



Position Specification

Case Western Reserve University

Dean of Engineering

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Case Western Reserve University (CWRU) seeks nominations and applications for the next Dean of the Case School of Engineering (CSE). Reporting to the Provost, the Dean will be an accomplished leader with the vision to build upon and enhance the School's existing strengths, to develop new opportunities for the School, and to lead it into the future in the rapidly evolving worlds of engineering research and higher education.

Working with the University's leadership, the Dean of Engineering will foster collaboration among the schools and thereby play an important role in the growth and advancement of the University. The Dean will work with the faculty of the School to articulate a vision for the School and work with the Provost and President of the University to implement that vision. This will require actively participating in fundraising efforts, recruiting and retaining outstanding faculty, strengthening undergraduate and graduate educational programs, and creating a research environment that supports the creativity and innovation of faculty. The Dean is also responsible for the School's programs and budgets, review of faculty appointments, and administration and development of financial support.

About the Case School of Engineering

An internationally renowned provider of engineering education and research for more than 125 years, the [Case Western Reserve University](#) Case School of Engineering is well-positioned for an even brighter future. In addition to an impressive record of developing a new breed of engineers and engineering leaders, Case faculty and students possess the potential and the propensity to solve society's most pressing problems of yesterday, today and tomorrow.

In the fall of 2017, Case Engineering enrolled 2,238 students, 1,481 of which were declared undergraduates and 757 of which were graduate and professional-degree students. In addition, 723 first year students expressed interest in engineering majors. The average SAT score of these incoming CSE students is 1416, and approximately 28% are women. Case Engineering's 124 full time faculty contributed to 95 invention disclosures, 165 patent applications, 15 deals with industry and 4 startup companies (2015 data). Research, training, and grant revenue totaled \$50.2 million in FY2017, and total revenue came in at \$108.1 million. The Case School of Engineering recently completed a Strategic Hiring Initiative resulting in the hiring of 15 new faculty members. In 2017, Case Engineering surpassed its capital campaign goal, raising \$51.2 million. A recent major gift of \$20 million from the Aiken family to the Case School of Engineering is to support development in biomedical engineering and the Department of Biomedical Engineering. A \$20 million endowment from the Wallace Coulter Foundation and CWRU supports an innovative translational research program between engineering and medicine.

Case's engineering undergraduate program ranks 40th nationally and the graduate program ranks 50th. The biomedical engineering programs are extremely well respected, with the undergraduate program ranked 14th nationally by *U.S. News & World Report* and the graduate program ranked 18th. This department is joint between the School of Engineering and the School of Medicine, with all but six faculty based in the School of Engineering. Collaboration within the department between the two schools has been seamless and effective.

Research

The Case School of Engineering has an active research faculty with externally funded research expenditures of \$42,084,000. Research over the past five years was catalyzed by the strategic hiring of 15 key faculty to grow 12 cluster areas deemed high growth/high potential for CSE, building on our existing expertise and leadership and creating multi-disciplinary engagement across CSE departments and University schools and institutes. These clusters represent CSE strength in the areas of biomedical imaging, biomolecular engineering, electrochemistry, multi-scale biomedical systems and computational biology, photovoltaics, smart energy, sustainable manufacturing, and translational biomaterials.

CSE is active in interdisciplinary efforts across the campus. Among some of the nation's most successful interdisciplinary programs is the [Case Comprehensive Cancer Center](#), one of only 49 National Cancer Institute-designated comprehensive cancer centers in the country and recently rated "exceptional" in an NCI review. It integrates the cancer research activities of the largest biomedical research and health care institutions in Ohio—Case Western Reserve, Cleveland Clinic, and University Hospitals Cleveland Medical Center. Since 2009, the [Great Lakes Energy Institute](#) has led efforts to catalyze interdisciplinary research breakthroughs in energy sustainability, addressing some of the world's most pressing challenges around smart grid solutions, energy storage, solar and wind energy, and oil and gas. The Functional Electrical Stimulation (FES) Center has developed critical technologies for rehabilitation of patients with stroke, spinal cord injury, traumatic brain injury, and other neurologic complications and is a strong collaboration across the Louis Stokes VA Medical Center, MetroHealth System, and University Hospitals. The Case Center for Imaging Research spans the School of Engineering, School of Medicine, and University Hospitals and is connected with the fastest growing biotech sector in Cleveland. In 2015, Case Western Reserve opened the [Larry Sears and Sally Zlotnick Sears think\[box\]](#) in the Richey Mixon Building, the country's largest university-based innovation center open to the public as well as the campus community. Students have used the Sears think[box] equipment and [CWRU LaunchNet's](#) (funded by the Burton D. Morgan Foundation) entrepreneurial mentoring and support to launch more than 60 companies, which in turn have attracted more than \$6.2 million in external funding.

