Bernard M. Gordon Dean, School of Engineering

Leadership Profile

Fall 2024

WittKieffer

Executive Summary

Worcester Polytechnic Institute (WPI) invites nominations and applications for an accomplished, creative, values-driven leader with a demonstrated track record of success in leading a high-performing, visionary, and dynamic organization to serve as the next Bernard M. Gordon Dean, School of Engineering. Globally renowned for its long history of project-based learning, impactful invention, and discoveries, the School of Engineering prepares students to collaborate with peers across disciplines to develop innovative and effective solutions to the world's most pressing challenges.

The successful candidate will serve as the fourth Dean of WPI's School of Engineering and will be a key strategic partner to the newly appointed Provost and Senior Vice President, Andrew Sears. The next Dean will have the opportunity to build on the University's rich history, distinctive educational approach, impactful research and innovation, and highly immersive, inclusive, and innovative campus culture to forge a future that continues to drive WPI's transformative STEM education and research.

Founded in 1865, WPI is the third oldest engineering and technological university in the United States. WPI stands out as a place where cutting-edge research, innovative education, and informed practice intersect and complement one another to the benefit of students, faculty, staff, and society. The University is a recognized leader for engaging undergraduates in research and a pioneer and global leader in project-based learning; no other university does projects—or global experiences—at WPI's scale and quality. Through a meaningful combination of theory and practice, every WPI student achieves intellectual breadth through degree requirements and mandatory hands-on projects.

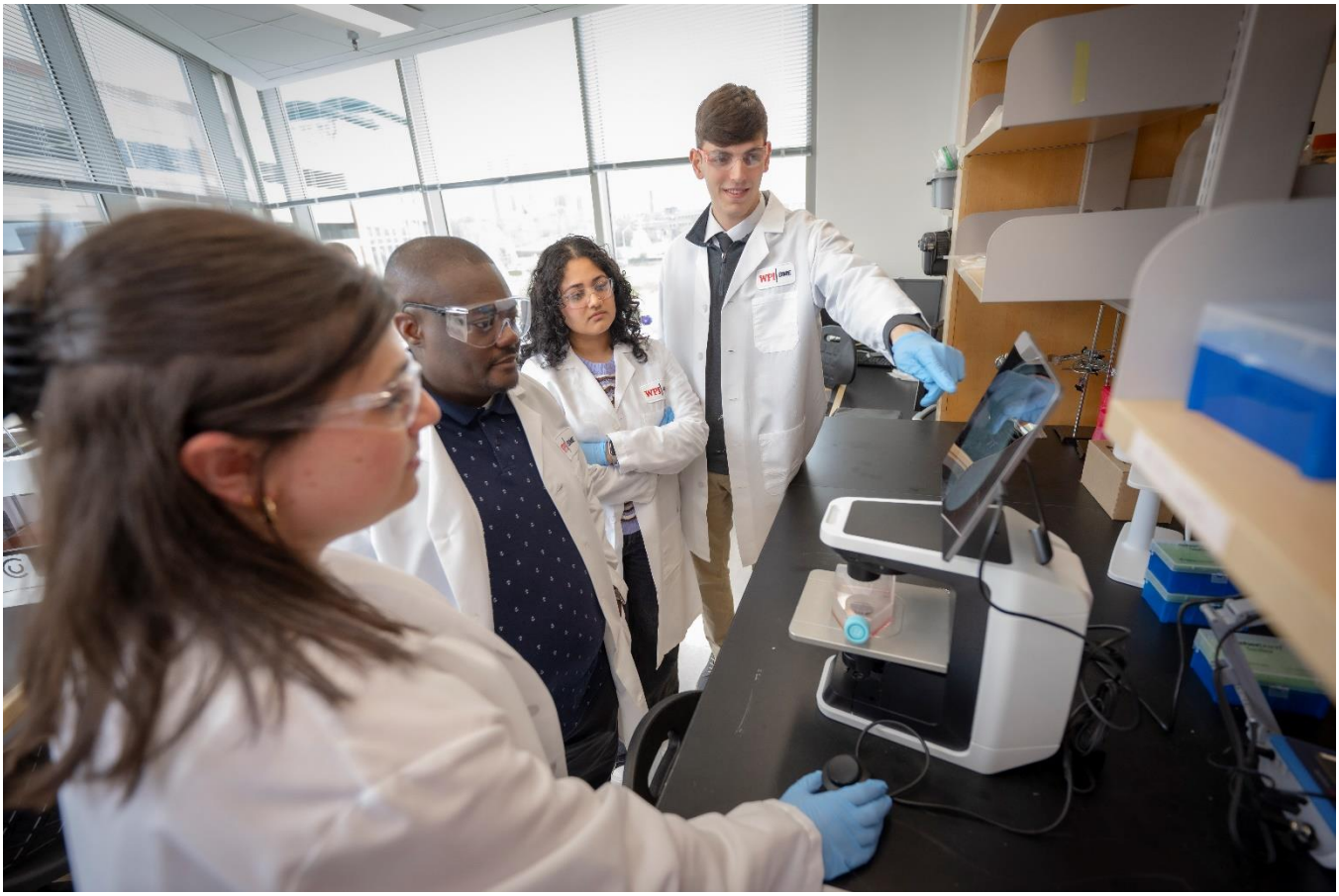
The campus is located on 95 acres atop Boynton Hill in Worcester, Massachusetts, and is home to more than 5,500 undergraduates and 2,000 graduate students who represent 48 states, two US territories, and 103 countries. Approximately 500 faculty and 800 staff support these students, garnering awards for research and scholarship and providing inspirational teaching and mentorship. The University's location in central Massachusetts provides easy access to corporate and industry internships, research collaborations, and post-graduate career opportunities in Worcester, Boston, and beyond.

The School of Engineering is the University's largest school and is foundational to WPI's reputation as a distinctive global leader in project-based STEM education. The School's 140+ faculty includes 20 NSF CAREER Award recipients. The School has over 3,200 undergraduate students and more than 1,000 graduate students and its offerings from more than a dozen departments and programs include ten ABET-accredited bachelor's degrees, 24 master's degrees, 11 PhD degrees, as well as minors and certificates. Students gain the knowledge, skills, and experiences needed to adapt to an ever-changing and always-challenging global environment through a broad, deep, and project-based education. Graduates leave WPI with technical expertise and a thoughtful approach to how technology impacts society.

