

Proposed MS in Applied Sustainability (MS-AS)

The Master of Science in Applied Sustainability (MS-AS) will be a unique interdisciplinary degree designed for the aspiring sustainability professional. The MS-AS will stand out by its strong emphasis on sustainability competencies – systems, futures, values, and strategic thinking – which will make students more reflective, agile, and effective problem solvers.

Nationwide, student completions of sustainability master’s programs have increased by nearly 90% over the past five years, with 82 institutions now offering a specific sustainability degree at the master’s level.¹ Despite federal retrenchment, private sector sustainability roles grew 22% year-over-year in Q1 2025, and LinkedIn identifies sustainability roles as among the fastest growing jobs globally.² However, our market research indicates that employers are frustrated by existing master’s programs because they are too broad and not focused on specific skills needed for sustainability management jobs. This provides an opportunity to distinguish Northeastern’s sustainability education approach by (1) focusing on the mastery of skills most prioritized by the job market, and (2) emphasizing the hands-on experiential nature of Northeastern pedagogy.

The MS-AS is built on the University Interdisciplinary Programs (UIP) framework so that students are trained to build and practice competencies across disciplines. **Currently the MS-AS program includes commitments from seven Colleges for ten separate concentrations.**

The program will feature three Foundation courses (one from DMSB, one from CAMD, and one from CSSH) for all students to reinforce an interdisciplinary approach for sustainability concepts and related competencies. Students then select the required courses for their concentration as framed by their College. Finally students will cap their experience with a hands-on applied / experiential course aligns with Northeastern’s emphasis on experiential learning.

The program has an overall course load of 32 semester hours taught in-person on the Boston campus. With success of the program, it is designed to expand to include Plus 1 students and new concentrations on campuses of the global network. It is anticipated that the MS-AS can launch in the Fall 2026 semester.

¹ Northeastern Market Research related to “Sustainability” from Climate Solution Project, IPD, 11/12/2024.

² <https://research.com/careers/best-careers-to-pursue-with-a-sustainability-management-degree> Accessed Sept. 2025.

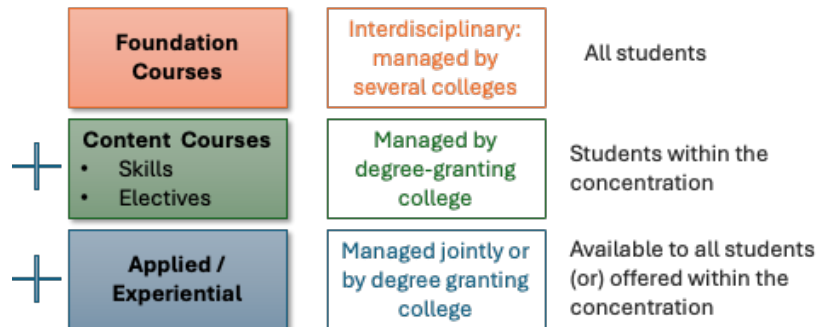
MS in Applied Sustainability (MS-AS)

Proposed Program

The Master of Science in Applied Sustainability (MS-AS) will be a unique interdisciplinary degree designed for the aspiring sustainability professional. The MS-AS will stand out by its strong emphasis on sustainability competencies which will make students more reflective, agile, and effective problem solvers.

The MS-AS is built on the University Interdisciplinary Programs (UIP) model which allows for more efficiently building, deploying, and managing multi-college graduate programs. This means the program structure will include a multi-disciplinary core of three classes that will be required for all students, plus content-driven concentrations managed by individual colleges. Finally, the program will feature an applied, hands-on course that aligns with Northeastern’s emphasis on experiential learning.

Figure 1: UIP Framework for Sustainability



Based on the UIP framework, the MA-AS will not be limited to a single program or college. The advantage of the UIP framework is that the MS-AS can support a suite of concentrations—each with specific content managed by a college—while all students start with the same foundation of training in sustainability competencies. This scalability will allow us to cater to a wider range of students and further establish Northeastern as a leader in sustainability education.

MS-AS Vision and Program Learning Outcomes

Vision

To be recognized and respected nationally by prospective students and employers as a rigorous, career focused, and effective training program for sustainability professionals.

Program Learning Outcomes

Graduates of this program will be able to:

1. Understand and apply key elements of a sustainability mindset for strategic and long-term effective decision-making.
2. Recognize institutional leadership and governing structures and how to integrate sustainability approaches into planning and governing strategies.
3. Be capable of employing tactics to be effective change agents within institutions, able to guide sustainable change through training, strategic planning, development of policies, and stakeholder engagement.
4. Employ data-driven decision-making tools to ensure outcomes recognize values, systems, future risks and opportunities.

