

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required

Transition students are required to complete 132 total semester hours

Minimum 2.000 GPA required

BA in Cinema Studies and Journalism

See page 65.

Minor in Journalism**REQUIRED COURSES**

Complete the following six courses:

JRN U101	Journalism 1	4 SH
JRN U150	Interpreting the Day's News	4 SH
JRN U201	Journalism 2	4 SH
JRN U301	Journalism 3	4 SH
JRN U550	Law of the Press	4 SH
JRN U650	Journalism Ethics and Issues	4 SH

GPA REQUIREMENT

2.000 GPA required in the minor

LINGUISTICS

www.casdn.neu.edu/~linguistics

JANET H. RANDALL, PHD

Associate Professor and Coordinator of Linguistics Program

MATTHEWS DISTINGUISHED UNIVERSITY PROFESSORS

Harlan Lane, PhD, *Doc. ès Lettres, Psychology*

Joanne L. Miller, PhD, *Psychology*

PROFESSOR

Steven A. Sadow, PhD, *Modern Languages*

ASSOCIATE PROFESSORS

Dennis R. Cokely, PhD, *American Sign Language*

John N. Frampton, PhD, *Mathematics*

Samuel Gutmann, PhD, *Mathematics*

Michael R. Lipton, PhD, *Philosophy and Religion*

Neal Pearlmuter, PhD, *Psychology*

ASSISTANT PROFESSORS

John D. Coley, PhD, *Psychology*

Marisol Fernandez-Garcia, PhD, *Modern Languages*

LECTURER

Heather Littlefield, MA, *Linguistics*

PROFESSOR EMERITUS

Irene R. Fairley, PhD, *English*

Linguistics is the scientific study of human language. A growing and exciting field, it has links to diverse fields including cognitive psychology, philosophy, neuroscience, computer science, artificial intelligence, sociology, language teaching, anthropology, and education. Linguistics is a key component of the emerging field of cognitive science, the study of the structure and functioning of human cognitive processes.

How do children learn to speak? How is language represented in the mind? What do all languages, including sign languages, have in common? How is language different from the communication systems used by whales, bees, and chimpanzees? What do we need to program into a computer in order to converse with it? How might we think about linguistic controversies, including debates about official languages, Ebonics, gender bias, and bilingualism in education? Linguistics attempts to answer each of these questions and covers a surprisingly broad range of topics related to language and communication.

The courses in the linguistics program come from seven departments (African-American Studies, American Sign Language, English, Modern Languages, Philosophy and Religion, Psychology, and Sociology/Anthropology). Each course is cross-listed under LIN and its other departmental prefix, and can be used interchangeably in the two areas. Many linguistics courses can be taken for credit in the honors program.

Linguistics offers a variety of co-ops, including positions at local companies involved in speech recognition and production, as well as in Northeastern's own speech perception and language processing labs. Linguistics majors can also participate in a special foreign internship opportunity, doing research at the Max Planck Institute for Psycholinguistics in the Netherlands.

Students with backgrounds in linguistics have pursued advanced degrees in fields including law, cognitive science, education, English, interpreting, business, speech pathology, computer science, and linguistics itself. Other graduates have gone on to work in research, translation, special education, and robotics. See pages 327–331 for course descriptions.

BA in Linguistics**COLLEGE OF ARTS AND SCIENCES****BA CORE REQUIREMENTS**

See page 44 for requirement list.

LINGUISTICS MAJOR REQUIREMENTS**Required Courses**

Complete the following six courses:

LIN U150	Introduction to Language and Linguistics	4 SH
or ENG U150	Introduction to Language and Linguistics	4 SH
LIN U350	Linguistic Analysis	4 SH
or ENG U350	Linguistic Analysis	4 SH
LIN U412	Language and Culture	4 SH
or SOA U412	Language and Culture	4 SH
LIN U422	Phonology	4 SH
or LNL U422	Phonology	4 SH

LIN U450	Syntax	4 SH
or ENG U450	Syntax	4 SH
LIN U464	Psychology of Language	4 SH
or PSY U464	Psychology of Language	4 SH

Symbolic Logic

Complete the following course:

PHL U215	Symbolic Logic	4 SH
or LIN U215	Symbolic Logic	4 SH

Linguistics Language Requirement

See “Linguistics Major Language Requirement” on page 89.

