B.A. or a B.S. degree, or as an Additional Major (see below). The requirements for either degree or for an additional major include a minimum of 117 units (thirteen 9-unit courses) divided into History and Philosophy Core Courses (72 units) and Elective Track courses (45 units). An Internship Option may be taken Pass/Fail for 9 units of academic credit by students who qualify (with a 3.0 overall QPA, a 3.25 QPA in their EHPP major, and with pre-approval by the Internship Coordinator). Students interested in an internship for academic credit should consult the policy and information at <http://www.hss.cmu.edu/departments/history/under/internships.html>. No Pass/Fail course (e.g. 79-505) may count toward any major requirement. Only one course for an EHPP major may double count toward another major or minor. Two courses for an EHPP major may double count towards the 2004 H&SS General Education requirements.

Bachelor of Science Option 18 units

Complete two of the following courses. None may double count for an H&SS General Education requirement.

- 21-257 Models & Methods for Optimization
(Prerequisite 21-256)
36-303 Samplings, Surveys, & Society
(Prerequisites include 36-201)
36-207 Probability & Statistics for Business
(Prerequisites: 21-116 or 21-121)
36-208 Regression Analysis
(Prerequisites: 36-207 or 21-116 or 21-121)
80-222 Measurement & Methodology (Prerequisite: 21-228)
80-305 Rational Choice
(Prerequisites: 36-226 or 36-202 or 36-217)
80-316 Causation, Probability & Artificial Intelligence
(Prerequisites: none)
Or:
Any Gen Ed 3. Modelling: Mathematics & Experiments
course option not used to fulfill that requirement.

Internship Option 9 units

79-505 Undergraduate Internship Pass/Fail Only

For an internship to receive academic credit it must be pre-approved by the History Department Internship Coordinator. Consult the policy and information on internships at <http://www.hss.cmu.edu/departments/history/under/internships.html>.

History Core Courses 36 units

1) Complete one of the following courses in American history.

- 79-204 20th Century America
79-206 Development of American Culture
79-240 Recent United States History, 1945-Present
2) Complete one of the following courses in policy history/social history.
79-202 The History of Public Policy in the United States
79-230 Technology in American Society
79-242 African American History II
79-256 Biology and Society
79-309 Public Policy and American Military Recruitment: Historical Perspective
79-331 Crime and Punishment in American Society
79-332 Juvenile Delinquency: Images, Realities and Public Policy, 1800-1940
79-333 History of Biomedical Research
79-335 Drug Use & Drug Policy
79-336 Epidemic Disease & Public Health
79-338 Childhood, Education, & Social Reform in American History
79-345 American Environmental History
79-384 Medicine & Society

3) Complete one of the following courses in international history

- 79-205 20th Century Europe
69-207 Development of European Culture
79-233 The United States & the Middle East Since 1945
79-253 Development of Caribbean Culture
79-258 Intro to African History: 18th Century to Neocolonialism
79-271 Modern China
79-281 Russian History: From Communism to Capitalism
79-288 Bananas, Baseball, and Borders: A History of Latin America - US Relations
79-289 Development and Democracy in Latin America
79-290 Between Revolutions: The Development of Modern Latin America
79-397 Religion & Politics in the Middle East

4) Complete one other course from the options under (2) or (3).

Philosophy Core Courses 36 units

1) Complete one of the following ethics courses.

- 80-130 Introduction to Ethics
80-230 Ethical Theory

2) Complete one of the following courses in political philosophy

- 80-135 Introduction to Political Philosophy
80-235 Political Philosophy

3) Complete one of the following courses in applied philosophy/applied ethics.

- 80-136 Social Structure, Public Policy, & Ethics
80-221 Philosophy of Social Science
80-236 Philosophy of Law
80-242 Conflict & Dispute Resolution
80-348 Health, Development, & Human Rights
80-321 Causation, Law, and Social Policy
80-430 Ethics & Medical Research

4) Complete one other course from any of the options above.

Elective Tracks 45 units

Complete 45 units (five 9-unit courses) from one of the two Elective Tracks below: Social Policies; or, Business & Economic Policies. New or other courses similar to those below might be offered that may be counted with the permission of your advisor.

Social Policies Track

- 19-319 Law & the Engineer [See EPP catalog for prerequisites]
19-321 Law & Technology [See EPP catalog for prerequisites]
19-422 Radiation, Health, & Policy [See EPP catalog for prerequisites]
19-424 Energy & the Environment [See EPP catalog for prerequisites]
19-426 Environmental Decision Making [See EPP catalog for prerequisites]
19-448 Science, Technology, & Ethics [See EPP catalog for prerequisites]
70-361 Foundations of Law
70-363 Law in Modern American Society
70-413 Conflict Resolution: Negotiation & Mediation
73-354 Law & Economics
73-356 Political Economy of Public Institutions
73-357 Regulation: Theory & Policy
73-358 Economics of the Environment & Natural Resources
73-359 Benefit-Cost Analysis
73-476 American Economic History
79-230 Technology in American Society
79-242 African American History II
79-243 A History of American Urban Life
79-244 Pittsburgh and the Transformation of Modern Urban America
79-256 Biology & Society
79-281 Modern Soviet History: From Communism to Capitalism
79-288 Bananas, Baseball, and Borders: A History of Latin America - US Relations
79-309 Public Policy and American Military Recruitment: Historical Perspective
79-330 The American Presidency
79-331 Crime & Punishment in American Society
79-332 Juvenile Delinquency: Images, Realities and Public Policy, 1800-1940
79-333 History of Biomedical Research
79-335 Drug Use & Drug Policy
79-345 American Environmental History: Critical Issues
79-368 Poverty, Charity, and Welfare
79-384 Medicine & Society
80-221 Philosophy of Social Science
80-235 Political Philosophy
80-336 Philosophy of Law
80-244 Management, Environment, & Ethics
80-245 Medical Ethics
80-348 Health, Development, & Human Rights
80-321 Causation, Law, & Social Policy
80-341 Computers, Society, & Ethics
80-430 Ethics & Medical Research
88-104 Decision Processes in American Political Institutions
88-309 Altruism & Selfishness
88-313 Rationality & Values in Democracy
88-322 Elections, Interest Groups, & Public Policy
88-340 Law & Public Policy

