LEAD WITH PURPOSE
The Strategic Plan for WPI

Report Card Year 3 | 2023–2024

WORCESTER POLYTECHNIC INSTITUTE

OUR MISSION

WPI transforms lives, turns knowledge into action to confront global challenges, and revolutionizes STEM through distinctive and inclusive education, projects, and research.

OUR CORE VALUES

Respect | Community | Inclusion | Innovation | Achievement

To increase impact…

In Year 3, President Grace Wang challenged our community to focus on scalable impact. The strategic plan actions were integrated into divisional goals to ensure appropriate long-term ownership. The student experience, central to the WPI mission, continued to be a major focus of our work, as creating a distinctive, immersive experience throughout the student lifecycle is pivotal to achieving maximum impact. Actions included increasing outreach to new populations, identifying and removing barriers for transfer students joining our community, and training our faculty in inclusive pedagogies.

We also continued to emphasize WPI's role in preparing students for a professional STEM environment that will rapidly incorporate artificial intelligence into research, products, and services. Research is consistently growing at WPI with a focus on large-scale, interdisciplinary efforts that promote an innovative and entrepreneurial ecosystem.

To support all of this on our physical campus, we have undertaken work to develop a campus planning framework to guide future projects related to student housing, engaging learning and research experiences, sustainability, and accessibility.

"To lead with purpose, we must align our actions and values, deepening our commitment to positively impacting the lives of all our students through our transformative STEM education and immersive student experiences."

—Grace Wang,
President

To **LEAD WITH PURPOSE** we must directly address issues of student well-being, access, and affordability, and commit to building a thriving community of diverse learners and doers.

To **LEAD WITH PURPOSE** we must revolutionize what it means to be successful STEM professionals, enhance our project-based, interdisciplinary approach to student development, and build a strong infrastructure to support their success.

To **LEAD WITH PURPOSE** we must look inward to create a culture of inclusion, belonging, well-being, and respect that draws diverse minds and provides the support necessary for all to thrive.

These goals are at the heart of this strategic plan.

Student Well-Being, Access, and Affordability

Take a holistic and inclusive approach to elevate student well-being across academic and co-curricular experiences, including launching the Center for Well-Being at WPI.

Advancing the Campus Wellness Coalition

- The group of 32 faculty, staff, and students met twice per term during the academic year with the mission of determining how WPI could **keep wellness at the forefront of community planning and decision-making**.

- **They analyzed WPI-specific and national data on student mental health and wellness** and started working towards WPI's adoption of the Okanagan Charter, a milestone expected to occur in late 2024.

- They also discussed ways to **create more meaningful connections with students** who are less engaged.

8,998

visits to the Center for Well-Being from B-Term '22 through C-Term '24

92%

increase in sense of preparedness to help a student in psychological distress connect with mental health services, per surveys of faculty and staff before and after completing the Kognito suicide prevention training

73%

of community members agree or strongly agree that Wellness Days allow them to support their own well-being

Expanding the Center for Well-Being

- **Mental health education and awareness:** Empowered the campus community to support each other by incorporating Kognito into the onboarding of all students and employees and through multiple collaborations with the Student Development & Counseling Center.

- **Peer mentoring:** Expanded our Peer Well-Being Ambassador Program to include peer coaching.

- **Well-being integrated into the curriculum:** Supported student well-being by reserving WPE 1600 to 1999 for wellness courses under the physical education requirement and expanding the wellness course options to include mindfulness meditation, yoga, nutrition, and visual arts appreciation.

- **Faculty and staff training and support:** Promoted self-care, leadership development, and crisis response through several guest lectures and training programs, including a Student Support Network training, the Women's Leadership Program, and a Talent & Inclusion session called "The Science of Personal Well-Being."

- **Well-being research:** Collaborated with faculty on four separate research projects, including a menstrual health project that has won a Justice, Equity, and Transformation (JET) grant and a Women's Impact Network (WIN) grant.

*Increase the number of Black, Indigenous, People of Color (BIPOC) students
and students from low-income families who attend WPI.*

Recruiting and Supporting a Diverse Student Body

Launched marketing and enrollment task forces to increase visibility, outreach, and recruitment to new prospective students and new regions.

Amplified transfer student recruitment efforts by enhancing the transfer admissions website, clearly communicating WPI's value proposition for transfer students, increasing outreach via targeted mailings and social media ads, and creating dedicated transfer partnership websites.

Deepened engagement with community college partners through events such as transfer fairs and customized WPI campus visits.

Won a **$2.5 million NSF grant for a scholarship program** for computer science students from low-income backgrounds.

Created **partnerships with community-based organizations to increase diversity** in pre-college summer programs, e.g., Frontiers, Launch, and College Credit Jumpstart.

Increase the number of Black, Indigenous, People of Color (BIPOC) students,
and students from low-income families who attend WPI.

