

HNR U302	Topics in Research and Inquiry: Focus on Analysis	4 SH	PHL U465	Advanced Medical Ethics	4 SH
HNR U322	Topics in Urban Experience: Focus on Analysis	4 SH	PHL U500	Theory of Knowledge	4 SH
HNR U342	Topics in Contemporary Issues: Focus on Analysis	4 SH	PHL U505	Metaphysics	4 SH
HST U313	Gender and Revolution in Russia and China	4 SH	PHL U510	Philosophy of Science	4 SH
HST U351	Japan since 1850	4 SH	PHL U515	Advanced Logic	4 SH
HST U372	Gender and Society in Modern Europe	4 SH	PHL U520	Philosophy of Logic	4 SH
HST U375	Culture and Identity in Early Modern England	4 SH	PHL U525	Philosophy of Social Science	4 SH
HST U387	Soviet Secret Police	4 SH	PHL U530	Philosophy of Psychology	4 SH
HST U388	Borderlands: World War II in Eastern Europe	4 SH	PHL U535	Philosophy of Mind	4 SH
HST U411	Environment in the Age of Discovery	4 SH	PHL U540	Philosophy of Language	4 SH
HST U421	History through Film	4 SH	PHL U901	Topics in Philosophy Seminar	4 SH
HST U990	Editing for Historical Publication	4 SH	PHL U902	Great Philosophers Seminar	4 SH
IAF U400	International Conflict and Negotiation	4 SH	PHL U903	Seminar in Religion	4 SH
INT U310	Water Resources Policy and Management	4 SH	PHL U904	Major Figures in Religious Studies	4 SH
INT U600	Contemporary Issues: Race, Science, and Technology	4 SH	POL U307	Public Policy and Administration	4 SH
LIN U450	Syntax	4 SH	POL U370	Religion and Politics	4 SH
LNS U436	Structure of Spanish	4 SH	POL U390	Science, Technology, and Public Policy	4 SH
LNS U550	Masterpieces of Spanish Literature: Twelfth–Seventeenth Century	4 SH	POL U405	International Political Economy	4 SH
LNS U551	Masterpieces of Spanish Literature: Eighteenth–Twentieth Century	4 SH	POL U415	Ethnic Conflict in Comparative Politics	4 SH
MTH U430	Number Theory	4 SH	POL U425	U.S. Foreign Policy	4 SH
MTH U481	Probability and Statistics	4 SH	POL U435	Politics in Western Europe	4 SH
MTH U525	Applied Analysis	4 SH	POL U445	Politics in Central and Eastern Europe	4 SH
MTH U530	Numerical Analysis	4 SH	POL U465	Government and Politics in the Middle East	4 SH
MTH U532	Numerical Solutions of Differential Equations	4 SH	POL U470	Arab-Israeli Conflict	4 SH
MTH U541	Advanced Calculus	4 SH	POL U480	Government and Politics in Japan	4 SH
MTH U545	Fourier Series and PDEs	4 SH	POL U487	Politics of Developing Nations	4 SH
MTH U550	Real Analysis	4 SH	SOA U500	Latin American Society and Development	4 SH
MTH U555	Complex Variables	4 SH	SOA U505	Native North Americans	4 SH
MTH U560	Geometry	4 SH	SOA U510	Anthropology of Africa	4 SH
MTH U565	Topology	4 SH	SOC U402	Feminist Perspectives on Society	4 SH
MTH U571	Advanced Linear Algebra	4 SH	SOC U406	Class, Crime, and the Legal System	4 SH
MTH U575	Group Theory	4 SH	SOC U440	Sociology of Human Service Organizations	4 SH
MTH U576	Rings and Fields	4 SH	SOC U470	Social Conflict and Community Service	4 SH
MTH U581	Statistics and Stochastic Processes	4 SH	SOC U485	Environment, Technology, and Society	4 SH
MTH U585	Introduction to Actuarial Math	4 SH	SOC U525	American Demographics	4 SH
MUS U311	Historical Traditions 1: America	4 SH	SOC U528	Computers and Society	4 SH
PHL U265	Latin American Religions	4 SH	THE U315	Theatre/Modernism	4 SH
PHL U325	Ancient Philosophy	4 SH			
PHL U330	Modern Philosophy	4 SH			
PHL U340	Philosophy of Human Nature	4 SH			
PHL U390	Cults and Sects	4 SH			
PHL U435	Moral Philosophy	4 SH			
PHL U440	Aesthetics	4 SH			
PHL U445	Philosophy of Religion	4 SH			
PHL U460	Philosophy and Literature	4 SH			

AFRICAN-AMERICAN STUDIES

www.afrostudies.neu.edu

ROBERT L. HALL, PhD

Associate Professor and Acting Chair

**COLLEGE OF ARTS AND SCIENCES
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 Edward A. Bullins, MFA, *Center for the Arts*
 William F. S. Miles, PhD, *Political Science*
 Peter C. Murrell, PhD, *Education*

The diverse experiences of black people—in the United States, Africa, the Caribbean, South America, and other parts of the world—are the focus of the field of African-American studies. The curriculum is interdisciplinary in approach and includes historical, social and behavioral, and cultural studies. International studies and contemporary public policy issues are also integral parts of the program. In class, in co-op, and in internships, students apply theoretical knowledge to real-world problems and concerns. Study-abroad programs exist in Ghana, Egypt, South Africa, the Caribbean, and Central and South America.