Laboratory

Complete the two required prerequisites and corresponding lab and then one of the three laboratory courses:

PREREQUISITES

PSY U101	Foundations of Psychology	4 SH
PSY U320	Statistics in Psychological Research	4 SH
with PSY U321	Lab for PSY U320	1 SH

LABORATORY

LIN U610	Laboratory in Psycholinguistics	4 SH
or PSY U610	Laboratory in Psycholinguistics	4 SH
LIN U612	Laboratory in Cognition	4 SH
or PSY U612	Laboratory in Cognition	4 SH
PSY U924	Directed Study	4 SH

Linguistics Seminar

Complete one seminar from the following list:

LIN U654	Seminar in Linguistics	4 SH
LIN U656	Seminar in Linguistics	4 SH
LIN U658	Seminar in Psycholinguistics	4 SH
LIN U660	Seminar in Cognition	4 SH

Linguistics Electives

Complete three courses that were not taken above from the following list:

LIN U402	African-American English	4 SH
LIN U428	African Languages	4 SH
LIN U430	Applied Linguistics	4 SH
LIN U432	Romance Linguistics	4 SH
LIN U434	Bilingualism	4 SH
LIN U436	Structure of Spanish	4 SH
LIN U438	Structure of French	4 SH
LIN U452	Semantics	4 SH
LIN U454	History of English	4 SH
LIN U458	Topics in Linguistics	4 SH
LIN U460	ASL Linguistics	4 SH
LIN U466	Cognition	4 SH
LIN U520	Language and the Brain	4 SH
LIN U522	Psychology of Reading	4 SH
LIN U524	Language and Cognitive Development	4 SH
LIN U540	Philosophy of Language	4 SH
LIN U610	Laboratory in Psycholinguistics	4 SH
LIN U612	Laboratory in Cognition	4 SH
LIN U654	Seminar in Linguistics	4 SH
LIN U656	Seminar in Linguistics	4 SH
LIN U658	Seminar in Psycholinguistics	4 SH
LIN U660	Seminar in Cognition	4 SH
LIN U924	Directed Study	4 SH

Experiential Education

Complete the following course:

LIN U954	Experiential Education Directed Study	4 SH
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LINGUISTICS MAJOR CREDIT REQUIREMENTS

Complete 68 semester hours in the major.

GENERAL ELECTIVES

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required

Transition students are required to complete 132 total semester hours

Minimum 2.000 GPA required

BA in Linguistics and English**COLLEGE OF ARTS AND SCIENCES BA CORE REQUIREMENTS FOR SPECIFIED PROGRAMS**

See page 44 for requirement list.

LINGUISTICS REQUIREMENTS**Introductory Linguistics**

Complete the following course:

LIN U150	Introduction to Language and Linguistics	4 SH
or ENG U150	Introduction to Language and Linguistics	4 SH

Intermediate Linguistics

Complete the following three courses:

LIN U412	Language and Culture	4 SH
LIN U422	Phonology	4 SH
LIN U450	Syntax	4 SH

Integrative Course

Complete the following course:

LIN U454	History of English	4 SH
or ENG U454	History of English	4 SH

Experiential Education

Complete the following course:

LIN U954	Experiential Education Directed Study	4 SH
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Linguistics Elective

Complete one course from the following list:

LIN U402	African-American English	4 SH
LIN U428	African Languages	4 SH
LIN U430	Applied Linguistics	4 SH
LIN U432	Romance Linguistics	4 SH
LIN U434	Bilingualism	4 SH
LIN U436	Structure of Spanish	4 SH
LIN U438	Structure of French	4 SH
LIN U442	Sociolinguistics	4 SH
LIN U444	Linguistics in Education	4 SH
LIN U448	Issues in Linguistics	4 SH
LIN U452	Semantics	4 SH
LIN U456	Language and Gender	4 SH
LIN U458	Topics in Linguistics	4 SH
LIN U460	ASL Linguistics	4 SH

LIN U464	Psychology of Language	4 SH
LIN U540	Philosophy of Language	4 SH
LIN U654	Seminar in Linguistics	4 SH
LIN U656	Seminar in Linguistics	4 SH
LIN U924	Directed Study	4 SH
PHL U215	Symbolic Logic	4 SH

Linguistics Language Requirement

See "Linguistics Major Language Requirement" on page 89.

