Table of Contents

ALL COURSES LISTED ARE SUBJECT TO CHANGE.

NUpath

Northeastern's academic core, known as NUpath, is built around essential, broad-based knowledge and skills—such as understanding societies and analyzing data—integrated with specific content areas and disciplines. It offers students the flexibility to integrate core learning into their individual educational journeys. NUpath is Northeastern University's set of institution-wide general education requirements for all students in all majors. You may find a list of these requirements with further details on the NU Core Curriculum webpage: https://www.northeastern.edu/core/requirements/.

Throughout this guide you will find the following abbreviations for NUpath categories. Below is a list of these NUpath categories and their accompanying codes.

NUpath Abbreviation	NUpath Attribute
ND	Engaging with the Natural and Designed World
EI	Exploring Creative Expression and Innovation
IC	Interpreting Culture
FQ	Conducting Formal and Quantitative Reasoning
SI	Understanding Societies and Institutions
AD	Analyzing and Using Data
DD	Engaging Difference and Diversity
ER	Employing Ethical Reasoning
WF	Writing in the First Year
WI	Writing Intensive in the Major

ALL COURSES LISTED ARE SUBJECT TO CHANGE.

NU Bound Bay Area

Acting 1
Focuses on the development of fundamental performance techniques and various significant acting methodologies needed by an actor to develop stage presence, strengthen the imagination, and increase freedom of expression. Studies, analyzes, and interprets contemporary texts through the performance of monologues and scenes.
NU Course Equivalent: THTR 1120, Acting 1. NUpath: EI.

African and Caribbean Literatures
Provides a comparative introduction to the modern literary traditions of the Spanish-, English, and French-speaking Caribbean. Includes authors such as Carpentier (Cuba), Naipaul (Trinidad), Zobel (Martinique), and Cardenal (Nicaragua).
NU Course Equivalent: CLTR 1261, Caribbean Literature and Culture.

All Power to the People: Community Based Education in the Bay and Beyond
Explores the impact of the Black Power movement on American colleges and universities. Examines the history of the movement and its relationship to the civil rights movement and the various impacts of Black Power on contemporary higher education. Traces how the movement led to distinct ideologies, scholarship, practices, and terminology that provided new lenses through which institutions of higher education viewed Negroes in terms of the preservation, transmittal, and enrichment of their culture by means of instruction and scholarly and scientific work. Explores Negro college students' adoption of a Black identity and making demands on campuses that manifested in curricula, programs, and services that represented this identity.
NU Course Equivalent: CAEP 3310: Say it Loud: The Black Power Movement and Higher Education. NUpath: DD.

American Government
Analyzes the system of politics and government in the United States. Topics include the philosophical basis, historical origins, design, and functioning of the Constitution as well as formal government institutions. Examines the influence of public opinion, political behavior and participation, parties, and interest groups.
NU Course Equivalent: POLS 1150, American Government. NUpath: SI.

Beginner/Intermediate Chinese
Designed for students who have very little or no prior knowledge of Chinese. Provides a lively introduction to basic oral expression, listening comprehension, and elementary reading and writing. Each lesson incorporates helpful information about daily life in China and the varied cultures within the world of Chinese speakers. Laboratory practice complements class work, enables students to work aloud at their own speed, reinforces their acquisition of essential structures, and acquaints them with a vast library of audio-visual resources. Focuses on Mandarin Chinese; students who wish to speak another dialect of Chinese should consult instructor for proper placement.
NU Course Equivalent: CHNS 1101, Elementary Chinese 1.
NOTE: Additional upper-level language classes may be available, per the host institutions placement exam

Beginner/Intermediate French
Designed for students with very little or no prior knowledge of French. Provides a lively introduction to basic oral expression, listening comprehension, and elementary reading and writing. Each lesson incorporates helpful information about daily life in France and the varied cultures within the world of French speakers. Laboratory practice complements class work, enables students to work aloud at their own speed, reinforces their acquisition of essential structures, and acquaints them with a vast library of audio-visual resources.
NU Course Equivalent: FRNH 1101, Elementary French 1.
NOTE: Additional upper-level language classes may be available, per the host institutions placement exam

Beginner/Intermediate Spanish
Designed for students with little or no knowledge of Spanish. Presents essentials of correct Spanish usage through acquisition of basic skills in reading, speaking, writing, and aural comprehension.
NU Course Equivalent: SPNS 1101, Elementary Spanish 1.
NOTE: Additional upper-level language classes may be available, per the host institutions placement exam

NU Bound Bay Area – *continued*

Buildings and Cities, A Global History
Introduces students to architecture, as understood through buildings, cities, and landscapes from antiquity to the present. Studies important monuments in the global history of architecture, as well as tools for analyzing the built environment. Considers buildings in relation to their political, social, economic, and cultural context, and as expressions of diversity in human societies and cultural perspectives. Topics include the language of architecture, architectural drawings, the classical orders, the problem of ornament, construction techniques, materials, site, and the role of the patron. Develops students' eye for composition in two and three dimensions, aesthetic discrimination of detail, ability to see buildings as part of a larger social and cultural fabric, and critical judgment in speaking and writing.
NU Course Equivalent: ARCH 1310, Buildings and Cities, A Global History. NUpath: DD, IC.

Business Statistics
Offers students an opportunity to obtain the necessary skills to collect, summarize, analyze, and interpret business-related data. Covers descriptive statistics, sampling and sampling distributions, statistical inference, relationships between variables, formulating and testing hypotheses, and regression analysis in the context of business. Use of the SPSS statistical programming package is an integral part of the course.
NU Course Equivalent: MGSC 2301, Business Statistics. NUpath: AD.

Calculus 1 for Science and Engineering
Covers definition, calculation, and major uses of the derivative, as well as an introduction to integration. Topics include limits; the derivative as a limit; rules for differentiation; and formulas for the derivatives of algebraic, trigonometric, and exponential/logarithmic functions. Also discusses applications of derivatives to motion, density, optimization, linear approximations, and related rates. Topics on integration include the definition of the integral as a limit of sums, antidifferentiation, the fundamental theorem of calculus, and integration by substitution.
NU Course Equivalent: MATH 1341, Calculus 1 for Science and Engineering. NUpath: FQ.

Calculus 2 for Science and Engineering
Covers further techniques and applications of integration, infinite series, and introduction to vectors. Topics include integration by parts; numerical integration; improper integrals; separable differential equations; and areas, volumes, and work as integrals. Also discusses convergence of sequences and series of numbers, power series representations and approximations, 3D coordinates, parameterizations, vectors and dot products, tangent and normal vectors, velocity, and acceleration in space.
NU Course Equivalent: MATH 1342, Calculus 2 for Science and Engineering. NUpath: FQ.
Prerequisite: Requires prior completion of MATH 1341 or permission of head mathematics advisor.

Calculus 3 for Science and Engineering
Extends the techniques of calculus to functions of several variables; introduces vector fields and vector calculus in two and three dimensions. Topics include lines and planes, 3D graphing, partial derivatives, the gradient, tangent planes and local linearization, optimization, multiple integrals, line and surface integrals, the divergence theorem, and theorems of Green and Stokes with applications to science and engineering and several computer lab projects.
NU Course Equivalent: MATH 2321, Calculus 3 for Science and Engineering. NUpath: FQ.
Prerequisite: MATH 1342 or MATH 1252.

Calculus for Business and Economics
Provides an overview of differential calculus including derivatives of power, exponential, logarithmic, logistic functions, and functions built from these. Derivatives are used to model rates of change, to estimate change, to optimize functions, and in marginal analysis. The integral calculus is applied to accumulation functions and future value. Emphasis is on realistic business and economics problems, the development of mathematical models from raw business data, and the translation of mathematical results into verbal expression appropriate for the business setting. Also features a semester-long marketing project in which students gather raw data, model it, and use calculus to make business decisions; each student is responsible for a ten-minute presentation. (Graphing calculator required, see instructor for make and model.)
NU Course Equivalent: MATH 1231, Calculus for Business and Economics. NUpath: FQ.

Color and Composition
Offers an opportunity to discover and research basic principles, language, and concepts inherent in two-dimensional visual systems. Offers students an opportunity to learn to think critically, analyze, and apply basic principles to design and art projects. In a studio workshop setting, three primary phases explore art, design, and photography.
NU Course Equivalent: ARTF 1122, Color and Composition. NUpath: EI.

NU Bound Bay Area – *continued*

Creative Writing
Gives the developing writer an opportunity to practice writing various forms of both poetry and prose. Features in-class discussion of student work.
NU Course Equivalent: ENGL 2700, Creative Writing. NUpath: EI.
Prerequisite: ENGW 1111, ENGL 1111, or ENGL 1102.

Criminology
Describes the nature and extent of crime, explains its causes, and examines society's responses to it. Defines the field of criminology by discussing the different types of crime and discusses different theories of crime causation. Studies the connections between systemic racism, inequalities, and crime and the role of bias in the development of the field and criminological theories. To establish the extent of crime in society, addresses measurement issues in the field of criminology.
NU Course Equivalent: CRIM 1120, Criminology. NUpath: SI.