Students with training in African-American studies have the knowledge to meet the challenges posed by diverse racial, cultural, and ethnic groups in the United States and abroad. Many graduates attend professional schools or teach at the secondary or the college level. Others work in museums, libraries, or research centers; in business; or in public service, social service, or law-enforcement agencies. See pages 263–269 for course descriptions.

BA in African-American Studies**COLLEGE OF ARTS AND SCIENCES BA CORE REQUIREMENTS**

See page 48 for requirement list.

AFRICAN-AMERICAN STUDIES MAJOR REQUIREMENTS**Introductory Courses**

Complete the following three courses:

AFR U101	African-American Studies	4 SH
AFR U109	Foundations of Black Culture 1	4 SH
AFR U185	Gender in the African Diaspora	4 SH

Literature

Complete the following course:

AFR U663	Early African-American Literature	4 SH
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Research and Seminar

Complete the following two courses:

AFR U310	Applied Research in the African Diaspora	4 SH
AFR U700	Advanced Seminar	4 SH

Electives

Complete six African-American Studies courses at the intermediate and advanced level from the following list: AFR U300 to AFR U699

EXPERIENTIAL EDUCATION REQUIREMENT

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

AFRICAN-AMERICAN STUDIES MAJOR CREDIT REQUIREMENT

Complete 48 semester hours for 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 African-American Studies**COLLEGE OF ARTS AND SCIENCES BS CORE REQUIREMENTS FOR SOCIAL SCIENCE MAJORS**

See page 51 for requirement list.

AFRICAN-AMERICAN STUDIES MAJOR REQUIREMENTS**Introductory Courses**

Complete the following three courses:

AFR U101	African-American Studies	4 SH
AFR U109	Foundations of Black Culture 1	4 SH
AFR U185	Gender in the African Diaspora	4 SH

Literature

Complete the following course:

AFR U663	Early African-American Literature	4 SH
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Research and Seminar

Complete the following two courses:

AFR U310	Applied Research in the African Diaspora	4 SH
AFR U700	Advanced Seminar	4 SH

Electives

Complete six African-American Studies courses at the intermediate and advanced level from the following list: AFR U300 to AFR U699

EXPERIENTIAL EDUCATION REQUIREMENT

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

AFRICAN-AMERICAN STUDIES MAJOR CREDIT REQUIREMENT

Complete 48 semester hours for 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

Minor in African-American Studies**REQUIRED COURSES**

Complete the following four courses:

AFR U101	African-American Studies	4 SH
AFR U109	Foundations of Black Culture 1	4 SH
AFR U185	Gender in the African Diaspora	4 SH
AFR U310	Applied Research in the African Diaspora	4 SH
or AFR U700	Advanced Seminar	4 SH

ELECTIVE COURSE

Complete one additional course in consultation with your adviser.

GPA REQUIREMENT

2.000 GPA required in the minor

AMERICAN SIGN LANGUAGE–ENGLISH INTERPRETING

www.asl.neu.edu

DENNIS R. COKELY, PhD

Associate Professor and Director

ASSOCIATE PROFESSOR

Richard Peterson, PhD

LECTURERS

Alma L. Bournazian, MS

Cathy Cogen, MEd

James Lipsky, MA

Elizabeth Lucey, MA

Paul Schreyer, MEd

American Sign Language (ASL) is a language used by large numbers of people in the United States and Canada. By mastering ASL, students gain both access to the culture of Deaf America and insights into features of spoken language that are

often taken for granted. Learning a modally different language gives students a new sense of the power of language and an appreciation of how it shapes their world. In this way, the mastery of ASL sharpens critical-thinking skills.

The program provides a firm foundation in language, linguistics, culture, and interpreting, plus a broad-based liberal arts education. American Sign Language courses are integral to degrees in human services with a specialization in Deaf studies and in linguistics with a focus on ASL.

Opportunities for ASL–English interpreters continue to increase, due to federal and state legislation. Graduates work as interpreters in such diverse areas as higher education, business, social service agencies, advanced technology, and theatre.

Northeastern's National and Regional Interpreter Education Centers seek to enhance the skills of interpreters currently working in the field and to increase the supply of competent interpreters throughout the United States. See pages 277–279 for course descriptions.

BS in American Sign Language**COLLEGE OF ARTS AND SCIENCES BS CORE REQUIREMENTS FOR ARTS/HUMANITIES MAJORS**

See page 50 for requirement list.

