Applied Sustainability, MS (Boston)

Admissions to this program will open for the 2027-2028 academic year.

The Master of Science in Applied Sustainability is a multidisciplinary graduate degree jointly offered through Northeastern University's participating colleges under the University Interdisciplinary Programs framework. Designed for aspiring sustainability professionals, this program provides students with the knowledge, practical skills, and strategic mindset needed to drive organizational and societal change toward a more sustainable future.

Students in the MS-AS program have an opportunity to develop mastery in core sustainability competencies—systems thinking, futures thinking, values thinking, strategic thinking, and interpersonal communication—that are essential to solving complex environmental and social challenges. Through an integrated sequence of foundation courses, students gain a deep understanding of sustainability strategy and policy, leadership and change management, and systems design. Building on this foundation, students complete a concentration from one of Northeastern's participating colleges to explore specialized domains.

A hallmark of the program is its emphasis on hands-on experiential learning. Students apply sustainability competencies in real-world contexts through applied projects, design studios, and capstone experiences aligned with Northeastern's global network of partners. Successful graduates emerge with the ability to integrate sustainability into decision making, lead institutional change, and advance measurable impact across industries and communities.

In this degree program, students will be admitted to the college associated with their selected concentration, and their degree will be awarded by that college. The concentrations are associated with the colleges as follows:

- Climate and Environmental Policy—College of Social Sciences and Humanities
  - This concentration is for students with an interest in building sustainability competencies to understand and address global grand challenges, with an emphasis on climate change.
- Design for Sustainability—College of Arts, Media and Design
  - This concentration is for students who wish to apply sustainability concepts to product design, development and use of materials, and human-centric design processes.
- Economic Sustainability and Climate Finance—College of Professional Studies
  - This concentration is for students who wish to work at the intersection of climate science and financial markets through economic frameworks and risk analytics tools to handle climate-related financial risks.
- Infrastructure and Environmental Systems—College of Engineering
  - This concentration is for students who want to create the next generation of sustainable urban systems and infrastructure. Students have an opportunity to learn quantitative tools and engineering strategies that underpin professional practice including modeling, data analysis, and design techniques for civil and environmental projects. Successful engineering projects combine technical designs with careful assessments of societal needs and policies, and students will apply both sets of skills in integrated, experiential projects for real-world clients.
- Modeling and Decision Making for Sustainability—College of Social Sciences and Humanities
  - This concentration is for students with an interest combining sustainability skills with data analytics for policy development, long-term strategic planning, and governance for the public good.
- Public Health—Bouvé College of Health Sciences
  - This concentration is for students who wish to work on sustainability issues within the healthcare industry.
- Sustainability Practice and Implementation—College of Professional Studies
  - This concentration is for aspiring sustainability professionals who lead organizational transformations by mastering change leadership, project finance, and strategic communication methods. Students will train for professional certifications in project management.
- Sustainable Chemistry—College of Science
  - The sustainable chemistry concentration prepares sustainability practitioners to understand and advance the transformation of chemical processes, materials, and products toward safer, more efficient, and renewable systems that ensure human and environmental health.
- Sustainable Management for Business—D'Amore-McKim School of Business

  - This concentration is for students focusing on the integration of sustainability principles into business management, emphasizing the alignment of environmental and social responsibility with business strategy and performance.

- Sustainable Urban Environments—College of Arts, Media and Design
  - This concentration is for students who are interested in how the fields of planning, design, policy, and technology intersect to create ecologically and economically productive built environments.

Program Requirements

Core Requirements

Code	Title	Hours
ARTG 5920	Complexity in Systems	4
PPUA 5254	Sustainability Foundations in Strategy and Policy	4
STRT 6422	Strategy for Sustainable Transformation: Leading Organizational Change	4

In addition to the core courses above, students will fulfill the requirements in their selected concentrations, offered through the Northeastern colleges listed below.

Applied Sustainability Concentration Options

Complete one of the following:

- Climate and Environmental Policy (p. 2)—College of Social Sciences and Humanities
- Design for Sustainability (p. 3)—College of Arts, Media and Design
- Economic Sustainability and Climate Finance (p. 3)—College of Professional Studies
- Infrastructure and Environmental Systems (p. 3)—College of Engineering
- Modeling and Decision Making for Sustainability (p. 4)—College of Social Sciences and Humanities
- Public Health (p. 4)—Bouvé College of Health Sciences
- Sustainability Practice and Implementation (p. 4)—College of Professional Studies
- Sustainable Chemistry (p. 5)—College of Science
- Sustainable Management for Business (p. 5)—D'Amore-McKim School of Business
- Sustainable Urban Environments (p. 5)—College of Arts, Media and Design