Market Analysis, Need, and Opportunity

Nationwide, student completions of sustainability master's programs have increased by nearly 90% over the past five years, with 82 institutions now offering a specific sustainability degree at the master's level.³ Correspondingly, there is a recognition among employers that sustainability-related skills are valuable attributes. However, Northeastern's market research also identified a key area for concern:

Our extensive interviews with business leaders and industry experts who hire graduates in this space revealed a general suspicion toward the value of sustainability-focused degrees, largely due to the variability in the market and lack of clarity around the level of mastery graduates have in specific domain areas.⁴

This insight represents a unique opportunity to distinguish Northeastern sustainability training from others by being singularly focused on the mastery of skills and content most prioritized by the job market. Rather than offering elective-rich degree programs that have something for everyone, this program will focus on training students with the specific competencies that are best aligned with sustainability careers. We also have the opportunity to develop a program that aligns with one of Northeastern's strengths: the emphasis on experiential learning. The proposed MS-AS program will stand out as a bespoke sustainability program that focuses on both sustainability job skills and hands-on applied learning that reinforces those skills. We think this will be a noticeable advantage over our peers. (See **Appendix A** for market research by IPD).

Contribution to Northeastern's Mission

Northeastern University is lauded for its focus on experiential learning and focus on developing skills that help our students become lifelong learners. This MS-AS program will build on the university's mission in the following ways:

³ Northeastern Market Research related to "Sustainability" from Climate Solution Project, IPD, 11/12/2024.

⁴ Northeastern MS Climate Finance and Policy Market Analysis, IPD, Jan 2025.

Building on the Power of Diversity

The MS-AS degree is designed around the diversity of views, perspectives, competencies, and understanding of the varied complexities of human nature. Further, the focus on core skills includes understanding interpersonal relations and stakeholder viewpoints, emphasizing the power of diversity.

Erase Boundaries

The MS-AS requires students to focus outside of their natural fields of study to understand concepts and approaches from engineering, business, policy, and environmental science. This interdisciplinary approach encourages sharing knowledge and ideas, leading to more holistic and integrated solutions to sustainability problems.

Maximize the Power of Experience

Building the kinds of sustainability competencies needed for this degree (systems thinking, future thinking, values thinking, and strategic thinking) requires hands-on learning to embed the concepts. The three foundation courses are designed to get students quickly into scenarios, role-plays, and simulations where they can test ideas and approaches. All students will be required to take an experiential / applied course as a part of each College concentration pathway.

Creating New Currents of Discovery

The MS-AS will bring together experts, researchers, and innovators to highlight the importance of thinking outside the box, constantly striving for elusive solutions, and finding creative ways to address change management within institutions. Further, the program will be aligned with Northeastern's Sustainability Innovation Incubator which encourages students to use the campus to test new ideas for sustainable solutions.

Deepening NU's Immersion in the World

The MS-AS will focus on sustainability globally, embracing international collaboration in areas such as the United Nations Sustainable Development Goals, the Paris Agreement on climate, and other global accords. Further, the degree emphasizes a perspective of addressing grand global challenges—those that transcend borders, culture, and language—and how solutions must adapt to global conditions.

Priorities for the MA-AS

The MS-AS is designed to ensure that sustainability concentrations within this suite (1) are complementary, (2) align with the needs of the job markets, (3) are compatible with a new sustainability accreditation program proposed by the Global Council for Science and the Environment, and (4) have a clear strategy for the university to market these programs collectively as unique to the Northeastern brand.

Complementary: With all concentrations building from the base of sustainability competencies, students will have a strong bond even when they branch out to their specific content areas. Sustainability-related competencies – particularly systems thinking, futures thinking, values thinking, strategic thinking, and interpersonal competency – are inherently cross-disciplinary and complements to existing academic fields of study.

Alignment with Job Market: Research on employer needs suggests that employers are increasingly valuing flexibility, adaptability, eagerness to learn, and problem-solving abilities – all skills that are exemplified within the sustainability competencies. Further, research suggests that employers are less interested in shallow knowledge of sustainability content, but rather training that aligns with the job descriptions and expected duties for the potential new hires. The foundation courses and experiential learning course are intended to emphasize the kinds of experiences new job seekers will need when pursuing sustainability professional careers.

