Dietrich College Interdisciplinary Majors

When addressing complex issues, 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 approach is most pronounced and in which the varied disciplinary perspectives are most fully integrated. These majors are presented here separately, rather than as departmentally-based options, to reflect and underscore their sponsorship by more than one academic department and the unique features that follow from this structure.

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

The Major in Economics and Mathematical Sciences

Faculty Advisor: Carol Goldburg
Office: GSE 133
Email: cg28@andrew.cmu.edu

The B.S. in Economics and Mathematical Sciences (http://coursescat.web.cmu.edu/dietrichcollegeofhumanitiesandssa/undergraduateeconomicsprogram/#bseconomicsandmathematicalsciencessc) is a collaborative effort between the Department of Mathematical Sciences and the Undergraduate Economics Program. Combining advanced mathematics with advanced economic theory is the hallmark of this curriculum. The curriculum provides students with courses that complement and develop depth of understanding of economic theory, applied economics, and applied mathematics. This major offers an integrated curriculum, guiding students through a program of coursework that exploits and builds upon the synergies between mathematics and economics. This degree program equips students with the mathematical tools that are essential for success in Ph.D. programs in economics; mathematics; and key functional areas of business including finance, accounting, marketing, and information systems. Students pursuing this degree will be well prepared for the beginning of their research careers in academia, government, and industry. There are a limited number of student slots in this program; interested students may apply as early as their sophomore year.

B.S. in Economics and Statistics

Faculty Advisors: Rebecca Nugent (Statistics), Cosma Shalizi (Statistics) and Carol Goldburg (Economics)
Office: Baker Hall 132A
Email: acadcoord@stat.cmu.edu

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.

The requirements for the B.S. in Economics and Statistics are the following:

I. Prerequisites

66 units

1. Mathematical Foundations

39 units

21-120 Differential and Integral Calculus 10
21-122 Integration, Differential Equations and Approximation 10
21-256 Multivariate Analysis 9
or 21-259 Calculus in Three Dimensions
21-240 Matrix Algebra with Applications 10
or 21-241 Matrices and Linear Transformations
or 21-242 Matrix Theory

II. Disciplinary Core

129 units

1. Economics Core

48 units

73-252 Advanced Microeconomic Theory 6
73-230 Intermediate Microeconomics 9
73-240 Intermediate Macroeconomics 9
73-253 Advanced Macroeconomic Theory 6
73-270 Writing for Economists 9
73-363 Econometrics 9

*Mini Courses

36 units

2. Statistics Core

36-201 Statistical Reasoning and Practice 9
and one of the following:
36-202 Statistical Methods 9
36-208 Regression Analysis 9
36-309 Experimental Design for Behavioral and Social Sciences 9

Or extra statistical elective**

*Acceptable equivalents for 36-201 are 36-207 (70-207), 36-220 and 36-247.

**Students who enter the program with 36-225/36-226 should discuss options with their advisors

III. Advanced Electives

45 units

Students must take two advanced economics elective courses (numbered 73-300 through 73-495, excluding 73-363, 73-407 and 73-450) and two advanced statistics elective courses (numbered 36-303, 36-315, 36-350 or 36-410 through 36-495). A fifth advanced elective is required and can be chosen from either statistics or economics.

Total number of units for the major 195 units

Total number of units for the degree 360 units

Recommendations for Prospective PhD Students

Students interested in pursuing a PhD in Statistics or Biostatistics (or related programs) after completing their undergraduate degree are strongly recommended to take additional Mathematics courses, perhaps with

Note: Passing the MSC 21-120 assessment test is an acceptable alternative to completing 21-120.

Note: 21-241 and 21-242 are intended only for students with a very strong mathematical background.

2. Economics Foundations

9 units

73-100 Principles of Economics 9

3. Statistical Foundations

18 units

36-201 Statistical Reasoning and Practice 9
and one of the following:
36-202 Statistical Methods 9
36-208 Regression Analysis 9
36-309 Experimental Design for Behavioral and Social Sciences 9

Or extra statistical elective**

*Acceptable equivalents for 36-201 are 36-207 (70-207), 36-220 and 36-247.

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Note: 21-241 and 21-242 are intended only for students with a very strong mathematical background.
The following sample program illustrates one way 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 footnotes below the schedule).