ENGLISH REQUIREMENTS**Literature Backgrounds**

Complete the following course:

ENG U226	Backgrounds in English and American Literature	4 SH
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Literature Survey Courses

Complete three courses from the following list:

ENG U220	Survey of English Literature 1	4 SH
ENG U221	Survey of English Literature 2	4 SH
ENG U223	Survey of American Literature 1	4 SH
ENG U224	Survey of American Literature 2	4 SH

Shakespeare

Complete one course from the following list:

ENG U489	Shakespeare on Film	4 SH
ENG U611	Shakespeare	4 SH
ENG U612	Shakespeare's Comedies	4 SH
ENG U613	Shakespeare's Tragedies	4 SH
ENG U614	Topics in Shakespeare	4 SH

Literature before 1800

Complete one course from the following list:

ENG U605	Medieval English Literature	4 SH
ENG U606	Topics in Medieval Literature	4 SH
ENG U610	Sixteenth-Century English Literature	4 SH
ENG U619	Eighteenth-Century English Literature	4 SH
ENG U620	Topics in Eighteenth-Century English Literature	4 SH
ENG U661	Early American Literature	4 SH

Literature after 1800

Complete one course from the following list:

ENG U394	Modern Film	4 SH
ENG U408	The Modern Bestseller	4 SH
ENG U409	The Modern Novel	4 SH
ENG U410	Modern Drama	4 SH
ENG U411	The Modern Short Story	4 SH
ENG U412	Contemporary Fiction	4 SH
ENG U519	American Novels 1	4 SH
ENG U520	American Novels 2	4 SH
ENG U621	Romantic Poetry	4 SH
ENG U624	Victorian Literature	4 SH
ENG U625	Topics in Victorian Literature	4 SH
ENG U626	Nineteenth-Century British Fiction	4 SH
ENG U630	Major Twentieth-Century British Novelists	4 SH
ENG U631	Twentieth-Century English Literature	4 SH
ENG U663	Early African-American Literature	4 SH
ENG U665	The American Renaissance	4 SH
ENG U667	American Realism	4 SH

ENG U668	Modern American Literature	4 SH
ENG U670	Modern African-American Literature	4 SH
ENG U671	Multiethnic Literature of the U.S.	4 SH
ENG U672	Asian-American Literature	4 SH
ENG U673	U.S. Latino/Latina Literature	4 SH
ENG U674	American Indian Literature	4 SH
ENG U676	Contemporary American Literature	4 SH
ENG U687	Modern Poetry	4 SH
ENG U688	Contemporary Poetry	4 SH

Junior/Senior Seminar

Complete the following course:

ENG U710	Junior/Senior Seminar	4 SH
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LINGUISTICS AND ENGLISH DUAL MAJOR CREDIT REQUIREMENT

Complete 72 semester hours in the major.

GENERAL ELECTIVES

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required

Transition students are required to complete 132 total semester hours

Minimum 2.000 GPA required

BA in Linguistics and Psychology**COLLEGE OF ARTS AND SCIENCES****BA CORE REQUIREMENTS FOR SPECIFIED PROGRAMS**

See page 44 for requirement list.

LINGUISTICS REQUIREMENTS**Introductory Linguistics**

Complete the following course:

LIN U150	Introduction to Language and Linguistics	4 SH
or ENG U150	Introduction to Language and Linguistics	4 SH

Intermediate/Advanced Linguistics

Complete the following four courses:

LIN U350	Linguistic Analysis	4 SH
or ENG U350	Linguistic Analysis	4 SH
LIN U412	Language and Culture	4 SH
or SOA U412	Language and Culture	4 SH
LIN U422	Phonology	4 SH
or LNL U422	Phonology	4 SH
LIN U450	Syntax	4 SH
or ENG U450	Syntax	4 SH

Experiential Education

Complete either an experiential education directed study or two junior/senior project courses:

LIN U954	Experiential Education Directed Study	4 SH
PSY U951	Experiential Education Directed Study	4 SH
PSY U970	Junior/Senior Project 1	4 SH
with PSY U971	Junior/Senior Project 2	4 SH

Linguistics Language Requirement

See “Linguistics Major Language Requirement” on page 89.

Linguistics Elective

Complete one course from the following list:

LIN U402	African-American English	4 SH
LIN U428	African Languages	4 SH
LIN U430	Applied Linguistics	4 SH
LIN U432	Romance Linguistics	4 SH
LIN U434	Bilingualism	4 SH
LIN U436	Structure of Spanish	4 SH
LIN U438	Structure of French	4 SH
LIN U442	Sociolinguistics	4 SH
LIN U444	Linguistics in Education	4 SH
LIN U448	Issues in Linguistics	4 SH
LIN U452	Semantics	4 SH
LIN U454	History of English	4 SH
LIN U456	Language and Gender	4 SH
LIN U458	Topics in Linguistics	4 SH
LIN U460	ASL Linguistics	4 SH
LIN U540	Philosophy of Language	4 SH
LIN U654	Seminar in Linguistics	4 SH
LIN U656	Seminar in Linguistics	4 SH
LIN U924	Directed Study	4 SH
PHL U215	Symbolic Logic	4 SH

