ACADEMIC PLAN: NORTHEASTERN 2025

Humankind is on the threshold of a new era—an age of artificial intelligence as revolutionary in its global impact as the Industrial Revolution. Fields such as financial services, healthcare, and law are already changing as intelligent computers take on once-indispensably human tasks. Automation is expected to eliminate more than half the current jobs in the world's largest economies. While some observers see in this a looming social and economic catastrophe, we see the future differently.

Northeastern is perfectly positioned to lead a revolution in higher education that ensures the era of intelligent machines is one of expanding opportunity. An evolution based on networks: networks for lifelong learning and discovery that make people more agile, adaptable, and creative, and inspire us to be fully human. Networks of humans and intelligent machines collaborating to build communities that are connected and creative, resilient and entrepreneurial—advanced, not marginalized, by technology.

Northeastern 2025 is our blueprint for this networked university, one that empowers humans to be agile learners, thinkers, and creators, beyond the capacity of any machine.

Put simply, not an Age of Robotics, an Age of Humanics.

An age that integrates and elevates our human and technological capacities to meet the global challenge of our time: building sustainable human communities. By marshaling our strengths in globally networked learning and experiences, we will create innovations that only human minds are capable of, lighting the way for others to follow.

I. BUILD DIVERSE, INCLUSIVE NETWORKS OF ENDLESS POSSIBILITIES

Personalized connections making people and communities more agile

Sustainable human communities require agile, resilient learners and innovators who create change by networking across boundaries of every kind. They exchange knowledge, skills, and ideas—working with anyone, anywhere, at any time. Northeastern 2025 will integrate students, alumni, employers, teachers, and researchers into evolving global networks for lifelong learning and discovery that they can personalize to their own goals.

"Just-for-you" learning

Northeastern 2025 will leverage the flexible, trackable, and mobile advantages of personalized networks to deliver just-for-you learning, with curated content and resources matched to individual learning goals. Learning modules and "stackable" credentialing will add customization.

In addition to traditional learning pathways such as courses and co-ops, network members will have access to shared learning experiences through online options such as blog posts, videos, and discussion forums. As students graduate and continue to participate as alumni, they will plug into a multigenerational ecosystem of lifelong learning and career support—critical to personal and professional resilience.

Improvements in cognitive science and learning analytics—including advances coming out of the university's own research—will enable Northeastern to amplify the capacity for network personalization.

Integral to this effort, the university will create flexible options to existing semester-based timelines and rigid course and program structures. Northeastern will also revise systems for learning assessment, credit, and tuition. The university will move from a "purchase" to a "subscription" model that promotes lifelong learning.

Discovery and innovation freed of traditional limitations

Northeastern 2025 will continue to build out research in its foundational themes of health, security, and sustainability—the global challenges that define the path to sustainable human communities. The university will achieve this by making the bold investments needed to create distinct pillars of excellence in select areas of use-inspired research.

Northeastern will break down the traditional barriers of academic research—between disciplines, between universities, and between academia and industry. Personalized networks for discovery and knowledge-sharing will promote the free flow of ideas around the world, nurturing entrepreneurship and innovation.

Northeastern will be a model of interdisciplinary collaboration, with a supportive environment for multidisciplinary team projects and research centers, incentives to avoid

disciplinary silos, and a system for integrating external researchers into our networks. The university will adopt coordinated policies and utilize high-performance research management software to streamline processes for collaboration.

Northeastern will also promote the flow of ideas and information across its primary research themes, and elevate its ability to compete with other leading universities for external funders and outstanding faculty.

Agile networks powered by diversity

Northeastern 2025 will strengthen communities by harnessing the power of diversity and inclusion. Learning networks of diverse ideas, experiences, and perspectives—activated by inclusiveness—strengthen professional, intellectual, and cultural agility. They transform globalization from a challenge to an opportunity.

Within the university we will create a diverse and inclusive culture, with accountability at all levels for developing solutions that advance diversity and inclusion goals.

A networked model for lifelong experiential learning means that higher education's traditional roles and trajectories will be increasingly open to the world outside our walls. This will make our networks for knowledge sharing, professional development, and cross-cultural education and discovery more diverse in every way; tapping into and contributing to these networks will make our community of learners and innovators inclusive, adaptable, and more resilient to societal shifts.