Business & Economic Policies Track

- 19-319 Law & the Engineer [See EPP catalog for prerequisites]
 - 19-424 Energy & the Environment [See EPP catalog for prerequisites]
 - 19-426 Environmental Decision Making [See EPP catalog for prerequisites]
 - 70-311 Organizational Behavior
 - 70-332 Business & Society
 - 70-413 Conflict Resolution: Negotiation & Mediation
 - 70-430 International Management
 - 73-330 Comparative Economic Systems
 - 73-354 Law & Economics
 - 73-351 Public Finance
 - 73-356 Political Economy of Public Institutions
 - 73-357 Regulation: Theory & Policy
 - 73-359 Benefit-Cost Analysis
 - 73-365 Industrial Organization
 - 73-371 International Trade
 - 73-372 International Money & Finance
 - 73-380 Strategy in Economics and Politics
 - 73-476 American Economic History
 - 79-230 Technology in American Society
 - 79-345 American Environmental History: Critical Issues
 - 79-358 Complex Technological Systems: Past, Present, and Future
 - 79-440 Perspectives on Industrial Research and Development
 - 80-221 Philosophy of Social Science
 - 80-321 Causation, Law, & Social Policy
 - 80-242 Conflict & Dispute Resolution
 - 80-243 Business Ethics
 - 80-244 Management, Environment, & Ethics
 - 88-104 Decision Processes in American Political Institutions
 - 88-223 Decision Analysis & Decision Support Systems
 - 88-309 Altruism & Selfishness
 - 88-313 Rationality & Values in Democracy
 - 88-343 Economics of Technological Change
 - 88-425 Politics of Economic Deregulation
- Sample Elective Track Concentrations

Students may, if they wish, concentrate their Elective Track courses in a topical area of special interest to them. The following four sample concentrations are illustrated with course options under the Social Policies Elective Track. The Business & Economic Policies Elective Track similarly accommodates special-interest concentrations, for example concentrations emphasizing international business and economic policies, or environmental policy. Students specially interested in International Relations are well advised to pursue the International Relations additional major or minor along with the EHPP major and to choose an EHPP Elective Track and concentration consonant with their International Relations interests. Only one course taken for the EHPP major may be double counted for any additional major or minor.

Medicine & Health Policy

- 19-422 Radiation, Health, & Policy [See EPP catalog for prerequisites]
- 79-256 Biology & Society
- 79-333 History of Biomedical Research
- 79-335 Drug Use & Drug Policy
- 79-384 Medicine & Society
- 79-256 Biology & Society
- 80-245 Medical Ethics
- 80-348 Health, Development & Human Rights
- 80-430 Ethics and Medical Research
- 85-442 Health Psychology
- 90-650 Intro to Health Care Management

Law & Social Policy

- 73-354 Law & Economics
- 70-361 Foundations of Law
- 70-363 Law in Modern American Society
- 79-309 Public Policy and American Military Recruitment: Historical Perspective
- 79-331 Crime & Punishment in American Society
- 79-332 Juvenile Delinquency: Images, Realities and Public Policy, 1800-1940
- 79-338 Childhood, Education, & Social Reform in American History
- 80-336 Philosophy of Law
- 80-321 Causation, Law, and Social Policy

80-348 Health, Development, & Human Rights

Environmental Policy

- 19-426 Environmental Decision Making [See EPP catalog for prerequisites]
- 73-358 Economics of the Environment & Natural Resources
- 79-345 American Environmental History
- 80-244 Management, Environment, & Ethics

Criminal Justice Policy

- 79-331 Crime & Punishment in American Society
- 79-332 Juvenile Delinquency: Images, Realities and Public Policy, 1800-1940
- 79-335 Drug Use & Drug Policy
- 80-336 Philosophy of Law

**Ethics, History, and Public Policy
Sample Curriculum**

Junior Year		Senior Year	
Fall	Spring	Fall	Spring
Core requirement in History or Philosophy	Core requirement in History or Philosophy	Elective Track Course	Elective Track Course
Core requirement in History or Philosophy	Core requirement in History or Philosophy	Elective Track Course	Elective Track Course
Core requirement in History or Philosophy	Core requirement in History or Philosophy	Elective Track Course	Elective
Core requirement in History or Philosophy	Core requirement in History or Philosophy	Elective	Elective

The above sample program is presented as a two-year (junior-senior year) plan for completing EHPP major requirements. Its purpose is to show that this program can be completed in as few as two years; not that it must be. Students may enter their EHPP major, and begin major course requirements, as early as the start of the sophomore year, or even in the first year. Students should consult their advisor when planning their program.

Additional Major

All Ethics, History, and Public Policy requirements for an additional major are the same as those for non-B.S. degree candidates whose primary major is EHPP. Only one course may double count for both a student's EHPP additional major and the student's primary major.

The Major in European Studies

Beryl Schlossman, Professor of French; European Studies Advisor

Offered jointly by Modern Languages and History, the Major in European Studies is a unique interdisciplinary program that seeks to develop and enhance students' understanding of European societies and cultures. It aims to train students in literature and language, cultural history and the arts, as well as related areas of professional opportunity. It offers students substantive knowledge of Western European society through two approaches. First, it provides a foundation in one of the continental Western European languages. Second, it encourages comparative inquiry across boundaries of time, nation, and scholarly discipline.

Curriculum

Offered jointly by the Departments of Modern Languages and History, the European Studies major is offered as a B.A. degree.

European Studies majors must take two prerequisite courses (18 units) in one foreign language (French, Spanish, or German) or demonstrate the equivalent in language ability through the Carnegie Mellon Language Placement Test. The requirements include a minimum of 99 units divided into core courses (63 units) and electives (36 units). Students are strongly advised to fulfill prerequisite and core courses by the end of their junior year. Students are encouraged to take advantage of the Study Abroad Program.

Students are urged to check with the Major Advisor in selecting courses for this major.

The Major in European Studies 99 units

Students who arrive at Carnegie Mellon with previous language study and/or who have high AP or CEEB scores will be able to begin taking courses toward the major earlier in their undergraduate program and will also be able, should they so desire, to complete an additional major. Progress toward the major will be accelerated by study abroad.