Program Credit/GPA Requirements

32 total semester hours required (additional semester hours required for participation in optional co-op in certain concentrations)
Minimum 3.000 GPA required

CLIMATE AND ENVIRONMENTAL POLICY CONCENTRATION—COLLEGE OF SOCIAL SCIENCES AND HUMANITIES

Code	Title	Hours
Complete four of the following:		16
INTL 5100	Climate and Development	
or PPUA 5100	Climate and Development	
INTL 5268	International Environmental Policy	
or PPUA 5268	International Environmental Policy	
PPUA 5238	Climate Change and Global Urbanization	
PPUA 5249	Sustainable Urban Coastal Policy	
PPUA 5264	Energy Democracy and Climate Justice: Technology, Policy, and Social Change	
PPUA 5267	Climate Policy and Justice	
PPUA 5270	Food Systems and Public Policy	
PPUA 6101	Environmental Science and Policy Seminar 1	
Complete one of the following:		4
ARTG 5000	Topics in Design (for a total of 4 semester hours)	
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
PPUA 5246	Participatory Modeling for Collaborative Decision Making	
Optional Co-op		

Complete the following (students must complete EESH 6000 to qualify for co-op experience):

EESH 6000	Professional Development for Co-op	0
INSH 6964	Co-op Work Experience	0

DESIGN FOR SUSTAINABILITY CONCENTRATION—COLLEGE OF ARTS, MEDIA AND DESIGN

Code	Title	Hours
ARTG 5000	Topics in Design	4
ARTG 5710	Design for Dignity	4
ARTG 6460	Human-Centered AI	4
SUEN 7230	Urban Ecologies and Technologies 1	4
Complete one of the following:		4
ARTG 5000	Topics in Design (for a total of 4 semester hours)	
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
Optional Co-op		
Students must complete a required co-op preparation course before participating in co-op; consult your academic advisor for details.		
EEAM 6964	Co-op Work Experience	0
or EEAM 6954	Co-op Work Experience - Half-Time	
or EEAM 6955	Co-op Work Experience Abroad - Half-Time	
or EEAM 6965	Co-op Work Experience Abroad	

ECONOMIC SUSTAINABILITY AND CLIMATE FINANCE CONCENTRATION—COLLEGE OF PROFESSIONAL STUDIES

Code	Title	Hours
Complete four of the following:		16
CED 6120	Environmental Economics and Public Policy	
CED 6130	Sustainable Economic Development	
CED 6983	Special Topics	
GST 6610	Sustainable Development	
NPM 6230	Measuring Social Impact	
PJM 6250	Project Finance	
Complete one of the following:		4
ARTG 5000	Topics in Design (for a total of 4 semester hours)	
SLP 6980	Sustainability Transformation Capstone	
Optional Co-op		
Complete the following (students must complete INT 6200 to qualify for co-op experience):		
INT 6200	Experiential Project Preparation	1
COP 6945	Co-op Work Experience—Full Time	0
or COP 6946	Global Co-op Work Experience—Full Time	
or COP 6954	Co-op Work Experience - Half-Time	

INFRASTRUCTURE AND ENVIRONMENTAL SYSTEMS CONCENTRATION—COLLEGE OF ENGINEERING

Code	Title	Hours
Complete four of the following:		16
CHME 6420	Engineering for Chemical Sustainability	
CIVE 5255	Tools and Techniques of Environmental Health	
CIVE 5261	Dynamic Modeling for Environmental Investment and Policymaking	
CIVE 7110	Critical Infrastructure Resilience	
CIVE 7150	Data-Driven Decision Support for Civil and Environmental Engineering	
EECE 5670	Sustainable Energy: Materials, Conversion, Storage, and Usage	
SBSY 5100	Sustainable Design and Technologies in Construction	
Complete one of the following:		4
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
CIVE 7110	Critical Infrastructure Resilience	
Optional Co-op		
Complete the following (students must complete ENCP 6100 to qualify for co-op experience):		
ENCP 6100	Introduction to Cooperative Education	1
ENCP 6964	Co-op Work Experience	0

or ENCP 6954	Co-op Work Experience - Half-Time
or ENCP 6955	Co-op Work Experience Abroad - Half-Time
or ENCP 6965	Co-op Work Experience Abroad

MODELING AND DECISION MAKING FOR SUSTAINABILITY CONCENTRATION—COLLEGE OF SOCIAL SCIENCES AND HUMANITIES

Code	Title	Hours
INSH 6101	Agent-Based Modeling for Applied and Social Sciences	4
PPUA 5235	Participatory Community Planning Methods	4
PPUA 5260	Ecological Economics	4
PPUA 5261	Dynamic Modeling for Environmental Decision Making	4
Complete one of the following:		4
ARTG 5000	Topics in Design (for a total of 4 semester hours)	
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
PPUA 5246	Participatory Modeling for Collaborative Decision Making	
Optional Co-op		
Complete the following (students must complete EESH 6000 to qualify for co-op experience):		
EESH 6000	Professional Development for Co-op	0
INSH 6964	Co-op Work Experience	0

