

Dean Carnegie Mellon University, College of Engineering Pittsburgh, PA

# THE SEARCH

Carnegie Mellon University (CMU) seeks a dynamic, collaborative, and savvy organizational leader and a distinguished academic with a track record of strategic innovation to serve as its next dean of the College of Engineering. This individual will have the opportunity to lead a world-renowned college at the forefront of engineering education and research.

Recognized for the excellence and societal impact of its programs, the College of Engineering at Carnegie Mellon consistently ranks as one of the top engineering colleges in the country, currently ranked #7 in the 2024 *U.S. News & World Report* ranking of graduate engineering programs. Approximately 900 faculty and staff members span ten academic degree-granting departments and institutes, and the College's global reach includes degree-granting locations in Rwanda and Silicon Valley in addition to the main campus in Pittsburgh. With a student enrollment of more than 4,700, the College of Engineering constitutes the largest of Carnegie Mellon's schools and colleges. It offers 11 undergraduate majors across seven departments, 20 master's programs, and 11 doctoral programs.

Driven by its distinctive spirit of entrepreneurship and culture of collaboration, the College of Engineering taps into the creativity of faculty to generate ground-breaking ideas at the interface of disciplines. The College has been home to Nobel Prize, Turing Award, MacArthur Fellow, National Medal of Technology and Innovation winners, as well as over 55 members of the National Academy of Sciences, Engineering, and Medicine. It has pioneered cutting-edge research in advanced manufacturing, air quality, artificial intelligence, biomedical technology, climate change, energy, cybersecurity and privacy, and transportation, among many other fields. The College has made significant impacts on society, shaping government policy, medical treatments, and technology commercialization. The College attracts an incredibly selective set of students from around the world who are drawn to CMU's commitment to an unparalleled educational experience with an emphasis on outstanding technical skills as well as innovative thinking, leadership development, entrepreneurship, and global awareness. The College has championed an inclusive culture.

The successful dean candidate will accelerate the College's considerable momentum, inspiring and galvanizing the community around bold plans for the future in which the College and CMU continue to push the boundaries of education, teaching, and research. The incoming dean will advance the college's long-standing tradition of excellence, nurture its culture, support its commitment to interdisciplinary programs, research, scientific integrity, and innovation; support the development of large-scale research programs and research infrastructure; and develop strategies around graduate and certificate programs to meet the current moment. As the public face of the College, the dean will lead efforts to engage external audiences, partners in industry and government, and funders, and will leverage relationships with the College's alumni to fuel its aspirations.

## CARNEGIE MELLON UNIVERSITY

A member of the Association of American Universities (AAU), CMU is a global, research-intensive university with more than 16,600 students, 6,700 faculty and staff, and 127,000 active alumni. Since its founding in 1900, the University has been a birthplace of innovation. Its award-winning faculty members are renowned for inspiring students to think ambitiously and creatively, to interpret with insight, and to solve major scientific, technological, and societal challenges. As a result, its students are recruited by some of the most forward-thinking organizations throughout the world. The University has embraced a deep commitment to solving problems through collaborative integration of multiple perspectives and disciplines, with an emphasis on creativity, innovation, and the human element, to enable pervasive and sustainable societal impact.

Carnegie Mellon was founded on the principle of education as a force to enhance careers, lives, and communities, as reflected in Andrew Carnegie's oft-quoted words: "My heart is in the work." Students at Carnegie Mellon embrace a multi-faceted learning environment infused with opportunities for students to be engaged in formal and informal research, in project courses designed for interdisciplinary problem solving, and in learning opportunities in and out of the classroom, lab, studio, and stage. Seven schools and colleges comprise the University: College of Engineering, College of Fine Arts, Dietrich College of Humanities and Social Sciences, Heinz College of Information Systems and Public Policy, Mellon College of Science, School of Computer Science, and the Tepper School of Business. CMU has its main 122-acre campus in Pittsburgh, a branch campus in Doha and Qatar, additional locations and other instructional sites in Kigali, Rwanda, Silicon Valley, New York City, Washington, DC, Los Angeles, and various locations in Portugal.