1. Core Courses in Modern Languages 36 units

Language courses are to be completed in the same language: French, German, or Spanish.

Complete two courses in a 200-level language sequence* 18 units

82-2xx 200-level language course
82-2xx 200-level language course

*Students who place out of 200-level language courses must take at least two 300-level courses instead of the required one 300-level language course.

Complete one course in a 300-level language course 9 units
82-3xx 300-level language course

Complete one course in a 400-level language course 9 units
82-4xx 400-level language course

2. Core Courses in History 27 units

Required Course 9 units
79-207 Development of European Culture

Pre-20th Century European History 9 units

Complete one 200-level (or above) course in Pre-20th century European history.
79-2xx/3xx Pre-20th century European History course

European History 9 units

Complete one 300-level course in European history.
79-3xx European History course

3. Electives 36 units

This list includes samples of courses that can be taken as appropriate electives in European history, literature, and culture in relevant departments. In any given semester, offerings differ. Students are urged to consult with the Major Advisor and with relevant departments for current offerings. Electives also may include additional 400-level courses in the target language, additional courses in Modern Languages, 200- and 300-level courses

in History, and some offerings in English and CFA.

History

79-250 Two Revolutions: Dynamics of Change in Nineteenth Century Europe
79-261 Europe after the Black Death
79-263 Riots, Revolts, and Revolutions
79-307 The Anthropology of Europe

Modern Languages

French:
82-406 The European Union
82-415/416 Topics in French and Francophone Studies

German:
82-424 The New Germany
82-427 Nazi and Resistance Culture

Spanish:
82-441 Studies in Peninsular Literature and Culture Art
60-350 Michelangelo and Renaissance Art
60-377 Picasso and the 20th Century

English
76-236 19th Century British Literature and Culture
76-331 Renaissance Literary and Cultural Studies
76-336 Romantic Age Literary and Cultural Studies

New courses will be added as appropriate.

European Studies (B.A.)

Sample Curriculum

Junior Year		Senior Year	
Fall	Spring	Fall	Spring
300-level Language Course 82-3xx	400-level Language Course 82-4xx	European Studies Elective	European Studies Elective
Development of European Culture 79-207	Pre-20th Century European Course 79-2xx/3xx	European Studies Elective	European Studies Elective
Elective	European History Course 79-3xx	Elective	Elective
Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective

This is presented as a two-year (junior-senior) plan for completing major requirements. Its purpose is to show that this program can be completed within two years. Students may enter their major, and begin major course requirements, as early as the start at the beginning of the sophomore year, and in some instances in the first year. Students should consult their advisor when planning their program.

This plan is an example of the suggested sequence of study for students who have had little or no prior exposure to the language. These students would need to satisfy the prerequisites (elementary and intermediate language study) during their freshman and sophomore years.

The Major in Information Systems

Faculty Program Director: Randy S. Weinberg
 Office: Porter Hall 224C, rweinberg@cmu.edu
 Program Advisor: Stephen Pajewski
 Office: Porter Hall 222F, sp4g@andrew.cmu.edu
 Faculty: C.F. Larry Heimann, Jeria Quesenberry, Raja Sooriamurthi

Information Systems (IS) is a unique and innovative undergraduate interdisciplinary program, drawing on a wide range of exciting college and university strengths. IS is an internationally recognized undergraduate major for students who want to design and implement effective solutions to meet organizational and management needs for information and decision support. IS majors study the organizational, technological, economic and societal aspects of computer-based information systems, and learn how these elements work together to affect real outcomes. Students completing the program will be well grounded in the fundamentals of organization theory, decision-making, teamwork and leadership, understanding and organizing complex problems, and research methods as well as develop in depth knowledge of current and emerging information systems methodologies and technologies. Graduates of the Program are ideally situated to take a leading role in managing and shaping our information-based future.

IS appeals to outstanding students with a wide range of backgrounds and interests. The major provides students with a broad liberal education (being situated in the College of Humanities & Social Sciences) along with training in the essential aspects of the design and implementation of information systems. The flexible nature of the program encourages students to explore their own interests in a contemporary content area. While all IS majors will become proficient in information technologies, they share a common interest in the effective application of these technologies to real organizational, managerial and societal needs for better information management and decision making.

IS students are well prepared to pursue graduate work in information systems, business administration, technology management and policy, human-computer interaction, and other related areas. Because of the broad training received within the IS fields and H&SS curricula, IS students are also positioned to pursue graduate degrees in some disciplinary fields of the social and behavioral sciences or in the humanities, as well. For students interested in master's degree-level graduate work at Carnegie Mellon, there are various possibilities, including accelerated Masters of Information Systems Management (MISM) and Masters of Business Administration (MBA) programs. Some of the undergraduate coursework for the IS major can be counted towards graduate requirements and the degree can usually be completed in three or four additional semesters.

IS students meet an important need in the information-age workplace. There has been a strong job market for IS students in recent years, and national trends indicate that this is likely to continue. IS majors often take jobs in consulting companies, major software firms, large corporations, and start-up companies. Internship opportunities closely parallel the job market.

In addition to the H&SS General Education Requirements and basic prerequisites in mathematics, statistics and computer programming, IS students must complete a Professional Core, the Disciplinary Core and a focused Content Area. In the Professional Core (consisting of five courses), students learn the basic skills necessary to analyze, design, implement and test information systems using current and emerging organizational and technological practices. Two of the Professional Core courses are project-based experiences in which small teams of students must develop and communicate solutions to real information problems.

In the Disciplinary Core (consisting of four courses), students study four areas that are fundamental to understanding and solving problems in information systems: organizations, decision sciences, research methods and professional communications. The organizations area emphasizes how groups of people can organize and coordinate their behaviors to perform complex tasks. The decision sciences area focuses on the necessary skills for understanding, structuring and computerizing decision-making at individual and organizational levels. The research methods area illuminates the process of gathering, summarizing, evaluating and presenting empirical data. The professional communications area develops skills in the most effective methods for presenting information.