AMERICAN SIGN LANGUAGE MAJOR REQUIREMENTS***American Sign Language***

Complete the following four courses:

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

Social and Cultural World

Complete the following two courses:

ASL U150	Deaf People in Society	4 SH
ASL U350	Deaf History and Culture	4 SH

Linguistics

Complete the following three courses:

ASL U460	ASL Linguistics	4 SH
ASL U560	ASL-English Contrastive Analysis	4 SH
LIN U150	Introduction to Language and Linguistics	4 SH

Interpreting

Complete the following five courses:

ASL U510	Interpreting Inquiry Texts	4 SH
ASL U515	Interpreting Narrative Texts	4 SH
ASL U550	The Interpreting Profession	2 SH
ASL U610	Interpreting Expository Texts	4 SH
ASL U615	Interpreting Persuasive Texts	4 SH

Interpreting Practicum

Complete the following practicum:

ASL U950	Interpreting Practicum	4 SH
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Ethics

Complete the following two courses:

ASL U650	Ethical Decision Making	4 SH
ASL U651	Ethical Fieldwork	2 SH

Research Capstone

Complete the following capstone course:

ASL U960 Interpreting Research Practicum 4 SH

EXPERIENTIAL EDUCATION REQUIREMENT

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

GPA REQUIREMENT

Minimum 2.750 GPA required in all ASL courses

Minimum 2.500 overall GPA required

AMERICAN SIGN LANGUAGE CREDIT REQUIREMENT

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

BS in American Sign Language and Human Services**COLLEGE OF ARTS AND SCIENCES BS CORE REQUIREMENTS FOR ARTS/HUMANITIES MAJORS**

See page 50 for requirement list.

AMERICAN SIGN LANGUAGE AND HUMAN SERVICES DUAL-MAJOR REQUIREMENTS**American Sign Language**

Complete the following four courses:

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

Social and Cultural World

Complete the following two courses:

ASL U150 Deaf People in Society 4 SH

ASL U350 Deaf History and Culture 4 SH

Linguistics

Complete the following three courses:

ASL U460 ASL Linguistics 4 SH

ASL U560 ASL-English Contrastive Analysis 4 SH

LIN U150 Introduction to Language and Linguistics 4 SH

Interpreting

Complete the following course:

ASL U510 Interpreting Inquiry Texts 4 SH

Human Services

Complete the following eight courses:

HS U101 Human Services Professions 4 SH

HS U300 Counseling in Human Services 4 SH

HS U700 Senior Seminar in Human Services 4 SH

PSY U101 Foundations of Psychology 4 SH

SOC U101 Introduction to Sociology 4 SH

SOC U324 Human Services Research and Evaluation 4 SH

SOC U401 Social Policy and Intervention 4 SH

SOC U440 Sociology of Human Service Organizations 4 SH

Integrative Course Work

Complete the following two courses:

ASL U960 Interpreting Research Practicum 4 SH

HS U940 Human Services Internship 6 SH

EXPERIENTIAL EDUCATION REQUIREMENT

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

AMERICAN SIGN LANGUAGE AND HUMAN SERVICES MAJOR GPA REQUIREMENT

Minimum 2.750 GPA required in all ASL courses

Minimum 2.500 overall GPA required

AMERICAN SIGN LANGUAGE AND HUMAN SERVICES MAJOR CREDIT REQUIREMENT

Complete 82 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

BS in American Sign Language and Psychology**COLLEGE OF ARTS AND SCIENCES BS CORE REQUIREMENTS FOR ARTS/HUMANITIES MAJORS**

See page 50 for requirement list.

AMERICAN SIGN LANGUAGE AND PSYCHOLOGY DUAL-MAJOR REQUIREMENTS**American Sign Language**

Complete the following four courses:

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

Social and Cultural World

Complete the following two courses:

ASL U150 Deaf People in Society 4 SH

ASL U350 Deaf History and Culture 4 SH

Linguistics

Complete the following three courses:

ASL U460 ASL Linguistics 4 SH

ASL U560 ASL-English Contrastive Analysis 4 SH

LIN U150 Introduction to Language and Linguistics 4 SH

Interpreting

Complete the following course:

ASL U510 Interpreting Inquiry Texts 4 SH

Psychology

Complete the following four courses:

PSY U101 Foundations of Psychology 4 SH

PSY U320 Statistics in Psychological Research 4 SH

PSY U464 Psychology of Language 4 SH

or PSY U466 Cognition 4 SH

PSY U524 Language and Cognitive Development 4 SH

Psychology Lab or Directed Study

Complete one additional psychology lab or one psychology directed study:

LAB

PSY U536 Developing Education and Intervention Programs for Eating Disorders 4 SH

PSY U600 Research Design in Psychology 4 SH

PSY U602 Experiments in Learning and Motivation 4 SH

PSY U604 Laboratory in Learning and Motivation 4 SH

PSY U606 Laboratory in Psychobiology 4 SH

PSY U608 Laboratory in Animal Behavior Research 4 SH

PSY U610 Laboratory in Psycholinguistics 4 SH

PSY U612 Laboratory in Cognition 4 SH

PSY U614 Laboratory in Social Psychology 4 SH

PSY U616 Laboratory in Personality 4 SH

PSY U618 Laboratory in Community Psychology 4 SH

PSY U620 Laboratory in Industrial/Organizational Psychology 4 SH

PSY U622 Laboratory in Sensation and Perception 4 SH

DIRECTED STUDY

PSY U924 Directed Study 4 SH

PSY U951 Experiential Education Directed Study 4 SH

Personal/Social Bases of Behavior (Area A)

Complete two courses from the following list:

PSY U400 Personality 4 SH

PSY U402 Social Psychology 4 SH

PSY U404 Developmental Psychology 4 SH

PSY U406 Abnormal Psychology 4 SH

Biological/Cognitive Bases of Behavior (Area B)

Complete one course from the following list:

