Position Specification

Virginia Polytechnic Institute and State University (Virginia Tech)

Dean of the College of Engineering
The Search

Virginia Tech, the leading research university in the Commonwealth of Virginia, welcomes applications and nominations for the next Dean of the College of Engineering. This is a unique opportunity to lead an outstanding college with exceptional potential and to expand boundaries of research, education, and service in a modern comprehensive university. The dean will play a critical role in increasing opportunities for interdisciplinary collaboration within the college and across the university, as well as overseeing growing enrollment in both undergraduate and graduate programs.

The dean will join Virginia Tech at an exciting time of transition. The university’s 16th president, Timothy D. Sands, who began his tenure in 2014, is leading the university community in a visioning process to ensure Virginia Tech’s position as a global land-grant university leader. He is joined by several new members of the senior leadership team, including Executive Vice President and Provost Thanassis Rikakis, who began his term in the fall of 2015. This new leadership team will build on the momentum generated by a string of successes at Virginia Tech over the past several years, including the establishment of a school of medicine, research growth that places it among the top-40 research universities in the nation, the successful completion of a $1.1 billion capital campaign, and strategic initiatives to further develop health sciences and the arts at Virginia Tech.

College of Engineering

The College of Engineering is the leading engineering college in the commonwealth, known in Virginia and throughout the nation for the excellence of its engineering programs across the areas of education, research, and public service. It is the state’s largest engineering college, and now ranks among the top five suppliers of new B.S. degrees in the United States.

U.S. News & World Report’s most recent survey of undergraduate engineering programs ranked the undergraduate program in Virginia Tech’s College of Engineering 15th among all accredited engineering
schools and 8th among public universities. This places Virginia Tech among the top three percent of more than 600 institutions accredited by the Accreditation Board of Engineering and Technology. The magazine’s 2017 report on “Best Graduate Schools” ranked the college’s graduate program 21st among all of the nation’s engineering schools.

The College of Engineering also is known for its “Hands On, Minds On” leadership in transforming engineering education. One prime example is the Joseph F. Ware, Jr. Advanced Engineering Laboratory, where students design and construct competition projects including Formula SAE race cars, Baja SAE vehicles, human-powered submarines and airplanes, radio-controlled aircraft, and hybrid electric vehicles.

Engineering courses have been offered at Virginia Tech since its founding in 1872, and engineering was one of the first four administrative departments in 1903-04. The School of Engineering was established in 1920-21 and became the College of Engineering in 1964. As the largest college on Virginia Tech’s Blacksburg campus today, the College of Engineering has eleven academic departments, in addition to affiliation with one department in another college and affiliation with two schools:

- Aerospace and Ocean Engineering
- Biological Systems Engineering (located in the College of Agriculture and Life Sciences)
- Biomedical Engineering and Mechanics
- Chemical Engineering
- Civil and Environmental Engineering
- Computer Science
- Electrical and Computer Engineering
- Engineering Education
- Industrial and Systems Engineering
- Materials Science and Engineering
- Mechanical Engineering
- Mining and Minerals Engineering
- Myers-Lawson School of Construction (jointly operated with the College of Architecture and Urban Studies)
- School of Biomedical Engineering and Sciences (a unique collaboration with Wake Forest University)

**Engineering in the National Capital Region**
Virginia Tech’s National Capital Region (NCR) presence provides opportunities for engineering researchers to interact with academia, government, and industry in the Metropolitan Washington, D.C., area. The College of Engineering offers a wide range of graduate degrees and certificate programs in the NCR in addition to conducting a substantial research program aligned with the high tech economy and accessible government and industrial sponsors. Emphasis areas are expanding to meet increasing demand and capitalize on recent research infrastructure investments (e.g., Virginia Tech Research Center in Arlington). The college presence in the NCR is expected to grow significantly over the next several years as research expenditures, graduate offerings, and opportunities for undergraduate
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experiential learning broaden and expand. Currently, the college’s NCR presence is involved with issues concerning transportation, systems performance modeling, water quality, geospatially enabled decision making, energy and the environment, computer networks, computer and network security, information technology, spatial databases, data mining, mobile computing, sensor networks, software engineering, quantum computation, medical informatics, fiber-optics, wireless & telecommunications, satellite systems, power systems, electromagnetics, and more.