Table 1: Examples of Jobs that Utilize Sustainability Competencies

- Chief Sustainability Officers
- SVPs and VPs of Sustainability
- Sustainability Consultants
- Corporate Social Responsibility (CSR) Manager
- Environmental, Social, & Governance (ESG) Officer
- ESG Reporting and Compliance Manager
- Social Impact professionals
- Brand Responsibility Managers
- Risk Officers
- Operations, Manufacturing, and Supply Chain Managers
- Innovation and CleanTech Executives
- Sustainability Communications Specialists
- Corporate Strategic Planning Manager

Accreditation Compatibility: As a relatively new field of study, most sustainability programs developed in the absence of consensus of what content, skills, and other features should be prioritized. Fortunately, the Global Council for Science and the Environment is finalizing a comprehensive set of accreditation standards that can serve as guidance and guardrails for programs. In a recent report, the National Academies of Science, Engineering, and Medicine emphasized the focus on sustainability competencies as essential elements of sustainability programming: “It is important to ascertain how the core competencies are translated into program-level learning outcomes, assessment tools, and effective curricula for a broad array of institutions of higher learning.”⁵

Figure 2: New Sustainability Accreditation Standards will Impact the Development of Programs



The MS-AS is developed so that it will comply with the new standards and will be one of the first graduate programs in the country to be accredited.

Marketing Strategy: Northeastern is an expert in marketing and promoting its academic programs, but it has been difficult to market collectively the disparate collection of sustainability-oriented programs because they are quite different. This UIP framework for the MS-AS program will

⁵ NASEM, Strengthening Sustainability Programs and Curricula at the Undergraduate and Graduate Levels, 2020, p.102.

make it easier to market the program because all concentrations will have a similar foundation, purpose, and expected outcomes leading to the job market. Concentrations will be organized by the types of jobs expected for the graduates and will be focused on specific career tracks where tailored sustainability knowledge will provide an advantage for the graduates. This will create marketing advantages since the suite of MS-AS concentrations can be promoted together.

Focus on Sustainability-Related Competencies

The most important feature of the MS-AS is the focus on core sustainability competencies. The emphasis on competencies is a recognition that many of the significant global challenges resulted from decisions influenced by a faulty understanding of long-term, systems, and strategic thinking. Many of today’s sustainability problems were rooted in well-intentioned policies or technical solutions that resulted in unintended or unforeseen consequences. The MS-AS training starts with, and continually reinforces, immersing students in the various sustainability competencies so that by the time they graduate, they will be able to demonstrate their ability to examine, analyze, and create long-term solutions to complex sustainability problems.

Table 2: Sustainability Competencies

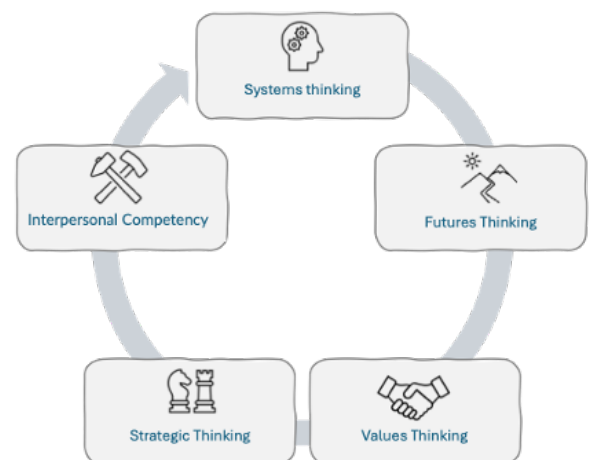
Sustainability Competencies	Related and Associated Skills
Systems Thinking	Identify unintended consequences; relationship-focused analysis; Lifecycle thinking
Futures Thinking	Scenario planning; anticipatory governance; forecasting / back-casting; long-term trends and drivers
Interpersonal Competencies	Communications; mediation and conflict resolution; stakeholder engagement; recognizing social norms and biases in behaviors
Strategic Thinking	Action planning; goal orientation; innovation; Impact analysis; data literacy; performance metrics and KPIs
Values - Human Thriving	Appreciation, ethics, justice, belonging, empathy, responsibility

The five competencies most prioritized in the foundation courses and concentration requirements are systems thinking, future thinking, strategic thinking, values thinking, and interpersonal competencies (referring to soft skills in communication and understanding behavioral tendencies). These represent the core building blocks of skills that all sustainability professionals should master to be effective in their careers.