Current Issues in Cities and Suburbs
Introduces students to pressing urban issues: urban sprawl, poverty, education, transportation, economic development, and housing, through an intensive analysis of the Boston metropolitan area. The course is cotaught by university faculty and practitioners in government, community, and nonprofit organizations throughout the metropolitan area. Offers students the opportunity to analyze Boston data, go on outings to see development in progress, talk with urban practitioners about what they do, and conduct research on an urban issue of their choice.
NU Course Equivalent: POLS/SOCL 2358, Current Issues in Cities and Suburbs. NUpath: DD, SI.

Design Perspectives
This course introduces the student to a wide range of perspectives and points of view on design as a human activity in a series of modules that each frame design with a differing focus. It engages the student with a rich mix of theories, principles, practices, and histories that constitute our various understandings of design across cultures. It exposes the student to the impacts, influences, accomplishments, consequences, possibilities, and limits of design in the world, through illustrative case studies. It provides an overview of our curriculum of design studies and an opportunity for the student to become familiar with the work of our design faculty. It initiates an intellectual investigation of what it means to develop a personal design practice, aligned with the aspirations and intentions of each student, through lectures, discussions, reflections, recitations, and conceptual exercises.
NU Course Equivalent: ARTG 1001/1002, Design Perspectives and Studio.

Design Process Context and Systems
Explores common design practices, principles, and vocabularies, introducing the design process as a method of inquiry and problem solving through studio projects. Emphasizes the importance of an awareness of audience and context in the creation of meaningful communications and experiences. Explores the practice of design as an iterative process, offering students an opportunity to obtain an understanding of the value of systems thinking and the importance of feedback and exchange as a means for assessing the quality of design's effectiveness in helping users achieve their goals.
NU Course Equivalent: ARTG 1250, Design Process Context and Systems. NUpath: EI.

Developmental Psychology
Examines change throughout the life span in social relationships, emotional functioning, language, cognition, and other psychological domains, with emphasis on infancy through adolescence. Introduces major theories of development. Stresses the interaction of social and cognitive factors in development, and the interaction of the developing person with the environment. Also explores individual and cross-cultural differences in patterns of development, and research issues in developmental psychology.
NU Course Equivalent: PSYC 3404, Developmental Psychology.
Prerequisite: PSYC 1101.

NU Bound Bay Area – *continued*

Differential Equations and Linear Algebra
Studies ordinary differential equations, their applications, and techniques for solving them including numerical methods (through computer labs using MS Excel and MATLAB), Laplace transforms, and linear algebra. Topics include linear and nonlinear first- and second-order equations and applications include electrical and mechanical systems, forced oscillation, and resonance. Topics from linear algebra, such as matrices, row-reduction, vector spaces, and eigenvalues/eigenvectors, are developed and applied to systems of differential equations.
Prerequisite: MATH 1342.
NU Course Equivalent: MATH 2341, Differential Equations and Linear Algebra.

Discrete Structures with Seminar
Introduces the mathematical structures and methods that form the foundation of computer science. Studies structures such as sets, tuples, sequences, lists, trees, and graphs. Discusses functions, relations, ordering, and equivalence relations. Examines inductive and recursive definitions of structures and functions. Discusses principles of proof such as truth tables, inductive proof, and basic logic. Also covers the counting techniques and arguments needed to estimate the size of sets, the growth of functions, and the space-time complexity of algorithms.
NU Course Equivalent: CS 1800/1802, Discrete Structures with Seminar. NUpath: FQ.

Documentary Theater
In this course we will be creating a documentary theater piece around a topic central to the community. It will be based on interviews conducted with citizens who have something to say about their intimate relationship to the topic. THS 175 A will be used to acquaint the students with the history of the project's theme. Students will be guided in the collection of video interviews of subjects. They will then transcribe, edit and collate information into a script. Students will be encouraged but not required to enroll for THS 175B in the Spring.
NU Course Equivalent: THTR 1400, Documentary Theater.

Environmental Ethics
Focuses on a current ecological crisis and addresses the values that underlie our concern over this crisis, whether the values at issue are anthropocentric or biocentric. Explores the ethical implications these ecological concerns have for our individual lifestyles, and for our role as members of communities.
NU Course Equivalent: PHIL 1180, Environmental Ethics. NUpath: SI, ER.

Environmental Science
Focuses on the complex array of topics that collectively form the discipline of environmental science. Emphasizes the problems facing today's natural, human-managed, and coupled human/natural ecosystems and the solutions to those problems. Studies the human dimensions of environmental science, including culture, politics, worldviews, ethics, and economics, particularly within the context of global climate change. Offers students an opportunity to learn to analyze data as a means of exploring relationships among societal and ecological drivers affecting economic, ecological, and socioeconomic stability; to learn how the scientific method is used to separate fact and data from opinion; and to apply these methods to explore the causes and solutions to global climate change.
NU Course Equivalent: ENVR 1101, Environmental Science. NUpath: AD, ND.

Ethics
Introduces students to the fundamentals of moral theory; ethical reasoning; social and political philosophy; as well as theories of social, political, and institutional change. Emphasizes in-depth ethical analysis and evaluation of the issues studied, their social and historical sources and context, as well as the way in which responses to them can and should lead to institutional and policy changes. Offers students an opportunity to be selected for an off-campus competitive debate experience. This course is modeled after the Intercollegiate Ethics Bowl debates on current social and ethical issues.
NU Course Equivalent: PHIL 1112, Debating Ethical Controversies. NUpath: SI, ER.

NU Bound Bay Area – *continued*

Financial Accounting and Reporting
Covers the basic concepts underlying financial statements and the accounting principles followed in the preparation of the balance sheet, the income statement, and the statement of cash flows. Offers students an opportunity to become familiar with accounting terminology and methods designed to enable them to interpret, analyze, and evaluate published corporate financial reports. Wherever appropriate, the course relates current economic, business, and global events to accounting issues. Analyzes how financial reporting concepts affect the behavior of investors, creditors, and other external users. Emphasizes the importance of ethics in financial reporting. Requires second-semester-freshman standing or above.
NU Course Equivalent: ACCT 1201, Financial Accounting and Reporting.

First Year Writing
Designed for students to study and practice writing in a workshop setting. Students read a range of texts in order to describe and evaluate the choices writers make and apply that knowledge to their own writing and explore how writing functions in a range of academic, professional, and public contexts. Offers students an opportunity to learn how to conduct research using primary and secondary sources; how to write for various purposes and audiences in multiple genres and media; and how to give and receive feedback, to revise their work, and to reflect on their growth as writers.
NU Course Equivalent: ENGW 1111, First Year Writing. NUpath: WF.

Foundations in Ecology and Evolutionary Biology with Lab
Introduces students to the foundational principles of ecology and evolutionary biology. Merges traditional lectures on foundational topics in ecology and evolutionary biology (adaptation, mechanisms of evolution, community and ecosystems ecology) with explorations of local field sites and an introduction to field ecology. Students spend several weeks of the semester designing and implementing independent field research projects, through which they are exposed to the foundation of scientific inquiry, including hypothesis testing, collecting, managing, and analyzing data, and presenting their findings.
NU Course Equivalent: EEMB 1101/1102, Foundations in Ecology and Evolutionary Biology with Lab. NUpath: ND.

Foundations of Psychology
Surveys the fundamental principles, concepts, and issues in the major areas of basic and applied psychological science. Approaches the study of psychology as a method of inquiry as well as a body of knowledge. Introduces students to research methods and to psychological research on the biological bases of behavior, learning, sensation and perception, cognition and language, development, emotion, social psychology, personality, and psychological disorders.
NU Course Equivalent: PSYC 1101, Foundations of Psychology. NUpath: ND, SI.

Fundamental Design
Introduces architectural design. Examines a number of approaches to spatial organization, massing, and envelope articulation through the analysis of pertinent case studies as well as through a series of fast-paced design exercises. Offers students an opportunity to develop a single design through a series of design studies that deal with issues of site planning, program, user input, and collective negotiation. Requires a portfolio demonstrating the student's representational abilities and iterative design process.
NU Course Equivalent: ARCH 1120, Fundamental Design. NUpath: ND, EI.

Fundamental Representation
Introduces students to architectural representation as a form of documentation, experimentation, and communication through a series of exercises in orthographic, axonometric, and perspectival projection as well as physical and digital modeling. Supports the development of an iterative design methodology by introducing students to the tools of representation. Includes theoretical lectures and workshops in analog and digital media.
NU Course Equivalent: ARCH 1110, Fundamental Representation. NUpath: EI.

Fundamentals of Computer Science 1 with Lab
Introduces the fundamental ideas of computing and the principles of programming. Discusses a systematic approach to word problems, including analytic reading, synthesis, goal setting, planning, plan execution, and testing. Presents several models of computing, starting from nothing more than expression evaluation in the spirit of high school algebra. No prior programming experience is assumed; therefore, suitable for freshman students, majors and nonmajors alike who wish to explore the intellectual ideas in the discipline.
NU Course Equivalent: CS 2500/2501, Fundamentals of Computer Science 1 with Lab. NUpath: ND, FQ.