Vision and Strategy
The university has undertaken a long-range visioning process, seeking to imagine the world and the university as it will exist 30 years from now. “Beyond Boundaries” began as a year-long initiative involving stakeholders from across the university in thinking about the global land-grant university, student preparation, new funding models, and the campus of the future. Three key concepts areas have emerged for strategic development and planning:

• VT-Shaped Discovery – prioritizing purpose-driven engagement with a combination of disciplinary depth and interdisciplinary capacities,
• Communities of Discovery – advancing organizational networks and engaging the university in ideas that matter, and
• Nexus of Discovery – extending beyond current disciplinary boundaries to form a living laboratory that will project Virginia Tech to the world and bring the world to Virginia Tech.

More information about the Beyond Boundaries initiative can be found here: http://www.beyondboundaries.vt.edu; the 2047 Vision report can be found here: http://www.beyondboundaries.vt.edu/reports.html.

Faculty members across the university are also engaging in conversations about Destination Areas – areas that require complex problem solving, interdisciplinary research contributions, and vibrant engagement – for which Virginia Tech will be internationally known. These areas will both leverage and transcend our disciplinary strengths, enabling the development of agile and innovative solutions and knowledge that serve the needs of our world. Members of the college are actively involved in these university-wide conversations about strategic directions and planning, supporting initiatives of the president and provost to further define the global land grant university of the future and place Virginia Tech among the world’s leading comprehensive universities. The college will follow with the development of its own strategic plan that aligns with these university strategies and goals.

Finances and Research
In fiscal year 2014-15, the college operated with an $88.3 million budget, and $131.2 million in college-specific sponsored research expenditures. Research in the college is rooted in 17 graduate engineering programs and 55 engineering institutes, centers, and labs. In 2015, the College of Engineering climbed to its highest ranking in the latest National Science Foundation’s report on engineering schools’ research expenditures, moving upward to eighth position with almost $229 million in research expenditures (this figure includes research within the college as well as engineering-related research in the university’s institutes). Of all research spending at Virginia Tech, 43% is engineering related.
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Faculty and Staff
The college is supported in its teaching and research mission by 349 tenured or tenure-track faculty, nearly 130 research faculty, and over 100 non-tenure-track instructional faculty. Fifty-five administrative and professional faculty and over 150 full-time staff provide professional, administrative, and operational support to the college and its departments. The college is home to 68 faculty holding endowed chairs, professorships, and fellowships as well as one of the university’s ten Alumni Distinguished Professors and two of fifteen University Distinguished Professors. Five current faculty are members of the National Academy of Engineering.

Students
College of Engineering enrollments include over 7,900 undergraduate majors (including first and second majors), over 900 master’s students, and over 1,300 students working in doctoral programs. Students in the college have been recognized with society student paper awards, industry research awards, Department of Defense SMART fellowships, NSF Graduate Research Fellowships, ACC Creativity and Innovation grants, and Fulbright Fellowships. Virginia Tech is also one of the country’s six senior military colleges, with over 1,100 students in its Corps of Cadets. About 22% of the university’s cadets are enrolled in engineering programs.

More information on the College of Engineering can be found here: [http://www.eng.vt.edu/](http://www.eng.vt.edu/)

The Dean’s Role and Responsibilities

As the leader of the college, the dean sets the academic tenor, promotes a culture of outstanding innovation and scholarship, and represents its faculty, students, and staff to the university and beyond. This particular dean has the opportunity to transform the role and the college, elevating the college and the university, at a critical time in the university’s strategic positioning. The college’s department heads, associate deans, and center directors report to the dean. The dean has financial and administrative management responsibility for the college, guides and oversees its annual operating budget, advocates to the central administration for investment in new initiatives, and leads its fundraising efforts. The dean’s charge also includes providing effective leadership for the college’s faculty and administrative staff.