PSYCHOLOGY REQUIREMENTS**Introductory and Intermediate Psychology**

Complete the following two courses with corresponding lab:

PSY U101	Foundations of Psychology	4 SH
PSY U320	Statistics in Psychological Research	4 SH
with PSY U321	Lab for PSY U320	1 SH

Advanced Psychology

Complete the following two courses:

PSY U402	Social Psychology	4 SH
PSY U466	Cognition	4 SH

Psychology Lab

Complete one of the following lab courses:

PSY U610	Laboratory in Psycholinguistics	4 SH
PSY U612	Laboratory in Cognition	4 SH
PSY U924	Directed Study	4 SH

Psychology Seminar

Complete one of the following seminars:

PSY U658	Seminar in Psycholinguistics	4 SH
PSY U660	Seminar in Cognition	4 SH

Integrative Courses

Complete the following course:

LIN U464	Psychology of Language	4 SH
or PSY U464	Psychology of Language	4 SH

Psychology Elective

Complete two courses from the following list:

PSY U356	Nonverbal Communication	4 SH
PSY U404	Developmental Psychology	4 SH
PSY U450	Learning and Motivation	4 SH
PSY U452	Introduction to Sensation and Perception	4 SH
PSY U458	Psychobiology	4 SH

PSY U520	Language and the Brain	4 SH
PSY U522	Psychology of Reading	4 SH
PSY U524	Language and Cognitive Development	4 SH
PSY U526	Categorization and Reasoning	4 SH
PSY U610	Laboratory in Psycholinguistics	4 SH
PSY U612	Laboratory in Cognition	4 SH
PSY U658	Seminar in Psycholinguistics	4 SH
PSY U660	Seminar in Cognition	4 SH
PSY U924	Directed Study	4 SH

LINGUISTICS AND PSYCHOLOGY DUAL MAJOR CREDIT REQUIREMENT

Complete 72 semester hours in the major.

GENERAL ELECTIVES

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required

Transition students are required to complete 132 total semester hours

Minimum 2.000 GPA required

Linguistics Major Language Requirement

In addition to the language courses taken for the BA core, complete two courses in any combination of foreign language, language family, or language structure from the following list:

AMERICAN SIGN LANGUAGE

ASL U101	Elementary ASL 1	4 SH
ASL U102	Elementary ASL 2	4 SH
ASL U301	Intermediate ASL 1	4 SH
ASL U302	Intermediate ASL 2	4 SH
ASL U501	Advanced ASL 1	2 SH
ASL U502	Advanced ASL 2	2 SH

ARABIC

LNA U101	Elementary Arabic 1	4 SH
LNA U102	Elementary Arabic 2	4 SH
LNA U301	Arabic Conversation and Composition	4 SH

CHINESE

LNC U101	Elementary Chinese 1	4 SH
LNC U102	Elementary Chinese 2	4 SH
LNC U301	Chinese Conversation and Composition 1	4 SH
LNC U302	Chinese Conversation and Composition 2	4 SH
LNC U501	Advanced Chinese 1	4 SH
LNC U502	Advanced Chinese 2	4 SH

FRENCH

LNF U101	Elementary French 1	4 SH
LNF U102	Elementary French 2	4 SH
LNF U301	French Conversation and Composition 1	4 SH
LNF U302	French Conversation and Composition 2	4 SH
LNF U501	Advanced French	4 SH

GERMAN

LNG U101	Elementary German 1	4 SH
LNG U102	Elementary German 2	4 SH
LNG U301	German Conversation and Composition	4 SH

HEBREW

LNH U101	Elementary Hebrew 1	4 SH
LNH U102	Elementary Hebrew 2	4 SH

ITALIAN

LNI U101	Elementary Italian 1	4 SH
LNI U102	Elementary Italian 2	4 SH
LNI U301	Italian Conversation and Composition 1	4 SH
LNI U302	Italian Conversation and Composition 2	4 SH
LNI U501	Advanced Italian 1	4 SH
LNI U502	Advanced Italian 2	4 SH

JAPANESE

LNJ U101	Elementary Japanese 1	4 SH
LNJ U102	Elementary Japanese 2	4 SH
LNJ U301	Japanese Conversation and Composition	4 SH