The next Dean will step into leadership at an exciting time. Joining President Grace Wang and Provost Andrew Sears, the Dean will have the opportunity to contribute to a leadership team which is dynamically guiding WPI into the future via the Institute's Strategic Plan: Lead with Purpose. The next Dean will architect the School's future vision and strategy, providing a forward-looking path that further elevates WPI Engineering's role in providing distinctive, transformative engineering education, addressing the world's grand challenges, and contributing to societal good. Building upon a rich and proven curricular, pedagogical, and innovative history, the Dean will provide thought leadership and strategic focus on exemplary, leading-edge undergraduate and graduate engineering education and high-impact, highly interdisciplinary engineering research. The Dean will lead and partner with faculty and staff in Engineering to prepare students for a rapidly changing world, advance new frontiers, build internal and external partnerships, and open exciting opportunities. The Dean will be a collaborative, transparent, solution-driven, and consensus-building leader. As a member of the Provost's Council, the next Dean has the opportunity to collaborate with Provost Sears and other senior leaders to shape and

advance the academic enterprise. They will inspire and support others toward success, be deeply committed to WPI, value diverse lived experiences, and champion interdisciplinary research and teaching.

To submit a nomination or express personal interest in this position, please see Procedure for Candidacy at the end of this document.



Role of the Bernard M. Gordon Dean, School of Engineering

The Dean of the School of Engineering serves in a pivotal position providing strategic and operational direction across eight academic departments and advancing WPI's engineering education and research initiatives with a focus on collaborative, faculty/student-driven projects. The Dean will work closely with faculty, staff, and students in Engineering, and play a key role in fostering faculty and student success, securing extramural funding, engaging with distinguished alumni and the local community, and building valuable industry and professional partnerships. Additionally, the Dean will collaborate with Vice President and Vice Provost for Research and Innovation, and the Deans of Undergraduate Studies, Graduate Studies, School of Arts and Sciences, Business School, and Global School and to elevate WPI's achievements and enhance its reputation.

Essential Duties and Responsibilities

- Provide visionary intellectual and research leadership for faculty, students, and staff. Cultivate an entrepreneurial mindset among students, faculty, and staff.
- Further elevate WPI's engineering programs to even greater national and international prominence.
- Strengthen collaborative relationships with other deans to foster interdisciplinary connections. Forge industry and professional partnerships, including the growth of the Engineering Advisory Board.
- Prioritize recruiting, retaining, and advancing faculty and staff with a strong focus on fostering belonging, well-being, and community in alignment with strategic priorities.
- Inspire and reward excellence in teaching and the adoption of best practices in education. Collaborate with faculty and staff to determine program and enrollment growth opportunities, amplify the School's impact at both undergraduate and graduate levels, and enhance WPI's unique project-based undergraduate programs.
- Support and expand the research enterprise by aligning faculty research initiatives with the School's strategic goals. Identify and develop interdisciplinary centers to enhance research and collaboration.
- Facilitate opportunities for faculty to secure external funding from federal agencies, corporations, foundations, and donors for industry-relevant research.
- Ensure continuous accreditation of programs by maintaining standards set by ABET, NAAB, and NECHE.
- Ensure compliance with university, state, and national policies, standards, and laws.
- Promote an environment that celebrates and rewards diversity among faculty, students, and staff.
- Oversee the School budget, promote fiscal responsibility, and ensure administrative excellence throughout the School.

The Dean will manage a budget of nearly $56M and provide leadership for a dean's office comprising 11 direct reports including:

- Department Head, Aerospace Engineering
- Department Head, Fire Protection Engineering
- Department Head, Electrical and Computer Engineering
- Department Head, Robotics Engineering
- Department Head, Biomedical Engineering
- Department Head, Civil, Environmental, and Architectural Engineering
- Department Head, Mechanical and Materials Engineering
- Department Head, Chemical Engineering
- Director, Operations
- Senior Executive Administrator
- Administrative Associate

Opportunities and Expectations for Leadership

The Dean, School of Engineering will report directly to Provost and Senior Vice President, Andrew Sears. They will be an integral and vital part of the WPI leadership team, collaboratively supporting the Institution's strategic mission and priorities alongside their decanal peers. They will be responsible for ensuring an enduring future for the School of Engineering and leading talented faculty and staff.

In addition, the Dean will be expected to:

Develop and advance a strategic vision for the future of the school

In conjunction with and in support of the Lead with Purpose 2021-2026 Strategic Plan, the new Dean will develop and advance an ambitious vision and plan for the future of the School of Engineering. This vision will be grounded in the founders' directive: to create, to discover, and to convey knowledge at the frontiers of academic inquiry for the betterment of society, propelled by the School's strengths. The next Dean will appreciate and leverage the School's unique blend of research and teaching, pioneering application of project-based learning, global centers that nurture global problem-solvers, faculty deeply committed to research and research-embedded teaching, exemplary student retention and graduation rates, and an innate desire to provide relevant academic programming in the service of society. The new Dean will use their curricular experience and deep knowledge of innovation in engineering education as lenses through which to explore the new and exciting possibilities that await the School, its faculty, staff, and students. They will collaborate with 140+ faculty and 40+ staff to identify program development and enrollment growth opportunities, amplifying the School's impact at both the undergraduate and graduate levels. They will work with faculty to expand existing areas of research excellence and identify new strategic areas where WPI is positioned to excel. As the Dean of the largest school, a pillar on which the University was founded, they will provide an inspiring path forward that ensures a sustainable future and serves as a national model for other engineering schools.

Further elevate the School’s national and global prominence

The School of Engineering educates exceptional engineers. From its distinctive pedagogical beginnings, WPI has always been a place defined by bold innovation and forward thinking. The next Dean will further elevate the School’s reputation by collaborating with the University’s Marketing and Communications team, externally promoting faculty and students, and networking amongst their peers to tell this story. The next Dean will formulate strategies to showcase the School's accomplishments and leading-edge research projects, publicly emphasize its contributions to engineering research and education, and ensure student educational experiences and outcomes that result in an elevation of its national and global reputation.