To maximize the power and reach of networks, the university will make global opportunities for learning and research more accessible and flexible.

Employer and alumni connections

Northeastern 2025 will integrate employer and alumni networks as sources of lifelong learning, teaching, mentoring, and innovation. Our campuses around the world will serve as amplifiers for integration—pathways to richly diverse networked relationships, including employer and alumni partnerships, affinity groups, and topical communities.

Among these enlarged roles for alumni and employer networks, international alumni will provide professional and personal support for students, faculty, and staff who are abroad. Our global employer network will offer new opportunities for students to customize their learning experiences. For example, students will be able to split up a co-op, research project, or other field experience among several locations and companies.

Employers and alumni will also take on more formal and informal mentoring and learning assessment responsibilities.

II. LEARNING ANY TIME, FROM ANYWHERE, WITH ANYONE
A network of experiences making learners more agile

Sustainable human communities require learners to grow as resilient, inventive, and collaborative problem solvers, adept at putting ideas into action—all qualities of an experiential education. Northeastern 2025 will magnify the impact, mobility, and reach of co-op and other experiential opportunities. We will transform lifelong learning into a global network of experiences, creating a diverse, inclusive ecosystem of entrepreneurial learners.

Co-op and other experiences customized by design
Northeastern 2025 will expand co-op and other experiential opportunities to be more flexible, open to a broader sector of our community—including alumni and working professionals—and more closely integrated with learners' needs. Employers worldwide will help develop the design and delivery of these experiences.

Northeastern will enlarge students' capacity for resilience by expanding traditional notions of co-op to deliver accessible, flexible experiential opportunities that fit a wide range of learner needs. Students will have access to a rich variety of learning experiences that can be archived, shared, and updated. All student life experiences, including athletics, organizational activities, and multicultural programs and events, will be open for mindful and guided learning and assessment, including a comprehensive grounding in diversity and inclusion issues to enhance cultural agility. Toward that goal, we will foster curricular and co-curricular experiences that build diversity and promote social justice.

To promote lifelong learning, the university will create a subscription-based online vehicle for knowledge sharing that subscriber-members can draw upon and contribute to throughout their lifetimes.

Intercultural hubs for learning and discovery
Northeastern 2025 will build on the university's network of campuses around the world to create intercultural hubs for lifelong experiential learning: expanded study-abroad programs, international co-op opportunities, international dialogues, and coursework embedded with employer partners.

Northeastern will expand the range and impact of global experiential learning to include short-term experiences in heavily structured majors such as engineering; semester-long exchange programs with global universities; curriculum-based group projects abroad; and degree programs that incorporate one or two years of study and work in the host nation's language.

Learners will also have the option of taking on a project assignment from an individual professional anywhere in our global network to master a specific skill—a flexible alternative to a full course or co-op.

In addition, the university will leverage its network of campuses to provide skills-focused, variable-term experiences that give learners insight into how culture affects professional practice.

Beyond cultural agility, these initiatives will instill in students an entrepreneurial mindset about their own learning choices and opportunities.

Building sustainable communities through immersive experiences

Cultural agility, diversity, and inclusiveness are characteristics of strong, dynamic communities that respect and benefit from the individual viewpoints and qualities of each member. Northeastern will instill those characteristics through the integration of immersive global experiences that evolve through a strategy of continuous assessment and reflection. This will offer occasions for the larger community to learn and work together, reaching across social barriers to forge culturally agile networks.

To help ensure that our learning communities are inclusive and diverse, Northeastern will invest in recruiting and retaining students, faculty, and staff from underrepresented groups.

We will serve as a national model for community engagement in the neighborhoods surrounding our campuses, providing our students with opportunities to develop their cultural agility in real-world settings as the university further networks with our community partners.

The process of assessing the impact and value of global experiences will require increased, ongoing campus-based dialogue and reflection around what our culturally diverse student body has learned and shared—a community- and agility-building experience in itself.

Learning tailored by advancements in technology

Northeastern 2025 will take advantage of technology to connect more quickly with professional networks across industries in real time. This will enable the university to make education, including our liberal arts curriculum, more responsive, with classroom and experiential learning tailored to the demands of an ever-evolving world, a requisite for professional resilience.