RUSSIAN

LNR U101	Elementary Russian 1	4 SH
LNR U102	Elementary Russian 2	4 SH
LNR U301	Russian Conversation and Composition	4 SH

SPANISH

LNS U101	Elementary Spanish 1	4 SH
LNS U102	Elementary Spanish 2	4 SH
LNS U301	Spanish Conversation and Composition 1	4 SH
LNS U302	Spanish Conversation and Composition 2	4 SH
LNS U501	Advanced Spanish	4 SH

LANGUAGE FAMILY

LIN U428	African Languages	4 SH
LIN U432	Romance Linguistics	4 SH

LANGUAGE STRUCTURE

LIN U402	African-American English	4 SH
LIN U436	Structure of Spanish	4 SH
LIN U438	Structure of French	4 SH
LIN U460	ASL Linguistics	4 SH

Minor in Linguistics**REQUIRED COURSES**

Complete the following course:

LIN U150	Introduction to Language and Linguistics	4 SH
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Complete two of the following courses:

LIN U350	Linguistic Analysis	4 SH
LIN U422	Phonology	4 SH
LIN U450	Syntax	4 SH

ELECTIVE COURSES

Complete two courses from the Department of Linguistics (or any of its cross-listed equivalents) in the 200–699 range.

GPA REQUIREMENT

2.000 GPA required in the minor

For more information on the linguistics minor, contact the program director, Professor Janet Randall (565 Holmes), at 617.373.3678 or at j.randall@neu.edu.

MATHEMATICS

www.math.neu.edu

ROBERT C. MCOWEN, PHD

Professor and Chair

MATTHEWS DISTINGUISHED UNIVERSITY PROFESSOR

Mikhail Shubin, PhD

PROFESSORS

Samuel J. Blank, PhD
 Bohumil Cenk, ScD
 Stanley J. Eigen, PhD
 Terence J. Gaffney, PhD
 Maurice E. Gilmore, PhD
 Arshag B. Hajian, PhD
 Anthony Iarrobino, PhD
 Christopher K. King, PhD
 Venkatrama Lakshmibai, PhD
 Marc N. Levine, PhD
 Mikhail Malioutov, PhD
 Richard D. Porter, PhD
 Egon Schulte, PhD
 Jayant M. Shah, PhD
 Alexandru I. Suci, PhD
 Chuu-Lian Terng, PhD
 Jerzy M. Weyman, PhD
 Andrei V. Zelevinsky, PhD

ASSOCIATE PROFESSORS

Mark Bridger, PhD
 Robert W. Case, PhD
 Aidong Adam Ding, PhD
 John N. Frampton, PhD
 Eugene H. Gover, PhD
 Samuel Gutmann, PhD
 Solomon M. Jekel, PhD
 Donald R. King, PhD
 Nishan Krikorian, PhD
 Alex Martsinkovsky, PhD
 David Massey, PhD
 Mark B. Ramras, PhD
 Martin Schwarz, PhD
 Thomas O. Sherman, PhD
 Gordana G. Todorov, PhD

ASSISTANT PROFESSOR

Maxim Braverman, PhD

CLINICAL ASSISTANT PROFESSOR OF MATHEMATICAL PRACTICE

Carla B. Oblas, MS

LECTURERS

Rekha Bai, PhD

Joan Campbell, BS

John Lindhe, MS

Robert A. Lupi, MA

Steven W. Olson, ME

Shu-Shih Wu, PhD

PROFESSORS EMERITI

Holland C. Filgo, PhD

Alberto R. Galmarino, PhD

Jack Warga, PhD

Mathematics is of ever-increasing importance to our society and everyday life. It has long been the language of science and technology, and provides a rich source of methods for analyzing and solving problems encountered in the physical world. Today, mathematics is essential in virtually all fields of human endeavor, including business, the arts, and the social sciences.

The Bachelor of Arts degree requires at least eleven mathematics courses and two physics courses, in addition to the study of a foreign language; this program is appropriate for students who wish a broader liberal arts education. The Bachelor of Science degree requires at least fourteen mathematics courses and two physics courses but no foreign language study; it is more specialized, and it is recommended for those strongly interested in mathematics and science. The department also offers a minor degree in mathematics.

The major programs provide flexibility with elective courses. Students may take advantage of a range of interdisciplinary programs and may join a major in mathematics with one in such fields as computer science, physics, and biology.