### Freshman
<table>
<thead>
<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>21-120 Differential and Integral Calculus</td>
<td>21-259 Calculus in Three Dimensions</td>
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<tr>
<td>36-201 Statistical Reasoning and Practice</td>
<td>36-202 Statistical Methods</td>
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#### Sophomore
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<tr>
<th>Fall</th>
<th>Spring</th>
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<tbody>
<tr>
<td>21-122 Integration, Differential Equations and Approximation</td>
<td>21-240 Matrix Algebra with Applications</td>
</tr>
<tr>
<td>36-225 Introduction to Probability Theory</td>
<td>36-226 Introduction to Statistical Inference</td>
</tr>
<tr>
<td>73-240 Intermediate Macroeconomics</td>
<td>73-252 Advanced Microeconomic Theory</td>
</tr>
</tbody>
</table>

#### Junior
<table>
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<tr>
<th>Fall</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>36-401 Modern Regression</td>
<td>36-402 Advanced Data Analysis</td>
</tr>
<tr>
<td>73-363 Econometrics</td>
<td>Statistics Elective</td>
</tr>
</tbody>
</table>

#### Senior
<table>
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<tr>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics Elective</td>
<td>Economics Elective</td>
</tr>
</tbody>
</table>

#### Electives
- *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.

Prospective PhD students might add 21-127 fall of sophomore year, replace 21-240 with 21-241, add 21-260 in spring of junior year and 21-355 in fall of senior year.

Students who elect Economics and Statistics as a second major must fulfill all Economic and Statistics degree requirements. Majors in many other programs would naturally complement a Statistics Major, including GSIA’s undergraduate business program, Social and Decision Sciences, Policy and Management, History and Policy, and Psychology.

With respect to double-counting courses, it is departmental policy that students must have at least five statistics courses that do not count for their primary major. If students do not have at least five, they typically take additional advanced electives.

Students are advised to begin planning their curriculum (with appropriate advisors) as soon as possible. This is particularly true if the other major has a complex set of requirements and prerequisites.

### Additional Major in Environmental Policy

Faculty Director: John Soluri  
Office: Baker Hall 240  
E-mail: jsoluri@andrew.cmu.edu

The major in Environmental Policy (which is only offered as an additional major) 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 Carnegie Mellon students as an additional major. The major focuses 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 54-56 units
- Two courses in Calculus: 21-111-21-112  
  Calculus I-II or equivalent  
  Units 20
- Two courses in Statistics: 36-201-36-202  
  Statistical Reasoning and Practice - Statistical Methods or equivalent  
  Units 18
- One of the following groups:  
  Two courses in Biology: 03-121-03-122  
  Modern Biology - Organismic Botany  
  or 03-121-03-124  
  Modern Biology and Modern Biology Laboratory  
  Units 18
- Two courses in Chemistry: 09-103  
  Atoms, Molecules and Chemical Change  
  or 09-104  
  Fundamental Aspects of Organic Chemistry and Biochemistry  
  Units 9
- Or 09-105  
  Introduction to Modern Chemistry I  
  or 09-106  
  Modern Chemistry II  
  Units 10
- The following two courses: 06-100  
  Introduction to Chemical Engineering  
  or 09-103  
  Atoms, Molecules and Chemical Change  
  Units 12
- The following course is recommended, although not required: 73-100 Principles of Economics.

#### Research and Analytical Methods 18-21 units
- 85-340  
  Research Methods in Social Psychology  
  or 88-251  
  Empirical Research Methods  
  Units 9
- Theory and Context 45 units (minimum)
- Required 36 units
  - 73-148  
    Environmental Economics  
  - 73-358  
    Economics of the Environment and Natural Resources  
  - 79-381  
    Petrocultures: How Oil Changed the World  
  - 80-344  
    Management, Environment, and Ethics  
  Units 9
- Required Electives 9-12 units
  Complete one course in one of the following areas:
- Science and Technology: 09-510  
  Introduction to Green Chemistry  
  or 12-100  
  Introduction to Civil and Environmental Engineering  
  Units 9
- 12-351  
  Environmental Engineering  
  Units 9
The B.A./B.S. in Ethics, History, and Public Policy is an interdepartmental major offered jointly by the Departments of History and Philosophy. It prepares students for leadership positions in law, public policy, ethics, and advocacy by providing them with a rigorous, interdisciplinary humanistic and social-scientific education. It also serves as an excellent spring board for graduate study in a wide variety of disciplines. The program focuses equally on the historical understanding of how modern-day problems have evolved, and the importance of developing clear criteria for ethical decision-making. The capstone project course provides students with the opportunity to engage with real-world public policy challenges using the methods, theories, and knowledge that they have gained through the major. Offered jointly by the departments of History and Philosophy, the B.A./B.S. in EHPP encourages specialization, internship experiences, and research in a wide range of policy areas.