NU Bound Bay Area – *continued*

Fundamentals of Computer Sciences 2 with Lab
Continues CS 2500. Examines object-oriented programming and associated algorithms using more complex data structures as the focus. Discusses nested structures and nonlinear structures including hash tables, trees, and graphs. Emphasizes abstraction, encapsulation, inheritance, polymorphism, recursion, and object-oriented design patterns. Applies these ideas to sample applications that illustrate the breadth of computer science.
Prerequisite(s): CS 2500.
NU Course Equivalent: CS 2510/2511, Fundamentals of Computer Science 2 with Lab. NUpath: ND, AD.

Fundamentals of Western Music Theory
Introduces students with little or no musical experience to all the major and minor key signatures and the following scales: major, natural minor, harmonic minor, and melodic minor. Topics include how to read music in treble clef, bass clef, and various C-clefs; how to identify and construct intervals, triads, and seventh chords; how melody and harmony work together to create a piece of music; roman numeral analyses; and various small forms. Short excerpts are analyzed, and students are required to write musical compositions.
NU Course Equivalent: MUSC 1119, Fundamentals of Western Music Theory. NUpath: EI.

Games and Society
Provides an historical and cultural perspective on games and other forms of interactive entertainment. Examines the present state and future directions of paper, card, and board games; physical games and sports; and video games. Introduces students to current issues, experiments, and directions in the field of game design. Through weekly lectures and small-group labs, students have an opportunity to develop a critical basis for analyzing game play.
NU Course Equivalent: GAME 1110, Games and Society.

General Biology 1 with Lab
Explores basic principles of biology with a focus on those features shared by all living organisms and seen through the lens of evolutionary theory. Through lectures, readings and discussion, offers students an opportunity to understand how the scientific method has been and is used to address biological questions. Central topics include recent advances in cell anatomy and physiology, including the interplay between organelles, membrane transport, and cell-signaling; energy transfer through cells and through the biosphere; cellular reproduction and cancer; heredity and human genetic disorders; and protein synthesis and biotechnology. Explores the societal implications of such topics as biopharmaceuticals, ocean acidification, climate change, human diseases, epigenetics, cancer, and cloning.
NU Course Equivalent: BIOL 1111/1112, General Biology 1 with Lab. NUpath: ND, AD.

General Biology 2 with Lab
Continues BIOL 1111. Examines the evolution of structural and functional diversity of organisms; the integrative biology of multicellular organisms; and ecological relationships at the population, community, and ecosystem levels.
Prerequisite: BIOL 1101, BIOL 1107, BIOL 1111, or BIOL 1115.
NU Course Equivalent: BIOL 1113/1114, General Biology 2 with Lab. NUpath: ND, AD.

General Chemistry for Science Majors with Lab
Introduces the principles of chemistry, focusing on the particulate nature of matter and its interactions and reactions that form the basis for the underlying molecular dynamics of living systems. Presents basic concepts of chemical bonding and intermolecular interactions for molecules and molecules' behavior in aqueous solutions with examples from biologically relevant molecules. Introduces kinetics and chemical thermodynamics with examples from biological systems. Offers students an opportunity to obtain a framework for understanding the chemical basis for different methods for separating and purifying biological compounds.
NU Course Equivalent: CHEM 1161/1162/1163, General Chemistry for Science Majors with Lab. NUpath: ND.

Global and Intercultural Communication
Focuses on theories of and approaches to the study of intercultural communication. Emphasizes the importance of being able to negotiate cultural differences and of understanding intercultural contact in societies and institutions. Stresses the benefits and complexities of cultural diversity in global, local, and organizational contexts.
NU Course Equivalent: COMM 2303, Global and Intercultural Communication. NUpath: SI, DD.

NU Bound Bay Area – *continued*

Global Climate Change
Analyzes Earth's modern climate system and natural climate change over Earth's 4.5-billion-year history. Examines ongoing and future climate change. Includes expected impacts of the predicted climate changes as well as mitigation and adaptation options.
NU Course Equivalent: ENVR 1110, Global Climate Change. NUpath: ND, AD.

Global Markets and Local Culture
Examines selected topics in the socioeconomic transformation of other cultures, including urbanization, industrialization, globalization, commodity production, and international labor migration. Focuses on the impact of global capitalist development on contemporary developing and postcolonial societies as well as local responses and/or resistances to those changes.
NU Course Equivalent: ANTH 2305, Global Markets and Local Culture. NUpath: IC.

Globalization and International Affairs
Offers an interdisciplinary approach to analyzing global/international affairs. Examines the politics, economics, culture, and history of current international issues through lectures, guest lectures, film, case studies, and readings across the disciplines.
NU Course Equivalent: INTL 1101, Globalization and International Affairs. NUpath: SI.

Healthcare Policy and Administration
Focuses on management and policy issues in healthcare. Discusses management and administrative structures in hospitals and other healthcare organizations, including community clinics and health organizations, both private and public. Introduces the financial systems, economic information, and payment mechanisms necessary to understand healthcare financing. Also explores the variety of factors that influence population health from a healthcare policy perspective. Offers students an opportunity to learn how to analyze, prepare, and write policy briefs based on understanding the various economic, legal, and political forces shaping healthcare in the United States.
Prerequisite: PHTH 1260 or PHTH 1261.
NU Course Equivalent: PHTH 2515, Healthcare Policy and Administration.

History of the Western United States
Examines the history of the western areas of North America that eventually became the United States. Topics include the history and culture of the area's indigenous peoples; the expansion of European settlers; cultural and military encounters; trade and travel across the Pacific, the importance of water, mining and resource extraction; the rise of conservation and the environmental movement; the experience of Asian-American, Mexican-American, and African-American communities, the "Cowboys and Indians" mythology in American popular culture (film, television, literature, and advertising); the growth of western cities like Phoenix, Denver, Los Angeles, and Seattle; the influence of Hollywood and Silicon Valley.
NU Course Equivalent: HIST 2341, History of the Western United States. NUpath: SI, DD.

Honors Seminar – To Be Determined

International Business and Global Social Responsibility
Introduces the student to forces and issues confronted in our era of rapid globalization. Managers must understand forces from interconnected social, political, and economic national environments that affect their company's operations. At the same time they need to draw on their ethical foundations to address and act on social responsibility imperatives across national borders.
NU Course Equivalent: INTB 1203, International Business and Global Social Responsibility. NUpath: IC, ER.

International Relations
Introduces a broad study of international relations, encompassing both theoretical perspectives and empirical knowledge. Reviews the role of states as well as international and nongovernmental organizations in dealing with security and war, terrorism, human rights, trade, globalization, and environmental protection, among other important contemporary issues.
NU Course Equivalent : POLS 1160, International Relations. NUpath: SI.

NU Bound Bay Area – *continued*

Introduction to Building Systems
Introduces fundamentals of building technology and explores technology as means and manifestation of architecture in the world. Using a systems approach, studies the interactions among natural forces, material properties, technological capabilities, and human cultural values and the ways these relationships give rise to architecture. Considers a series of physical principles—including gravity, moisture, heat, light, and air—to reveal specific architectural possibilities and material responses. Explores the ways design shapes the interaction of materials and forces to provide for human safety, shelter, comfort, and delight through a combination of hands-on workshops, seminal readings, and design exercises.
NU Course Equivalent: ARCH 2260, Introduction to Building Systems. NUpath: ND.

Introduction to Communication Studies
Surveys the field of communication studies. Covers major theories and methodological approaches in communication studies and situates communication within larger social, political, and economic institutions. Exposes students to ways of ethical reasoning across communication contexts, including organizational communication, social media, intercultural communication, mass media, and interpersonal communication.
NU Course Equivalent: COMM 1101, Introduction to Communication Studies. NUpath: ER, SI.

Introduction to Contemporary Pharmaceutical Sciences
Introduces multiple aspects of the contemporary pharmaceutical sciences. Explores how these disciplines are used to solve real-world medical problems. Offers students an opportunity to learn about foundational concepts in pharmacology; drug development and translational medicine; and the nexus of biotechnology, engineering, industry, entrepreneurship, and the career landscape for scientists. Discussion-based classes that introduce fundamental concepts are followed by student-driven classes that explore the real-world application and societal context of the material. Seeks to help students interested in pharmaceutical sciences to identify and interact with like-minded students and faculty researchers.
For Pharmaceutical Science majors only, livestream from Boston.
NU Course Equivalent: PHSC 1001, Introduction to Contemporary Pharmaceutical Sciences.

Introduction to Criminal Justice
Surveys the contemporary criminal justice system in the United States. Examines the phases of the criminal justice system beginning with the detection of crimes by the police; the handling of the case through the courts; and, finally, disposition and sentencing. Analyzes issues and characteristics of each of the phases of the criminal justice system (police, courts, and corrections) and identifies its key actors (for example, police, judges, prosecutors, correctional officers). Traces the role of systemic racism and intersecting dimensions of oppression in the historical development of and current policies and practices in the criminal justice system. Also introduces students to the U.S. juvenile justice system.
NU Course Equivalent: CRIM 1100, Introduction to Criminal Justice. NUpath: SI.