Carnegie Mellon University puts a strong emphasis on creativity – from art to robots to policy – to address cultural imperatives and enrich lives. It is a global leader in taking ground-breaking ideas quickly to market and in creating successful entrepreneurial ventures. It ranks first among U.S. universities without a medical school in the number of start-up companies created per research dollar spent since 2007. In addition, CMU spinoffs represent more than a third of the total companies created in Pennsylvania in recent years. Altogether, CMU has helped to greenlight more than 1,000 companies, creating jobs across the U.S. and internationally. In early 2011, the World Economic Forum invited CMU to become a permanent member of its Global University Leaders Forum. Business members of the Forum include the

world's top 1,000 companies, which drive the economy forward and collaborate on shaping global, regional, and industry agendas. CMU is one of only 29 universities in the world – and one of 12 universities in the U.S. – to be invited to join.

# College of Engineering

Widely regarded as one of the preeminent engineering institutions in the world, the College of Engineering ranks as seventh-best in graduate engineering and eighth-best in undergraduate engineering in the United States, according to *U.S. News & World Report*. The College is home to more than 4,700 students, which include more than 800 doctoral candidates across 11 distinct PhD offerings, more than 1,900 master's students in 20 unique programs, and more than 1,900 undergraduates in six primary undergraduate majors. It boasts over 36,000 living alumni. The College's departments are biomedical engineering, chemical engineering, civil and environmental engineering, electrical and computer engineering, engineering and public policy, materials science and engineering, and mechanical engineering. Across these programs, the College is known for its innovative and interdisciplinary "maker" culture aimed at addressing and solving complex societal problems.

With \$340.9M reported to *U.S. News & World Report* in 2025 in the Engineering discipline, the College is a national leader in federal and industry research programs. A commitment to integrating across engineering, sciences, arts, business, and other disciplines guides the College's socially transformative research in advanced manufacturing, artificial intelligence, cyberphysical systems, cybersecurity, energy and environment, health and biomedicine, additive manufacturing, smart cities, and robotics, as well as many other areas.

Several University-wide centers and institutes have a large footprint in the College, with directors either reporting to or interacting with the Dean of Engineering on a regular basis.

- **CyLab** Security and Privacy Institute, a departmental unit spanning the College of Engineering and the School of Computer Science, addresses issues in cybersecurity and digital privacy.
- The **Information Networking Institute** is a degree-granting institute that educates and develops engineers through technical, interdisciplinary master's programs in information networking, security, and mobility that incorporate business and policy perspectives.
- The **Integrated Innovation Institute** is a degree granting institute that joins forces between engineering and business, fosters the development of innovative products and services that create value for real people.
- The **Manufacturing Futures Institute** (MFI) is leading the digital transformation of manufacturing to accelerate innovation for economic prosperity.

• The Wilton E. Scott Institute for Energy Innovation leverages faculty expertise in technology, policy, integrated systems, and behavioral science to improve energy efficiency and develop new, clean, affordable, and sustainable energy sources.

The College engages meaningfully with other major institutes on campus, such as The Robotics Institute, the world's largest robotics research and development organization, which is creating the next generation of robotics for human interaction. It also plays a leadership role in a range of multidisciplinary centers advancing research on topics from environmental resilience to mobility.

The College of Engineering extends its reach beyond the main campus in Pittsburgh. It is a leading partner in CMU-Africa, which was established in 2011 and remains the only U.S. research university offering master's degrees in Africa on a campus with full-time faculty, staff, and operations. Born out of a partnership between CMU and the Government of Rwanda, CMU-Africa provides a platform to engage in Africa's most significant opportunities and challenges through world-class education and contextually relevant research. The College has been offering master's programs at its Silicon Valley campus since 2002, connecting many of its distinctive technology education programs to the innovative California business community. Through this location, the College has developed strategic partnerships with NASA and industry partners. The College is also home to the CMU-Portugal Program, which includes dual-degree doctoral programs, as well as sponsored joint research projects with university and industry partners in Portugal.

The College of Engineering is firmly committed to ensuring that faculty, staff, and students have the opportunity to succeed and to thrive. It strives to be a welcoming and inclusive community that provides access for all to a world-class engineering school.

#### **Current Moment**

The College of Engineering is in an excellent position to continue its global leadership, with research on the rise, an increasingly diverse faculty and student body, and expanding relationships with internal and external partners. The next leader will extend the College's upward trajectory, promoting the next era of innovation and entrepreneurship. In 2023, the College launched its current strategic plan, *Engineering Impact: Transformative Education and Pioneering Research for Real and Enduring Good*. The dean will work with the community to realize this ambitious vision for the future, facilitating Advanced Collaboration, stewarding new initiatives, and garnering resources to support the infrastructure and talent to achieve the plan's goals.