Curriculum

Students graduating with a primary major in Ethics, History, and Public Policy may elect to receive either a Bachelor of Arts or a Bachelor of Science Degree (additional requirements apply; see below). Basic requirements include 123 units encompassing 9 units in Economics, 39 units in History, 36 units in Philosophy, 27 units of elective courses, and a 12-unit, senior capstone course. This program may also be taken as an additional (e.g., second) major.

I. Economics Requirement 9 units

Choose one of the following:

- 73-100 Principles of Economics 9
- 88-220 Policy Analysis I 9

II. History Core 39 units

Choose one 9-unit course from each category below:

Policy History (9 units)
- 79-300 History of American Public Policy 9
- U.S. History (9 units)
- 79-240 The Development of American Culture 9
- 79-249 20th Century U.S. 9
- Non-U.S. History (9 units)
- 79-205 20th Century Europe 9
- 79-207 Development of European Culture 9
- 79-220 Caribbean: Cultures and Histories 9
- 79-222 Between Revolutions: The Development of Modern Latin America 9
- 79-226 Introduction to African History: Earliest Times to 1780 9
- 79-227 Introduction to African History: 1780-1994 9
- 79-261 Chinese Culture and Society 9
- 79-265 Russian History: From the First to the Last Tsar 9
- 79-266 Russian History: From Communism to Capitalism 9
- 79-307 Religion and Politics in the Middle East 9

Historical Methods and Approaches (12 units)
- 79-200 Introduction to Historical Research 12

III. Philosophy Core 36 units

Choose one 9-unit course from each category below. No more than 18 units at the 100 level may be counted toward this requirement.

Ethics (9 units)
- 80-130 Introduction to Ethics 9
- 80-230 Ethical Theory 9

Political Philosophy (9 units)
- 80-135 Introduction to Political Philosophy 9
- 80-235 Political Philosophy 9

Foundations of Social Science (9 units)
- 80-221 Philosophy of Social Science 9
- 80-321 Causation, Law, and Social Policy 9
- 80-337 Philosophy Politics & Economics 9

Applied Philosophy (9 units)
- 80-136 Social Structure, Public Policy & Ethics 9
- 80-241 Ethical Judgments in Professional Life 9
- 80-244 Environmental Ethics 9
- 80-245 Medical Ethics 9
- 80-247 Ethics and Global Economics 9
- 80-341 Computers, Society and Ethics 9
- 80-344 Management, Environment, and Ethics 9
- 80-348 Health Development and Human Rights 9
- 80-447 Global Justice 9

IV. Senior Capstone Project Course (79/80-449) 12 units

The Ethics, History and Public Policy Project Course is required for the Ethics, History and Public Policy major and is taken in the fall semester of the senior year. In this capstone course, Ethics, History and Public
Policy majors carry out a collaborative research project that examines a compelling current policy issue that can be illuminated with historical research and philosophical and policy analysis. The students develop an original research report based on both archival and contemporary policy analysis and present their results to a client organization in the community.

V. Elective Courses

Choose any three courses from any category or categories shown below.

Engineering and Public Policy (some courses have prerequisites; see EPP catalog listing)

19-424 Energy and the Environment 9
19-426 Environmental Decision Making 9
19-448 Science, Technology & Ethics 9

Business
70-311 Organizational Behavior 9
70-321 Negotiation and Conflict Resolution 9
70-332 Business, Society and Ethics 9
70-364 Business Law 9
70-365 International Trade and International Law 9
70-430 International Management 9

Economics (some courses have prerequisites; see Economics catalog listing)

73-148 Environmental Economics 9
73-310 Evolution of Economic Ideas and Analysis 9
73-352 Public Economics 9
73-357 Regulation: Theory and Policy 9
73-358 Economics of the Environment and Natural Resources 9
73-359 Benefit-Cost Analysis 9
73-365 Firms, Market Structures, and Strategy 9
73-372 International Money and Finance 9
73-375 History of Money and Monetary Policy 9
73-408 Law and Economics 9
73-476 American Economic History 9

English
76-492 Rhetoric of Public Policy 9

History

Courses from the EHPP History Core (above) may be taken as electives only if they are not being used to fulfill the core requirement. Double counting is not permitted.