Diversifying the Student Body by Making WPI More Accessible to Transfer Students

Removed barriers to transfer:

- **Reformed the credit transfer policy**, making it uniform across all departments and programs.

- **Accelerated the process** of reviewing and accepting transfer credits.

- **Guaranteed housing** for transfer students.

- **Improved Interactive Qualifying Project (IQP) placement** for transfer students.

- Implemented an intentional strategy for **transfer student financial support**, including a waived application fee and increased transparency about costs and aid.

- **Developed transfer agreements** that will enable students to successfully transfer to WPI from local institutions including Quinsigamond Community College and Mount Wachusett Community College.

Enhanced the overall transfer student experience:

- Created an interdepartmental team of Admissions, Advising, and Undergraduate Studies members **dedicated to assisting transfer students**.

- **Prioritized community-building opportunities**, such as a dedicated transfer student orientation.

- Provided a **transfer student advisor** in the advising office and in each department or program.

- Provided housing for transfer students **together as a cohort**.

- Launched a **transfer student Insight group.**

Enhance the outcomes and experience of minoritized and underrepresented student populations at WPI.

Promoting Representation and Belonging

The Lotus Lounge opened in February 2024. This new affinity space is for Pan-Asian identifying students.

The LGBTQIAP+ Advocacy Board was reinvigorated this year with the hiring of Lauren Feldman, Assistant Director for Gender Equity and Sexuality in the Office of Diversity, Inclusion, and Multicultural Education (ODIME), and a strategic focus on how to best serve LGBTQIAP+ students.

An Accessibility Working Group was launched to better understand and improve the experience of navigating campus as a student with a disability. The overall goal is to make campus more user-friendly, accessible, and approachable.

The Black Student Experience Project—an internal study examining challenges our Black students face—resulted in the launch of several programs offering academic, social, mental health, and career services, including the Center for Black Excellence. We celebrate the important progress it made and look forward to continuing the work to enhance the overall experience of our Black students.

Supporting Students Through Outreach and Intervention

Began an early intervention initiative to ensure student success, supported by a grant of approximately $500,000. The initiative uses data analytics to understand predictors that affect retention and graduation rates while enabling staff to intervene with at-risk students and help them graduate on time.

Started an advisory committee on sexual assault awareness and healthy relationships with the goal of educating the community around these issues. Sponsored by the Office of Equal Opportunity & Outreach (formerly the Title IX Office), the committee consists of students, staff, and faculty.

Increased student engagement through initiatives like Herd Huddles, Deans' Office Hours, and Deans' Lunches.

Reduce financial barriers to an undergraduate education at WPI.

Reducing and Relieving Financial Strain

Made the WPI experience more affordable:

- Increased investment in **financial aid**.

- Established **transfer partnerships** that give students a pathway to WPI with lower overall tuition costs.

- Adopted **proactive monitoring and advising** to help more students graduate on time.

Increased outreach to students about available resources:

- **MassHealth** for health benefits

- **SNAP** for assistance in purchasing groceries

- **WRTA** and **MBTA** for affordable public transportation

Formalized our commitment to clarity, accuracy, and transparency around financial aid offers by joining the nationwide College Cost Transparency Initiative.

Broad Community Engagement to Support Students

The Dough Club food pantry opened in April 2023. Located in the Innovation Studio and run entirely by student volunteers, the food pantry follows a "come when you need, take what you need" ethos. Stocking items commonly desired by students and has helped students meet basic needs while focusing on their studies.

Gompei's Closet opened in late 2022. It is an on-campus resource for students and employees to request and receive clothing products, ties, dress shirts, blouses, shirts, underwear, socks, and other garments.

Purpose-Driven Education and Research

Increase our global impact by incorporating online and tech-enabled learning options into WPI's already distinctive project-based curriculum at the undergraduate level, through cohort models, blended and fully remote options, and online experiential learning.

Building an AI Bridge Across Campus

Our faculty understand that artificial intelligence is more than a technology—it's a revolutionary force that will transform every sector of the economy and every facet of our lives. In driving AI research and training and making AI accessible for all, we're increasing the impact of a WPI education for decades to come.

"AI for all":

WPI faculty championed an "AI for all" mindset with the mission of **developing AI skills for all students**, not just computer science and data science majors. Faculty also encouraged open dialogue about topics in AI by hosting social coffee hours and walk-in meetings. In addition, WPI launched a task force to **develop a comprehensive AI technology enhancement strategy**, approved an interim policy around confidential information in generative AI, and started updating the Data Classification and Usage Policy.

Modernized curriculum:

In addition to launching a BS/MS, master's degree, and graduate certificate in AI, we have **modernized our curriculum university-wide** to integrate AI components with a focus on AI literacy and ethics. Faculty across several departments and programs collaborated to **introduce four new AI courses in spring 2024**.