Northeastern's infrastructure of co-op employers and co-op coordinators already gives the university an edge in aligning its learning programs with industry needs. Rapid advances in communications technology will amplify the university's power to leverage its employer network in this way, keeping pace with the speed of change as new fields emerge and grow.

Doctoral education integrated with experience

Northeastern 2025 will infuse global experiential learning into doctoral education. These experiences will help PhD students integrate the value and application of their research by enabling them to learn in environments where their disciplines are "in action" in the world.

New industry partnerships in high-profile research fields will attract and engage students, faculty, and partners in experiential pathways that instill the values of innovation and entrepreneurship. Experiential learning will provide PhD students with deeper opportunities to synthesize knowledge and create solutions, giving them an edge in the academic job market and preparing them for positions outside the university.

III. ACCELERATE DISCOVERY EXPONENTIALLY THROUGH THE POWER OF NETWORKS

Research freed from silos, making innovation more agile

Sustainable human communities require solutions to grand challenges in health, security, and sustainability, sparked by creative minds collaborating to bring a range of knowledge, experiences, and perspectives to the discovery process. Northeastern 2025 will create a globally networked ecosystem for research, innovation, and entrepreneurship. We will enable a diverse network of innovators around the world to connect and collaborate, amplifying their power to generate solutions, free of geographic, disciplinary, cultural, and organizational silos. This will fuel resilience in discovery—the ability of researchers to shift focus quickly, in response to the variables that make up the landscape of innovation.

A new center to fuel collaborative discovery

Northeastern 2025 will establish the Center for Advancing Research and Scholarship. More than just a support center, it will be a nexus for supporting faculty and other innovators in building diverse, global networks—enabling researchers and entrepreneurs everywhere to find and work with each other.

CARS will be a key component of Northeastern's networked, partner-focused research strategy. It will offer multi-level training in team building and support, research development and promotion, and internal funding opportunities to all researchers, including undergraduate students. The center will also provide training for specialized expertise (e.g., statistical analysis, data visualization, scientific editing) that elevates the value and impact of research publications.

Culturally agile solutions, built on diversity

Northeastern 2025 will eliminate barriers to cross-cultural understanding in research and scholarship as well as learning. We will ensure that the solutions needed to make communities sustainable are informed by a deep cultural understanding of those communities.

The university's success as a global academic leader generating new ideas and discoveries depends on its ability to integrate diversity and complexity in knowledge areas, research topics, and scholarly perspectives.

Northeastern will devote resources to ensuring that its faculty and student body closely reflect the diversity of society and embrace diverse scholarly viewpoints. These include concerted efforts to leverage external partnerships and reach beyond Northeastern to enhance the pipeline of outstanding diverse faculty and students.

Widening the network of faculty innovation

Northeastern 2025 will expand the university's capacity for breakthrough innovation through flexible and nontraditional faculty appointments and engagement, including:

- faculty appointments split between academia and industry
- faculty appointments split across academic institutions
- faculty embedded in targeted industry positions to help accelerate real-world impact
- "exchange" opportunities arising from collaboration with departments at other universities

The university will develop and deploy a range of such appointments in order to leverage talent in research, pedagogy, service, and community engagement as widely as possible.

By 2025, the university will have a well-coordinated strategic plan for global research that encourages partnerships across countries. As collaboration extends to teams that span the country and globe—enabled by connecting technologies—Northeastern's research will have few borders.

Experiential research themes as cornerstones

Northeastern 2025 will expand two areas of interdisciplinary research: the science of experiential learning and the science of networks. We will establish the Research Institute for Experiential Learning Sciences to achieve a clearer understanding of how and why experiential learning works and how it can be made more powerful. We will increase our knowledge of human communities and the human-technology interface—the core of humanics—through a focus on the science of networks.

By expanding Northeastern's evidence-based understanding of both experiential learning and human networks, these research areas will serve as cornerstones for innovation in the university's networked approach to learning and discovery.

Humanics will support our goal of creating sustainable human communities by addressing the wide-ranging variety of public policy and community-building aspects of health, security, and sustainability.

Novel PhD programs aligned with emerging fields

Northeastern 2025 will elevate the excellence and impact of our doctoral programs with increased support for novel PhD programs that take advantage of our ever-increasing research capabilities, our collaborative approach to innovation and discovery, and our distinctive educational model.