IS students must also complete three courses within one Content Area. The Areas are designed to complement the depth provided by the Professional Core and the breadth provided by the Disciplinary

Core by providing an opportunity to gain additional depth in a focused area. Currently, eight Content Areas are available: (1) Organizations, (2) Decision Science and Rational Choice, (3) Research Methods, (4) Professional Communications, (5) Business/Economics, (6) Computers and Cognition, (7) Technology, and (8) Global Systems.

Transfer to Information Systems

Only IS students are allowed to enroll in the Professional Core courses, and IS students have enrollment priority in all IS electives. The target class size of these courses is determined annually by the College. If the target size is not met by existing IS students, then additional students may be admitted to the IS major as transfer students and are required to begin the Professional Core courses during the next available semester. (IS students are currently admitted directly into IS as incoming freshmen). Students who are accepted as transfers to the IS program can complete the requirements of the degree in two years with careful scheduling. Applications for admission to the major will be considered at the end of each semester. Students interested in applying for admission to the IS major should keep in touch with the IS advisor for information regarding availability, application procedures and deadlines. Potential applicants to the IS major should be working toward a sensible alternative major, so that their success at Carnegie Mellon is not predicated on admission to the IS program.

Study Abroad Options in Information Systems

Given the rise of globalization and its effect on information systems development, we encourage students to consider expanding their international experience by spending a semester studying abroad. The IS program is very flexible in allowing students to pursue these opportunities, and we have a number of strategic alliances with overseas universities to make it easy for students to find courses that will count towards major requirements. Most students who study abroad do so in their sophomore or senior years, although study abroad is possible in the spring of the junior year as well. The only semester study abroad is difficult is the fall of junior year due to the professional core requirements of 67-271 and 67-272. Students interested in study abroad should talk with the IS student advisor to help plan an appropriate course of study.

Additional Major and Minor

Information Systems is not available as either an additional major or minor.

Curriculum

The Information Systems major is offered only as a Bachelor of Science (B.S.) degree. In addition to major requirements outlined below, all Information Systems students must fulfill all H&SS General Education requirements.

Disclaimer: Requirements are subject to revision. Advisor approval is required for each student's major curriculum plan. No course used to fulfill the requirements of the major can be used to fulfill the requirements for any other major or minor nor used more than once to meet the requirements of this major without prior approval from the Information Systems Program.

Prerequisites

The prerequisites common to all Information Systems majors are presented below. All prerequisites must be successfully completed prior to the start of fall semester, junior year.

Mathematics 20 units

Complete any of the following three calculus sequences:

21-111	Calculus I	
and		
21-112	Calculus II,	
or		
21-120	Differential and Integral Calculus	
and		
21-256	Multivariate Analysis and Approximation,	
or		
21-120	Differential and Integral Calculus	
and		
21-122	Integration, Differential Equations, and Approximation	

Computer Programming 10-19 units

Units needed to fulfill this requirement category vary based on placement into the appropriate initial programming course from the programming placement test results.

- 15-100 Introductory/Intermediate Programming (10 units)
and
15-200 Advanced Programming/Practicum (9 units)
or
15-111 Intermediate/Advanced Programming (10 units)

Professional Core 51 units

Complete all five courses.

- 67-250 The Information Systems' Milieux
(or 67-344, Organizational Intelligence in the
Information Age, used as a substitution for IS transfer
students)
67-272 Application Design and Development
(prerequisites: 67-250 or 67-344 and 15-200 or 15-111)
67-371 Fundamentals of Systems Development
(prerequisites: 67-250 or 67-344 and 15-200 or 15-111)
67-373 Software Development Project
(prerequisites: 67-271 and 67-272);
67-475 Information Systems Applications
(prerequisite: 67-373)

Disciplinary Core 36 units

Complete one course from each of the four Disciplinary Core categories.

1. Organizations

The focus of this area is on how organizations, ranging from small groups of individuals to society at large, can be transformed by information technology. Students will develop a greater understanding of how to create effective information systems to meet key organizational needs, and how social policy can influence this outcome. Such knowledge can be readily applied by students pursuing careers in both the private and public sectors.

Complete one course:

- 67-344 Organizational Intelligence in the Information Age
70-311 Organization Behavior
70-341 Organizational Communication
70-342 Managing Across Cultures
70-414 Technology-Based Entrepreneurship
88-260 Organizations
88-341 Organizational Communication

2. Decision Science and Rational Choice

This area focuses on the decision making component of information systems, taking into account the social, political, and ethical issues in an information-driven society. This area builds on the analytic rigor of the social sciences and the enduring normative questions of philosophy to promote a critical understanding of the way that information technologies shape the contemporary world.

Complete one course:

- 73-251 Economic Theory
80-211 Arguments and Inquiry
80-305 Rational Choice
80-341 Computers, Society and Ethics
88-220 Policy Analysis I
88-223 Decision Analysis and Decision Support Systems

3. Research Methods

Understanding how data and information are acquired is an important first step to solving information problems. Moreover, discerning the patterns and trends in data can help guide an organization's information strategy. Research methods provide a basis for students seeking to understand these fundamental issues.

Complete one course. (It is recommended that this requirement be completed by the end of the sophomore year.)

- 36/70-208 Regression Analysis
36-202 Statistical Methods
36-303 Sampling, Survey and Society
36-309 Experimental Design for Behavioral and Social Sciences
80-222 Measurement and Methodology
88-251 Empirical Research Methods

4. Professional Communications

These courses help information systems designers understand how the structure and presentation of information affects how well (and how easily) it can be understood and used. In addition, information systems professionals are often called to facilitate communications between software engineers and non-technical business clients; consequently, the most successful information systems professionals are typically those with strong communication skills.

Complete one course. (It is recommended that this requirement be completed by the junior year.)

- 36-315 Statistical Graphics and Visualization
70-340 Business Communications
70-343 Interpersonal Communication
70-345 Oral Communications
70-346 Written Communications
76-270 Writing in the Professions

Content Area 27 units

Complete 27 units from a combination of IS Electives and one Content Area with a maximum of 9 units of IS Electives counting toward this requirement. With 9 units of IS electives, a minimum of 18 units from a Content Area are necessary, or with 6 units of IS electives, at least 21 units from a Content Area are needed. If none of the IS Electives are selected, all 27 units are to be from one of the eight Content Areas. Some courses in these Content Areas are the same as courses in the Disciplinary Core. A single course can only be used once to fulfill a Disciplinary Core or Content Area requirement.