Increased internal training:

We have added **more training on AI and machine learning** internally:

- "Generative AI in the Classroom: Explorers and Experimenters" training session
- "Creating Generative AI in Teaching and Learning" professional learning community for AY 2024–25
- Short courses in AI topics available for all community members

Revolutionize what it means to be a successful STEM professional, enhance our project-based, interdisciplinary approach to student development, and build an integrated research infrastructure to support their success.

President's Research Catalyst Grants Program

This donor-supported program provides seed funding to **support faculty in pursuing center-scale, extramural funding in critical research areas**, including AI. By supporting faculty in their development of competitive proposals, the seed funding aims to help build and establish more interdisciplinary, multi-institutional research centers at WPI.

2023 Award for Undergraduate Research Accomplishments

WPI received this prestigious award from the Council on Undergraduate Research, underscoring the **university's commitment to fostering a culture of innovation, inquiry, and academic excellence**.

NAFSA 2024 Senator Paul Simon Spotlight Award for Campus Internationalization

WPI was recognized for its **Global Projects for All initiative**, which seeks to maximize the number of students who participate in WPI's Global Projects Program, in part by removing financial barriers.

2024 Award for Academic Achievement Abroad

Three WPI students were named winners of the **Forum on Education Abroad Award for Academic Achievement Abroad**. Together as a team, they were honored for their rigorous and meaningful academic project, "Reducing Waste Through Innovation: Engaging the Melbourne Community via Plastic Bottle Cap Recycling," which they completed at WPI's Melbourne, Australia, Project Center in spring 2023.

Strengthen and grow new demand-driven graduate programs through differentiated pricing, strategic partnerships, and innovation, including practice-based MS/PhD, graduate programs from The Global School, stackable credentialing, and workforce development.

Graduate degrees and certificates in artificial intelligence reinforce WPI's extensive history and expertise in the field to the scientific community, peer institutions, potential partners, and prospective students.

New Master's Degree in AI

- Launched a graduate program in artificial intelligence that includes a master of science and graduate certificate.

- Widely promoted the degree program and WPI's longstanding AI leadership via national, local, and digital media markets.

- Centered history of innovation and ethical development as key differentiators for the AI program at WPI.

International Partnerships

In 2023, WPI successfully ramped up international recruitment initiatives and partnerships across the globe. We now have more than 60 agreements with over 45 educational institutions in 20+ countries.

- **In India**, we added eight memorandums of understanding and expanded our on-the-ground presence by opening a dedicated office from which to recruit students, guide them through the application and visa process, and provide a robust support structure for assimilating to the US and WPI.

- We established **new project centers in Spain and Greece** and launched several dual-degree programs, including a **new master of science with the Zurich University of Applied Sciences** (ZHAW), allowing for international study and research collaboration.

- In the UAE, we have a new virtual exchange partnership focused on sustainability with the American University of Sharjah, which enabled **three WPI students to participate in the 2023 UN Climate Change Conference in Dubai**.

The "Front Door" to WPI

The Corporate Relations Office in University Advancement was rebranded to the **Office of Corporate Partnerships (OCP)**, and it now serves as the designated "front door" to the university. The OCP's function is to provide a seamless process for internal and external partners to engage with WPI and vice versa, driving momentum forward and facilitating shared goals.

Draper Scholars Program

WPI announced a new partnership with Draper, an independent engineering innovation nonprofit, making WPI a participant in the Draper Scholars program. Starting fall 2024, the program will provide scholarships and opportunities for WPI graduate students to conduct **research under the collaborative supervision of a Draper scientist/engineer and a WPI faculty member**.

Expand scholarly work at WPI by growing interdisciplinary discovery and addressing global challenges such as sustainability, climate change, human health, and socially just technologies through increased funding, better proposal win rates, and greater student engagement in transformational research for impact on societal problems.

Research expenditures in 2023 increased 16% to $66 million

Academic Year 2023–24 Highlights

National Institutes of Health
Awarded WPI up to $13.6M

to develop a wearable oxygen sensor for premature infants of color that will address racial bias in healthcare;

to study the use of machine learning, a form of artificial intelligence, in predicting pain management responses;

to investigate a novel high-resolution multiscale brain modeling method for brain stimulation therapies, neurophysiological recordings, and other clinical applications.

Defense Advanced Research Projects Agency (DARPA)
Awarded WPI $2.8M

to develop a prototype for a new method of detecting buried explosives using fungi as underground sensors.

National Science Foundation
Awarded WPI $1.2M

to uncover how gene expression is regulated in soil bacteria, laying the groundwork for new ways to engineer microbes that improve soil health, crop production, and pollution control with minimal environmental risk.

Massachusetts Technology Collaborative
Awarded WPI $2M

to build a research and development lab for autonomous systems. The lab's new digital infrastructure will use virtual and augmented reality tools.