Introduction to Environmental, Social, and Biological Data
Introduces the fundamental concepts in the fields of environmental, social, and biological science. Studies the expertise needed in each discipline to organize and manage data in sustainability science. The first half of the course covers data collection relevant to pressing issues in sustainability, database organization, coding, and finding errors in data sets. The second half of the course covers basic principles in the statistical analysis of data sets used in conservation and sustainability, including simulating data, machine learning, and errors in analysis. Offers hands-on experience through students' own data collection projects. Appropriate for students interested in biology, marine biology, environmental science, and ecology and evolutionary biology. Designed to prepare students for co-ops and upper-level classes in these fields.
NU Course Equivalent: ENVR 1500/1501, Introduction to Environmental, Social, and Biological Data with Lab

Introduction to Health Science Research
Surveys research methods and topics relevant to health science research with the goal of engaging undergraduate students to commit to research training throughout at least one semester and possibly continuing throughout their undergraduate program. Exposes students to lectures addressing the benefits of a research experience and readings of original literature. Health science faculty from across the university present their lines of research focusing on projects that would be available to students. Seeks to familiarize students with use of the scientific method in addressing unsolved problems and to prepare them to select the most appropriate research laboratory to engage in research.
For Pharmaceutical Science majors only, livestream from Boston.
Prerequisite(s): BIOL 1111*; (CHEM 1161 or CHEM 1211)*; (MATH 1241 or MATH 1245)* *may be taken concurrently
NU Course Equivalent: PHSC 2650, Introduction to Health Science Research.

NU Bound Bay Area – *continued*

Introduction to Language and Linguistics
Explores linguistics, the scientific study of language. Major topics include phonetics (production of speech sounds), phonology (sound systems in languages), morphology (structure of words), syntax (grammatical relationships between words and sentences), and semantics (meaning of words and sentences). Other topics may be surveyed such as the relationship between language and culture, language use within speech communities, languages in contact, the study of language change, language and brain, animal communication, and first language acquisition.
NU Course Equivalent: LING 1150, Introduction to Language and Linguistics. NUpath: ND, SI.

Introduction to Languages, Literature, and Culture
Examines the rich interconnections between literature and language and the culture that supports them. Discusses the relationship of language to literature and investigates how language and literatures are embedded in culture. Addresses several very broad and important questions, such as the relationship between language and culture; the relationship between language and thought; the definition of cultural relativism; and how ethical dilemmas are expressed in different cultures. Explores the relationship of esthetic and rhetorical traditions in given languages to the culture from which they sprang. In this context, examines the extremely interesting case of American Sign Language and how a gestural language sheds light on these issues.
NU Course Equivalent: CLTR 1120, Introduction to Languages, Literature, and Culture. NUpath: IC.

Introduction to Marketing
Provides an overview of the role of marketing in business and society. Considers the planning, implementation, and evaluation of marketing efforts in consumer and business-to-business companies, in service and goods companies, and in for-profit and nonprofit organizations. Also examines contemporary issues in marketing that can affect organizational success. A term project is used to enable students to apply their learning about the fundamentals of marketing.
NU Course Equivalent: MKTG 2201, Introduction to Marketing.

Introduction to Music Technology
Provides students with instruction in the use of a computer for composing original music. Topics include MIDI sequencing, digital audio processing, and sound synthesis. Students use music hardware and software to complete a variety of projects.
NU Course Equivalent: MUST 1220, Introduction to Music Technology. NUpath: AD.

Introduction to Sociology
Explores diverse social phenomena, from how people try to look their best in face-to-face interactions; to how race, gender, and class shape identities and social conditions; to how industrial capitalism came to dominate the world. Offers students an opportunity to gain a grasp of key sociological theories and empirical research on topics such as social order, social conflict, and social change, as well as learn to identify social forces that shape human behavior, explain how these forces affect individuals and social groups, and make valid predictions about how they may shape future behavior or events.
NU Course Equivalent: SOCL 1101, Introduction to Sociology. NUpath: SI, DD.

Introduction to the History of the United States
Engages with the major issues in U.S. history. Topics include the interaction of native populations with European settlers, the American Revolution and the Constitution, slavery, the Civil War, industrialization and migration, the growth of government and rise of the welfare state, media and mass culture, struggles for civil rights and liberation, and America's role in the world from independence to the Iraq wars.
NU Course Equivalent: HIST 1130, Introduction to the History of the United States. NUpath: DD, IC.

Introduction to Theater
Reveals the dynamic world of theatre by exploring the artistry, ideas, and techniques of actors, designers, directors, and playwrights. Goes behind the scenes in the study of theory and literature with both in-depth discussions and in-class performances. Includes a survey of significant movements in theatre history and analysis of diverse plays from contemporary drama. No theatre experience required.
NU Course Equivalent: THTR 1101, Introduction to Theatre. NUpath: EI, IC.

NU Bound Bay Area – *continued*

Journalism 1: Fundamentals of Reporting
Covers foundations of news writing for print media, including leads, story structure, objective tone, and attribution. Introduces fundamental reporting skills such as interviewing, researching, and observation. It then asks students, in their reporting, to step back and analyze the institutions they are writing about and the media itself in order to understand how societies and its institutions function and the validity of theories that explain these processes.
NU Course Equivalent: JRNL 1101, Journalism 1: Fundamentals of Reporting. NUptath: EI, SI, WI.

Law, Resistance, & Identity: Indigenous Peoples in the "U.S." from 1900 – present
Introduces the Indigenous peoples of North America and the academic field of Native American and Indigenous studies. Combines public history and public art, field trips, and original research to focus on the ongoing resistance to colonization and erasure and the resilience of Indian nations in New England and beyond. Covers particular themes, including the present-day impact of historical treaties and policies including land allotment, relocation, termination, boarding schools, and natural resource extraction.
NU Course Equivalent: HIST 2000, Native American Resistance: Past and Present. NUpath: DD, IC.

Leadership for Social Change
Examines racism, racial identity, and theories of social change and racial empowerment primarily within the U.S. context. Highlights different ways in which racism and racial privilege have been experienced by different racial communities, more specifically at the micro-, meso-, and macro-levels. Offers students an opportunity to learn ways to promote racial empowerment and equity. Using theory from primarily psychology and sociology, the course investigates the impact of social systems and institutions on individual-level and group experiences of racism. Investigates students' own racial identities, a deeper understanding of institutional inequalities and intersectionality, and practical skills in leadership and community building that can promote positive social change and racial equality.
NU Course Equivalent: HUSV 2355, Race, Identity, Social Change and Empowerment. NUpath: DD.

Media, Culture, and Society
Introduces the study of media, including print, radio, film, television, and digital/computer products. Explores the ideological, industrial, political, and social contexts that impact everyday engagements with media. To accomplish this, students examine how media products are developed, how technological changes impact the production and consumption of media, how political processes are influenced by media, how people interpret and interact with media content, and how media influence cultural practices and daily life.
NU Course Equivalent: MSCR 1220, Media, Culture, and Society. NUpath: IC, SI.

Music in Everyday Life
Dedicated to exploring, expanding, and exploding traditional meanings of what music is; of what it means to be a composer, performer, and audience member; and of what it means to listen. The overarching goal is to provide students with the tools and opportunities necessary for determining for themselves what place music holds in everyday life.
NU Course Equivalent: MUSC 1001, Music in Everyday Life. NUpath: EI, IC.

Music Theory 1
Introduces melodic and harmonic practices in tonal music with additional work in chord and melody construction. Develops ear training and sight-singing skills.
Prerequisite: MUSC 1119.
NU Course Equivalent: MUSC 1201, Music Theory 1.

Native American Resistance: Past and Present
Introduces the Indigenous peoples of North America and the academic field of Native American and Indigenous studies. Combines public history and public art, field trips, and original research to focus on the ongoing resistance to colonization and erasure and the resilience of Indian nations in New England and beyond. Covers particular themes, including the present-day impact of historical treaties and policies including land allotment, relocation, termination, boarding schools, and natural resource extraction.
NU Course Equivalent: HIST 2000, Native American Resistance: Past and Present. NUpath: DD, IC.

NU Bound Bay Area – *continued*

Organic Chemistry 1 with Lab
Introduces nomenclature, preparation, properties, stereochemistry, and reactions of common organic compounds. Presents correlations between the structure of organic compounds and their physical and chemical properties, and mechanistic interpretation of organic reactions. Includes chemistry of hydrocarbons and their functional derivatives.
Prerequisite: CHEM 1151, CHEM 1214, CHEM 1220, or CHEM 1161.
NU Course Equivalent: CHEM 2311/2312, Organic Chemistry 1 with Lab.

People and Cultures
Surveys basic concepts in cultural anthropology by looking at a range of societies and the issues they face in a globalizing world. Examines the manner in which cultures adapt to, reject, or modify all of the changes they face. These changes impact everything from traditional family structure, to religion, gender, all the way to patterns of joking and concepts of beauty the world over.
NU Course Equivalent: ANTH 1101, Peoples and Cultures. NUpath: IC.