Drive interdisciplinary education and research

WPI's impact on society is one of its greatest achievements and part of its storied history. From the development of the first liquid-fueled rocket, to the battery-operated smoke detector, to the lithium-ion battery recycling process, to the surgical robot: WPI Engineering leads in innovative problem solving. In both theory and practice, WPI students learn key engineering and professional skills that position them to drive impact in industry and research immediately following graduation. As the world faces greater and greater challenges, solutions will be built with an interdisciplinary approach. WPI's curriculum has interdisciplinary teaching and learning baked into its core. As a highly collaborative member of WPI’s academic leadership team, the next Dean will support pathways for cross- and inter-disciplinary partnerships, build relationships with other deans and external partners to seed collaborative partnerships, and catalyze faculty to innovate around interdisciplinary research and teaching, presenting new and exciting ways to link colleges and faculty. The next Dean will support the formation of interdisciplinary research clusters to strengthen outcomes and attract external funding to address global challenges. As a top-of-mind

priority, they will apply an interdisciplinary lens as they craft the School's strategic priorities and foster a school culture that instinctively looks for collaborative opportunities.

Strengthen and expand the research enterprise

Research is integral to the WPI Plan and creates compelling opportunities for faculty, staff, and students. With the anticipation of an R1 Carnegie classification in early 2025, the next Dean will arrive at an opportune moment to further advance the School's research endeavors, capitalizing on this exciting momentum. The School's faculty accounted for over $25M in research expenditures from external sources in FY 2024. Over the last decade, research expenditures have more than doubled. The next Dean will continue to grow research by identifying areas of opportunity, supporting faculty, and aligning faculty research initiatives with the School's strategic goals. They will work in concert with the Provost's Office to determine appropriate resource allocation and bring to bear a spirit of entrepreneurism and creativity in doing so. The Dean will facilitate opportunities for faculty to secure external funding from federal agencies, corporations, foundations, and donors for industry-relevant research. They will provide visionary intellectual and research leadership for faculty, students, staff, donors, and professional peers. They will also strategize to enhance WPI’s unique project-based undergraduate education and pioneering engineering research.

Support faculty and staff excellence

As a key indicator of success, WPI is proud of its 94% student retention rate and equally impressive 89% six-year graduation rate. Integral to these student outcomes are the faculty and staff who advise, mentor, teach, and support undergraduate and graduate students. The next Dean will be an advocate and champion of the engineering faculty and staff, prioritizing recruitment, retention, and advancement with a strong focus on fostering belonging, well-being, community, and inclusion. The Dean will inspire and reward excellence in teaching and research, as well as the adoption of best practices in education. They will cultivate an entrepreneurial mindset among students and faculty. They will address the pressures and temporal demands inherent in a project-based learning environment, providing creative solutions that enable faculty and staff to achieve success as teachers, mentors, and researchers. They will identify ways to further strengthen structural, procedural, and cultural factors to create an environment where faculty and staff can flourish.

Partner with University leadership to ensure institutional success

In partnership with Provost Sears, the next Dean will also help define the role of, and empower, deans at WPI. A relatively new construct at WPI, deans were added to the leadership structure in 2010. Since that time, deans have worked together and with the faculty across the Institute to advance its research as well as its distinctive undergraduate and graduate education, and to provide unique interdisciplinary opportunities for faculty and students. With new leadership in the Provost's Office, the next Dean of Engineering will have the opportunity to support the Provost as he refines and empowers the decanal functions for the betterment of the Institution. In collaboration with their decanal peers, they have a momentous opportunity to influence the shape and impact of the entire academic enterprise. To that end, the next Dean will be expected to come to the role with a discerning eye. They will assess the School and suggest changes that will contribute to the overarching success of WPI and affirm the School of Engineering’s commitment to collaborative success across all schools.

Professional Qualifications and Personal Qualities

The successful candidate will have a proven record of leadership excellence in complex higher education settings; demonstration of the highest personal and professional integrity; an earned doctorate or other terminal degree from an accredited institution; and a record of high-quality teaching and scholarship appropriate for appointment as a tenured professor at WPI. In addition, the following characteristics are critical:

- **Strategic Planning:** Demonstrated strategic leadership in planning, communication, and organization as well as the vision, tact, and judgment to set clear priorities and goals, with proven success in leading change; the ability to communicate the vision of engineering at WPI in a compelling way to internal and external constituents;

- **Vision:** The ability to discern future trends and capitalize on them for the benefit of WPI and the School; the ability to envision, create, and capitalize on novel opportunities especially as new trends emerge; an eye toward innovation and creativity in problem solving;

- **Leadership:** Demonstrated success in administrative leadership that includes experience with a broad range of disciplines, and the creativity, vision, and entrepreneurial approach to achieve goals; approachability as a leader with high energy and motivation to excel in a fast-paced environment; the ability to lead through influence and by example; commitment to highly collaborative leadership, engaging all key constituents and fostering transparency and trust; proven ability to inspire, collaborate with, and lead diverse constituencies, including faculty and professional staff, to achieve the University's mission and strategic priorities;

- **Shared Governance:** Demonstrated success in working collaboratively in a shared-governance environment, engaging and empowering faculty in moving shared goals forward with agility; the ability to inspire key constituencies to collaborate to achieve WPI's priorities and to role model a truly collaborative approach in all areas of their work; demonstrated commitment to a consultative process and an ability to utilize and analyze data to inform decision-making;

- **Management:** Successful experience managing staff and overseeing staff personnel matters; ability to work with and through a team, delegating and effecting results through others; a commitment to provide professional development and opportunities for career advancement; the desire to create a work environment that positions individuals and teams to excel and be creative;

- **Inclusion, Belonging, Well-Being, and Community:** Dedication to creating an academic environment that is diverse, open, and inclusive, and to promoting inclusion, belonging, well-being, and community in all aspects of university life;

- **Resource Development and Allocation:** An enthusiasm for fundraising and resource development and the ability to forge new opportunities for the School through philanthropic support; the ability to evaluate, allocate, and leverage resources in strategic and effective ways to advance organizational objectives; an ability to gain the respect and the colleagueship of leaders within the local, academic, scientific, and business community;

- **Academic Affairs:** Demonstrated experience and success with effective evaluation of academic programs, learning outcomes, assessment methodologies, and accreditation standards; proven success in building new and innovative academic programs to ensure WPI stays at the forefront of STEM education given the changing landscape of scientific and technology advancements and workforce needs; the breadth of knowledge and foresight to identify existing, emerging, and interdisciplinary fields for investment; the skills and initiative to work with faculty, administration, and other constituents across campus to champion teaching and research; substantial experience in equitable practices and success in faculty hiring, retention, evaluation, promotion, and tenure processes;

- **Student Success:** Strong commitment to student access and success and continuing enhancement of the quality of an immersive student living and learning experience at both undergraduate and graduate levels;

- **Research:** Ability to build initiatives on campus and beyond to significantly increase external research and education funding, identify and leverage areas of opportunity, and successfully compete for program opportunities nationally and globally;
- **Fiscal Acumen:** Exceptional management, planning, and financial acumen; an astute understanding of finances and the relationship between academic priorities, budgeting, and fundraising;
- **Decision Making:** Ability to assess risks, make informed decisions, and communicate decisions with context, respect, and clarity; proven record to ensure follow-through to actions, delegate authority when appropriate, and manage confidential matters effectively;
- **Interpersonal and Communication Skills:** Thoughtfully articulate with excellent public speaking skills; ability to uphold a culture of respect and inclusion in all engagements;
- **Personal Qualities:** Empathetic listening and enabling skills; and an effective and wise blending of patience, persistence, compassion, and urgency, as well as a sense of humor.