MS-AS Framework

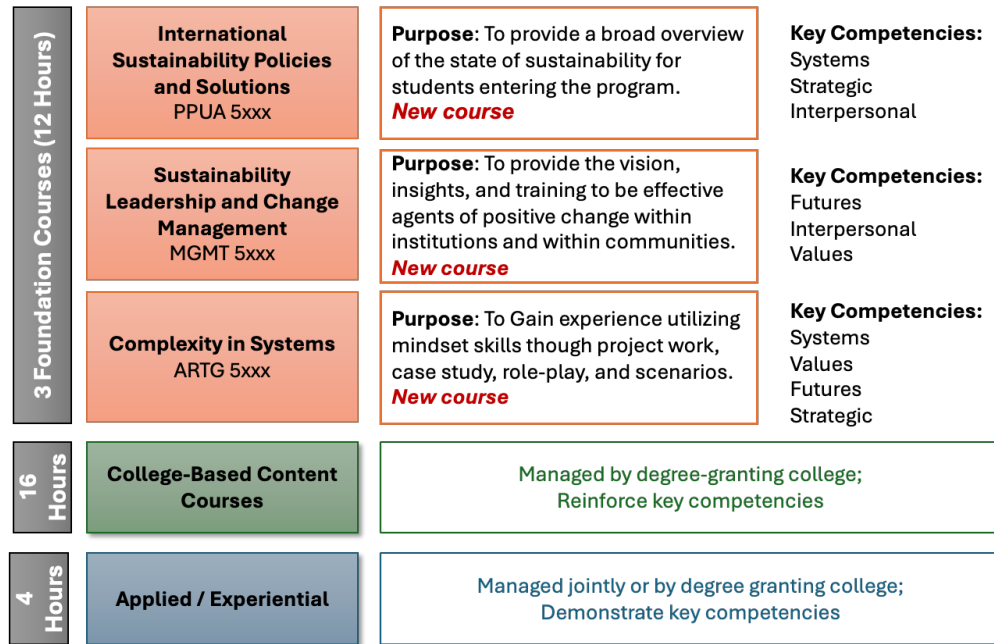
The MS-AS begins with three core courses that are essential building blocks for all students, regardless of their concentration. These three courses create an interdisciplinary foundation to ensure that students can understand sustainability literacy,

Figure 3: Five Core Sustainability Competencies



change management, and applied problem solving. Figure 4 shows the three foundation courses and proposed colleges that could take the lead in developing and offering them.

Figure 4: MS-AS Framework



Following the foundation courses, students will then pursue concentration curricular pathways as developed by the sponsoring colleges. Each concentration is designed to provide both content AND reinforcement of the core sustainability competencies.

All concentrations will also include one experiential course that either can be developed by the college for the concentration or can share an existing course such as a Sustainability Design Thinking course. Colleges are also encouraged to develop Capstones when appropriate.

Administrative Organization through UIP

The University Interdisciplinary (UIP) model allows for the MS-AS degree with all concentrations to appear to students as one unified program, which will help with marketing, communications, and outreach to potential employers. The MS-AS will be jointly managed by participating colleges through a Program Committee, with oversight and administrative support from the Office of the Provost. The MS-AS Program director will be a Program Committee member who will serve as the program’s academic point of contact.

Participating Colleges and Concentrations

Six of Northeastern's Colleges have agreed to participate. Three of the Colleges (CAMD, CPS, and CSSH) plan to offer two concentrations. The remaining three Colleges have expressed an interest in participating in the future. It is noteworthy that Mills College, who is developing sustainability content at the undergraduate level, has contributed significantly to the development of this structure and has helped align this MS-level program with a similar structure of competencies at the undergraduate level. (See **Appendix B** for coursework requirements within concentrations).

College	Concentration	Brief Description
Bouvé	Sustainability and Public Health	<i>For students who wish to work on sustainability issues within the health care industry.</i>
CAMD (1)	Design for Sustainability	<i>For students who wish to apply sustainability concepts to product design, development and use of materials, and human-centric design processes.</i>
CAMD (2)	Sustainable Urban Environments	<i>For students who are interested in how the fields of planning, design, policy, and technology intersect to create ecologically and economically productive built environments.</i>
COE	Infrastructure and Environmental Systems	<i>For students who wish to learn and apply sustainability strategies to major works and infrastructure projects for long-term value and resilience.</i>
CPS (1)	Sustainability Practice and Implementation	<i>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.</i>
CPS (2)	Economic Sustainability and Climate Finance	<i>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.</i>
CSSH (1)	Modeling and decision-making for sustainability	<i>For students with an interest combining sustainability skills with data analytics for policy development, long term strategic planning, and governance for the public good.</i>
CSSH (2)	Climate and environmental policy	<i>For students with an interest in building sustainability competencies to understand and address global grand challenges, with an emphasis on climate change.</i>
DMSB	Sustainable Management for Business	<i>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.</i>

Appendix A: Market Research from IPD

Sustainability Careers

Has the Landscape changed?