Physics for Engineering 1 with Lab and Interactive Learning Seminar
Covers calculus-based physics. Offers the first semester of a two-semester integrated lecture and laboratory sequence intended primarily for engineering students. Covers Newtonian mechanics and fluids. Stresses the balance between understanding the basic concepts and solving specific problems. Includes topics such as one-dimensional and three-dimensional motion, Newton's laws, dynamics friction, drag, work, energy and power, momentum and collisions, rotational dynamics, forces, torque and static equilibrium, pressure, fluids, and gravity.
NU Course Equivalent: PHYS 1151/1152/1153, Physics for Engineering 1 with Lab and ILS. NUpath: ND, AD.
Prerequisite: MATH 1241, 1251, 1340, 1341*, 1342* or 2321*.*May be taken concurrently.*

Physics for Engineering 2 with Lab
Continues PHYS 1151. Offers integrated lecture and laboratory. Covers electrostatics; capacitors; resistors and direct-current circuits; magnetism and magnetic induction; RC, LR, and LRC circuits; waves; electromagnetic waves; and radiation.
Prerequisite: PHYS 1151, PHYS 1161, or PHYS 1171; MATH 1252, MATH 1342, or MATH 2321 (may be taken concurrently).
NU Course Equivalent: PHYS 1155/1156/1157, Physics for Engineering 2 with Lab. NUpath: ND, AD.

Principles of Macroeconomics
Introduces macroeconomic analysis. Topics include the flow of national income, economics growth and fluctuation, the role of money and banking, and monetary and fiscal policies. Emphasizes the development of conceptual tools to analyze the economic problems facing modern society.
NU Course Equivalent: ECON 1115, Principles of Macroeconomics. NUpath: SI, AD.

Principles of Microeconomics
Focuses on development of basic theory of demand, supply, and market price. Explores applications to selected microeconomic problems, such as basic monopoly and competition, and other issues that relate to the role of the pricing system in resource allocation and income distribution.
NU Course Equivalent: ECON 1116, Principles of Microeconomics. NUpath: SI, AD.

Programming with Data with Practicum
Introduces programming for data and information science through case studies in business, sports, education, social science, economics, and the natural world. Presents key concepts in programming, data structures, and data analysis through Python and Excel. Integrates the use of data analytics libraries and tools. Surveys techniques for acquiring and programmatically integrating data from different sources. Explains the data analytics pipeline and how to apply programming at each stage. Discusses the programmatic retrieval of data from application programming interfaces (APIs) and from databases. Introduces predictive analytics for forecasting and classification. Demonstrates the limitations of statistical techniques. *NU Course Equivalent: DS 2000/2001, Programming with Data with Practicum. NUpath: AD.*

Public Speaking
Develops skills in public communication. Topics include choosing and researching a topic, organizing and delivering a speech, handling speech anxiety, listening critically, and adapting language to an audience. Offers the opportunity for students to present a series of speeches and receive advice and criticism from an audience.
NU Course Equivalent: COMM 1112, Public Speaking. NUpath: EI.

NU Bound Bay Area – *continued*

Race, Crime and Justice
Provides students with an overview of the role and treatment of racial/ethnic minorities in the criminal justice system. Covers historical and theoretical frameworks for understanding the relationship between race, crime, and criminal justice. In so doing, students become familiar with trends and patterns in criminal offending by racial/ethnic minorities, as well as system response to such behavior.
NU Course Equivalent: CRIM 3120, Race, Crime, and Justice. NUpath: DD.

Race and Ethnic Relations in the U.S.
Focuses on the social construction of race and ethnicity and the nature of dominant/minority relations in the United States. Emphasizes the peculiar evolution of race relations in U.S. history, the political and economic conditions that have transformed race relations, and the nature of contemporary racial and ethnic relations in the United States. Topics include immigration, ethnic and racial identity, discrimination, and race-based policies (e.g., residential restrictive codes, Jim Crow segregation). Offers students an opportunity to develop a critical lens from which to observe and interpret contemporary debates over structural racism.
NU Course Equivalent: SOCL 3270, Race and Ethnic Relations. NUpath: SI, DD.

Sex, Gender, and Popular Culture
Examines how femininities, masculinities, and different forms of sexual identity are produced and represented within popular culture. Using theories and concepts from both feminist/sexuality studies and popular culture studies, analyzes popular texts and media for their treatment of gender and sexuality and the intersection of those categories with racial and class identities. Explores the visual representation of women (and men) and analyzes how visual and textual media shape our attitudes and identities. Required reading and assignments include close readings of texts, film screenings, class discussions and activities, writing assignments, and creative projects.
NU Course Equivalent: SOCL 1102, Sex, Gender, and Popular Culture. NUpath: DD, IC.

Site, Space, Program
Studies how to analyze, draw, and model the built environment. Students engage in issues of program, composition, type, and material. Offers students the opportunity to think conceptually about architectural design.
Prerequisite: ARCH 1120.
NU Course Equivalent: ARCH 2130, Site, Space, Program.

Social Change and Human Services
Offers students an opportunity to obtain a foundation for understanding social inequality and for practicing in the human services field. Introduces students to a range of specializations in human services through lectures, service-learning, group work, individual projects, papers, debates, and presentations. Analyzes and applies ethical frames for practice using case studies and service-learning experiences. Students are expected to develop an understanding of the history of nonprofit and government responses to inequality and the social, political, and economic forces that influence social professionals.
NU Course Equivalent: HUSV 1101, Social Change and Human Services. NUpath: SI, EX.

Social Psychology
Provides an introductory survey of social psychology. Topics include aggression, attribution, attitude formation; and change, attraction, gender and culture, conformity, impression formation, and group processes.
Prerequisite: PSYC 1101.
NU Course Equivalent: PSYC 3402, Social Psychology.

Sustainable Development
Focuses on the principles and practice of sustainable development, both as a way of looking at the interconnected world and an overarching framework for promoting economic development, social inclusion, and environmental stewardship. Students will study decades of local and global efforts aimed at developing economies, eradicating hunger and disease, and restoring and sustaining ecosystems for a large, and growing, population living on an increasingly altered planet and facing a changing climate. Along with lectures and discussions on core concepts, students will critically dissect the toughest questions and challenges of sustainable development through an online class blog and semester-long group projects.
Prerequisite: ENVR 1101 or ENVR 1400 (may be taken concurrently).
NU Course Equivalent: ENVR 2515, Sustainable Development. NUpath: SI, WI.

NU Bound Bay Area – *continued*

Technology and Human Values
Studies philosophy of technology, as well as ethics and modern technology. Considers the relationship between technology and humanity, the social dimensions of technology, and ethical issues raised by emerging technologies. Discusses emerging technologies such as biotechnology, information technology, nanotechnology, and virtual reality.
NU Course Equivalent: PHIL 1145, Technology and Human Values. NUpath: SI, ER.

The American Healthcare System
Introduces the organization and dynamics of the healthcare system and the role of consumers. Explores basic elements of healthcare including financing, personal insurance, high-risk status, and patient rights within the context of the U.S. system. Central to this exploration is an analysis of healthcare issues requiring informed consent from patients: patient bill of rights, healthcare directives, and the use of a proxy for decision making. Introduces the roles and responsibilities of various healthcare workers within the framework of an interdisciplinary model of healthcare.
NU Course Equivalent: PHTH 1260, The American Healthcare System. NUpath: SI.

The World Since 1945
Examines the political, economic, social, and cultural relationship between the developed and developing world since the end of World War II. Topics include the Cold War, independence and national movements in developing countries, the globalization of the world economy, scientific and technological innovations, wealth and poverty, the eradication of some diseases and the spread of others, the fall of the Soviet Union, Middle East turmoil, and the enduring conflict between Israel and Palestine.
NU Course Equivalent: HIST 2211, The World Since 1945. NUpath: SI, DD.

Topics in Architectural History
Covers a variety of topics in architectural history and theory. Taught by faculty according to their interests and expertise.
NU Course Equivalent: ARCH 2370, Topics in Architectural History. NUpath: WI.

Topics in Dance
Offers opportunity for early undergraduate examination of a subject of particular significance in dance.
NU Course Equivalent: THTR 2863, Topics in Dance.

Understanding Today's News
Examines the media institutions that shape the news and how the challenges of economics, politics, diversity, and globalization change the function of the website, newspaper, news magazine, and news broadcasts. Examines stories and news decisions from different perspectives to evaluate national, political, local, foreign, sports, and science news in the U.S. media. Topics include responsibilities of the press and the changing ways news is gathered, processed, and disseminated. Explores how other societies in different parts of the world view the news; freedom of the press; and the role of reporters, producers, and editors.
NU Course Equivalent: JRNL 1150, Understanding Today's News. NUpath: DD, SI.