Education

Case School of Engineering is ranked as one of the top engineering schools in the nation, and has a 125-year history of excellence. The School offers 15 undergraduate degree programs, 14 Master of Science degrees and their related Doctor of Philosophy degrees, as well as the Master of Engineering and Master of Engineering and Management degrees. A new undergraduate degree program in Data Science and Analytics was initiated in 2015, and five of our master's degrees are currently available 100% online.

Case School of Engineering education is rooted in a rigorous dive into engineering fundamentals, with an additional focus on experiential, hands-on learning. The curriculum is built to nurture engineers "plus"—those whose interests and abilities allow them to excel beyond engineering. Dual majors in the humanities, joint degrees in management and medicine, a strong focus on leadership and entrepreneurship, and laboratories shared with world-class institutions like the Cleveland Institute of Art and NASA Glenn Research Center let Case engineers pursue multiple passions. Currently, the University is in the process of re-examining and revising the content and scope of the undergraduate general

education requirements, while the School of Engineering is in the midst of re-inventing and modernizing our core undergraduate engineering curriculum.

Innovation and Entrepreneurship

CSE has active entrepreneurship activities at the faculty, graduate, and undergraduate levels. Several programs of CWRU and CSE promote entrepreneurship, including facilities designed for design innovation, programs that promote interdisciplinary collaborations between faculty and students and with industry, and investment programs for early stage financing that can lead to corporate start-up activities. Faculty activity in 2015 resulted in ten times the national average in patent applications, 2.4 times the average of industry deals, and four times the national average of start-up companies. The School of Engineering is home to a Coulter endowment, which has catalyzed the development of many technologies for clinical use in its more than ten years of operation.

In 2012, the engineering school opened the first phase of its 50,000 sq. ft. innovation and entrepreneurship space called Sears think[box]—an entire ecosystem that provides everything needed to take a concept from initial idea to market-ready product. The space includes an extensive digital makerspace with supporting design and collaboration, fabrication equipment, project space, business development and incubation. The facility has been supported by generous alumni at a level of \$35 million, and will be finalized in the summer of 2018—allowing Sears think[box] to realize its vision of a physical and cultural space that is fully open to all disciplines as well as all community members. This space and concept was highlighted by the White House on the 2014 National Day of Making and has been featured regularly in both public and academic outlets. It is a huge attractor of undergraduate students, with 64% of students saying Sears think[box] was a significant factor in their choice to attend Case Western Reserve. Annually, more than 5,000 unique visitors use the space. Engineering accounts for approximately half of the think[box] users. Since 2012, Sears think[box] users (predominantly CWRU undergraduate students) have raised more than \$10 million in support of their ideas and ventures.

About Case Western Reserve University

Case Western Reserve University is an independent research university located in Cleveland's University Circle, a square-mile urban district full of cultural, medical and educational institutions, as well as thriving dining, retail and residential options. Case Western Reserve holds membership in the Association of American Universities, is fully [accredited](#) by the Higher Learning Commission and by several nationally recognized professional accrediting associations, and is ranked 37th among national research universities by [US News and World Report](#) and 34th in the [Wall Street Journal/Times Higher Education College Rankings](#). Nationally, Case Western Reserve is ranked 19th among private institutions of higher education in overall research expenditures, and 35th and 55th of all institutions of higher education in federally-financed research expenditures and in overall research expenditures, respectively. Additionally, a recent [Brookings Institution report](#) ranked Case Western Reserve 13th in the country for effectiveness in translating research breakthroughs into commercial success. The University's student body includes 5,150 undergraduate and 6,674 graduate and professional students, representing all 50 states and 81 countries. Case Western Reserve undergraduate students are known for embracing [double and triple majors](#), often with STEM and arts combinations, and a strong commitment to public service.