PSY U450 Learning and Motivation 4 SH

PSY U452 Introduction to Sensation and Perception 4 SH

PSY U458 Psychobiology 4 SH

PSY U464 Psychology of Language 4 SH

or PSY U466 Cognition 4 SH

Integrative Course Work

Complete the following two courses:

ASL U960 Interpreting Research Practicum 4 SH

PSY U658 Seminar in Psycholinguistics 4 SH

EXPERIENTIAL EDUCATION REQUIREMENT

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

AMERICAN SIGN LANGUAGE AND PSYCHOLOGY**MAJOR GPA REQUIREMENT**

Minimum 2.750 GPA required in all ASL courses

Minimum 2.500 overall GPA required

AMERICAN SIGN LANGUAGE AND PSYCHOLOGY**MAJOR CREDIT REQUIREMENT**

Complete 80 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

BS in American Sign Language and Theatre**COLLEGE OF ARTS AND SCIENCES BS CORE REQUIREMENTS FOR ARTS/HUMANITIES MAJORS**

See page 50 for requirement list.

AMERICAN SIGN LANGUAGE AND THEATRE**DUAL-MAJOR REQUIREMENTS****American Sign Language**

Complete the following four courses:

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

Social and Cultural World

Complete the following two courses:

ASL U150 Deaf People in Society 4 SH

ASL U350 Deaf History and Culture 4 SH

Linguistics

Complete the following three courses:

ASL U460 ASL Linguistics 4 SH

ASL U560 ASL-English Contrastive Analysis 4 SH

LIN U150 Introduction to Language and Linguistics 4 SH

Interpreting

Complete the following course:

ASL U510 Interpreting Inquiry Texts 4 SH

Theatre

Complete the following eleven courses. A minimum grade of C is required in all theatre courses.

THE U101 Theatre Arts 4 SH

THE U120 Acting 1 4 SH

THE U131 Technical Theatre 1 4 SH

THE U250 Voice and Movement for Theatre 4 SH

THE U270 Theatrical Design 4 SH

THE U300 Theatre History 4 SH

THE U325 Script Analysis for the Stage 4 SH

THE U500	Dramatic Theory/Criticism	4 SH
THE U550	Concepts of Directing	4 SH
THE U701	Rehearsal and Performance	4 SH
THE U901	Theatre Practicum 1	1 SH

Integrative Course Work

Complete the following two courses:

ASL U960	Interpreting Research Practicum	4 SH
THE U902	Theatre Practicum 2	1 SH

EXPERIENTIAL EDUCATION REQUIREMENT

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

AMERICAN SIGN LANGUAGE AND THEATRE MAJOR GPA REQUIREMENT

Minimum 2.750 GPA required in all ASL courses
Minimum 2.500 overall GPA required

AMERICAN SIGN LANGUAGE AND THEATRE MAJOR CREDIT/GRADE REQUIREMENT

Complete 86 semester hours in the major. A minimum grade of C is required in all theatre courses.

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

ARCHITECTURE

www.architecture.neu.edu

GEORGE H. THRUSH, MARCH
Associate Professor and Chair

MATTHEWS DISTINGUISHED UNIVERSITY PROFESSOR
Mardges Bacon, PhD

PROFESSOR
Elizabeth C. Cromley, PhD

ASSOCIATE PROFESSOR
Peter H. Wiederspahn, MArch

ASSISTANT PROFESSORS
Timothy Love, MArch
Keil Moe, MArch
Mo Zell, MArch

Architecture is the context for civic life. In an age of increasingly rapid technological and social change, architects must find ways to forge connections between our past and our future. That involves critical thinking about many complex contemporary issues, such as the relationship of public and private life, the interaction between formal and political ideas in cities, and the role of technology in contemporary architecture and design. Because the process of designing buildings involves the synthesis of disparate elements, it can also translate into strategies for approaching a wide range of other problems not traditionally understood to be “architecture.” At Northeastern, we connect specific problem solving inherent to architectural understanding with the larger context of contemporary cities.

The curriculum teaches students to conceptualize, synthesize, and represent complex architectural and urban issues. The program focuses on core skills and critical thinking as preparation for both professional practice and advanced study. The curriculum in the design studio encompasses two major themes: first, the studio projects focus on the art of building, and second, the projects explore how buildings affect urban conditions. Buildings meet both our individual need for shelter and our shared need for cultural meaning. The art of building includes the study of building construction and technology, as well as the cultural messages created by the expression of material, structure, and form in architecture. The contemporary city is our laboratory. This urban focus requires that students integrate their own creative impulses with the future of the society of which they will be a part. By building on the practical and technical training afforded by co-op to develop core professional skills, the curriculum focuses on architecture’s fundamental aesthetic, technological, social, and political aspects.

With the effective synthesis of the art of building with urban issues, Northeastern’s program in architecture is becoming a leader in identifying opportunities for civic representation, urban development, and neighborhood design. Northeastern’s students are in demand in area offices because of their combination of professional competence and fluency in urban architectural issues. There are opportunities for interdisciplinary cooperation in urban-oriented research and creative work in areas such as GIS mapping, urban economics and development, new forms of spatial and visual communication, and public policy.

In addition, complete the arts and sciences core curriculum and the experiential education requirement (see page 35). See pages 270–272 for course descriptions.

BS in Architecture

COLLEGE OF ARTS AND SCIENCES BS CORE REQUIREMENTS FOR ARTS/HUMANITIES MAJORS

See page 50 for requirement list.