In **2020**, colleges and universities were looking at sustainability and environmental protection as playing a growing role in society, and the number of jobs in the field of sustainability is growing. As more companies clamor to include sustainability into their business and organizational strategies, students with experience and education in this area will have ever-increasing access to both the public and private sectors, finding work with companies as large as Amazon or with a government agency like the United States Department of Energy and the Environmental Protection Agency. Some potential titles for those who have earned a degree in sustainability include Sustainability Specialist, Climate Change Analyst, and Corporate Sustainability Strategist.

Sustainability degrees can fall under a variety of umbrellas. When looking to earn a graduate degree in this field, students can first see whether a master's in sustainability is offered through a school of business, public affairs, or another part of the college. A Master of Business Administration in Sustainability Management or Systems will be much more business-minded than a Master of Science in Sustainability Studies.

2025 President Trump has quickly transformed America's approach to the environment, withholding funds and stretching the limits of presidential power. [NYT The Impact of a Trump Presidency on the climate Job market.](#)

The Trump administration's environmental and energy policies in 2025 have created a bifurcated job market for sustainability professionals: federal roles and research opportunities face severe contraction, while private sector demand surges due to global economic forces, state-level initiatives, and corporate decarbonization mandates. Graduates must craft portfolios that marry technical acuity with advocacy savvy, positioning themselves as intermediaries between polarized political and corporate spheres. Institutions that survive this era will foster agility—equipping students to pivot between AI-driven data roles, community-led justice initiatives, and global climate diplomacy. While federal support wanes, the market's hunger for sustainability expertise ensures that environmental science remains a vital, if transformed, career frontier.

The Trump administration's policies are accelerating the privatization of climate academia, with elite institutions pivoting to corporate alliances while under-resourced schools face existential threats. Over the next decade, expect:

Two-Tiered Research Systems: Ivy League tech hubs advancing AI-driven climate solutions versus regional universities constrained by dwindling federal support

Global Realignment: U.S. schools deepening ties with EU and Asian partners to bypass domestic funding instability.

Generational Shifts: Students increasingly prioritizing private sector impact over academic careers, reshaping graduate education toward applied technical training.

While federal rollbacks have spurred innovation in alternative funding and pedagogy, they risk fragmenting the collaborative networks essential for tackling global warming.

Universities that survive this era will treat sustainability not as a discipline but as a lens through which all fields—from finance to civil engineering—must operate.

Corporate Demand for Green Skills

Despite federal retrenchment, private sector sustainability roles grew 22% year-over-year in Q1 2025, with median salaries exceeding \$110,000 in tech and finance¹¹². Amazon's Climate Pledge Fund hired 1,200 specialists for supply chain decarbonization, while banks like JPMorgan Chase expanded ESG (Environmental, Social, Governance) teams to navigate EU carbon border taxes²³.

Universities are adapting curricula to meet this demand:

MBA Integration: 89% of top business schools now embed sustainability modules in core courses like Financial Accounting, teaching carbon credit valuation alongside traditional metrics¹.

AI-Driven Training: MIT's Climate+AI Lab trains students in machine learning applications for emissions tracking, a skill sought by 74% of renewable energy employers⁴¹².

Federal Retrenchment: Erosion of Public Sector Pathways

Cuts to Climate Science and Regulatory Roles

The Trump administration's executive orders have systematically dismantled federal sustainability infrastructure. On his first day in office, Trump disbanded the Interagency Working Group on the Social Cost of Greenhouse Gases, eliminating critical tools for climate policymaking¹. This move, coupled with layoffs at the EPA, NOAA, and Department of Energy, has reduced federal environmental staff by 10–15%, including early-career scientists and policy analysts⁵¹³. For example, NOAA's National Centers for

Environmental Information lost 10% of its workforce, crippling long-term climate data projects essential for renewable energy planning¹³.