A note on scheduling and availability: the courses listed for the Content Areas below are generally offered with some regularity. However, some courses may not be offered every year or enrollment priority may be given to declared majors or minors. Also, infrequently offered courses that would qualify for a Content Area may be available in a specific semester. Many of the courses in the Content Areas also have prerequisites. In most cases the prerequisites are also listed in the same Content Area, are part of the Disciplinary or Professional Cores, are acceptable to fulfill General Education requirements, or may be taken as part of a minor or second major. Students are advised to confer with the Information Systems program advisor and maintain some flexibility in selecting courses from their Content Area.

Information Systems Electives

A maximum of 9 units (of the 27 required for any of the eight Content Areas) can be IS electives.

- 67-301 Networks and Telecommunications
67-304 Database Design and Implementation
67-305 Application Software Development in .NET
67-320 Special Topics in Information Systems
67-325 Global Systems Delivery Models
67-390 Independent Study in Information Systems
67-xxx Other IS Electives (as approved by the IS program)

A. Organizations

The focus of this content area is on how organizations, ranging from small groups of individuals to society at large, can be transformed by information technology. Students will develop a greater understanding of how to create effective information systems to meet key organizational needs, and how social policy can influence this outcome. Such knowledge can be readily applied by students pursuing careers in both the private and public sectors.

Complete courses to bring total to 27 units (generally three courses)

- 15-390 Entrepreneurship for Computer Science
45-392 Human Behavior in Organizations
45-453 Organizational uses of information systems
67-344 Organizational Intelligence in the Information Age
70-311 Organizational Behavior
70-341 Organizational Communication
70-342 Managing Across Cultures
70-414 Technology-Based Entrepreneurship
79-342 Technology, Organization, and Information
88-260 Organizations
88-341 Organizational Communication
88-354 Economics and Psychology of Organizational Communication
88-367 Computers and Organizations

B. Decision Science and Rational Choice

This area focuses on the decision making component of information systems, taking into account the social, political, and ethical issues in an information-driven society. We need to understand the technical complexities of economic, political, and statistical analysis, but we have also to reflect on basic moral and political values.

This area builds on the analytic rigor of the social sciences and the enduring normative questions of philosophy to promote a critical understanding of the way that information technologies shape the contemporary world.

Complete courses to bring total to 27 units (generally three courses)

19-448	Science, Technology and Ethics
36-350	Data Mining
73-251	Economic Theory
80-211	Arguments and Inquiry
80-230	Ethical Theory
80-305	Rational Choice
80-341	Computers, Society, and Ethics
80-405	Game Theory
88-220	Policy Analysis I
88-223	Decision Analysis and Decision Support Systems
88-302	Behavioral Decision Making
88-385	Managerial Decision Making

C. Research Methods

Understanding how data and information are acquired is an important first step to solving information problems. Moreover, discerning the patterns and trends in data can help guide an organization's information strategy. Research methods provide a basis for students seeking to understand these fundamental issues.

Complete courses to bring total to 27 units (generally three courses)

36-202	Statistical Methods
36/70-208	Regression Analysis
36-350	Data Mining
36-303	Sampling, Surveys, and Society
36-309	Experimental Design for Behavioral & Social Science
36-310	Fundamentals of Statistical Modeling
36-401	Modern Regression
36-410	Introduction to Probability Modeling
36-46x	Topics Courses in Statistics
70-208	Regression and Forecasting
70-481	Market Research
80-222	Measurement and Methodology
80-316	Probability and Artificial Intelligence
80-321	Causation and Social Policy
88-251	Empirical Research Methods

D. Professional Communications

These courses help information systems designers understand how the structure and presentation of information affects how well (and how easily) it can be understood and used. Students become fluent in both electronic and print-based media and learn the fundamentals of visual, verbal, and on-line publication. In addition, information systems professionals are often called to facilitate communications between software engineers and non-technical business clients; consequently, the most successful information systems professionals are typically those with strong communication skills.

Complete courses to bring total to 27 units (generally three courses)

36-315	Graphics and Visualization
51-247	Color and Communication [†]
51-251	Digital Prototyping [†]
51-261/262	Communication Design Fundamentals
70-340	Business Communications
70-343	Interpersonal Communication
70-345	Oral Communications
70-346	Written Communications
76-270	Writing in the Professions
76-318	Communicating in the Global Marketplace
76-373	Argument
76-382	Multimedia Authoring I
76-383	Multimedia Authoring II
76-389	Grammar of Standard English
76-390	Style
76-391	Document Design
76-395	Science Writing
76-479	Marketing, Public Relations and Corporate Communications
76-481	Writing for Multimedia

76-487	On-line Information Design (76-488 lab section not required)
76-491	Software Documentation
80-291	Issues in Multimedia Authoring

[†] Registration for course requires prior acceptance into the Design Minor.

E. Business/Economics

Information systems professionals who understand the nature of business and the financial considerations facing today's companies provide great value to their organizations. The courses within this content area are designed to broaden a student's knowledge in business and economics and to allow them to be as adept working with business clients as they are with software engineers.

Complete courses to bring total to 27 units (generally three courses)

21-292	Operations Research I
21-380	Introduction to Mathematical Modeling
21-393	Operations Research II
21-420	Continuous-Time Finance
36-410	Stochastic Modeling
70-201	Professional and Service Projects
70-332	Business and Society
70-368	Intellectual Property and E-Commerce
70-371	Production and Operations Management
70-381	Marketing
70-391	Finance
70-401	Management Game
70-414	Technology-Based Entrepreneurship
70-459	Distributed Virtual Business
70-460	Mathematical Models for Consulting
70-471	Logistics and Supply Chain Management
73-251	Economic Theory
73-325	Experimental Foundations of Equilibrium
73-359	Benefit-Cost Analysis
73-469	Economics of E-commerce
79-230	Technology in American Society
79-440	Perspectives on Industrial Research and Development
79-441	Science, Technology, and Business in U.S. History
80-241	Ethical Judgments in Professional Life
80-335	Philosophy, Politics, and Economics
88-223	Decision Analysis and Decision Support Systems
88-345	Rise of Industrial Research and Development

F. Computers and Cognition

The area of computers and cognition explore questions of how people think and learn, how computers affect the human learning process and how computers themselves might be able to learn. Courses in this area also investigate how human-computer interaction affects interface design and systems development.