Visual Intelligence with Seminar
Introduces skills of visual intelligence. Combines techniques of observation (formal description, visual data, theories of attention) with multiple models of inquiry (decolonial discourses, intersectional feminisms, critical race theory, data ethics, disability studies), allowing students to develop comparative interpretations of diverse visual art and artifacts across time periods within a shifting global context. Examines differing ways image technologies shape society and operate as powerful tools for communication, innovation, and creation. Offers students an opportunity to understand, analyze, and critique visual art as artifact and act of public address. Students engage in experiments in visual thinking fundamental to the fields of art and design, their related institutions, and practices (publishing, curating, conservation, exhibition design) and other areas of knowledge production in the visual arts and cultural history.
NU Course Equivalent: ARTH 1001/1002, Visual Intelligence with Seminar. NUpath: IC.

NU Bound England

Global Learning Experience
This online seminar will focus on global citizenship and cultural difference in the twenty-first century. We will begin by defining global citizenship and examining its origins and critiques. We will then explore frameworks of intercultural learning and praxis. You will critically analyze and apply these ideas as you engage in personal reflection and team-based problem-solving, connecting issues you encounter during your own global experience in your NU Boundhost site with broader dynamics of globalization, migration, positionality, power, and privilege.
NU Course: INSH 1990, Interdisciplinary Elective in Social Sciences & Humanities.

Beginner/Intermediate French
Designed for students with very little or no prior knowledge of French. Provides a lively introduction to basic oral expression, listening comprehension, and elementary reading and writing. Each lesson incorporates helpful information about daily life in France and the varied cultures within the world of French speakers. Laboratory practice complements class work, enables students to work aloud at their own speed, reinforces their acquisition of essential structures, and acquaints them with a vast library of audio-visual resources.
NU Course Equivalent: FRNH 1101, Elementary French 1.
NOTE: Additional upper-level language classes may be available, per the host institutions placement exam

Beginner/Intermediate Spanish
Designed for students with little or no knowledge of Spanish. Presents essentials of correct Spanish usage through acquisition of basic skills in reading, speaking, writing, and aural comprehension.
NU Course Equivalent: SPNS 1101, Elementary Spanish 1.
NOTE: Additional upper-level language classes may be available, per the host institutions placement exam

Britain and the World: Interaction and Empire
Welcome to 'Britain and the World: Interaction and Empire'. This course introduces students to the history of Britain and its interaction with the world. The course follows British history from the Roman Empire to today. The aim is to examine the Britain's relationships with other countries and cultures, exploring social, economic, and cultural developments, as well as political and diplomatic ones. As well as understanding these developments discretely, students will also be encouraged to see how they affect one another.
NU Course Equivalent: HIST 2376, Britain and the British Empire, NUpath: SI, DD.

British Drama and the London Stage
In this course students will study a range of drama from the British Isles across six centuries, with a particular emphasis on the evolving nature of theatre and performance in London. Attention is given to major playwrights, movements, styles and themes and their historical, critical and performance contexts. Throughout the course we will be considering the relationship between page and stage: between the dramatic text as it appears in written from, and its life in performance. After an overview we will proceed chronologically, from Elizabethan and Jacobean Shakespeare through to the eclectic British theatre of the twenty-first century. Lectures are highly interactive and are structured around significant playwrights, genres, movements and topics. We will use the wealth of theatres and productions happening on our doorstep in London as a resource.
NU Course Equivalent: THTR 1990, Theatre Elective, NUpath: EI, IC.

Business Statistics
Offers students an opportunity to obtain the necessary skills to collect, summarize, analyze, and interpret business-related data. Covers descriptive statistics, sampling and sampling distributions, statistical inference, relationships between variables, formulating and testing hypotheses, and regression analysis in the context of business. Use of the SPSS statistical programming package is an integral part of the course.
NU Course Equivalent: MGSC 2301, Business Statistics. NUpath: AD.

Calculus for Business
Calculus for Business is a calculus course intended for those studying business, economics, or other related business majors. The following topics are presented with applications in the business world: functions, graphs, limits, differentiation, integration, techniques and applications of integration, partial derivatives, optimization, and the calculus of several variables. Each textbook section has an accompanying homework set to help the student better understand the material.
NU Course Equivalent: MATH 1231, Calculus for Business and Economics. NUpath: FQ.

NU Bound England -- *continued*

Calculus 1 for Science and Engineering
Covers definition, calculation, and major uses of the derivative, as well as an introduction to integration. Topics include limits; the derivative as a limit; rules for differentiation; and formulas for the derivatives of algebraic, trigonometric, and exponential/logarithmic functions. Also discusses applications of derivatives to motion, density, optimization, linear approximations, and related rates. Topics on integration include the definition of the integral as a limit of sums, antidifferentiation, the fundamental theorem of calculus, and integration by substitution.
NU Course Equivalent: MATH 1341, Calculus 1 for Science and Engineering. NUpath: FQ.

Calculus 2 for Science and Engineering
Covers further techniques and applications of integration, infinite series, and introduction to vectors. Topics include integration by parts; numerical integration; improper integrals; separable differential equations; and areas, volumes, and work as integrals. Also discusses convergence of sequences and series of numbers, power series representations and approximations, 3D coordinates, parameterizations, vectors and dot products, tangent and normal vectors, velocity, and acceleration in space. Requires prior completion of MATH 1341 or permission of head mathematics advisor.
NU Course Equivalent: MATH 1342, Calculus 2 for Science and Engineering. NUpath: FQ.
Prerequisite: Requires prior completion of MATH 1341 or permission of head mathematics advisor.

Calculus 3 for Science and Engineering
Extends the techniques of calculus to functions of several variables; introduces vector fields and vector calculus in two and three dimensions. Topics include lines and planes, 3D graphing, partial derivatives, the gradient, tangent planes and local linearization, optimization, multiple integrals, line and surface integrals, the divergence theorem, and theorems of Green and Stokes with applications to science and engineering and several computer lab projects.
NU Course Equivalent: MATH 2321, Calculus 3 for Science and Engineering. NUpath: FQ.
Prerequisite: MATH 1342 or MATH 1252.

Criminology
Describes the nature and extent of crime, explains its causes, and examines society's responses to it. Defines the field of criminology by discussing the different types of crime and discusses different theories of crime causation. Studies the connections between systemic racism, inequalities, and crime and the role of bias in the development of the field and criminological theories. To establish the extent of crime in society, addresses measurement issues in the field of criminology.
NU Course Equivalent: CRIM 1120, Criminology. NUpath: SI.

Cultures of London
This course is about the relationship between place, people, and culture in the widest sense of the term. In this course you will encounter and study a wide range of cultural manifestations in and of London: examining how different people and different art forms have helped form an idea of the city across different time periods; and how the city has in turn influenced the people who live here and the directions art forms have taken. Wherever possible we will be studying London and its cultures first-hand. The course focuses on a wide variety of art that has been produced in, or which reflects upon, London, including in the visual arts and architecture, and with a strong emphasis on literary representations. We will study a range of poetry, prose and drama spanning more than 450 years, tracing continuities and differences in relation to historical and sociological change. Above all, the aim is for students to enhance their semester abroad by reflecting deeply on their own experiences of London as visitors from overseas, in relation to the similar experiences of overseas visitors and immigrants to London over the past five centuries.
NU Course Equivalent: INSH 1600, Cultures of London – Abroad. NUpath: IC, DD.

Current Issues in Cities and Suburbs
Introduces students to pressing urban issues: urban sprawl, poverty, education, transportation, economic development, and housing, through an intensive analysis of the Boston metropolitan area. The course is cotaught by university faculty and practitioners in government, community, and nonprofit organizations throughout the metropolitan area. Offers students the opportunity to analyze Boston data, go on outings to see development in progress, talk with urban practitioners about what they do, and conduct research on an urban issue of their choice.
NU Course Equivalent: POLS/SOCL 2358, Current Issues in Cities and Suburbs. NUpath: DD, SI.

NU Bound England -- *continued*

Design Process Context and Systems
Explores common design practices, principles, and vocabularies, introducing the design process as a method of inquiry and problem solving through studio projects. Emphasizes the importance of an awareness of audience and context in the creation of meaningful communications and experiences. Explores the practice of design as an iterative process, offering students an opportunity to obtain an understanding of the value of systems thinking and the importance of feedback and exchange as a means for assessing the quality of design's effectiveness in helping users achieve their goals.
NU Course Equivalent: ARTG 1250, Design Process Context and Systems. NUpath: EI.

Developmental Psychology
Examines change throughout the life span in social relationships, emotional functioning, language, cognition, and other psychological domains, with emphasis on infancy through adolescence. Introduces major theories of development. Stresses the interaction of social and cognitive factors in development, and the interaction of the developing person with the environment. Also explores individual and cross-cultural differences in patterns of development, and research issues in developmental psychology.
NU Course Equivalent: PSYC 3404, Developmental Psychology.
Prerequisite: PSYC 1101.

Differential Equations and Linear Algebra
Studies ordinary differential equations, their applications, and techniques for solving them including numerical methods (through computer labs using MS Excel and MATLAB), Laplace transforms, and linear algebra. Topics include linear and nonlinear first- and second-order equations and applications include electrical and mechanical systems, forced oscillation, and resonance. Topics from linear algebra, such as matrices, row-reduction, vector spaces, and eigenvalues/eigenvectors, are developed and applied to systems of differential equations.
Prerequisite: MATH 1342.
NU Course Equivalent: MATH 2341, Differential Equations and Linear Algebra.