ARCHITECTURE MAJOR REQUIREMENTS**Breadth Courses****CALCULUS**

Complete the following course:

MTH U141 Calculus 1 4 SH

PHYSICS

Complete the following course:

PHY U141 General Physics 4 SH

Architecture Requirements**FOUNDATION SKILLS**

Complete the following four courses:

ARC U111 History of World Architecture 1 4 SH

ARC U112 History of World Architecture 2 4 SH

ARC U256 Manual Representation 4 SH

ARC U257 Digital Representation 4 SH

HISTORY/THEORY

Complete the following four courses and complete one additional architecture course related to history or theory:

ARC U325 Nineteenth-Century Architecture and Urbanism 4 SH

ARC U326 Twentieth-Century Architecture and Urbanism 4 SH

ARC U329 American Houses and Housing 4 SH

ARC U330 Third-Year Seminar 4 SH

TECHNOLOGY

Complete the following four courses:

ARC U356 Structures 1: Statics 4 SH

ARC U357 Structures 2: Tectonics 4 SH

ARC U555 Environmental Systems 4 SH

ARC U656 Integrated Building Systems 4 SH

STUDIO DESIGN

Complete the following six courses:

ARC U310 Studio 1: Site, Type, Composition 6 SH

ARC U311 Studio 2: Pattern and Urban Design 6 SH

ARC U410 Studio 3: Building Beyond the City 6 SH

ARC U413 (Sub)Urban Types 6 SH
(pending approval)

ARC U510 Studio 4: Housing and Aggregation 6 SH

ARC U511 Studio 5: Tectonics 6 SH

EXPERIENTIAL EDUCATION

(Completed as part of the studio design requirement)

ARC U510 Studio 4: Housing and Aggregation 6 SH

MAJOR GPA REQUIREMENT

Minimum 2.500 GPA required

ARCHITECTURE MAJOR CREDIT REQUIREMENT

Complete 96 semester hours in the major.

GENERAL ELECTIVES

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

COOPERATIVE EDUCATION**UNIVERSITY-WIDE REQUIREMENTS**

145 total semester hours required

Minimum 2.000 GPA required

Minor in Architectural History**REQUIRED COURSES**

Complete the following four courses:

ARC U111 History of World Architecture 1 4 SH

ARC U112 History of World Architecture 2 4 SH

ARC U325 Nineteenth-Century Architecture and Urbanism 4 SH

ARC U326 Twentieth-Century Architecture and Urbanism 4 SH

GPA REQUIREMENT

2.000 GPA required in the minor

BEHAVIORAL NEUROSCIENCE

DENISE JACKSON, PhD

Associate Professor of Psychology and Acting Program Director

PROGRAM ADVISORY BOARD

Joseph L. Ayers, PhD, *Department of Biology*

Frederick C. Davis, PhD, *Department of Biology*

Michelle L. Israel, MS, *Associate Cooperative Education Coordinator*

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Franklin Naarendorp, PhD, *Department of Psychology*

Donald M. O'Malley, PhD, *Department of Biology*

James R. Stellar, PhD, *College of Arts and Sciences Dean's Office*

The behavioral neuroscience major is an interdepartmental program for undergraduates, with a program director and advisory board made up of the neuroscience faculty of the College of Arts and Sciences. The field of neuroscience focuses on brain mechanisms and how they give rise to behavioral functions in humans and animals. Behavioral neuroscience combines the disciplines of biology and psychology with a strong background in basic physical sciences and mathematics. The goal is to achieve an understanding of anatomy and physiology of nerve cells, chemical transmission, simple neural circuits, and fundamental biological processes such as inheritance and development, and then to see how these biological events give rise to normal and pathological behavior. The primary objective of the neuroscience major is to draw together faculty and students who are interested in this interdisciplinary topic and to provide undergraduates with an education in the field. This major serves as ideal preparation for advancement to graduate programs in the field of neuroscience or to biology or psychology programs with an emphasis in neurobiology. This major also serves as preparation for admission to medical school, although there are additional science courses that should be taken as electives. The curriculum also prepares students to

find employment in clinical settings or in allied fields such as the biotech industry.

Note: Due to overlap in course content, double majoring in behavioral neuroscience and psychology or behavioral neuroscience and biology is not permitted. Also, there is no minor offered in behavioral neuroscience.

For further information, contact Dr. Denise Jackson, preferably at d.jackson@neu.edu. Phone messages may be left at 617.373.3860.

BS in Behavioral Neuroscience

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

See page 51 for requirement list.