Complete courses to bring total to 27 units (generally three courses)

05-410	Introduction to Human-Computer Interaction Methods
05-411	Cognitive Modeling
05-430	Programming Usable Interfaces
05-431	Software Architectures for User Interfaces
15-381	Artificial Intelligence
15-482	Human Language Technologies
39-648	Wearable Computer Design
51-241	How People Work: Human Factors [†]
51-421	Visual Interface Design [†]
80-271	Philosophy and Psychology
80-300	Minds, Machines, and Knowledge
85-211	Cognitive Psychology
85-213	Human Information Processing and Artificial Intelligence
85-370	Perception
85-392	Human Expertise
85-393/	
05-413	Human Factors
85-412	Cognitive Modeling
85-417	Intelligent Computer-Assisted Instruction

[†] Registration for course requires prior acceptance into the Design Minor.

G. Technology

Of the three components of information systems—people, process, and technology—it is the latter that is in the greatest state of flux. This content area allows students to focus on a particular area of technology that has special interest for them.

Complete courses to bring total to 27 units (generally three courses)

03-310/410	Introduction to Computational Biology
05-331	Building Virtual Worlds
09-560	Molecular Modeling and Computational Chemistry
15-211	Fundamental Data Structures and Algorithms
15-212	Principles of Programming
15-213	Introduction to Computer Systems
15-312	Foundations of Programming Languages
15-354	Computational Discrete Mathematics
15-384	Robotic Manipulation
15-385	Computer Vision
15-410	Operating System Design and Implementation
15-411	Compiler Design
15-412	Operating System Practicum
15-415	Database Applications
15-418	Parallel Computer Architecture and Programming
15-441	Computer Networks
15-451	Algorithm Design and Analysis
15-462	Computer Graphics
15-463	Rendering and Image Processing
15-493	Special Topic: Computer Game Programming
15-499	Media Technology
15-505	Special Topic: Animation Art and Technology
15-681	Artificial Intelligence: Machine Learning
16-311	General Robotics
16-362	Mobile Robot Programming Laboratory
16-363	Advanced Mobile Robot Programming
17-651	Models of Software Systems
18-240	Fundamentals of Computer Engineering
18-447	Introduction to Computer Architecture
33-241	Introduction to Computational Physics
51-442	Integrated Product Development [†]
60-414-422	Advanced Electronic Time-based Art
67-304	Database Design and Implementation
67-305	Application Software Development in .NET
85-419	Introduction to Parallel Distributed Processing

[†] Registration for course requires prior acceptance into the Design Minor.

H. Global Systems

The rise of global project management and systems development increases the need for information systems professionals to develop skills essential for participating in the international marketplace. This content area exposes students to contemporary issues and practices facing organizations, managers and individuals working on a global scale across political, cultural, temporal and geographic boundaries.

Complete courses to bring total to 27 units (generally three courses)

15-391	Technology Consulting in the Community
15-502	Technology for Developing Communities
67-325	Global Systems Delivery Models
67-326	Global Project Management
70-365	International Trade and International Law
70-430	International Management
70-480	International Marketing
73-371	International Trade and Economic Development
73-372	International Money and Finance
76-318	Communicating in the Global Marketplace
76-386	Language and Culture
76-442	Communication across Cultures
79-270	Chinese Culture and Society
79-271	Modern China
79-289	Development and Democracy in Latin America
79-290	Between Revolutions: The Development of Modern Latin America
79-350	Theories of International Relations
82-333	Introduction to Chinese Language and Culture
82-383	Introduction to Second Language Acquisition
82-433	Topics in Contemporary Culture in China
82-487	On Writing in a Second Language
85-375	Cross Cultural Psychology
88-326	International Relations
88-327	Politics of Economic Development
88-352/	
79-346	International Environmental Law and Policy
88-359	Globalization
88-378	International Economics

Information Systems, B.S. Sample Curriculum

Freshman Year		Sophomore Year	
Fall	Spring	Fall	Spring
Interpretation & Argument 76-101	Intro to World History 79-104	Information Systems Milieux 67-250	Application Design and Development 67-272
Statistical Reasoning 36-201	Statistical Methods 36-202 (Disciplinary Core Course)	Disciplinary Core Course	Disciplinary Core Course
Calculus Sequence I	Calculus Sequence II	Elective	Elective
Programming 15-100	Programming 15-200	Elective	Elective
Computing @ Carnegie Mellon & IS Freshman Workshop	H&SS Freshman Seminar	Elective	Elective
Elective	IS Freshman Colloquium 67-101		

Junior Year		Senior Year	
Fall	Spring	Fall	Spring
Fundamentals of Systems Development 67-271	Software Development Project 67-373	Information Systems Applications 67-475	Elective
Disciplinary Core Course	Content Area Course	Content Area Course	Content Area Course
Disciplinary Core Course	Elective	Elective	Elective
Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective

The Major in Linguistics

Mandy Simons, Director
Office: Baker Hall 155E
Email: simons@andrew.cmu.edu

Linguistics is the study of human language, and it encompasses a broad spectrum of research questions, approaches and methodologies. Some linguists are concerned with the cognitive aspects of language learning, production and comprehension; some are concerned with language as a social and cultural phenomenon; others engage in the analysis of linguistic form and meaning, some from a functional and others from a formal perspective. There are also computational approaches to linguistics with both applied and theoretical goals.

The Major in Linguistics reflects the multidisciplinary character of the field and of the Linguistics faculty here at Carnegie Mellon, offering a program which provides students with the fundamental tools of linguistic analysis while maintaining a focus on the human context in which language is learned and used. After completing their core courses, students can follow a concentration in one of three areas: Language in its Social Context, Language and Mind, or Language and Communication. Various specialized electives, including Language Technology courses, are available to students with the appropriate preparation. Students can choose to focus fairly narrowly on an area of particular interest, or to explore more widely.