Exceptional students are accepted into the honors program, and have the option to enroll in honors sections of several of their mathematics courses. All math majors may benefit from co-op opportunities in the scientific and business communities in Boston and elsewhere. Almost every job involves mathematically stimulating work that enables students to find out how math is used in the world around us.

Many of the mathematics courses that we offer use computers for visualization, modeling, and numerical approximation. The math computer lab features twenty-eight personal computers supported by student mentors in a pleasant physical environment.

Students planning to teach secondary-school mathematics must major in mathematics and take a specific minor in education, which includes course work and student teaching.

Mathematical training may lead to opportunities in applied research (natural sciences, engineering, economics, management, computer science) as well as in mathematical research, teaching, or industry. See pages 358–363 for course descriptions.

BA in Mathematics**COLLEGE OF ARTS AND SCIENCES****BA CORE REQUIREMENTS**

See page 44 for requirement list.

MATHEMATICS MAJOR REQUIREMENTS FOR BA***Problem Solving***

Complete the following course:

MTH U170 Math Discovery and Computers 4 SH

History of Mathematics

Complete the following course:

MTH U201 History of Mathematics 4 SH

Calculus

Complete the following three courses:

MTH U241 Calculus 1 for Science and Engineering 4 SH

MTH U242 Calculus 2 for Science and Engineering 4 SH

MTH U341 Calculus 3 for Science and Engineering 4 SH

Intermediate and Advanced Math

Complete four courses from the following list:

MTH U371 Linear Algebra 4 SH

MTH U550 Real Analysis 4 SH

or MTH U565 Topology 4 SH

MTH U560 Geometry 4 SH

or MTH U430 Number Theory 4 SH

MTH U575 Group Theory 4 SH

Mathematics Electives

Complete two electives from mathematics 400 or above:

MTH U401 to MTH U799

Required Physics

Complete the following two courses and corresponding labs:

PHY U161 Physics 1 4 SH

with PHY U162 Lab for PHY U161 1 SH

or PHY U151 Physics for Engineering 1 4 SH

with PHY U152 Lab for PHY U151 1 SH

PHY U165 Physics 2 4 SH

with PHY U166 Lab for PHY U165 1 SH

or PHY U155 Physics for Engineering 2 4 SH

with PHY U156 Lab for PHY U155 1 SH

MATHEMATICS MAJOR GRADE REQUIREMENT

A grade of C or higher is required in all mathematics courses at level 399 and lower.

EXPERIENTIAL EDUCATION REQUIREMENT

Complete one course in experiential education. Please see department for approved courses.

MATHEMATICS MAJOR CREDIT REQUIREMENT

Complete 50 semester hours in the major.

UPPER-DIVISION ELECTIVES

Complete three general electives at 300 level or above.

GENERAL ELECTIVES

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required
 Transition students are required to complete 132 total semester hours
 Minimum 2.000 GPA required

BS in Mathematics**COLLEGE OF ARTS AND SCIENCES BS CORE REQUIREMENTS FOR NATURAL SCIENCE MAJORS**

See page 46 for requirement list.

MATHEMATICS MAJOR REQUIREMENTS FOR BS**Problem Solving**

Complete the following course:

MTH U170 Math Discovery and Computers 4 SH

Calculus

Complete the following three courses with a grade of C or higher:

MTH U241 Calculus 1 for Science and Engineering 4 SH

MTH U242 Calculus 2 for Science and Engineering 4 SH

MTH U341 Calculus 3 for Science and Engineering 4 SH

Intermediate and Advanced Math

Complete the following five courses:

MTH U345 Ordinary Differential Equations 4 SH

MTH U371 Linear Algebra 4 SH

MTH U481 Probability and Statistics 4 SH

MTH U550 Real Analysis 4 SH

MTH U575 Group Theory 4 SH

Mathematics Electives

Complete five mathematics courses at 400 level or above:

MTH U401 to MTH U799

Required Physics

Complete the following two courses and corresponding labs:

PHY U161 Physics 1 4 SH

with PHY U162 Lab for PHY U161 1 SH

or PHY U151 Physics for Engineering 1 4 SH

with PHY U152 Lab for PHY U151 1 SH

PHY U165 Physics 2 4 SH

with PHY U166 Lab for PHY U165 1 SH

or PHY U155 Physics for Engineering 2 4 SH

with PHY U156 Lab for PHY U155 1 SH

MATHEMATICS MAJOR GRADE REQUIREMENT

A grade of C or higher is required in all mathematics courses at level 399 and lower.

EXPERIENTIAL EDUCATION REQUIREMENT

Complete one course in experiential education. Please see department for approved courses.