About the School of Engineering

Overview

The School of Engineering is the University's largest School and is foundational to WPI's reputation as a distinctive global leader in project-based STEM education. The School offers all levels of degrees, minors, and certificates through its eight departments. Students graduate with technical expertise, a thoughtful approach to how technology impacts society, and the knowledge and skills required to adapt throughout their careers. The School also delivers customized professional, graduate, and executive education programs to businesses and organizations onsite, offsite, and online.

The School offers ten ABET accredited programs:

- Aerospace Engineering
- Architectural Engineering
- Biomedical Engineering
- Chemical Engineering
- Civil and Environmental, and Architectural Engineering
- Electrical and Computer Engineering
- Environmental Engineering
- Industrial Engineering
- Mechanical & Materials Engineering
- Robotics Engineering

The School is also home to the following programs:

- Fire Protection Engineering
- Manufacturing Engineering
- Materials Process Engineering
- Materials Science & Engineering
- Systems Engineering

The People of the School of Engineering

A hardworking and deeply committed cohort, the School's 140+ faculty includes 20 NSF CAREER Award recipients. Along with their equally dedicated staff colleagues, they leverage their subject matter expertise, research projects, and pedagogical insights to the benefit of 3,200 undergraduate students and more than 1,000 graduate students. Accolades for the School and faculty include 11 Fulbright Scholar Awards, six Sigma Xi Outstanding Junior Faculty Awards, and five Sigma Xi Outstanding Senior Faculty Awards.

Faculty and staff contribute to exemplary student success. The School of Engineering has an impressive 95% retention rate and an 89% six-year graduation rate (compared to a 74-84% graduation rate at its comparison schools – California Institute of Technology, Carnegie Mellon University, Case Western Reserve University, Clarkson University, Drexel University, Illinois Institute of Technology, Massachusetts Institute of Technology, Northeastern, Rensselaer Polytechnic Institute, Rochester Institute of Technology, Stevens Institute of Technology, and Tufts University). More information on educational outcomes, student outcomes, and student enrollment data can be found here.

Graduates of the School of Engineering benefit from high placement rates, earning the School #15 in Poets & Quants Career Outcomes category of 2022. Niche ranked the School in the #52 for Best College for Engineering in America – 2025; and the online Masters in Engineering was named number one by Forbes in 2024. An alumni survey, conducted in Spring 2021, confirms the unique and lasting value of a WPI education. Responses from

more than 2,200 alumni confirm that the required experiential learning opportunities, whether completed on or off campus, prepare students to develop the leadership, teamwork, communication, and problem-solving skills that are in high demand in today's workplaces, communities, and everyday life.

Research and the School of Engineering

WPI emphasizes purpose-driven, high-impact, disciplinary, and interdisciplinary research. With experts who have a passion for hands-on learning and inquiry, the University's research enterprise continues to experience significant growth in external funding; FY2023 research expenditures across the Institute totaled $66 million, which represents a 16% increase from the previous year and a tripling of expenditures since 2014. Faculty research is broad ranging, with recent grants supporting innovations including a new compound alternative to concrete, a smartphone app to detect wound infections, transparent wound dressing, and a robotic laser probe for endoscopic larynx surgeries. Along with state, corporate, and foundation support, researchers are funded by a variety of federal agencies, including the Department of Defense, National Science Foundation, National Institutes of Health, Department of Health and Human Services, Department of Education, and Department of Energy. Led by the Office of the Vice President and Vice Provost for Research and Innovation, WPI continues to invest in state-of-the-art equipment and facilities that align with the University's strategic priorities.

WPI hosts a diverse portfolio of research institutes and centers that serve as critical points of convergence for WPI faculty, students, and staff, including four NSF Industry/University Collaborative Research Centers (I/UCRCs):

- The Center for Resource Recovery and Recycling (CR3) is focused on sustainable stewardship of the earth's resources by advancing technologies that recover, recycle, and reuse materials throughout the manufacturing process. These advancements help businesses reduce energy costs and increase profitability, while protecting our natural resources.
- The Center for Advanced Research in Drying (CARD) assists U.S. manufacturing industries in becoming more environmentally sustainable and improving the quality of their products, by developing novel technologies, equipment, and strategies that enhance and optimize the drying of semi-moist, porous materials such as food and agricultural products, pulp and paper products, chemicals, textiles, and pharmaceuticals.
- Robots and Sensors for Human Well-being (ROSE-HUB) is a multi-university NSF I/UCRC focused on applied robotics and sensing research in a wide range of industries including healthcare, material handling, transportation, manufacturing, energy, homeland security, and emergency preparedness and response. This is the only NSF I/UCRC focused on robotic and sensing technology.
- In the Wildfire Interdisciplinary Research Center (WIRC), WPI builds on its longstanding expertise in fire protection in collaboration with San Jose State University to study new fire detection methods, robotics solutions to enhance first-responder safety, and fire suppression systems for wildfires.

Additional WPI research centers include the Autonomous Vehicle Mobility Institute (AVMI), the healthcare training center PracticePoint, the Biomanufacturing Education and Training Center (BETC), and the Cell Engineering Research Equipment Suite (CERES), among others. The University also fosters valuable and productive partnerships with industries and organizations that seek WPI's hands-on expertise in emerging research areas. WPI is a member of 11 of the 17 Manufacturing USA institutes.

Work by WPI researchers translates into commercial impact. In FY 2024, research at WPI resulted in 56 new invention disclosures, 20 new patents, six licenses executed, and one new startup company. Over the last 10 years, WPI start-ups have raised a total of $1.7 billion and created 529 new jobs.

Key research areas in the School of Engineering include:

- Robotics and AI, where WPI pioneers advances in autonomous systems, medical robotics, and smart manufacturing.