BEHAVIORAL NEUROSCIENCE MAJOR REQUIREMENTS

Survey Courses—Level 1: Introductory

PSYCHOLOGY

Complete the following course:

PSY U101 Foundations of Psychology 4 SH

MATHEMATICS

Complete the following two courses:

MTH U141 Calculus 1 4 SH

or MTH U151 Calculus and Differential Equations for Biology 1 4 SH

MTH U142 Calculus 2 4 SH

or MTH U152 Calculus and Differential Equations for Biology 2 4 SH

SCIENCE

Complete the following four courses with corresponding labs:

BIOLOGY 1

BIO U101 Principles of Biology 1 4 SH

with BIO U102 Lab for BIO U101 1 SH

or BIO U111 General Biology 1 4 SH

with BIO U112 Lab for BIO U111 1 SH

BIOLOGY 2

BIO U103 Principles of Biology 2 4 SH

with BIO U104 Lab for BIO U103 1 SH

or BIO U113 General Biology 2 4 SH

with BIO U114 Lab for BIO U113 1 SH

CHEMISTRY 1

CHM U211 General Chemistry 1 4 SH

with CHM U212 Lab for CHM U211 1 SH

CHEMISTRY 2

CHM U214 General Chemistry 2 4 SH

with CHM U215 Lab for CHM U214 1 SH

Survey Courses—Level 2: Intermediate

PSYCHOLOGY

Complete the following two courses:

PSY U320 Statistics in Psychological Research 4 SH

PSY U458 Psychobiology 4 SH

or BIO U405 Neurobiology 4 SH

SCIENCE

Complete the following three courses with corresponding labs:

BIO U301 Genetics and Molecular Biology 4 SH

with BIO U302 Lab for BIO U301 1 SH

CHM U311 Organic Chemistry 1 4 SH

with CHM U312 Lab for CHM U311 1 SH

CHM U313 Organic Chemistry 2 4 SH

with CHM U314 Lab for CHM U313 1 SH

Advanced Courses—Psychology

ADVANCED PSYCHOLOGY ELECTIVES (AREA A)

Complete one course from the following list:

PSY U202 Biological Basis of Mental Illness 4 SH

PSY U358 Behavior Therapies 4 SH

PSY U400 Personality 4 SH

PSY U402 Social Psychology 4 SH

PSY U404 Developmental Psychology 4 SH

PSY U406 Abnormal Psychology 4 SH

ADVANCED PSYCHOLOGY ELECTIVES (AREA B)

Complete one course from the following list:

PSY U450 Learning and Motivation 4 SH

PSY U452 Introduction to Sensation and Perception 4 SH

PSY U464 Psychology of Language 4 SH

PSY U466 Cognition 4 SH

PSY U510 Psychopharmacology 4 SH

PSY U512 Neuropsychology 4 SH

PSY U520 Language and the Brain 4 SH

Advanced Courses—Biology

ADVANCED BIOLOGY ELECTIVES (AREA A)

Complete one course with corresponding lab from the following list:

BIO U319 Regulatory Cell Biology 4 SH

with BIO U320 Lab for BIO U319 1 SH

BIO U407 Molecular Cell Biology 4 SH

BIO U551 Principles of Animal Physiology 4 SH

with BIO U552 Lab for BIO U551 1 SH

ADVANCED BIOLOGY ELECTIVES (AREA B)

Complete one course with corresponding lab from the following list:

BIO U403 Animal Behavior 4 SH

BIO U545 Neuroethology 4 SH

with BIO U546 Lab for BIO U545 1 SH

BIO U587 Comparative Neurobiology 4 SH

ADVANCED BIOLOGY ELECTIVES (AREA C)

Complete one course with corresponding lab from the following list:

BIO U311 Ecology 4 SH

with BIO U312 Lab for BIO U311 1 SH

BIO U315 Invertebrate Zoology 4 SH

with BIO U316 Lab for BIO U315 1 SH

BIO U317 Vertebrate Zoology 4 SH

with BIO U318 Lab for BIO U317 1 SH

BIO U323 Biochemistry 4 SH

with BIO U324 Lab for BIO U323 1 SH

BIO U401	Comparative Vertebrate Anatomy	4 SH
with BIO U402	Lab for BIO U401	1 SH
BIO U503	Marine Invertebrate Zoology	4 SH
with BIO U504	Lab for BIO U503	1 SH
BIO U543	Embryonic Stem Cells	4 SH
BIO U547	Sociobiology	4 SH
BIO U549	Microbial Biotechnology	4 SH
BIO U553	Biology of Muscle: Molecules to Movements	4 SH
BIO U565	Mammalogy	4 SH
with BIO U566	Lab for BIO U565	1 SH
BIO U573	Medical Microbiology	4 SH
with BIO U574	Lab for BIO U573	1 SH
BIO U577	Developmental Biology	4 SH
with BIO U578	Lab for BIO U577	1 SH
BIO U581	Biological Imaging	4 SH
BIO U583	Immunology	4 SH
BIO U585	Evolution	4 SH
with BIO U586	Lab for BIO U585	1 SH

The following courses require permission prior to registration:

PTH U301	Gross Anatomy	4 SH
with PTH U302	Lab for PTH U301	1 SH
PTH U308	Neuroscience	4 SH

Specialty Courses

SEMINAR

Complete one seminar from the following list:

BIO G383	Topics in Biochemistry Cell and Molecular Biology	2 SH
BIO G384	Topics in Integrative Biology	2 SH
BIO U409	Current Topics in Biology	4 SH
PSY U650	Seminar in Clinical Case Study	4 SH
PSY U652	Seminar in Ethics in Psychology	4 SH
PSY U654	Seminar in Behavioral Modification	4 SH
PSY U656	Seminar in Psychobiology	4 SH
PSY U658	Seminar in Psycholinguistics	4 SH
PSY U660	Seminar in Cognition	4 SH
PSY U666	Seminar in Clinical Psychology	4 SH
PSY U668	Seminar in Sensation and Perception	4 SH
PSY U670	Seminar in Research Psychology	4 SH
PSY U672	Seminar in History and Theories of Psychology	4 SH