US Department of Energy
Awarded WPI $3.8M

to develop a recycling process for fuel cells and hydrogen electrolyzers as part of a nationwide consortium aimed at advancing sustainability and innovation within the hydrogen industry.

US Department of Education
Awarded WPI $3.7M

to build a conversational AI tutor with the aim of addressing income-based learning gaps by helping students who have fallen behind in math classes and can't afford private tutoring.

Our Inclusive Community

Drive more explicit engagement with WPI's mission and values to advance our campus culture; regularly take the pulse of our employees on how well we are living our values.

Fostering a Culture of Support

Continued to develop a learning sequence framework to foster student cultural proficiency.

Administered a Staff Climate Survey, which highlighted a strong affinity for the university's mission, meaningful work, and DEIB efforts.

Supported our diverse community of students, faculty, and staff by improving readiness and responsiveness to geopolitical situations.

*Build an inclusive campus culture through the implementation of our
divisional Inclusive Excellence plans, equitable practices, and inclusive policies.*

Inspire

**To inspire further inclusivity
in the classroom**

- Implemented the **Morgan Pedagogy Champions** initiative, fostering faculty engagement and ensuring ongoing improvement in inclusive pedagogy.
- Launched **teaching and syllabus** inclusivity workshops.
- **Increased enrollment and retention rates** in the Louis Stokes Alliance for Minority Participation program, adding 55 participants.

Elevate

To elevate belonging in every sphere
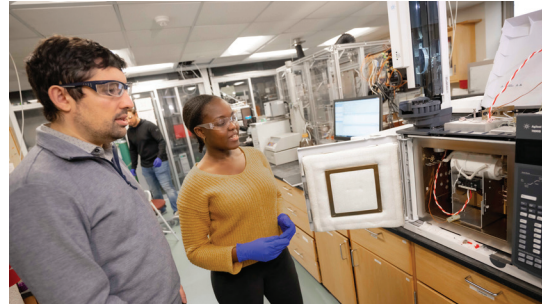
- **Awarded seed grants** through the Office of the Vice Provost for Research to 13 projects related to diversity, equity, inclusion, and justice (DEIJ) at WPI.
- **Awarded an institutional NIH T34 grant** as part of the Maximizing Access to Research Careers program to help underrepresented undergraduates transition into higher degree programs in biomedical, research-focused fields.

Build

**To build a more inclusive
environment**

- **Enhanced talent acquisition and recruitment** strategies through a revamped Diversity Advocate program for faculty searches, inclusive staff training workshops, and second annual job fair.
- **Improved inclusivity on community platforms** by adding a field for preferred name, audio for correct name pronunciation, and expanded classifications of gender identity.
- **Developed an academic life coaching function** for graduate students.
- Rolled out new resources including a new **non-discrimination policy**, **employee welcome video**, **comprehensive hiring guide**, and **talent acquisition recruiting page**.
- Developed **online research guides** representing diverse topics, **audited the university website for accessibility and inclusion**, and increased production of **open educational resources**.

DEIB Wellness Day Symposium: "Elevating Belonging for Everyone in the University"

This event highlighted two of our WPI priorities: self-care and community. Speakers shared insights on mental health, healing, workplace dynamics, and the relationship between wellness and DEIB efforts. Community members engaged with each other on essential DEIB topics such as accessibility as an integral facet of inclusivity; support for caregivers in the workplace; reshaping the landscape for women, people of color, and LGBTQIAP+ individuals; and creating affinity spaces to build community.

Invest in advancing the professional development, well-being, and job satisfaction of faculty and staff to create stronger, more inclusive shared governance, including the founding of a Staff Council to expand the voice of the staff in steering the university.

Professional Development, Well-Being, and Satisfaction

- **Expanded the WPI Staff Council** in its second year of operation.

- Launched **professional development programming for faculty and staff,** including the seven-session Women's Leadership Program funded by WIN, the Bite-Sized Learning Series for employees and managers, the New Manager Program for those managing direct reports for the first time, the Inclusive Excellence Training and Development programs, and several others.

- **Completed the staff position classification and compensation project** to assess the market competitiveness of staff salaries at WPI and to build a pay structure that is fair and equitable.

- Launched the new **WPI Learning Academy**, powered by LinkedIn Learning, to **help staff and faculty build new skills and augment their careers**.

- Formed a **Staff Performance Review Task Force**, a collaborative effort led by the Office of Talent & Inclusion, to **assess WPI's performance review process and provide recommendations for improvement**. The task force is working to ensure this important process is more efficient and effective, accurately documents performance and goals, and is overall more engaging for both managers and staff.

Inclusive Excellence Employee Resource Groups

- Men of Color Coalition
- Accessibility Network Group
- Shades of Strength Society (aka S-Cube)
- Jewish Faculty, Administrators, Staff, and Allies Group (J-FAST)