The Inflation Reduction Act (IRA) and Bipartisan Infrastructure Law funding freezes have stalled \$25 billion in climate grants, delaying projects like low-income solar installations and electric school bus deployments⁸. These cuts disproportionately affect academic research: **UC Berkeley's** microgrid initiative and **Boston University's** wind energy studies face indefinite delays, leading to reduced PhD admissions and canceled postdoctoral positions⁵⁸. Elite institutions like **Stanford** and **Columbia** have offset losses through private philanthropy (\$1.7 billion raised for the Doerr School of Sustainability) and global partnerships³¹⁰.

Long-Term Career Strategy Recommendations

Diversification of Skill Portfolios - Graduates should pursue hybrid credentials, such as:

MBA/MS Dual Degrees: MIT Sloan's Climate Economics Lab combines business strategy with technical climate modeling¹²

Certifications: NYU Stern's ESG Investing Certificate saw 300% enrollment growth in 2024¹²

Fieldwork Experience: Northeastern University's Co-Op Program partners with Ørsted and Siemens Energy for hands-on renewable energy training⁷

Targeting Resilient Sectors

High-growth areas for 2025–2030 include:

- **Renewable Energy:** Solar project developers (\$98,000 median salary)¹²
- **Climate Risk Finance:** Sustainable investment associates (\$145,000)¹²
- **Urban Resilience:** Municipal climate adaptation planners (\$89,000)⁴

Decentralization of Climate Research

With federal support waning, universities are forging cross-sector alliances:

Corporate Partnerships: Arizona State University's collaboration with Tesla on solar microgrids has yielded \$120 million in private funding, offsetting lost DOE grants¹.

Global Networks: Columbia's Climate School now co-authors 22% of its research with Global South institutions like Kenya's Strathmore University, leveraging international funding streams less vulnerable to U.S. politics⁸.

Philanthropic Endowments: Stanford’s Doerr School of Sustainability raised \$1.7 billion from tech donors in 2024, establishing a buffer against federal volatility¹.

As Stanford’s Doerr School Dean notes: “Sustainability isn’t declining—it’s decentralizing. The jobs follow the capital, and the capital is now in boardrooms, not bureaucracies” [NYT](#).

List of Colleges and Universities that offer Sustainability Master’s Degrees

These programs vary in format (online, hybrid, or on-campus), duration, and focus areas, ensuring options for professionals seeking to advance in sustainability leadership, policy, or technical roles. Many emphasize experiential learning through capstone projects, international collaborations, and partnerships with industry leaders.

Similar to Northeastern Approach in Skill-Building for Sustainability Jobs

[University of Toronto Mississauga](#)

- Offers a MSc in Sustainability Management with a focus on knowledge of relevance for managers.
- “The curriculum provides a strong foundation in management principles, sustainable business strategies, managerial economics and accounting, organizational behaviour, environmental and ecosystem science, and environmental and business law and policy. The program provides the knowledge, skills, and strategic perspectives required for leaders and senior managers responsible for managing the sustainability process”

[Arizona State University](#)

- Offers an Executive Master of Sustainability Leadership (EMSL) with focus on internal change management from within the organization.
- Learning outcomes –
 - Build and communicate cases for sustainability initiatives in organizations.
 - Gain critical knowledge, approaches and tools for sustainability leadership.
 - Lead institutional change and development toward sustainability.

Popular Programs

[Harvard University Extension](#)

- Offers a Master’s in sustainability with five concentrations: Corporate Sustainability, Sustainable Cities and Communities, Environmental Policy and

International Development, Sustainable Food Systems, and Natural Resource Management.

[Columbia University](#)

- Provides a Master of Science in Sustainability Management through its Earth Institute, blending management and environmental science.
- Features courses like Financing Natural Infrastructure, Disaster Risk Management, and Sustainable Urban Resilience.
- Culminates in an Integrative Capstone Workshop with client consulting.

[American University \(Kogod School of Business\)](#)

- MS in Sustainability Management (STEM-designated) focuses on policy, climate change, and business strategy.
- Elective tracks include Business Sustainability, Environment, and Policy.
- Includes an international capstone project for hands-on experience in global sustainability practices.

[Tufts University](#)

- Master of Science in Sustainability emphasizes socio-ecological systems and sustainable solutions.
- Students engage with research centers like the Global Development and Environment Institute (GDAE) and Tufts Institute of the Environment (TIE)

[Georgetown](#)

- The Earth Commons Institute, the McDonough School of Business, created this degree with the understanding that science and business principles are critical to achieving sustainability goals globally.
- Georgetown's MS-ESM is a full-time, 10-month interdisciplinary program held on-campus in Washington, D.C. The unique curriculum combines environmental science principles with a business management foundation, delivering the comprehensive knowledge you need to become a principled leader in environment and sustainability.