Over the last few years, the College has completed two new state-of-the-art engineering facilities on the main campus, which added more than 120,000 square feet of labs, classrooms, and maker spaces: <u>Ansys</u> <u>Hall</u> and <u>Scaife Hall</u>. In collaboration with the Robotics Institute, the College is set to open a groundbreaking <u>Robotics Innovation Center</u> in the fall of 2025 that will provide 150,000 square feet of open research space. The space is located in the nearby Hazelwood community, and the building will also foster engagement between CMU researchers and the local community.

The College has developed a number of programs and resources to support research and educational activities. The Engineering Research Accelerator provides college-wide research development services to faculty members. The Accelerator's services include proposal support for large and center-level submissions, guidance for grant/contract preparation, technical editing and writing, and graphics. The College also plays a significant role in the Swartz Center for Entrepreneurship, encouraging participation in center activities and entrepreneurial mentorship. The College of Engineering Center for Faculty Success provides orientation programming, professional and leadership development opportunities, and valuable resources to empower and recognize faculty success. The Center helps professors excel while balancing teaching, cutting-edge research, mentorship, and service workload to achieve career advancement and success.

## ROLE OF THE DEAN

Reporting to the provost, the dean serves as the chief academic and executive officer of the College of Engineering, empowering its faculty, ensuring the success of its talented students, forging internal and external partnerships, and raising critical funds toward its research and teaching endeavors. The dean functions as a member of the senior University leadership, contributing to overall institutional strategy, and works closely with other deans to foster cross-college initiatives. The dean will craft a broad vision for continued excellence and impact, bringing department heads and other College leaders together around a set of shared priorities, opportunities, and objectives. The dean oversees a \$315 million budget.

The dean oversees department heads for the seven academic departments, the leadership of the CMU Africa program, as well as directors of several institutes: CyLab, the Information Networking Institute, the Wilton E. Scott Institute for Energy Innovation, Manufacturing Futures Institute, and the Integrated Innovation Institute. The dean must value the multi-disciplinary approaches found at CMU and the distinctive identities of the units, which include several unique departments and institutes that are integral members of the academic community. The dean also provides guidance and strategic oversight for programs in Silicon Valley and Portugal that are managed through associated departments. In addition, the dean's office includes the following direct reports:

- Associate Dean for Faculty and Graduate Affairs
- Associate Dean for Undergraduate Studies
- Associate Dean for Research
- Associate Dean for Advancement
- Associate Dean for Community Engagement and Outreach
- Chief Business Officer
- Chief Operating Officer
- Chief Partnerships Officer
- Chief Marketing Officer
- Executive Assistant to the Dean and Office Manager

## KEY OPPORTUNITIES AND CHALLENGES FOR THE DEAN

#### Provide strategic vision and leadership to chart the future of the College of Engineering

In an increasingly technological world, CMU's historic strength in engineering brings enormous potential for addressing global challenges and making revolutionary contributions to society. The College has reached new heights over the past decade, and the new dean will position the College for continued success in a fast-evolving academic landscape. The dean will lead the implementation of the strategic plan, adapting as necessary to ensure the College is leading across education, research, innovation, and impact. As a consultative and decisive leader, the dean will leverage faculty perspectives to assess and seize opportunities for the College, bringing together expertise across departments and aligning with broader CMU priorities. The dean will ensure that entrepreneurship is infused throughout the strategic framework and that the opportunities of the College's geographic reach (Africa, Portugal, and Silicon Valley) are fully leveraged.

#### Catalyze impactful, transformative research, especially at the intersections

The College has grown its research funding and experienced significant increases in the number of large proposals and center-scale activity. The dean will build on this momentum by working with the College community to identify strengths and areas where CMU can lead the field and to incentivize and reward faculty engagement in large-scale collaborative proposals. The dean will bring intellectual curiosity and an appreciation of the broad range of excellence across the College and must demonstrate judgment and foresight to invest in seed programs, research infrastructure and equipment, renovations, or other means of advancing faculty research success. Through close coordination with fellow deans and senior University leaders, the dean will be a strong partner in cross-university initiatives and stimulating cross-college collaborations.

#### Support a high-performing community of dedicated and ambitious faculty and staff

The dean will bring the College community together with a shared purpose, communicating regularly to the broad range of constituencies from Pittsburgh to Kigali to Silicon Valley. The dean should be a visible and accessible part of the community. Establishing a strong office to oversee the myriad functions for the College is critical, and the dean needs to cultivate, develop, and retain a high-performing team to administer College operations. The dean sets direction and empowers the team to pursue creative and inventive ideas and solutions, which are hallmarks of the innovative campus culture. Demonstrating a commitment to an inclusive working and learning environment where all can flourish is vital, and the dean will promote leadership development opportunities for faculty and staff more broadly.