LABORATORY COURSE

Complete one laboratory course from the following list:

BIO U579	Biochemistry/Molecular Biology Experimental Approaches	5 SH
BIO U924	Directed Study	4 SH
BIO U970	Junior/Senior Project 1	4 SH
with BIO U971	Junior/Senior Project 2	4 SH
PSY U602	Experiments in Learning and Motivation	4 SH
PSY U604	Laboratory in Learning and Motivation	4 SH
PSY U606	Laboratory in Psychobiology	4 SH
PSY U608	Laboratory in Animal Behavior Research	4 SH
PSY U610	Laboratory in Psycholinguistics	4 SH
PSY U612	Laboratory in Cognition	4 SH

PSY U622	Laboratory in Sensation and Perception	4 SH
PSY U924	Directed Study	4 SH
PSY U970	Junior/Senior Project 1	4 SH
PSY U971	Junior/Senior Project 2	4 SH

BEHAVIORAL NEUROSCIENCE EXPERIENTIAL EDUCATION REQUIREMENT

Complete one of the following three options:

Option 1: Practical and Reflective Experience

PRACTICAL EXPERIENCE

Complete one research co-op, research internship, research-oriented directed study, or study abroad.

REFLECTIVE EXPERIENCE

Complete one of the following courses:

BIO U701	Biology Capstone	4 SH
BIO U954	Experiential Education Directed Study	4 SH
PSY U650	Seminar in Clinical Case Study	4 SH
PSY U652	Seminar in Ethics in Psychology	4 SH
PSY U656	Seminar in Psychobiology	4 SH
PSY U934	Independent Study	4 SH
PSY U951	Experiential Education Directed Study	4 SH

Option 2: Honors Project

Complete two semesters of a biology or psychology honors project:

BIO U970	Junior/Senior Project 1	4 SH
with BIO U971	Junior/Senior Project 2	4 SH
PSY U970	Junior/Senior Project 1	4 SH
with PSY U971	Junior/Senior Project 2	4 SH

Option 3: Directed Study

Complete two semesters of directed study, which includes a final oral presentation or written report:

BIO U924	Directed Study	4 SH
PSY U924	Directed Study	4 SH

BEHAVIORAL NEUROSCIENCE MAJOR CREDIT REQUIREMENT

Complete 83 semester hours in the major.

Due to overlap in course content, double majoring in behavioral neuroscience and psychology or behavioral neuroscience and biology is not permitted. Also, there is no minor offered in behavioral neuroscience.

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

BIOCHEMISTRY

www.biochemistry.neu.edu

Biochemistry includes nearly the entire spectrum of science—from physics and chemistry to biology and medicine. The biochemistry major, sponsored jointly by the Departments of Biology and Chemistry and Chemical Biology, provides a strong foundation in mathematics and the physical sciences as well as thorough training in biochemistry, biology, and chemistry. In addition to formal classwork, opportunities are available for participation in faculty research programs on an individual basis or through the honors program. The large number of biotechnology companies and biomedical facilities in the Boston area provides a rich source of opportunities through Northeastern's program of cooperative education. Two combined BS/MS programs are also available: BS in biochemistry/MS in biotechnology and BS in biochemistry/MS in chemistry.

A Bachelor of Science degree in biochemistry allows students to enter the job market directly or go on to graduate, medical, veterinary, dental, law, or business school. Students may find positions in biotechnology companies, pharmaceutical companies, or government agencies, working in laboratory or clinical research, quality control, production, information systems, marketing, or technical sales. Students may also pursue graduate study in biochemistry, molecular biology, cell biology, biophysics, genetics, toxicology, biotechnology, clinical chemistry, animal science, nutrition, plant science, or other biomedical sciences.

Students who are interested in attending medical, dental, or veterinary school following graduation are urged to consult with the preprofessional advisory committee early in their careers at Northeastern.

To graduate with a major in biochemistry, a student must have a cumulative grade-point average (GPA) of 2.000 for all science and mathematics courses required for the major.

No double majors are offered in biochemistry and biology or in biochemistry and behavioral neuroscience due to similarity in course curricula. Students must maintain a minimal grade-point average of 2.000 to remain in this program. In addition, students must complete the arts and sciences core curriculum and experiential education requirement.

BS in Biochemistry

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

See page 51 for requirement list.

BIOCHEMISTRY BREADTH COURSES

Mathematics Courses

Complete the following two courses:

MTH U151	Calculus and Differential Equations for Biology 1	4 SH
MTH U152	Calculus and Differential Equations for Biology 2	4 SH

Physics Courses

Complete the following two courses with corresponding labs:

PHY U145	Physics for Life Sciences 1	4 SH
with PHY U146	Lab for PHY U145	1 SH
or PHY U151	Physics for Engineering 1	4 SH
with PHY U152	Lab for PHY U151	1 SH
or PHY U161	Physics 1	4 SH
with PHY U162	Lab for PHY U161	1 SH
PHY U147	Physics for Life Sciences 2	4 SH
with PHY U148	Lab for PHY U147	1 SH
or PHY U155	Physics for Engineering 2	4 SH
with PHY U156	Lab for PHY U155	1 SH
or PHY U165	Physics 2	4 SH
with PHY U166	Lab for PHY U165	1 SH