MATHEMATICS MAJOR CREDIT REQUIREMENT

Complete 66 semester hours in the major.

UPPER-DIVISION ELECTIVES

Complete three electives at the 300 level or above.

GENERAL ELECTIVES

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required
 Transition students are required to complete 132 total semester hours
 Minimum 2.000 GPA required

BS in Computer Science and Mathematics

See page 170.

Minor in Mathematics**REQUIRED COURSES**

Complete the following two courses:

MTH U241 Calculus 1 for Science and Engineering 4 SH

MTH U242 Calculus 2 for Science and Engineering 4 SH

Biology majors may substitute the following two courses:

MTH U151 Calculus and Differential Equations 4 SH
 for Biology 1

MTH U152 Calculus and Differential Equations 4 SH
 for Biology 2

INTEGRATIVE COURSES

Complete two courses from the following list:

MTH U430 Number Theory 4 SH

MTH U433 Combinatorial Mathematics 4 SH

MTH U560 Geometry 4 SH

MTH U565 Topology 4 SH

MTH U571 Advanced Linear Algebra 4 SH

MTH U575 Group Theory 4 SH

MTH U576 Rings and Fields 4 SH

MATHEMATICS ELECTIVES

Complete two upper-division courses at 300 level or above:

MTH U300 to MTH U699

GPA REQUIREMENT

2.000 GPA required in the minor

MODERN LANGUAGES

www.modlang.neu.edu

DENNIS R. COKELY, PhD

Associate Professor and Chair

MATTHEWS DISTINGUISHED UNIVERSITY PROFESSOR

Harlow L. Robinson, PhD

PROFESSORS

Thomas Havens, PhD

Inez Hedges, PhD

Constance H. Rose, PhD

Stephen A. Sadow, PhD

ASSOCIATE PROFESSORS

Walter M. Gershuny, PhD
 Christina Gilmartin, PhD
 Bonnie S. McSorley, PhD
 Holbrook C. Robinson, PhD
 John Spiegel, PhD

ASSISTANT PROFESSORS

Marisol Fernandez-Garcia, PhD
 Rei Okamoto, PhD
 Alan West-Duran, PhD

LECTURERS

Michele Cao-Danh, PhD
 Catherine Dunand, MA
 Paul LaPlante, MA
 Luigia Gina Maiellaro, PhD
 Sermin Muctehitzade, MA
 Rita Schneider, MA
 Claudia Sokol, MD

The study of modern languages can benefit all students, regardless of their majors. The multicultural world in which we live requires increased communication among varied and often divergent cultures. Learning a new language and its culture enables students to cross cultural barriers and to achieve a more cosmopolitan, open-minded, and sensitive view of the world.

The major seeks to ensure that students become as fluent as possible in a given language and introduces them to the relevant culture of that language. For this reason, the students take a number of language classes as well as literature, cinema, and general civilization courses. In addition, students are required to participate in study abroad and are urged to consider participating in international co-op, which prepares students to function on an everyday level in a foreign country.

The major in modern languages is currently available in Spanish and in French. It is also possible to minor in French or Spanish.

A major in a modern language can form the basis for careers in teaching at the elementary, secondary, or college level; international business relations; high-tech fields; government service; journalism; library science; world affairs; travel; and community service, especially in Spanish-speaking areas. See pages 331–342 for course descriptions.

BA in French**COLLEGE OF ARTS AND SCIENCES****BA CORE REQUIREMENTS**

See page 44 for requirement list.

FRENCH MAJOR REQUIREMENTS**Language Courses**

Complete the following three courses:

LNF U301	French Conversation and Composition 1	4 SH
LNF U302	French Conversation and Composition 2	4 SH
LNF U501	Advanced French	4 SH

World Perspective

Complete the following two courses:

LNF U150	Introduction to French Culture	4 SH
LNM U250	International Perspectives	4 SH

Language and Linguistics

Complete the following course:

ENG U150	Introduction to Language and Linguistics	4 SH
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Literature and Culture

Complete the following five courses:

LNF U280	French Film and Culture	4 SH
LNF U550	Masterpieces of French Literature 1	4 SH
LNF U551	Masterpieces of French Literature 2	4 SH
LNF U650	French Poetry	4 SH
LNF U651	The Splendid Century	4 SH
or LNF U652	Age of Enlightenment	4 SH

French Seminar

Complete the following seminar:

LNF U670	Topics in French	4 SH
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Study Abroad/Experiential Education

See department for details.