#### Serve as a student-centered champion for innovative education

CMU students are engaged leaders in the community. The dean will ensure continued excellence in the educational mission across all programs. The dean will maintain a commitment to an exceptional student experience, including support for extracurricular involvement, community engagement, advising, and

career planning activities. Increasingly, this includes a keen focus on student wellbeing and mental health. The dean will also be attentive to student interests and enrollment trends across programs. In particular, the dean will work with departments on strategies for robust master's programs while also promoting innovation through certificate, stackable credential, online, or other offerings where CMU can meet student needs. Growing the CMU Africa and Silicon Valley programs are also important opportunity areas.

#### Develop, attract, and strategically steward resources

The dean is the chief ambassador for the College and plays a leading role in securing financial resources for its goals. The dean must generate excitement among alumni and other friends of the College to invest in its future. This individual will be a superb relationship builder and active fundraiser, broadcasting the power and impact of College programs. The dean will also broker relationships with leaders in industry and government to advance contributions to its mission. As the funding landscape for higher education changes, the dean will be a compelling storyteller to articulate the many contributions of the College and adroit in identifying and pursuing novel funding opportunities.

## QUALIFICATIONS AND CHARACTERISTICS

The successful candidate will bring many of the following qualifications, professional experiences, and personal attributes:

- Creative and visionary leader with proven ability to execute ambitious goals and bring a forward-looking perspective on trends in science and technology;
- An exemplary record of scholarly achievement;
- Distinguished record of leadership impact and administrative accomplishments in a complex organization overseeing academic activities;
- Demonstrated ability to generate resources, including a strong record of fundraising from public and private sources and revenue generation;
- Proven commitment to access and inclusion, including the recruitment and retention of an excellent faculty, staff, and student population;
- Evidence of ability to establish high-impact collaborations with industry;
- A collaborative champion and strong institutional citizen with a record of interdisciplinary program development and institutional innovation and impact;
- Ability to develop, articulate, and communicate a clear vision for the future of research and education in engineering;
- Ability to engage and inspire the CMU community, including cultivating a robust leadership team and fostering career development of faculty and staff; and
- Demonstrated intellectual breadth and the ability to support excellence in research programs across diverse disciplines.



## PITTSBURGH

Carnegie Mellon is deeply engaged with the City of Pittsburgh and the greater Pittsburgh region to the benefit of the University and the region. Over the last decade, as the area has established its identity as a technology hub for both startups and large corporations, that relationship has grown even stronger. Low costs of living, networking opportunities, small business accelerators, and an innovative community make the city appealing to entrepreneurs, especially recent graduates. There is a high density of software and robotics companies, in particular, that contribute to the growing technology and innovation ecosystem in the region, including ANSYS, Bosch, Google, Argo, and others, many with CMU roots and partnerships. The city is also home to the Department of Energy National Energy Technology Laboratory.

Pittsburgh has a vibrant research environment with numerous universities and research hospitals. CMU and the College of Engineering have multiple collaborative ventures, notably with the University of Pittsburgh (Pitt), the University of Pittsburgh Medical Center (UPMC), Allegheny Health Network, and Highmark.

Well known for its quality of life and frequently ranked among the most livable cities in the nation, Pittsburgh features a relatively low cost of living, a highly educated population, and an increasingly vibrant dining and social scene. The city features a suite of cultural institutions, four major professional sports teams, and a gateway to mountains, whitewater, and other outdoor activities. Many CMU faculty live close to campus, enjoying short walks or bike rides to work, a range of educational options for their children, nearby public transportation, parks, restaurants, and shopping, all within walking distance of home. CMU faculty, staff, and students increasingly enjoy a region with growing vitality and national reputation.

## APPLICATIONS, INQUIRIES, AND NOMINATIONS

Screening of complete applications will begin immediately and continue until the completion of the search process. Inquiries, nominations, referrals, and CVs with cover letters should be sent via the <u>Isaacson, Miller</u> <u>website</u>. Electronic submission of materials is strongly encouraged.

John Muckle, Partner Karen McPhedran, Managing Associate Isaacson, Miller

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Carnegie Mellon University Dean, College of Engineering

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