Discrete Structures
This course introduces the mathematical structures and methods that form the foundation of computer science. Studies structures such as sets, tuples, sequences, lists, trees, and graphs. Discusses functions, relations, ordering, and equivalence relations. Examines inductive and recursive definitions of structures and functions. Discusses principles of proof such as truth tables, inductive proof, and basic logic. Also covers the counting techniques and arguments needed to estimate the size of sets, the growth of functions, and the space-time complexity of algorithms.
NU Course Equivalent: CS 1800/1802, Discrete Structures with Recitation. NUpath: FQ.

Experience and Interaction
Explores the language of interactive experience as a compelling medium to communicate meaning. Examines how variables within the environment can change how we inhabit an experience physically, conceptually, and emotionally. Studies historical and contemporary examples of art and design projects designed as exchanges or experiences. Incorporates drawing as a means to understand the present and project potential future experiences.
NU Course Equivalent: ARTF 2223, Experience and Interaction. NUpath: EI.

Financial Accounting and Reporting
Covers the basic concepts underlying financial statements and the accounting principles followed in the preparation of the balance sheet, the income statement, and the statement of cash flows. Offers students an opportunity to become familiar with accounting terminology and methods designed to enable them to interpret, analyze, and evaluate published corporate financial reports. Wherever appropriate, the course relates current economic, business, and global events to accounting issues. Analyzes how financial reporting concepts affect the behavior of investors, creditors, and other external users. Emphasizes the importance of ethics in financial reporting. Requires second-semester-freshman standing or above.
NU Course Equivalent: ACCT 1201, Financial Accounting and Reporting.

NU Bound England -- *continued*

First-Year Writing Studio
The goal of this course is to help students learn how to participate in an academic community, in part by helping students to become aware of the ways information and communication function within all sorts of different cultural groups. Students will learn how to assess a variety of communication situations, and how to make choices that will help them participate effectively in those situations. This course aims to help students negotiate writing goals and audience expectations regarding conventions of genre, medium, and situation; formulate and articulate a stance through writing; revise writing using responses from others, including peers and teachers; effectively use and appropriately cite sources in your writing; use multiple forms of evidence to support your claims, ideas, and arguments; practice critical reading strategies; provide revision-based response to your peers; and self-assess as writers.
NU Course Equivalent: ENGW 1111, First Year Writing. NUpath: WF.

Foundations of Psychology
This course provides an introductory insight into psychology. It surveys fundamental principles, concepts, and issues in the major areas of contemporary scientific psychology. The goal of this course is for you to gain an understanding of multiple major areas of psychology including biological, behavioral, cognitive, and social factors that influence and regulate learning and motivation; personality dynamics; psychopathology and its treatment; life-span development; sensory and perceptual processes; and communication and social behaviors. We will be able to see how psychology is applied to explain individual differences in behaviors, attitudes and feelings. You will learn how psychological experiments are conducted and what famous psychological studies have revealed about human behavior.
NU Course Equivalent: PSYC 1101, Foundations of Psychology, NUpath: ND, SI.

Fundamentals of Computer Science with Lab
This course is an introduction to computing and programming. Our major goal is to introduce you to the principles of systematic problem solving through programming and the basic rules of computation. By the end of this course, you will have a sense for the differences between a programmer and a well-trained software engineer. You will also have a sense of the complexities involved in developing solid software. You'll be able to apply what we learn to solve many non-computational problems in a systematic way. This course does not assume any prior programming experience. It is suitable for all students, majors and non-majors alike, who wish to explore the ideas behind the discipline of computer science. It does assume familiarity with (high-school-level) arithmetic and algebra, and it demands curiosity, self-discipline, and the capacity to work well with others.
NU Course Equivalent: CS 2500/2501, Fundamentals of Computer Science 1 with Lab, NUpath: ND, FQ.

General Biology 1 with Lab
Explores basic principles of biology with a focus on those features shared by all living organisms and seen through the lens of evolutionary theory. Through lectures, readings and discussion, offers students an opportunity to understand how the scientific method has been and is used to address biological questions. Central topics include recent advances in cell anatomy and physiology, including the interplay between organelles, membrane transport, and cell-signaling; energy transfer through cells and through the biosphere; cellular reproduction and cancer; heredity and human genetic disorders; and protein synthesis and biotechnology. Explores the societal implications of such topics as biopharmaceuticals, ocean acidification, climate change, human diseases, epigenetics, cancer, and cloning.
NU Course Equivalent: BIOL 1111/1112, General Biology 1 with Lab. NUpath: ND, AD.

General Biology 2 with Lab
Continues BIOL 1111. Examines the evolution of structural and functional diversity of organisms; the integrative biology of multicellular organisms; and ecological relationships at the population, community, and ecosystem levels.
Prerequisite: BIOL 1101, BIOL 1107, BIOL 1111, or BIOL 1115.
NU Course Equivalent: BIOL 1113/1114, General Biology 2 with Lab. NUpath: ND, AD.

General Chemistry for Science Majors with Lab
Introduces the principles of chemistry, focusing on the particulate nature of matter and its interactions and reactions that form the basis for the underlying molecular dynamics of living systems. Presents basic concepts of chemical bonding and intermolecular interactions for molecules and molecules' behavior in aqueous solutions with examples from biologically relevant molecules. Introduces kinetics and chemical thermodynamics with examples from biological systems. Offers students an opportunity to obtain a framework for understanding the chemical basis for different methods for separating and purifying biological compounds.
NU Course Equivalent: CHEM 1161/1162/1163, General Chemistry for Science Majors with Lab. NUpath: ND.

NU Bound England -- *continued*

Global and Intercultural Communication
Focuses on theories of and approaches to the study of intercultural communication. Emphasizes the importance of being able to negotiate cultural differences and of understanding intercultural contact in societies and institutions. Stresses the benefits and complexities of cultural diversity in global, local, and organizational contexts.
NU Course Equivalent: COMM 2303, Global and Intercultural Communication. NUpath: SI, DD.

Global Markets and Local Culture
Examines selected topics in the socioeconomic transformation of other cultures, including urbanization, industrialization, globalization, commodity production, and international labor migration. Focuses on the impact of global capitalist development on contemporary developing and postcolonial societies as well as local responses and/or resistances to those changes.
NU Course Equivalent: ANTH 2305, Global Markets and Local Culture. NUpath: IC.

Intermediate Programming with Data with Lab
Offers intermediate to advanced Python programming for data science. Covers object-oriented design patterns using Python, including encapsulation, composition, and inheritance. Advanced programming skills cover software architecture, recursion, profiling, unit testing and debugging, lineage and data provenance, using advanced integrated development environments, and software control systems. Uses case studies to survey key concepts in data science with an emphasis on machine-learning (classification, clustering, deep learning); data visualization; and natural language processing. Additional assigned readings survey topics in ethics, model bias, and data privacy pertinent to today's big data world. Offers students an opportunity to prepare for more advanced courses in data science and to enable practical contributions to software development and data science projects in a commercial setting.
Prerequisite: DS 2000.
NU Course Equivalent: DS 2500/2501, Intermediate Programming with Data with Lab. NUpath: AD.

International Business and Global Responsibility
The emphasis of this course is on the cultural, economic, strategic, and political aspects of national business environments and their impact on international business operations. Students are exposed to a variety of key international business concepts, ranging from strategic planning in the global arena, to managing behavior and interpersonal relations. Additional topics include free trade agreements, national trade policies, foreign market analysis, and international strategic management. Outside of the classroom we will visit some British Museum galleries, which is intended to support students' understanding of global cultural business environments around the world.
NU Course Equivalent: INTB 1203, International Business and Global Social Responsibility. NUpath: IC, ER.

International Relations: Theory and Practice
The study of international relations (IR) helps us understand the circumstances under which conflict and cooperation occur in the world. If we can determine the causes of these events, we might learn to control them. This course is designed as an introduction to the only academic discipline that is specifically concerned with the study of "The International". It offers a broad introduction to international relations and assumes no prior knowledge. It is structured to provide a balance between empirical applications and theoretical underpinnings. The course covers several mainstream and critical theories that help to explain recurring patterns in international relations, including realism, liberalism, Marxism, constructivism, and feminism. Along with these theories, we will explore basic concepts used by IR scholars, such as the "state," the "nation," "anarchy," and "power." We will then study the different ways in which to analyse fundamental problems of international relations— conflict or cooperation—whether by studying the "big picture,", the international system, or the inner workings of the state. Throughout the course you will be given the opportunity to apply complex and fast-changing scholarship to "real world" world problems, including state failure, climate change and security, international development, and humanitarian crises, which will enhance your critical thinking skills and help you to situate current international events in complex empirical and theoretical frameworks.
NU Course Equivalent: POLS 1160, International Relations. NUpath: SI.