The Major in Linguistics is available as either a primary major or an additional major. It is an ideal choice for students with a general interest in their own or other languages, and combines well thematically with studies in any of the departments represented in the major.

Curriculum

I. Required Courses

A. Fundamental skills (36 units)

Complete one course from each of the groups below. Additional courses from these groups may be taken as electives.

Introductory Course

80-180 Nature of Language

Sounds

80-282 Phonetics and Phonology

Structure

80-280 Linguistic Analysis

or

76-389 Rhetorical Grammar

Meaning

80-381 Meaning in Language

or

76-385 Discourse Analysis

B. Language requirement (18-24 units)

Complete 2 semesters of language study in a single language. (Sequential courses)

II. Electives (45 units)

The electives are organized into three thematically coherent groups: Language in Its Social Context, Language and Mind, and Language and Communication. There is an additional set of specialized electives.

Students must complete 5 elective courses. At least three courses must be selected from one thematic group. The remaining two courses can be selected from any group or from the specialized electives. Additional Fundamental Skills courses may also be taken towards the required electives.

Group 1: Language in Its Social Context

76-244 World English
76-318 Communicating in the Global Marketplace
76-341 American English
76-386 Language and Culture
76-451 Topics in Language Study*
76-490 Discourse and Identity
82-358 Literacies across Language and Culture
82-483 Topics in Modern Languages*

82-384 Language and Culture: Language in its Social Context
82-388 Understanding Second Language Fluency
82-480 Social and Cognitive Aspects of Bilingualism
82-585 Pragmatics and Second Language Learning
82-891 Second Language Acquisition in a Study Abroad Context

Group 2: Language and Mind

76-420 Process of Reading and Writing
80-281 Language and Thought (Philosophy)
80-380 Philosophy of Language
82-483 Topics in Modern Languages*
82-280 Learning about Language Learning
82-383 Second Language Acquisition
82-480 Social and Cognitive Aspects of Bilingualism
85-354 Infant Language Development
85-356 Music and Mind: the Cognitive Neuroscience of Sound
85-421 Language and Thought (Psychology)
85-455 The Discovery of Spoken Language

Group 3: Language and Communication

76-318 Communicating in the Global Marketplace
76-357 Language, Power and the Law
76-381 Contemporary Rhetorical Theory
76-451 Topics in Language Study*
76-457 Topics in Rhetorical Study*
76-490 Discourse and Identity
80-380 Philosophy of Language
82-388 Understanding Second Language Fluency
82-483 Topics in Modern Languages*
82-585 Pragmatics and Second Language Learning

* A variety of different topics are taught under these course numbers. The suitability of the course as an elective in a given group will depend on the specific topic. Students should consult with the faculty advisor.

Specialized Electives

Courses in this group have prerequisites outside the Linguistics Major, but may be taken by any students with appropriate background.

82-777 The Japanese Language
82-334 Structure of Chinese
82-373 Structure of the Japanese Language
82-444 Structure of Spanish
85-356 Music and Mind: the Cognitive Neuroscience of Sound
11-4xx Introduction to Natural Language Processing
11-582 Language Technologies
11-521 Grammars and Lexicons
11-531 Machine translation
11-541 Information Retrieval
11-552 Speech: Phonetics, Prosodics, Perception, and Synthesis
11-722 Grammar Formalisms

III. Senior Thesis (12 units)

In their senior year, typically in the Spring semester, students must complete a senior thesis under the direction of a faculty member of their choosing. The thesis project must be of a scope appropriate for the 12-unit course credit. Students who participate in the Honors program may combine their Honors thesis and Major thesis, as long as the thesis is of appropriate scope.

Students for whom Linguistics is an additional major may substitute an additional elective for the Senior Thesis requirement after consultation with the Faculty Advisor.

The Major in Russian Studies

Faculty Advisor: Charlene Castellano,
Department of Modern Languages
Main Office: Baker Hall 160

The relationship between Russia and the West has been central to the history of the twentieth century, and it continues to influence politics throughout the globe. The rise in fascism, World War II, the Cold War, revolutions in Cuba, Korea, China and Vietnam, and de-colonization struggles in Africa cannot be understood apart from Russian influence. The study of Russia is thus central to our understanding of the present world order and international relations. The disintegration of the USSR, the emergence of more democratic forms of government, and the development of new "free market" economies have led not only to greater openness and stronger ties with the West, but also to a host of new questions in the areas of business, science, technology, national defense and international security. The end of the Cold War allows for exploration of new issues in fascinating ways that were formerly forbidden. The proliferation of exchange programs, the increased accessibility of libraries, archives, and information, and the development of a free press all open untried and exciting possibilities and opportunities for students and scholars. Young, talented people with a broadly-based knowledge of Russian history, language and culture are needed to fill jobs in international law, education, diplomacy, business, journalism and computing, as well as in economic, scientific and technical consulting. The Russian Studies Program aims to give students a solid background in the fields of Russian history, language, culture and politics, by offering a major and minor specialization to interested students.

Russian Studies, a B.A. Program, is jointly administered by the Departments of History and Modern Languages in the College of Humanities and Social Sciences. It is designed for students from all the Carnegie Mellon undergraduate colleges. It may be taken as either a primary major, additional major, or minor.

Russian Studies Major 93 - 96 units

The History Curriculum 27 units

For majors, there is a three-course History requirement comprised of one required course and two courses selected from a list of electives.

1. Core Course(s) in History 9 units

Complete one course.

79-280 Russian History from the First to the Last Tsar*
79-281 Modern Russian History: From Communism to Capitalism*

* Both courses are recommended.

2. Required Electives in History 18 units

Complete two courses. (Substitutions by advisor's permission)

79-282 Soviet Union in World War II: Military and Political History
79-344 The Cold War and Beyond

The Language and Culture Curriculum 45 units

Complete the two prerequisite courses, two intermediate courses and one advanced course.