Capstone

Complete the following capstone:

LNF U700	Capstone Seminar	1 SH
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FRENCH MAJOR CREDIT REQUIREMENT

Complete 68 semester hours in the major, which includes 16 semester hours of study abroad.

GENERAL ELECTIVES

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required

Transition students are required to complete 132 total semester hours

Minimum 2.000 GPA required

BA in Spanish**COLLEGE OF ARTS AND SCIENCES****BA CORE REQUIREMENTS**

See page 44 for requirement list.

SPANISH MAJOR REQUIREMENTS**Language Requirements**

Complete the following three courses:

LNS U301	Spanish Conversation and Composition 1	4 SH
LNS U302	Spanish Conversation and Composition 2	4 SH
LNS U501	Advanced Spanish	4 SH

Language and Linguistics

Complete the following course:

ENG U150	Introduction to Language and Linguistics	4 SH
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Culture

Complete the following four courses:

LNM U250	International Perspectives	4 SH
LNS U150	Spanish Culture	4 SH
LNS U160	Latin American Culture	4 SH
LNS U240	Latin American Film	4 SH

Literature

Complete the following four courses:

LNS U250	Cervantes and His Times	4 SH
LNS U550	Masterpieces of Spanish Literature: Twelfth–Seventeenth Century	4 SH
LNS U551	Masterpieces of Spanish Literature: Eighteenth–Twentieth Century	4 SH
LNS U650	Latin American Literature	4 SH

Spanish Seminar

Complete the following seminar:

LNS U670	Spanish Seminar	4 SH
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Study Abroad/Experiential Education

See department for details.

Capstone

Complete the following capstone:

LNS U700	Capstone Seminar	1 SH
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SPANISH MAJOR CREDIT REQUIREMENT

Complete 64 semester hours in the major, which includes 16 semester hours of study abroad.

GENERAL ELECTIVES

Additional courses taken beyond college and major course requirements to satisfy graduation credit requirements.

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

128 total semester hours required

Transition students are required to complete 132 total semester hours

Minimum 2.000 GPA required

BA in Cinema Studies and Modern Languages

See page 65.

Minor in French**REQUIRED COURSES**

Complete the following three courses:

LNF U150	Introduction to French Culture	4 SH
LNF U301	French Conversation and Composition 1	4 SH
LNF U302	French Conversation and Composition 2	4 SH

MASTERPIECES SERIES

Complete one of the following courses:

LNF U550	Masterpieces of French Literature 1	4 SH
or LNF U551	Masterpieces of French Literature 2	4 SH

ADVANCED ELECTIVES

Complete two courses from the following list. One of the two courses can be the remaining half of the Masterpieces Series:

LNF U550	Masterpieces of French Literature 1	4 SH
or LNF U551	Masterpieces of French Literature 2	4 SH
LNF U650	French Poetry	4 SH
LNF U651	The Splendid Century	4 SH
LNF U652	Age of Enlightenment	4 SH
LNF U653	Romantic Heritage	4 SH
LNF U670	Topics in French	4 SH

GPA REQUIREMENT

2.000 GPA required in the minor

Minor in Spanish**REQUIRED COURSES**

Complete the following three courses:

LNS U150	Spanish Culture	4 SH
or LNS U160	Latin American Culture	4 SH
LNS U301	Spanish Conversation and Composition 1	4 SH
LNS U302	Spanish Conversation and Composition 2	4 SH

MASTERPIECES SERIES

Complete one of the following courses:

LNS U550	Masterpieces of Spanish Literature: Twelfth–Seventeenth Century	4 SH
or LNS U551	Masterpieces of Spanish Literature: Eighteenth–Twentieth Century	4 SH

ADVANCED ELECTIVES

Complete two courses from the following list. One of the two courses can be the remaining half of the Masterpieces Series:

CIN U265	Spanish Civil War on Film	4 SH
LNS U170	Caribbean Literature and Culture	4 SH
LNS U240	Latin American Film	4 SH
LNS U250	Cervantes and His Times	4 SH
LNS U501	Advanced Spanish	4 SH
LNS U550	Masterpieces of Spanish Literature: Twelfth–Seventeenth Century	4 SH
or LNS U551	Masterpieces of Spanish Literature: Eighteenth–Twentieth Century	4 SH
LNS U650	Latin American Literature	4 SH
LNS U651	Spanish Golden Age	4 SH
LNS U670	Spanish Seminar	4 SH

GPA REQUIREMENT

2.000 GPA required in the minor