79-221 Development and Democracy in Latin America 9
79-231 American Foreign Policy: 1945-Present 9
79-233 The United States and the Middle East since 1945 9
79-242 African American History: Reconstruction to the Present 9
79-267 The Soviet Union in World War II: Military, Political and Social History 9
79-303 Pittsburgh and the Transformation of Modern Urban America 6
79-305 Juvenile Delinquency: Images, Realities, Public Policy, 1825-1967 9
79-306 Delinquency, Crime, and Juvenile Justice: 1970’s to the Present 9
79-320 Women, Politics, and Protest 9
79-331 Body Politics: Women and Health in America 9
79-333 Biology and Society: Evolution Animal Experimentation and Eugenics 9
79-334 Law, Ethics, and the Life Sciences 9
79-335 Drug Use and Drug Policy 9
79-338 Education and Social Reform 9
79-339 Juvenile Delinquency and Film (1920-1950) 6
79-342 Introduction to Science and Technology Studies 9
79-359 Sustainable Innovations: Ideas, Policies & Technologies to Make a Better Planet 9
79-368 Poverty, Charity, and Welfare 9
79-371 African American Urban History 9
79-374 American Environmental History: Critical Issues 9
79-381 Petrocultures: How Oil Changed the World 9
79-383 Epidemic Disease and Public Health 9
79-389 Stalin and Stalinism 9

Philosophy

Courses from the EHPP Philosophy Core (above) may be taken as electives only if they are not being used to fulfill the core requirement. Double counting is not permitted.

80-241 Ethical Judgments in Professional Life 9
80-256 Modern Moral Philosophy 9
80-305 Rational Choice 9
80-341 Computers, Society and Ethics 9
80-344 Management, Environment, and Ethics 9
80-405 Game Theory 9

Social and Decision Sciences

88-104 Decision Processes in American Political Institutions 9
88-181 Topics in Law: 1st Amendment 9
88-223 Decision Analysis and Decision Support Systems 9
88-343 Economics of Technological Change 9
88-345 Perspectives on Industrial Research and Development 9
88-347 Complex Technological Systems: Past, Present, and Future 9
88-371 Entrepreneurship, Regulation and Technological Change 9
88-387 Social Norms and Economics 9
88-423 Institutions, Entrepreneurship, and Innovation 9
88-444 Public Policy and Regulation 9

VI. Bachelor of Science Option

Students may elect to earn a Bachelor of Science rather than a Bachelor of Arts degree by completing two courses from the list below, or by petitioning the Director of EHPP to accept equivalent courses as substitutions.

21-257 Models and Methods for Optimization 9
36-202 Statistical Methods 9
or 36-208 Regression Analysis 9
36-207 Probability and Statistics for Business Applications 9
36-303 Sampling, Survey and Society 9
36-309 Experimental Design for Behavioral and Social Sciences 9
80-305 Rational Choice 9
88-251 Empirical Research Methods 9

Additional Major

The B.A./B.S. in Ethics History and Public Policy may be scheduled as an additional major in consultation with the departments concerned.

Ethics, History, and Public Policy Sample Curriculum

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<thead>
<tr>
<th>Junior Year</th>
<th>Senior Year</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
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<tr>
<td>Core requirement in History or Philosophy</td>
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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 the 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.
The Major in European Studies
Advisors: Kenya C. Dworkin (Hispanic Studies), Christian Hallstein (German), or Bonnie Youngs (French & Francophone Studies)

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 and awareness 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 continent's major 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 leads to 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.

Major Requirements 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

Starting at the intermediate level or higher, 4 courses are to be completed in the same language area.

* 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.

2. Core Courses in History 27 units

Pre-20th Century European History 9 units

European History 9 units

3. European Studies 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.

Modern Languages

New courses will be added as appropriate.