3. Prerequisite Courses in Modern Languages 24 units

82-191 Elementary Russian I (or demonstrated equivalent)
82-192 Elementary Russian II (or demonstrated equivalent)

4. Core Courses in Modern Languages 27 units

82-291 Intermediate Russian I
82-292 Intermediate Russian II
82-391 Advanced Russian I

Should a student enter the Russian Studies Program with a demonstrated language proficiency at any of these "Intermediate" or "Advanced" levels, the required total of 27 units is reached by selecting from among the advanced language options appearing below in the list of "Required Electives". Advanced language options include "Advanced Russian II" and "Special Topics: Russian", as well as subject-oriented language supplements to existing courses (taught in English) in a variety of fields. Thus students can add a

language supplement (3 units) to selected 9-unit electives, earning a total of 12 units for the language-supplemented course.

5. Required Electives 18 units

Complete two courses.

History

79-205 20th Century Europe
79-231 American Foreign Policy: 1945-Present
79-280 Russian History from the First to the Last Tsar
79-281 Russian History
79-282 Soviet Union in World War II: Military and Political History
79-344 Science and Technology and the Cold War

Modern Languages

82-296 A Century of Russian Film
82-392 Advanced Russian II
82-396 The Faust Legend at Home and Abroad
82-397 Russia's Demons
82-399 Special Topics: Russian
82-491 Topics in Twentieth Century Russian Literature
82-492 The Historical Imagination in Nineteenth-Century Russian Literature
82-493 Joseph Brodsky in Context

New courses will be added as appropriate.

6. Required Independent Research 3-6 units

Complete one course.

82-599 Russian Studies Thesis

In the senior year, majors are required to undertake an independent research or translation project in which their language skills are applied to Russian-language materials. This project, which earns 3 to 6 units, is conducted in connection with an existing course in Russian history, language, literature or politics. The student works closely with the professor to select a topic requiring the use of Russian sources suitable to the student's proficiency level. For example, students may choose to prepare a translation of a little-known piece of Russian literature or a debate from a nineteenth-century journal, to compare Soviet and Western newspaper coverage of the Cuban missile crisis, to research Russian opinion of American race relations, or to read and evaluate the reviews of a popular Russian novel.

7. Study Abroad

Students in both the major and minor programs are encouraged to spend a semester or summer in Russia via an approved exchange program. Many exchange programs offer instruction in Russian language, history, literature, and culture, in internationally recognized universities. They also offer travel to ancient sites and cities, visits to museums, palaces, exhibitions, and monuments, and the opportunity to live with a Russian host family. Scholarship monies are frequently available.

Faculty Exchange Program

In 1993, the College of Humanities and Social Sciences initiated a faculty exchange program with the Russian State University of the Humanities (RGGU), one of the foremost universities in Russia, located in Moscow. Carnegie Mellon has hosted faculty members from RGGU specializing in history, language and philosophy. These professors have joined our College departments for a semester, offering unique courses and perspectives not generally available to our students. In the past, these Russian visitors have offered courses on the Russian Civil War as well as advanced language and literature courses. Several faculty members from Carnegie Mellon have visited Moscow, using the RGGU exchange to pursue archival research and collaborative projects. The exchange offers students an opportunity to study language from native speakers, gain exposure to different perspectives on history and politics, and gather firsthand knowledge about recent developments in Russia. In addition, the exchange can provide important contacts for students interested in pursuing careers abroad.

Russian Studies, B.A.

Sample Curriculum

This sample curriculum assumes that all prerequisites for 82-291 are fulfilled prior to the Junior year.

Junior Year		Senior Year	
Fall	Spring	Fall	Spring
Intermediate Russian I 82-291	Intermediate Russian II 82-291	Advanced Russian I 82-391	Russian Studies Thesis 82-599
Core Course in History 79-280/281	Required Elective in History	Required Elective	Required Elective
Elective	Required Elective	Elective	Elective
Elective	Elective	Elective	Elective
Elective	Elective	Elective	Elective

This is presented as a two-year (junior-senior) plan for completing major requirements. Its purpose is to show that this program can be completed in as few as two years, not that it must be. Students may enter their major, and begin major course requirements, as early as the start of the sophomore year, and in some instances in the first year. Students should consult their advisor when planning their program.

This plan is an example of the suggested sequence of study for students who have had little or no prior exposure to the language. Such students would need to satisfy the prerequisites (elementary and intermediate language study) during their freshman and sophomore years. Students who arrive at Carnegie Mellon with previous language study and/or who have high AP or CEEB scores will be able to begin taking courses toward the major earlier in their undergraduate program and will also be able, should they so desire, to complete an additional major. In all cases, progress toward the major will be accelerated by study abroad which is strongly recommended for all majors.

Additional Major

All Russian Studies Program requirements for an additional major are the same as those for students obtaining the major in Russian Studies (B.A.).

Student-Defined Major Program

Joseph E. Devine, Associate Dean, H&SS Academic Advisory Center
Office: Baker Hall A57

For H&SS students whose educational goals cannot be as adequately served by the curricula of existing majors. The College provides the opportunity to self-define a major. The procedure for establishing such a major centers on a written proposal, submitted to the College's Dean's Office (c/o the H&SS Advisory Center). This proposal, which is to be built on the College's General Education Program, consists of two parts:

Major Description and Rationale. A description of the components of the proposed program of study; a presentation of the objectives of the program of study, why it represents a coherent and (given available faculty, courses, and other resources) viable course of study, and the reason(s) why these objectives cannot be accomplished within one or more of the College's existing majors.

The Curriculum. Presentation of a complete outline of all courses that will comprise the requirements for the major. These courses should be categorized in two ways: first, according to that component of the major program to which each belongs (e.g., mathematical prerequisites; research methods; theoretical perspectives; etc.) and second, a semester-by-semester outline that indicates when each course is to be taken (or, for any already taken, when taken and grade received). In addition to courses taken at Carnegie Mellon, the major's curriculum may include courses taken (or to be taken) at other schools, related projects or internships, or programs of study abroad. The minimum requirements for graduation is, as with all majors in the College, 350 units of credit.

Proposals and curricula are evaluated for clarity of focus, coherence and depth in related areas, and viability within the content of the College and the university. Proposals should generally be developed no later than the sophomore year, and approved majors begin their program generally no later than the junior year. All Student-Defined Majors must complete the H&SS General Education Program.

Additional details and guidelines for the Student-Defined Major program are available in the College's Academic Advisory Center, Baker Hall A57.