- Advanced materials and manufacturing, exploring advanced nanomaterials, composites, and sustainable technologies.
- Biomedical engineering, where researchers are pushing the boundaries of tissue engineering, medical devices, and regenerative medicine.
- Electrical and computer engineering, cutting-edge work in cybersecurity, wireless communications, embedded systems, and the Internet of Things (IoT).
- Chemical engineering, focusing on sustainable energy solutions, advanced materials, bioengineering, and process optimization, with applications in renewable energy, pharmaceuticals, and environmental protection.
- Aerospace engineering, developing propulsion systems, unmanned aerial vehicles (UAVs), aerodynamics, and space exploration technologies, with an emphasis on sustainable aviation and advanced flight systems.
- Civil, Environmental, and Architectural Engineering, addressing issues such as sustainable building materials, renewable energy, climate resilience, and water resource management.
- Fire protection engineering, investigating advanced materials and technologies to enhance fire safety in buildings, transportation, and industrial settings.

Engineering faculty, student researchers, and scientists work in state-of-the-art facilities and labs with cutting-edge equipment and instruments. Engineering recently added 30,000 square feet of research space in Sagamore Lab and additional space in Unity Hall for Robotics Engineering and Architectural Engineering.

The School is a strong campus partner. Interdisciplinary projects are the norm, and collaborations between Schools are common. As an example, WPI recently introduced a degree program in Artificial Intelligence, emphasizing the societal and ethical implications of AI, leveraging expertise from the Schools of Engineering, Arts and Sciences, and Business.

About Worcester Polytechnic Institute

Overview

One of the nation's first technological universities, WPI is an innovator in higher education and a leader in balancing teaching and research. Today, colleges and universities across the world turn to WPI's Center for Project-Based Learning to learn ways to advance high-impact practices on their campuses. At all levels, WPI students create their own educational journeys. Undergraduate students report lasting professional and personal benefits of experiential, hands-on learning through project work that matters to society. For graduate students, immersion in research means they, too, contribute to changing the world, and themselves, for the better. Not surprisingly, engineering students exemplify these advantages to the highest degree.

Across more than 70+ degree programs university-wide, WPI students are immersed in real-world situations, working alongside public and private partners and their faculty advisors to develop solutions to socially relevant problems. External partners are significantly involved in research, which has grown significantly, with a majority of this growth located in the School of Engineering.

At every juncture of the student experience are WPI's faculty—highly active and engaged teachers, leaders, mentors, researchers, and scholars committed to the whole student. Staff are equally dedicated to the WPI mission and focus on inspiring students and supporting them on their chosen academic and co-curricular journeys. Currently the faculty at WPI consists of 440+ full-time members including approximately 300 dual-mission teaching and research faculty as well as approximately 140 who are sole teaching faculty. Roughly 800 dedicated staff members prioritize the student experience. WPI employs a strong model of Faculty Governance and uses a unique tenure and promotion model that has clear, distinct, and equitable pathways for research and teaching faculty.

WPI recently completed a successful 10-year review of its accreditation by the New England Commission of Higher Education (NECHE). The University was commended for its strength in planning and evaluation and its focus on student success, well-being, and outcomes; purpose-driven education and research; and examining and strengthening its culture.

WPI is home to more than 5,500 undergraduate students and 2,000 graduate students hailing from 48 states, two U.S. territories, and 103 countries. The WPI alumni community is active and thriving, boasting a worldwide network of more than 50,000 alumni who live in more than 115 countries and work in diverse fields and professions.

Mission

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

Values

- **Respect** – WPI treats others with dignity at all times.
- **Community** – WPI works from a collective vision and purpose to break down barriers to advancing their mission.
- **Inclusion** – WPI seeks a campus where everyone feels a sense of belonging and all can thrive.
- **Innovation** – WPI commits to creating value in all that we do.
- **Achievement** – WPI is intentional in creating great experiences and results for all students, while embracing the importance of balance and well-being.

Academics

WPI has been revolutionizing STEM education since its founding in 1865. Its founders introduced a radical new curriculum that focused equally on theory and practice. This unique approach aimed to prepare the professionals and leaders who would make the discoveries, invent the technologies, and found the companies needed to drive the development of a young nation.

A century later, WPI reimagined that model and—while staying true to its founding vision—pioneered an approach to undergraduate STEM education grounded in project-based learning that emphasizes technology and society. Known as the WPI Plan, the method, implemented in 1970, requires students to work in interdisciplinary teams, learn how to learn in the process, and collaborate with partners in communities around the globe as they seek viable and sustainable solutions to real-world problems.

The University is a recognized leader for engaging undergraduates in research and a pioneer and global leader in project-based learning; no other university does projects—or global experiences—at the WPI's scale and quality. Through a meaningful combination of theory and practice, every WPI student achieves intellectual breadth through degree requirements and mandatory hands-on projects. The Humanities and Arts Project allows students to become immersed in art, theatre, music, and other forms of creative expression through a self-selected series of courses. This allows students to explore themes of complexity, diversity, and the richness of human experience by examining art, architecture, history, languages, literature, philosophy, or religion—the goal being to build well-rounded, globally aware graduates with superior critical and analytical thinking skills and a handle on ambiguous problems.

The Interactive Qualifying Project (IQP) is a highly effective teaching and learning methodology that calls on undergraduates to work in interdisciplinary teams to solve an important problem or fill a need that lies at the intersection of science and society. Through the IQP, students work at project centers around the globe or on campus. During the 2023-24 academic year, 1,217 students participated in an off-campus Global Project Program at one of WPI's 50+ project centers across six continents. Over their four years at WPI, 85% of all undergraduate

students participate in the Global Projects Program. As a recognized authority on project-based learning for higher education, WPI continuously works to modernize its educational model to respond to today's rapidly changing world. WPI is a recipient of the NAFSA 2024 Senator Paul Simon Spotlight Award for Campus Internationalization and, in 2023, won the IIE Heiskell Award for Innovation in International Education.

The project-based curriculum culminates with the Major Qualifying Project (MQP), which provides students a discipline-specific opportunity to gain authentic, professional-level, team-based research and/or design experience within their major field, developing skills that employers and graduate schools value.

WPI graduate students also have many opportunities to work in teams, receive personalized mentoring from experts in their fields, and engage in multidisciplinary research projects that solve important problems. Doctoral, master's, and certificate programs are offered both on campus and online, and comprehensive education and development programs provide graduate students with a foundation for success in both industry and academia.