European Studies (B.A.)Sample Curriculum

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 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: Carol Young
Office: Porter Hall 222F, caroly@cmu.edu

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 learn how elements of organizations, technology, economics, social aspects and human interaction work together to create effective computer-based information systems to affect real outcomes. Graduates of the Program are ideally situated to take a leading role in managing and shaping our information-based future.

For full program information, go to The Major in Information Systems (http://coursecatalog.web.cmu.edu/previous/2013-2014/dietrichcollegeofhumanitiesandsciences/informationsystems).

The Major in Linguistics

Tom Werner, Director
Office: Baker Hall 155F
Email: twerner@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. The major 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

The Linguistics major requires a total of 12 courses, which includes 2 semesters of language study. In addition, primary majors in Linguistics are required to write a Senior Thesis in their final year. At least three courses (not including specific language courses) must be at the 300-level or higher. All courses counted toward the major must be taken for a grade of "C" or above. For Dietrich College students, up to 2 of these courses may be counted also as satisfying the college's general education requirements (as long as the double-counting maximum established by the college is not exceeded), with permission of the major director. Students from other colleges may fulfill their Humanities requirements using courses taken towards the Linguistics Major. However, no courses may be counted simultaneously towards the Linguistics Major and any other major.

Introductory course

80-180 Nature of Language 9

Fundamental Skills

Take one course from each of the following core subject areas:

Sounds

80-282 Phonetics and Phonology 9

Structure

80-280 Linguistic Analysis 9

76-389 Rhetorical Grammar 9

80-283 Syntax and Discourse 9

Meaning

80-381 Meaning in Language 9

80-383 Language in Use 9

76-385 Introduction to Discourse Analysis 9

Breadth

Take one course from each of the following breadth subject areas:

Area 1: Language Learning and Language Cognition

76-420 Process of Reading and Writing 9

82-280 Learning About Language Learning 9

Area 2: Literature, Language and Thought

80-370-80-380 Literature and Language 9

80-382 Language in the Workplace 9

45-380 Language in Literature 9

80-388 Language, Psycho and Society 9

80-400 Language and Law 9

Area 3: Language and Society

90-250 Language in the Workplace 9

80-388 Language, Psycho and Society 9

80-382 Language in the Workplace 9

80-383 Language in Use 9

80-381 Meaning in Language 9

Area 4: Language and the Mind

82-355 The Psychology of Language 9

82-250 The Psychology of Language 9

82-250 Language and Cognition 9

82-270 Language, Thought and Memory 9

Area 5: Language and Communication

90-380 Mediation and Language 9

90-370 Language, Symbolism and Communication 9

90-385 Language, Communication and Power 9

90-382 Language and Discourse 9

Area 6: Second Language Acquisition and Pedagogy

80-370-80-380 Language and Language Learning 9

80-270 Language and Language Learning 9

80-380 Language and Language Learning 9

80-382 Language and Language Learning 9

80-383 Language and Language Learning 9

Area 7: The Comparative Study of Languages

80-280-80-281 Comparative Linguistics 9

80-380 Comparative Linguistics 9

80-382 Comparative Linguistics 9

80-383 Comparative Linguistics 9

Area 8: Theoretical Linguistics

80-286 Formal Linguistics 9

80-283 Formal Linguistics 9

80-282 Formal Linguistics 9

80-281 Formal Linguistics 9

80-280 Formal Linguistics 9

Area 9: Computational Linguistics

80-286 Computational Linguistics 9

80-283 Computational Linguistics 9

80-282 Computational Linguistics 9

80-281 Computational Linguistics 9

80-280 Computational Linguistics 9
Course number 82-345 topics vary: consult with Director.

Area 2: Discourse, Society and Culture

76-318 Communicating in the Global Marketplace 9
76-385 Introduction to Discourse Analysis 9
76-386 Language & Culture 9
82-273 Introduction to Japanese Language and Culture 9
82-305 French in its Social Contexts 9
82-311 Arabic Language and Culture I 9
82-312 Arabic Language and Culture II 9
82-333 Introduction to Chinese Language and Culture Var.