Introduction to Communication Studies
Surveys the field of communication studies. Covers major theories and methodological approaches in communication studies and situates communication within larger social, political, and economic institutions. Exposes students to ways of ethical reasoning across communication contexts, including organizational communication, social media, intercultural communication, mass media, and interpersonal communication.
NU Course Equivalent: COMM 1101, Introduction to Communication Studies. NUpath: ER, SI.

NU Bound England -- *continued*

Introduction to Criminal Justice
Surveys the contemporary criminal justice system in the United States. Examines the phases of the criminal justice system beginning with the detection of crimes by the police; the handling of the case through the courts; and, finally, disposition and sentencing. Analyzes issues and characteristics of each of the phases of the criminal justice system (police, courts, and corrections) and identifies its key actors (for example, police, judges, prosecutors, correctional officers). Traces the role of systemic racism and intersecting dimensions of oppression in the historical development of and current policies and practices in the criminal justice system. Also introduces students to the U.S. juvenile justice system.
NU Course Equivalent: CRIM 1100, Introduction to Criminal Justice. NUpath: SI.

Introduction to Marketing
Shifting forces and major consumption trends impacting markets in the digital age compete to create customer value, engagement and loyal relationships. Through real-world and engaging methods, this course provides an introduction to global marketing and what are considered effective marketing strategies, encouraging learners to recognize how customer value may be created and captured. Learning outcomes will enable a broader appreciation of basic marketing concepts, case-study strategies and Twenty-First century practices.
NU Course Equivalent: MKTG 2201, Introduction to Marketing.

Introduction to Sociology
Explores diverse social phenomena, from how people try to look their best in face-to-face interactions; to how race, gender, and class shape identities and social conditions; to how industrial capitalism came to dominate the world. Offers students an opportunity to gain a grasp of key sociological theories and empirical research on topics such as social order, social conflict, and social change, as well as learn to identify social forces that shape human behavior, explain how these forces affect individuals and social groups, and make valid predictions about how they may shape future behavior or events.
NU Course Equivalent: SOCL 1101, Introduction to Sociology. NUpath: SI, DD.

Introduction to Technology and Human Values
As long as here have been humans, there has been technology. Technology so permeates our form of life that some have characterized human beings as the technological animal. But while a relationship with technology is given, the nature of that relationship is not. Both human history and the contemporary world are replete with diverse and sometimes contradictory ways of conceiving of how people and technology interact. This course is oriented around these general questions: (1) What is the proper way to understand the relationship between humanity and technology? (2) What critical perspectives and tools can we use to evaluate the social, ethical, and to political dimensions of technology? (3) How can we make good decisions about incorporating emerging technologies into our society and lives?
NU Course Equivalent: PHIL 1145, Technology and Human Values, NUpath: SI, ER.

GE 1000. Introduction to the Study of Engineering. (1 Hour)
Presents an introduction to the various disciplines of engineering and strategies for success in the classroom, within the profession, and within the University community. Provides an initial orientation to engineering cooperative education. Covers the support services provided by both college and University and explores the richness of our community's diversity. Defines diversity, and offers students the opportunity to study and understand diverse cultures and communities in the academic environment. Oral presentations are required. This course will be delivered asynchronously online.
NU Course Equivalent: GE 1000, Introduction to the Study of Engineering.

Organic Chemistry 1 with Lab
Introduces nomenclature, preparation, properties, stereochemistry, and reactions of common organic compounds. Presents correlations between the structure of organic compounds and their physical and chemical properties, and mechanistic interpretation of organic reactions. Includes chemistry of hydrocarbons and their functional derivatives.
Prerequisite: CHEM 1151, CHEM 1214, CHEM 1220, or CHEM 1161.
NU Course Equivalent: CHEM 2311/2312, Organic Chemistry 1 with Lab.

People and Cultures
Surveys basic concepts in cultural anthropology by looking at a range of societies and the issues they face in a globalizing world. Examines the manner in which cultures adapt to, reject, or modify all of the changes they face. These changes impact everything from traditional family structure, to religion, gender, all the way to patterns of joking and concepts of beauty the world over.
NU Course Equivalent: ANTH 1101, Peoples and Cultures. NUpath: IC.

NU Bound England -- *continued*

Physics for Engineering 1 with Lab and Interactive Learning Seminar
Covers calculus-based physics. Offers the first semester of a two-semester integrated lecture and laboratory sequence intended primarily for engineering students. Covers Newtonian mechanics and fluids. Stresses the balance between understanding the basic concepts and solving specific problems. Includes topics such as one-dimensional and three-dimensional motion, Newton's laws, dynamics friction, drag, work, energy and power, momentum and collisions, rotational dynamics, forces, torque and static equilibrium, pressure, fluids, and gravity.
NU Course Equivalent: PHYS 1151/1152/1153, Physics for Engineering 1 with Lab and ILS. NUpath: ND, AD.
Prerequisite: MATH 1241, 1251, 1340, 1341*, 1342* or 2321*.*May be taken concurrently.*

Physics for Engineering 2 with Lab
Continues PHYS 1151. Offers integrated lecture and laboratory. Covers electrostatics; capacitors; resistors and direct-current circuits; magnetism and magnetic induction; RC, LR, and LRC circuits; waves; electromagnetic waves; and radiation.
Prerequisite: PHYS 1151, PHYS 1161, or PHYS 1171; MATH 1252, MATH 1342, or MATH 2321 (may be taken concurrently).
NU Course Equivalent: PHYS 1155/1156/1157, Physics for Engineering 2 with Lab. NUpath: ND, AD.

Principles of Macroeconomics
Introduces macroeconomic analysis. Topics include the flow of national income, economics growth and fluctuation, the role of money and banking, and monetary and fiscal policies. Emphasizes the development of conceptual tools to analyze the economic problems facing modern society.
NU Course Equivalent: ECON 1115, Principles of Macroeconomics. NUpath: SI, AD.

Principles of Microeconomics
This course teaches the fundamentals of microeconomics, providing a solid foundation for economic analysis and thinking. This course begins with an introduction to supply and demand and the basic forces that determine an equilibrium in a market economy. It introduces a framework for learning about consumer behavior and analyzing consumer decisions. The course will explore consumers and their decision-making process as well as firms and their decisions about optimal production. In addition, the course covers the impact of different market structures on firms' behavior and further includes two guest lectures by economic scholars. By the end of the course, you will be able to understand introductory microeconomic theory, solve basic microeconomic problems, and use these techniques to think about a number of policy questions relevant to the operation of the real economy.
NU Course Equivalent: ECON 1116, Principles of Microeconomics. NUpath: SI, AD.

Programming with Data with Practicum
Introduces programming for data and information science through case studies in business, sports, education, social science, economics, and the natural world. Presents key concepts in programming, data structures, and data analysis through Python and Excel. Integrates the use of data analytics libraries and tools. Surveys techniques for acquiring and programmatically integrating data from different sources. Explains the data analytics pipeline and how to apply programming at each stage. Discusses the programmatic retrieval of data from application programming interfaces (APIs) and from databases. Introduces predictive analytics for forecasting and classification. Demonstrates the limitations of statistical techniques. *NU Course Equivalent: DS 2000/2001, Programming with Data with Practicum. NUpath: AD.*

Public Speaking
Develops skills in public communication. Topics include choosing and researching a topic, organizing and delivering a speech, handling speech anxiety, listening critically, and adapting language to an audience. Offers the opportunity for students to present a series of speeches and receive advice and criticism from an audience.
NU Course Equivalent: COMM 1112, Public Speaking. NUpath: EI.

The World Since 1945
Examines the political, economic, social, and cultural relationship between the developed and developing world since the end of World War II. Topics include the Cold War, independence and national movements in developing countries, the globalization of the world economy, scientific and technological innovations, wealth and poverty, the eradication of some diseases and the spread of others, the fall of the Soviet Union, Middle East turmoil, and the enduring conflict between Israel and Palestine.
NU Course Equivalent: HIST 2211, The World Since 1945. NUpath: SI, DD.

NU Bound England -- *continued*

The Writer's Craft
The Writer's Craft Gives the developing writer an opportunity to practice writing various forms of both poetry and prose. Features in-class discussion of student work.
NU Course Equivalent: ENGL 2700, Creative Writing. NUpath: EI.

Topics in Design History
Explores various design history topics through pioneering designers whose work has influenced contemporary design culture. Instructor determines format and content.
NU Course Equivalent: ARTH 2200, Topics in Design History.

Visual Intelligence with Seminar
Introduces skills of visual intelligence. Combines techniques of observation (formal description, visual data, theories of attention) with multiple models of inquiry (decolonial discourses, intersectional feminisms, critical race theory, data ethics, disability studies), allowing students to develop comparative interpretations of diverse visual art and artifacts across time periods within a shifting global context. Examines differing ways image technologies shape society and operate as powerful tools for communication, innovation, and creation. Offers students an opportunity to understand, analyze, and critique visual art as artifact and act of public address. Students engage in experiments in visual thinking fundamental to the fields of art and design, their related institutions, and practices (publishing, curating, conservation, exhibition design) and other areas of knowledge production in the visual arts and cultural history.
NU Course Equivalent: ARTH 1001/1002, Visual Intelligence with Seminar. NUpath: IC.