Within the crowded higher education landscape, WPI stands out as a place where cutting-edge research, innovative education, and informed practice intersect and complement one another to the benefit of students, faculty, and society. WPI offers more than 70+ degree programs at the bachelor's, master's, and doctoral levels across 18 academic departments in science, engineering, business, the social sciences, and the humanities and arts. Graduate students are trained with a diversity of approaches, from traditional PhD and master's degree programs to market-responsive online and professional master's degree programs. Its faculty members are internationally recognized for breakthroughs and innovations in engineering, life sciences, robotics, artificial intelligence, data science, cybersecurity, advanced manufacturing, sustainable materials, and much more. The University fosters interdisciplinary research collaboration and offers numerous interdisciplinary programs such as Interactive Media and Game Design, Environmental and Sustainability Studies, Learning Sciences and Technologies, Architectural Engineering, Data Science, Financial Technology, Robotics Engineering, Bioinformatics and Computational Biology, Fire Protection Engineering, and Biomedical Engineering.

The School of Arts and Sciences
The School of Arts and Sciences weaves together the scientific, technological, artistic, and humanistic innovation found in all corners of WPI, and students are encouraged to explore and pursue music, art, and design thinking. While WPI is STEM-focused, the opportunity to seek out other perspectives promotes discovery and communication, advances knowledge, and allows human-focused scientists and engineers to have a long-lasting and valuable impact in the world.

The Business School
The Business School bridges the worlds of business and technology to develop adaptive leaders who impact the world—all with a STEM focus. Whether students aspire to lead a tech company, start a business, expand on a patent-worthy idea, move into the C-suite, or pursue another goal, the University's business programs work at the cross-section of business, innovation, STEM, and society to provide a distinctive and transformative skillset that such future leaders need.

The Global School
Faculty and students work through The Global School to co-create solutions for a more secure, sustainable, and habitable world. Through WPI's distinctive Global Projects Program, all undergraduate students work to address social, technological, ecological, and economic challenges through interdisciplinary, purpose-driven research leveraging a network of more than 50 project centers around the globe. Approximately 85% of WPI undergraduates study away from campus, and more than 65% study at an international location, through the Global Projects Program. Students describe these experiences as life changing.

Student Life

When it was established in 1970, the WPI Plan was nothing short of revolutionary—a once-traditional technological education redefined and restructured into a radically new, student-centered, project-based approach to learning. What began as a bold experiment in academia grew into an undergraduate learning experience rooted in both tradition and innovation that's still evolving to this day. Through its distinct focus on project work, students learn how to learn, applying knowledge and skills from the classroom to real problems around the world.

With a 13-to-1 student-to-faculty ratio, WPI students are given support, knowledge, and in-depth learning experiences to create their own academic paths and follow their passions. WPI's first-year retention rate is 94%, and 89% of students graduate within six years.

The WPI student experience focuses on solving important, meaningful problems through team efforts, instead of through competition. Undergraduates generally take three classes in each of the four seven-week terms per academic year, allowing for more intensive engagement, which creates space for the cooperative, open-ended project work at the core of the WPI Plan. Most graduate courses follow the semester schedule. For undergraduates, there are no failing grades due to a grading system that includes an NR (No Record) grade for course or project work for which credit has not been earned. The NR grade does not appear on the student's official transcripts, nor is it used in the calculation of satisfactory academic progress. This unique grading system encourages students to branch out, experiment, and cross disciplines.

Students can participate in more than 235 clubs and organizations ranging from the High-Power Rocketry Club and the Society of Magicians to the Equestrian Team and Greenhouse and Horticulture Club. There are 50 professional, career, development, and honors societies.

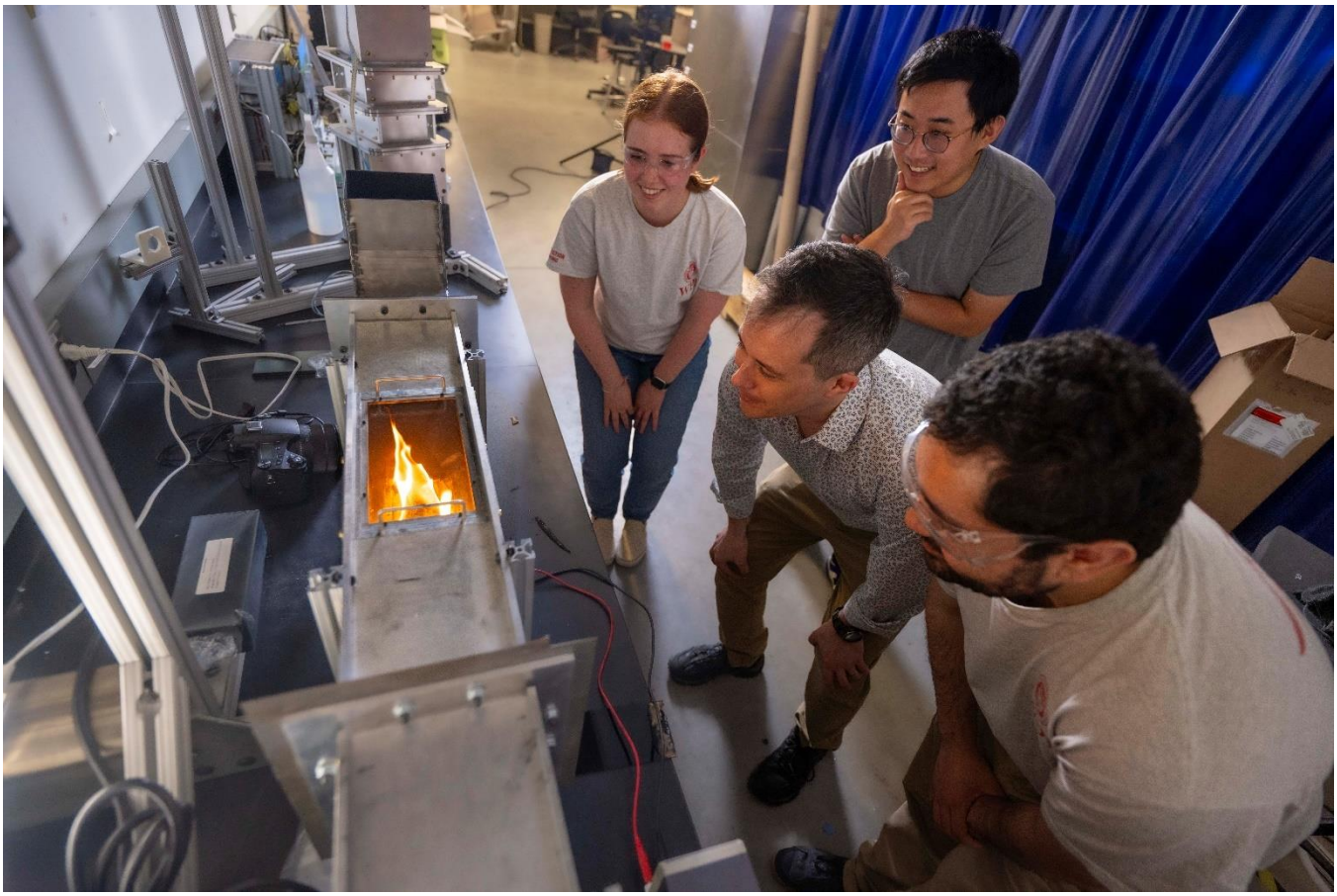
WPI has a vibrant, service-oriented Greek system with 13 fraternities and seven sororities, including five National Panhellenic Conference sororities, one associate-member multicultural sorority, and one associate-member Pan-Hellenic sorority. Fraternities and sororities are founded on the principles of scholarship, leadership, and community service.