PUBLIC HEALTH CONCENTRATION—BOUVÉ COLLEGE OF HEALTH SCIENCES

Code	Title	Hours
Complete four of the following:		16
CIVE 5255	Tools and Techniques of Environmental Health	
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
PHTH 5214	Environmental Health	
PHTH 5226	Management and Leadership in Public Health and Healthcare	
PHTH 6204	Society, Behavior, and Health	
Complete one of the following:		4
ARCH 5312	Mapping and Building Health	
SOCL 7267	Environment, Health, and Society	
Optional Co-op		
Complete the following (students must complete HLTH 5101 to qualify for co-op experience):		
HLTH 5101	Professional Development for Bouvé Graduate Co-op	1

SUSTAINABILITY PRACTICE AND IMPLEMENTATION CONCENTRATION—COLLEGE OF PROFESSIONAL STUDIES

Code	Title	Hours
Complete four of the following:		16
GST 6102	Global Corporate Social Responsibility	
LDR 6426	Developing Sustainable Global Leadership	
LDR 6436	Innovation and Organizational Transformation	
NPM 6230	Measuring Social Impact	
PBR 6725	Crisis Communication	
PJM 6200	Project Risk Management	
PJM 6250	Project Finance	
Complete one of the following:		4
ARTG 5000	Topics in Design (for a total of 4 semester hours)	
SLP 6980	Sustainability Transformation Capstone	
Optional Co-op		
Complete the following (students must complete INT 6200 to qualify for co-op experience):		
INT 6200	Experiential Project Preparation	1
COP 6945	Co-op Work Experience—Full Time	0
or COP 6946	Global Co-op Work Experience—Full Time	
or COP 6954	Co-op Work Experience - Half-Time	

SUSTAINABLE CHEMISTRY CONCENTRATION—COLLEGE OF SCIENCE

Code	Title	Hours
Complete four of the following:		16
CHEM 5640	Biopolymeric Materials	
CHEM 5642	Photochemistry Fundamentals and Applications	
CHEM 5643	Plastics Sustainability and Circular Economy: A Chemical Perspective	
CHEM 5651	Materials Chemistry of Renewable Energy	
CHEM 5670	Global Biogeochemistry	
ENVR 5610	Technology and the Blue Economy	
Complete one of the following:		4
CHEM 5692	Carbon Capture, Utilization, and Storage	
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
Optional Co-op		
Complete the following (students must complete EESC 6500 to qualify for co-op experience):		
EESC 6500	Pathways to Professional Success	1
EESC 6964	Co-op Work Experience	0
or EESC 6954	Co-op Work Experience - Half-Time	
or EESC 6965	Co-op Work Experience Abroad	

SUSTAINABLE MANAGEMENT FOR BUSINESS CONCENTRATION—D'AMORE-MCKIM SCHOOL OF BUSINESS

Code	Title	Hours
HRMG 6421	Power and Influence	4
MKTG 6426	Consumer Behavior	4
STRT 6424	Managing the Sustainable Global Enterprise	4
SUEN 6340	Topics in Urban Environmental Design	4
Complete one of the following:		4
CIVE 5275	Life Cycle Assessment of Materials, Products, and Infrastructure	
SUEN 7230	Urban Ecologies and Technologies 1	
Optional Co-op		
Consult your career advisor regarding co-op participation requirements.		

SUSTAINABLE URBAN ENVIRONMENTS CONCENTRATION—COLLEGE OF ARTS, MEDIA AND DESIGN

Code	Title	Hours
Complete four of the following:		16
SUEN 6210	Implementation and Visualization for Urban Environments 1	
SUEN 6310	Cities, Nature, and Design in Contemporary History and Theory	
SUEN 6340	Topics in Urban Environmental Design	
SUEN 7130	Master's Research Studio: Design and the Resilient City	
SUEN 7230	Urban Ecologies and Technologies 1	
Complete the following:		4
SUEN 6120	Graduate Studio 2: Sustainable Urban Systems	
Optional Co-op		
Students must complete a required co-op preparation course before participating in co-op; consult your academic advisor for details.		
EEAM 6964	Co-op Work Experience	0
or EEAM 6954	Co-op Work Experience - Half-Time	
or EEAM 6955	Co-op Work Experience Abroad - Half-Time	
or EEAM 6965	Co-op Work Experience Abroad	