General Comparison with Other Programs

	MSS Degree (Northeastern)	MS in Sustainability (Peer universities)	Sustainability Concentration (NU)	Sustainability Certificate (NU)
Purpose	To train students for jobs as sustainability practitioners	To gain knowledge of broad sustainability concepts and knowledge	To stack relevant sustainability knowledge onto the career training in a traditional field	To offer specific sustainability concepts or skills as workforce training or development
Pedagogy	Emphasis on specific competencies using hands on/experiential learning to build skills for successful strategic planning and change management	Emphasis on understanding the causes and conditions of current global challenges, with stress on broad understanding across disciplines	Emphasis on supplementing traditional discipline with related sustainability considerations	Emphasis on short learning modules for career development or developed in collaboration with learning partners (corporate training)
Career pathway	Jobs with “sustainability” in the title. Focus on practitioners and job skills	Jobs in policy, business, non-profit sector, and government	Traditional careers	Existing career, enhancement
Supporting Colleges	UIP	Professional studies (Harvard and Columbia)	Across the Colleges	EDGE

Appendix B: College Concentrations

The MS-AS will require 32 semester hours broken into these segments: the completion of 12 hours of Foundation courses, 16 semester hours for each concentration, and 4 hours of a capstone-styled applied/experiential course.

All students—regardless of their chosen concentration—are required to take three foundation courses.

Code	Title	Hours
Foundation Courses: Take 3		
PPUA 5254	Sustainability Foundations in Strategy and Policy	4
STRT 6422	Sustainability Leadership and Change Management	4
ARTG 5920	Complexity in Systems	4

In addition to the Foundation courses, students will fulfill the requirements in their selected concentrations, offered through the following Northeastern Colleges.

Bouvé College of Health Sciences

Concentration: **Public Health**

This concentration is for students who wish to work on sustainability issues within the health care industry.

Code	Title	Hours
Concentration: Choose 16 hours		
SOCL7267	Environment, Health, and Society	3
PHTH 6204	Society, Behavior, and Health	3
CIVE 5255	Tools and Techniques in Environmental Health	4
PHTH 5226	Management and Leadership in Public Health and Healthcare	3
PHTH 5214	Environmental Health	3
Applied / Experiential: Choose 1		
ARCH 5312	Mapping and Building Health	4
CIVE 5275	Life Cycle Assessment in Materials, Products, and Infrastructure	4

College of Arts, Media, and Design

Concentration: **Design for Sustainability**

This concentration is for students who wish to apply sustainability concepts to product design, development and use of materials, and human-centric design processes.

Code	Title	Hours
Concentration: Choose 4		

ARTG 5000	Designing Futures	4
ARTG 5000	Design and Culture of Sustainability	4
ARTH 5600	Landscape and Ecology in Visual Culture	4
ARTG 5710	Design for Dignity	4
ARTG 6460	Human-Centered AI	4
SUEN 7230	Urban Ecologies and Technologies	
Applied / Experiential: Choose 1		
CIVE 5275	Life Cycle Assessment in Materials, Products, and Infrastructure	4
ARTG 5000	Critical Making for Adaptive Futures: Interactions, Materials, Ecologies	4

College of Arts, Media, and Design

Concentration: Sustainable Urban Environments

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.

Code	Title	Hours
Concentration: Choose 4		
SUEN 6210	Implementation and Visualization for Urban Environments	4
SUEN 6310	Cities Nature & Design in Contemporary History and Theory	4
SUEN 6340	Planning and the Built Environment	4
SUEN 7130	Design and the Resilient City	4
SUEN 7230	Urban Ecologies and Technologies	4
Applied / Experiential		
SUEN 6120	Sustainable Urban Systems	4

D'Amore-McKim School of Business

Concentration: Sustainable Management for 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.

Code	Title	Hours
Concentration: Choose 4		
STRT 6424	Managing the Sustainable Global Enterprise	4
HRMG 6421	Power and Influence	4
MKTG 6426	Consumer Behavior	4
SUEN 6340	Planning and the Built Environment	4
Applied / Experiential: Choose 1		
SUEN 7230	Urban Ecologies and Technologies	4

CIVE 5275	Life Cycle Assessment in Materials, Products, and Infrastructure	4
-----------	--	---

College of Engineering

Concentration: **Infrastructure and Environmental Systems**

This concentration is for students who want to create the next generation of sustainable urban systems and infrastructure. Students will 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.