Electives

Take four additional electives. These can be additional courses from the Fundamental Skills courses or Breadth courses listed above, or any other course which is approved by the Director as a linguistics elective. Listed below are the additional electives offered on a regular basis. Additional appropriate courses are offered irregularly or on a one-off basis. The Director will provide students with a list of possible electives each semester, and will assist students in selecting electives which are consistent with their goals and interests.

76-373 Topics in Rhetoric: Argument 9
76-378 Literacy: Educational Theory and Community Practice 9
76-451 Topics in Language Study 9
76-476 Rhetoric of Science 9
80-281 Language and Thought 9
80-380 Philosophy of Language 9
80-345 Introduction to Hispanic Literary and Cultural Studies 9
82-373 Structure of the Japanese Language 9
82-378 Japanese Conversation Analysis 9
82-388 Understanding Second Language Fluency 9
82-442 Analysis of Spoken Spanish 9
82-444 The Structure of Spanish 9
82-476 Japanese Discourse Analysis 9
82-480 Social and Cognitive Aspects of Bilingualism 9
82-488 Language Learning in a Study Abroad Context 9
80-382 Linguistics of Germanic Languages 9
11-411 Natural Language Processing 12
11-716 Graduate Seminar on Dialog Processing 6
11-721 Grammars and Lexicons 12
11-722 Grammar Formalisms 12
11-761 Language and Statistics 12
11-762 Language and Statistics II 12
15-492 Special Topic: Speech Processing 12

Language Requirement

Students must successfully complete two semesters of consecutive language courses. (Note that students may not 'test out' of this requirement. However, language courses taken at other institutions or as part of a study abroad program will typically substitute for a semester of language study.)

Senior Thesis [primary majors only]

Primary majors must complete a senior thesis (a workload equivalent to a 12-unit course) during their senior year. Topics must be approved by an advisor, who will work with the student and guide the thesis project.

Notes

Course numbers 82-305, 82-311, 32-312, 82-373, 82-378, 82-442, 82-444, 82-476 are taught in the language of analysis.

Course number 82-345 topics vary: consult with Director.

All 11.xxx and 15.xxx courses have significant Computer Science prerequisites. Interested students should check with the course instructor before registering.

Language specific "Language and Culture" courses may be taken either as electives or towards the second breadth area. However only one such course per language area may be counted towards the major.

The Major in Psychology and Biological Sciences

This unified major is intended to reflect the interdisciplinary nature of our current research in the fields of psychology and biology, as well as the national trend in some professions to seek individuals broadly trained in both the social and natural sciences. Students entering from the Dietrich College of Humanities and Social Sciences will earn a Bachelor of Science in Psychology and Biological Sciences. Students entering from the Mellon College of Sciences receive a Bachelor of Science in Biological Sciences and Psychology. Students entering from the Science and Humanities Scholars (SHS) program can complete the SHS educational core and choose either departmental order for their diploma.

Pre-Major Requirements

The unified major specifies particular pre-major requirements in the areas of mathematical sciences and statistics, natural science, and computational reasoning. Particular courses are specified in these areas because they are prerequisites for courses required in the major and therefore they are the most efficient way to complete the general education requirements for either Dietrich College or SHS. All other general education categories can be filled in any way that satisfies the requirements of the student’s college or of the SHS program.

The major in Psychology and Biological Sciences is offered only as a B.S. degree. Full curriculum requirements can be viewed here (http://coursecatalog.web.cmu.edu/previous/2013-2014/dietrichcollegeofhumanitiesandsocialsciences/departmentofpsychology/#unifieddoublemajorinpsychologyandbiologicalsciences).

Student-Defined Major Program

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Email: jd0x@andrew.cmu.edu
http://www.hss.cmu.edu/studentdefinedmajor.html

For Dietrich College students whose educational goals cannot be as adequately served by the curricula of existing majors, the college offers the opportunity to self-define a major. The procedure for establishing such a major centers on a written proposal, submitted to the Dietrich College Dean’s Office. This proposal 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, how 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, 360 units of credit and completion of the Dietrich College general education program.

Proposals and curricula are evaluated for clarity of focus, coherence and depth in related areas, and viability. Proposals should generally be developed no later than the sophomore year, and approved majors begin their program generally no later than the junior year.

The student-defined option is also possible to propose as an additional major or minor. These options extend to undergraduates from all Carnegie Mellon colleges.