Our most successful PhD programs will provide students with a deep understanding of industry problems, societal issues, and disciplinary knowledge. This approach will prepare doctoral students to synthesize across disciplines and develop the skills needed to carry out impactful research that advances the university's mission to create new knowledge.

NO BOUNDARIES

Northeastern 2025 makes learning and discovery more powerful and more consequential by eliminating artificial boundaries of place and circumstance that limit what and how people learn and discover.

Our networks will have no such silos. They will be integrative and interactive, connecting students, alumni, researchers, employers, and entrepreneurs dynamically and organically in response to the needs and goals of the network members.

This is true because learning and discovery cut across largely static roles such as "student" and "researcher," which themselves are silos. In reality, everyone is a learner; everyone can be an innovator.

Northeastern 2025 is a game-changing vision of higher education because it unleashes the power of learning and discovery through limitless connection.

NORTHEASTERN'S ESSENCE

Northeastern University, a dynamic, highly networked research university with a global reach, is a world leader in experiential learning and a thought leader on the frontier of learning science. We foster excellence, creativity, and entrepreneurship throughout our undergraduate, graduate, and professional programs in a diverse and inclusive community.

Integrative Experiential Education We combine curricular and co-curricular programs with relevant professional experiences designed to develop in our students broad knowledge, intellectual creativity, and analytical skills. This integrated experiential model prepares students to be active, impactful participants in our evolving society and economy—engaged global citizens and leaders, successful professionals, and self-directed lifelong learners. Our educational programs foster formal and informal knowledge-sharing networks that meet the learning needs of students at every stage throughout their lives.

New Knowledge through Foundational and Translational Research We generate cutting-edge research, inspired by the world's grand challenges, that aligns with societal needs and our unique strengths. Our research is based on strong disciplinary foundations and a commitment to interdisciplinary discovery, and engages societal partners from business, government, and the academy to integrate basic and use-inspired research with development and translation.

Entrepreneurship and Innovation We empower a network of students, faculty, and alumni who develop entrepreneurial and professional collaborations and innovative enterprises that advance knowledge and contribute meaningfully to society. We relentlessly innovate in our educational pedagogies and organizations to keep pace with our changing environment and the needs of our students and faculty.

A Diverse and Inclusive Community We are a multicultural community, situated in a dynamic urban setting, in which students develop the cultural competencies and agility necessary to thrive in an interconnected world. Many of our students' most powerful learning opportunities occur through community engagement, in which they learn experientially about the importance of diversity and inclusion. Our educational programs foster civility and mutual respect by encouraging students to understand multiple, competing points of view.

A Global Perspective Grounded in Local Roots We are focused on expanding our teaching and research around the world just as we are enriched by our deep roots in Boston and the innovative city it has become. Our local and global engagement comes from the same starting point—the belief that academic pursuits must be grounded in reality. This underlying ethos guides us as we extend our presence around the globe.

Commitment to Excellence with a Purpose We are unyielding in the advancement of knowledge, the successful education of future generations, and the positive resolution of the challenges of our time.

Approved, Northeastern University Board of Trustees, September 30, 2016.

THE ACADEMIC PLANNING PROCESS

President Joseph Aoun and Provost James Bean laid the groundwork for the 2015–2016 strategic planning process in summer 2015.

Discussions with the Faculty Senate Agenda Committee about the planning process began in August 2015. An initial retreat with members of the university's senior leadership, academic deans, members of the provost's office, and other university leaders also took place in August 2015.

The Board of Trustees, at its retreat of October 2015, engaged in extended discussions of the future of higher education with the senior leadership team.

The planning process, which culminated in the production of a summary draft of the plan in June 2016, engaged the university community through a combination of topic-specific town halls and a blog on the academic planning website.

Seven town halls, held from December 2015 to March 2016, drew nearly 500 participants to discuss the strategic themes—the global university, lifelong experiential learning, diversity and inclusions, faculty of the future, doctoral education, and research and scholarship for impact—as well as the essence of Northeastern.

More than 360 comments were posted on the blog, and the academic planning website garnered nearly 32,000 page views and attracted nearly 7,000 new and returning users.

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