Students also have access to a wealth of resources and support systems ranging from academic advising and guidance to career support—through the Heebner Career Development Center—to well-being, health, and counseling services, all with the common goal of helping each student make their WPI experience exactly what they need. As an integral part of the University's efforts to support campus mental health and wellness, WPI's Center for Well-Being opened in fall 2022. The Center applies evidence-based practices to promote well-being for students and the broader WPI campus community, recognizing the importance of faculty and staff in creating, maintaining, and modeling a healthier environment for all.

WPI offers extensive connections with regional industries (biotech, aerospace, defense, and robotics, with full-time practitioners pursuing master's and PhD degrees) to support experiential learning and post-graduate outcomes.

The class of 2023's first destination success rates (employed or in graduate school six months post-graduation), based on a knowledge rate of 96%, and their average starting salaries were:

- 88% success rate for bachelor's; $82K average starting salary
- 94% success rate for master's; $96K average starting salary
- 93% success rate for PhD; $96K average starting salary
- 25% of bachelor's students go on to graduate school, with a large majority choosing to study at WPI.



Alumni

The WPI alumni community is active and thriving, boasting a worldwide network of more than 50,000 alumni who live in more than 115 countries and work in diverse fields and professions. This illustrious group of innovative problem solvers and STEM leaders is always breaking new ground, seeking better solutions, and creating positive changes in the world. GOLD (Graduates of the Last Decade), International Chapters, Voyagers, Student Alumni Society, and The Women of WPI provide ways to network with friends and stay connected to WPI.

Athletics

The University's student-athletes, coaches, and athletics staff are committed to fostering growth in leadership, encouraging the pursuit of excellence, and enhancing the overall experience and development of students. Through participation in varsity athletics, club sports, intramurals, and physical education, students emerge well-rounded with the skills, knowledge, and abilities to maintain active lifelong learning to support their success in life.

- 20 Division III varsity sports
- 650+ varsity athletes
- 2,200+ participants in club sports and intramurals
- 120+ physical education and wellness classes

Staff

WPI's 800 dedicated staff members are true professionals who prioritize the student experience. From offering expert guidance around course registration and campus life, to providing advice on financial literacy and career planning—or simply giving students a friendly “you’ve got this” during finals—WPI’s staff members provide an essential, supportive structure to the University community, creating a welcoming environment for students and their families, as well as for alumni, visitors, and corporate and government partners.

WPI’s newly formed 18-member elected Staff Council serves as a collective voice for the interests and needs of the University’s non-union staff, fostering a positive and inclusive work environment. Staff have high-level expertise in their fields and—alongside faculty—model for their students the importance of being their authentic selves and bringing forth ideas to help continually improve the campus culture and its operations.

Immersive Experience Centering Well-Being, Belonging, and Community on Campus

Over the past several years, WPI has worked steadily to infuse diversity, equity, inclusion, and belonging into every aspect of the University experience, inside and outside the classroom and the workplace. It has centered this work in its strategic plan and continues its commitment to fostering an environment in which all members can feel a true sense of belonging.

An integral part of the strategic plan is WPI's adoption of the Okanagan Charter which reflects the University's values and commitment to prioritizing the health and well-being of the entire campus community, while also benefiting society at large. WPI recognizes essential interconnections between people, place, and planet in elevating community health and well-being for the occupants of its campus and environs, both now and in the future. Student well-being, belonging, and community are three key focus areas of the *Lead with Purpose 2021-2016* strategic plan.

Two outcomes of this focus areas have been the establishment of its Center for Well-Being and the formation of the Campus Wellness Coalition, a group recruited from key constituencies across the campus and dedicated to extending the understanding of and support for instituting best practices in campus health and well-being.

Leadership

Grace J. Wang, President

Grace J. Wang, PhD, began as WPI’s 17th President on April 3, 2023. She is also a professor in the Department of Mechanical and Materials Engineering at WPI.

Elected by the WPI Board of Trustees after an extensive national search, Wang comes to WPI from The Ohio State University (OSU) where she served as Executive Vice President for Research, Innovation, and Knowledge, and as a professor in Materials Science and Engineering. At OSU, Wang’s efforts helped expand the University’s research and innovation ecosystem, achieving $1.38 billion in annual R&D expenditures during her tenure. With a strong focus on supporting faculty, staff, and student researchers, innovators, and entrepreneurs, Wang led the team to support curiosity-driven research; attract external funding to establish multiple large-scale, impact-driven, interdisciplinary research centers; launch campus-wide entrepreneurial activities; and enable experiential learning opportunities. Wang played a leading role in building large-scale, strategic university-industry partnerships, setting the vision, and paving the pathways for the development of OSU’s innovation district.

Prior to OSU, Wang served in a series of increasingly complex leadership roles at the State University of New York (SUNY). Appointed by the SUNY Board of Trustees, Wang started as Vice Chancellor for Research and Economic Development at SUNY System. She was subsequently promoted to Senior Vice Chancellor for Research and Economic Development of the SUNY System. During this time, Wang also simultaneously served as the Interim Provost for the SUNY System for one academic year. For about two and half years, Wang held dual roles as the Interim President of SUNY Polytechnic Institute (SUNY Poly) and the Senior Vice Chancellor for Research and Economic Development of the SUNY System. She also served as a professor in Materials Design and Innovation at the flagship University at Buffalo (UB).