Computer Science Course

Complete one of the following courses:

CET U201	Visual Basic Programming	4 SH
GE U111	Engineering Problem Solving and Computation	4 SH

BIOCHEMISTRY MAJOR REQUIREMENTS

Principles of Biology

Complete one course from biology 1 with corresponding lab, and then complete either biology 2 or genetics with corresponding lab:

BIOLOGY 1		
BIO U101	Principles of Biology 1	4 SH
with BIO U102	Lab for BIO U101	1 SH
or BIO U111	General Biology 1	4 SH
with BIO U112	Lab for BIO U111	1 SH
BIOLOGY 2		
BIO U103	Principles of Biology 2	4 SH
with BIO U104	Lab for BIO U103	1 SH
GENETICS		
BIO U113	General Biology 2	4 SH
with BIO U114	Lab for BIO U113	1 SH

Molecular Biology

Complete the following two courses with corresponding lab, where applicable:

BIO U301	Genetics and Molecular Biology	4 SH
with BIO U302	Lab for BIO U301	1 SH
BIO U407	Molecular Cell Biology	4 SH

Chemistry Courses

Complete the following six courses with corresponding labs:

CHM U211	General Chemistry 1	4 SH
with CHM U212	Lab for CHM U211	1 SH
CHM U214	General Chemistry 2	4 SH
with CHM U215	Lab for CHM U214	1 SH
CHM U311	Organic Chemistry 1	4 SH
with CHM U312	Lab for CHM U311	1 SH
CHM U313	Organic Chemistry 2	4 SH
with CHM U314	Lab for CHM U313	1 SH
CHM U321	Analytical Chemistry	4 SH
with CHM U322	Lab for CHM U321	1 SH

CHM U401 Physical Chemistry 1 4 SH
with CHM U402 Lab for CHM U401 1 SH

Biochemistry Course

Complete the following course with corresponding lab:

BIO U323 Biochemistry 4 SH
with BIO U324 Lab for BIO U323 1 SH

Experiential Education Introduction

Complete the following course:

BIO U106 Introduction to Experiential Education 1 SH

Experiential Education

An activity related to biochemistry and approved by the experiential education adviser must be completed before the capstone. Among the possibilities are co-op experience, junior/senior honors thesis, research project in a faculty lab, study abroad with submission of a paper, 120 hours of supervised volunteer work in a biochemistry-related area, completion of the following course:

CHM U750 Senior Research 4 SH
or other approved experiences.

Capstone

Complete the following course:

BIO U701 Biology Capstone 4 SH

BIOLOGY AND CHEMISTRY ADVANCED ELECTIVES

Complete four advanced courses for a total of at least 17 semester hours from biology and chemistry with a minimum of one from each department. At least one course must be an approved lab course from the "Approved Labs" list below. Up to 4 semester hours may be research in a faculty lab.

Biology

BIO U311 to BIO U699
BIO U970 Junior/Senior Project 1 4 SH
BIO U971 Junior/Senior Project 2 4 SH

Chemistry

CHM U310 to CHM U699
CHM U901 Undergraduate Research 4 SH
CHM U921 Directed Study 1 SH
CHM U922 Directed Study 2 SH
CHM U923 Directed Study 3 SH
CHM U924 Directed Study 4 SH
CHM U970 Junior/Senior Project 1 4 SH
CHM U971 Junior/Senior Project 2 4 SH

Approved Labs

BIO U579 Biochemistry/Molecular Biology 5 SH
Experimental Approaches
CHM U332 Lab for CHM U331 1 SH
with CHM U331 Bioanalytical Chemistry 4 SH
CHM U522 Instrumental Methods of Analysis Lab 4 SH
with CHM U521 Instrumental Methods of Analysis 1 SH
CHM U532 Chemical Synthesis Characterization 4 SH
Lab
with CHM U531 Chemical Synthesis Characterization 1 SH

Faculty Labs

BIO U964 Research 4 SH
BIO U970 Junior/Senior Project 1 4 SH

CHM U750 Senior Research 4 SH
CHM U901 Undergraduate Research 4 SH
CHM U970 Junior/Senior Project 1 4 SH

BIOCHEMISTRY MAJOR CREDIT/GPA REQUIREMENTS

Complete 98 semester hours in the major with a cumulative GPA of 2.000.

Due to overlap in course content, double majoring in biochemistry and biology or biochemistry and behavioral neuroscience is not permitted.

GENERAL ELECTIVES

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

COOPERATIVE EDUCATION

If elected

UNIVERSITY-WIDE REQUIREMENTS

136 total semester hours required
Minimum 2.000 GPA required

BS in Biochemistry/MS in Biotechnology

Undergraduate students apply to the combined program through the graduate school. Once admitted, students may count a limited amount of graduate credit toward the undergraduate degree.

BS in Biochemistry/MS in Chemistry

Undergraduate students apply to the combined program through the graduate school. Once admitted, students may count a limited amount of graduate credit toward the undergraduate degree.

BIOLOGY

www.biology.neu.edu

SUSAN POWERS-LEE, PhD
Professor and Chair

MATTHEWS DISTINGUISHED UNIVERSITY PROFESSORS

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