Code	Title	Hours
Concentration: Choose 4		
CHME 6420	Engineering for Chemical Sustainability	4
CIVE 5255	Tools and Techniques of Environmental Health	4
CIVE 5261	Dynamic Modeling for Environmental Investment and Policymaking	4
CIVE 7110	Critical Infrastructure Resilience	4
CIVE 7150	Data-Driven Decision Support for Civil and Environmental Engineering	4
EECE 5670	Sustainable Energy: Materials, Conversion, Storage, and Usage	4
SBSY 5100	Sustainable Design and Technologies in Construction	4
Applied / Experiential: Choose 1		
CIVE 7110	Critical Infrastructure Resilience	4
CIVE 5275	Life Cycle Assessment in Materials, Products, and Infrastructure	4

College of Professional Studies

Concentration: **Sustainability Practice and Implementation**

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.

Code	Title	Hours
Concentration: Choose 16 hours		
PJM 6250	Project Finance	3
NPM 6230	Measuring Social Impact	3
PBR 6725	Crisis Communication	3
LDR 6436	Innovation and Organizational Transformation	3
LDR 6426	Developing Sustainable Global Leadership	3
PJM 6200	Project Risk Management	4

GST 6102	Global Corporate Social Responsibility	4
Applied / Experiential: Choose 1		
XXX 6900	Sustainability Transformation Capstone (CPS)	4
ARTG 5000	Critical Making for Adaptive Futures: Interactions, Materials, Ecologies	4

College of Professional Studies

Concentration: **Economic Sustainability and Climate Finance**

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.

Code	Title	Hours
Concentration: Choose 16 hours		
CED 6120	Environmental Economics and Public Policy	3
CED 6130	Sustainable Economic Development	3
GST 6610	Sustainable Development	4
CED 6983	Economics of Climate Change	3
PJM 6250	Project Finance	3
NPM 6230	Measuring Social Impact	3
Applied / Experiential: Choose 1		
XXX 6900	Sustainability Transformation Capstone (CPS)	4
ARTG 5000	Critical Making for Adaptive Futures: Interactions, Materials, Ecologies	4

College of Science

Concentration: **Sustainable Chemistry**

Code	Title	Hours
Concentration: Choose 16 hours		
CHEM 5640	Biopolymeric Materials	3
CHEM 5642	Photochemistry Fundamentals and Application	3
CHEM 5643	Plastics Sustainability and the Circular Economy	3
CHEM 5651	Materials Chemistry of Renewable Energy	3
CHEM 5670	Global Biogeochemistry (also listed as ENVR 5670)	4
ENVR 5610	Technology and the Blue Economy	4
Applied / Experiential (Choose 1)		
CIVE 5275	Life Cycle Assessment in Materials, Products, and Infrastructure	4
CHEM 5692	Carbon Capture, Utilization, and Storage	4

College of Social Sciences and Humanities

Concentration: **Modeling and Decision-Making for Sustainability**

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.

Code	Title	Hours
Concentration: Choose 4		
PPUA 5235	Participatory Community Planning Methods	4
PPUA 5260	Ecological Economics	4
PPUA 5261	Dynamic Modeling for Environmental Decision Making	4
INSH 6101	Agent-Based Modeling for Applied and Social Sciences	4
Applied / Experiential: Choose 1		
PPUA 5246	Participatory Modeling for Collaborative Decision Making	4
CIVE 5275	Life Cycle Assessment in Materials, Products, and Infrastructure	4
ARTG 5000	Critical Making for Adaptive Futures: Interactions, Materials, Ecologies	4

College of Social Sciences and Humanities

Concentration: **Climate and Environmental Policy**

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.

Code	Title	Hours
Concentration: Choose 4		
PPUA 5267	Climate Policy and Justice	4
PPUA/INTL 5100	Climate and Development	4
PPUA 5238	Climate Change and Global Urbanization	4
PPUA/INTL 5268	International Environmental Policy	4
PPUA 5249	Sustainable Urban Coastal Policy	4
PPUA 5264	Energy Democracy and Climate Justice: Technology, Policy, and Social Change	4
PPUA 5270	Food Systems and Public Policy	4
PPUA 6101	Environmental Science and Policy Seminar 1	4
Applied / Experiential: Choose 1		
PPUA 5246	Participatory Modeling for Collaborative Decision Making	4
CIVE 5275	Life Cycle Assessment in Materials, Products, and Infrastructure	4
ARTG 5000	Critical Making for Adaptive Futures: Interactions, Materials, Ecologies	4