The University has 3,501 full-time faculty and employs 3,098 full- and part-time staff. Case Western Reserve has a \$1.1 billion operating budget and a nearly \$1.8 billion endowment.

Since President Barbara R. Snyder's arrival in 2007, the University has encouraged interdisciplinary excellence, catalyzed institutional collaboration across the region, and reinvigorated alumni engagement and fundraising. This summer the University surpassed its expanded \$1.5 billion [*Forward Thinking*](#) campaign goal a year-and-a-half early. Under President Snyder's leadership, the University has more than tripled undergraduate applications, become more than twice as selective, and dramatically improved the academic credentials of the entering class. For these efforts and many more and for her vision and commitment to excellence, President Snyder received a 2017 [*Academic Leadership Award*](#) from the Carnegie Corporation of America.

The Role

The Dean of Engineering will report to CWRU's Provost, and will work closely with President Barbara R. Snyder. The Dean must embrace the guiding principal of Case Western University, as set forth in the Strategic Plan *Think Beyond the Possible*: "improve[ing] people's lives through preeminent research, education, and creative endeavor." To that end, the Dean is charged with:

- Visibly and substantially increasing the research and scholarly profile;
- Fostering collaborations and effectively partnering with other schools across the University;
- Encouraging innovation of undergraduate experience to better prepare our students for our rapidly changing world;
- Strengthening graduate and postdoctoral programs to attract and recruit high-caliber students and young researchers and fostering an environment that encourages both their development and retention;
- Engaging with donors and supporters of the School on both a national and international level;
- Providing responsible financial stewardship for the School and thinking creatively about new lines of revenue;
- Establishing and nurturing relationships with partner organizations, funding agencies, and the corporate world;
- Fully engaging with the City of Cleveland and leveraging the School's proximity to the major health complexes across the city.

The School has a strong tradition of interdisciplinary engagement, which is crucial for today's engineering environment. This interdisciplinarity is an essential ingredient in Case's unique entrepreneurial environment. The Dean must be committed to both these principles, and will be expected to continue this tradition, working to enhance collaboration among the schools of the University and with partners outside the University. The location of the School within Cleveland, its proximity to the major health complexes in Cleveland, and a strong commitment to cooperation have resulted in a myriad of productive partnerships for research and education.

Qualifications for the Next Dean of the Case School of Engineering

The next Dean of Engineering must have qualifications and personal characteristics that are well matched with the University's values, achievements, aspirations, and potential. With respect to specific qualifications, we highlight the following:

- Significant leadership experience, demonstrated with a proven track record of success as a department head, dean, director of a research institute, or similar leadership role.
- Vision for the future of engineering as a discipline and how students need to be prepared to meet this future, and the courage to implement that vision.
- The ability to establish excellent working relationships with a diverse set of departments, spanning traditional engineering and computational science departments, including Biomedical Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering & Computer Science, Macromolecular Science & Engineering, Materials Science & Engineering, and Mechanical & Aerospace Engineering.
- The ability to work effectively with the University leadership — the President, Provost, Deans of other schools and Center Directors.
- A track record of recruiting and retaining talented faculty, with a particular emphasis on diversity and inclusion.
- Strong financial acumen and a clear understanding of how to operate within a responsibility-centred budget system.
- Experience with creating and executing a strategic plan.
- A vision for how CSE can operate on the global stage.
- Communications, external relations and fundraising experience.
- A distinguished record of research.
- Tenure as a full professor.
- Engagement in education and a demonstrated willingness to innovate in this space.
- A record of collaborative activities in education, research, or both.

Applications and nominations will be accepted until the new Dean is selected. Interested parties may submit their materials or nominations:

Mirah Horowitz & Charlie Falcone
Consultants to the Search Committee
Russell Reynolds Associates
CaseEngineering@russellreynolds.com

In employment, as in education, Case Western Reserve University is committed to Equal Opportunity and Diversity. Women, veterans, members of underrepresented minority groups, and individuals with disabilities are encouraged to apply.

Case Western Reserve University provides reasonable accommodations to applicants with disabilities. Applicants requiring a reasonable accommodation for any part of the application and hiring process should contact the Office of Inclusion, Diversity and Equal Opportunity at 216-368-8877 to request a reasonable accommodation. Determinations as to granting reasonable accommodations for any applicant will be made on a case-by-case basis.