Wang led the SUNY research enterprise with about $1.7 billion in annual R&D expenditures, advanced the research and economic development growth strategy, and significantly expanded research capacity in key areas. She supported a purposeful focus on identifying and implementing tools and resources to improve access and affordability at scale; enabling pathways for student success and completion; and fostering a diverse, inclusive, and welcoming campus culture. At SUNY, Wang was instrumental in building large-scale university-industry partnerships, including partnerships with IBM, Applied Materials, and Cree, to grow impact-driven research and innovation while fueling regional economic growth. Wang led SUNY Poly during the COVID-19 pandemic where she prioritized the health of the community with a hands-on, caring approach.

Before SUNY, Wang served as Deputy Assistant Director for Engineering and later as acting Assistant Director for Engineering at the National Science Foundation (NSF) where she oversaw a funding portfolio of more than $900 million, investing in frontier engineering research, supporting engineering education, and fostering innovation and technology commercialization. Previously at NSF, Wang was the Director of Industrial Innovation and Partnerships division. She started at NSF as a Program Director, focusing on investing in small businesses in the areas of nanotechnology, advanced materials, and manufacturing.

Wang began her career at IBM/Hitachi Global Storage Technologies where she focused on research and development of thin-film magnetic recording media and carbon overcoat for data storage. She holds seven U.S. patents.

In 2022, Wang was appointed by the White House to serve on the National Quantum Initiative Advisory Committee. She is a council member of the Government-University-Industry Research Roundtable (GUIRR) at the National Academies of Sciences, Engineering, and Medicine. She is a member of the Board of Governors for the New York Academy of Sciences. She also serves on the Board of Massachusetts High Technology Council (MHTC).

Wang earned a PhD in Materials Science and Engineering at Northwestern University.

Andrew Sears, Provost and Senior Vice President

Andrew Sears, PhD, began his tenure as the Provost and Senior Vice President in August 2024. He is a distinguished computer scientist with a focus on Human-Computer Interaction and has over 30 years of experience in higher education.

Sears most recently served as Professor and Dean of the School of Information Studies at Syracuse University. In that role, he focused on bringing people together to support interdisciplinary efforts, supporting faculty as they engaged in impactful scholarly activities, initiatives that provided faculty with time and resources to initiate new research projects, and supporting student success. He also co-led university-wide conversations about AI.

Prior to joining Syracuse, Sears spent eight years at Penn State University. While there, he served as Professor and Dean of the College of Information Sciences and Technology. Working with his leadership team, the college expanded programs to enhance the student experience; significantly increased external support for research; expanded interdisciplinary collaborations through faculty hiring and partnerships; established a multi-faceted faculty mentoring program; supported efforts focused on entrepreneurship and innovation; renovated and expanded the college's physical facilities; and advanced inclusion initiatives. He also helped establish the Center for Socially Responsible Artificial Intelligence.

Before Penn State, Sears served as a Professor and Dean in the B. Thomas Golisano College of Computing and Information Sciences at Rochester Institute of Technology. While there, he and his leadership team focused on academic programs and student success. Working in partnership with faculty, he helped build a robust research program and designed timely new academic programs. Sears also strengthened global relationships, and worked with companies, alumni, government representatives, and funding agencies to highlight the college's educational and research programs.

He began his academic career as an Assistant Professor in DePaul University's School of Computer Science, Telecommunications, and Information Systems. Subsequently, he joined the University of Maryland, Baltimore County, as an Associate Professor in its Information Systems Department. Over the years he also served in overlapping appointments as Chair of the Information Systems Department, Professor of Research in the US Department of Veterans Affairs; Professor of Anesthesiology at the University of Maryland's School of Medicine; Associate Director of the National Center for the Study of Elections; Affiliate Professor within the Erickson School of Aging Studies, among others.

Sears earned a B.S. in computer science from Rensselaer Polytechnic Institute and a Ph.D. in computer science with an emphasis on human-computer interaction from the University of Maryland-College Park. While in graduate school, he also worked as a Fellow/Research Assistant at the Human-Computer Interaction Lab within the Computer Science Department at the University of Maryland-College Park and as a Software Engineer at the NASA Goddard Space Flight Center.

His research focuses on human-computer interaction, mobile computing, and health information technologies, including speech recognition and accessibility-related platforms. His work has received support from various government agencies, foundations and industries, including IBM, Intel, Microsoft, Motorola, the National Science Foundation, the National Institute on Disability and Rehabilitation Research, the National Institute of Standards and Technology, and the Verizon Foundation.

He has received multiple awards and honors for his work. He is the author or co-author of six books, has contributed chapters to 16 other publications, and has nearly 60 papers in peer-reviewed journals. He also has more than 60 presentations published in conference proceedings and has edited eight journals/special issues.

He served the Association for Computing Machinery for nearly three decades in various leadership positions. He also served on the Board of Directors for the Computing Research Association, and as a member of the Maryland Governor's Workforce Investment Board on its IT Industry Workforce Initiative.

Worcester, Massachusetts

WPI's 95-acre campus sits atop Boynton Hill in Worcester, Massachusetts. Buildings and labs rich with history stand side-by-side with leading-edge makerspaces and classrooms, personifying the University's commitment to both honoring traditions and pushing boundaries.

With its recent emergence as a leader in healthcare, higher education, life sciences, and IT industries, Worcester itself is a perfect backdrop for the innovative spirit of WPI's students, faculty, and staff. The city is also a hub of arts, culture, nature, sports, and more, ensuring that WPI students gain not only invaluable professional experience but also fond personal memories.

Procedure for Candidacy

All applications, nominations, and inquiries are invited. Applications should include, as separate documents, a CV or resume and a letter of interest addressing the themes in this profile.

WittKieffer is assisting Worcester Polytechnic Institute in this search. For fullest consideration, candidate materials should be received by February 12, 2025.

Applications, nominations, and inquiries can be directed to:

Sandra Chu, Cathryn Davis, and Suzanne Teer

WPIDeanEngineering@wittkieffer.com

WPI is an Equal Opportunity Employer. All qualified candidates will receive consideration for employment without regard to race, color, age, religion, sex, sexual orientation, gender identity, national origin, veteran status, or disability. WPI seeks individuals with diverse backgrounds and experiences who will contribute to a culture of creativity and collaboration, inclusion, problem solving, and change making.