To ensure the College of Engineering’s continued growth and distinction, the next dean will:

**Develop a compelling future vision and strategic direction to clearly differentiate the college as an international leader**

The next dean will have the opportunity not just to shape engineering education, research, and outreach at Virginia Tech, but also the profession as it is reflected in the next generation of engineering professionals. Engaging with the university’s leadership team at a time of significant change, the dean will play a critical role in identifying the college’s opportunities and role in university-wide strategic initiatives, as well as setting the tone and articulating direction within the College of Engineering.
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Working with the faculty and the provost, the dean will develop a vision that enables faculty to identify opportunities to strengthen and seed a number of areas, in particular those that foster innovation and entrepreneurial approaches, further encourage interdisciplinary connections and cross-campus collaborations, and those that extend to include national and international scope and impact. The dean will also help the college innovate and scale to meet the needs of growing student enrollment, and leverage the assets of the National Capital Region and across the commonwealth during a dynamic and exciting period in the University’s history.

Provide transparent and collaborative academic and administrative leadership for the college

The next dean will be expected to engage the college and campus community by leading with transparency in decision-making, listening carefully, and thoughtfully connecting all areas and interests of the college, including those of faculty, staff, students, alumni, and other stakeholders. The dean will also be expected to further cultivate a thriving community through the articulation of a compelling vision, active communication, and data-driven decision making. The dean will empower and leverage the strong team of department heads and associate deans in service of the vision of the college, facilitating leadership throughout the college and its departments in a way that fully engages faculty, staff, and students in advancing the college and its mission.

Recruit, retain, and inspire faculty and ensure they are recognized and supported for their far-reaching impact on the missions of the university

The success of the College of Engineering is critical to the success of Virginia Tech. The next dean must be skilled in recruiting and retaining faculty, with particular attention to building and retaining a more diverse faculty and supporting faculty innovation and entrepreneurship. In addition to having significant expectations for research contributions, the college’s faculty members are responsible for educating a significant percentage of the undergraduate and graduate populations. To that end, the dean must be able to help the faculty assess the strength of the current curriculum and the opportunities to innovate curriculum and curricular approaches to meet the evolving needs of engineering education, with special attention graduating innovators and entrepreneurs.

Strengthen and grow collaborative partnerships

The new dean must be an individual with broad intellectual interests, a strong research background, and the interpersonal skills to champion collaboration, enhance and leverage links to other departments and colleges across the university, and build upon the existing culture of joint academic appointments and programs. The dean must be a collaborative leader who works effectively with other deans, vice presidents, and institute directors, removes barriers to fruitful collaboration, aligns the college’s goals with the university’s growing interdisciplinary culture, and advances opportunities for faculty research. Additionally, the dean will facilitate the development of a broad range of external partnerships, leveraging the knowledge of industry to attract potential partners and build strong, mutually beneficial collaborations.
Provide leadership in managing budgetary resources and strengthen fundraising for the college

The new dean will bring an entrepreneurial approach to education, strong budgetary acumen, and a passion for fundraising. The dean will need to be thoughtful and tactical about securing and using financial resources, knowledgeable about budgetary processes and the management of funds, and willing to develop entrepreneurial initiatives and vigorously explore new revenue streams. The successful candidate must advocate for the college’s needs and priorities to central administration in the university's annual budget development process and be a skilled fundraiser able to work in close coordination with University Advancement to develop and advance a cohesive, integrated fundraising effort, in addition to building solid relationships with the college’s highly supportive alumni and donor networks.

The Successful Candidate

The next dean will be an energetic leader, strategic thinker, relationship builder, and strong communicator. The dean will identify strategic growth areas and advocate for the college and the important role it plays in the university’s research, outreach, and education mission. The right candidate will have a strong record of relevant research and scholarship success and the ability to lead complex organizations. The dean will also be adept at championing the college externally to donors and alumni, as well as state, national, and international leaders. More specifically, the dean will be:

- A distinguished intellectual leader who brings a passion for students, research, and service.
- An experienced leader with a track record of success in a large, complex college or similar unit; an astute understanding of finances and the relationship between academic priorities and the budget.
- A person of absolute integrity who engenders trust.
- A team player who will work collaboratively with other deans, academic leaders, and central administration to set a strategic vision of the college in the broader context of the university and help the university and colleges achieve shared goals.
- An open and consultative leader; an excellent collaborator who can partner with and motivate faculty, staff, and students to take the college to a heightened level of success.
- A technologically adept communicator who can inspire, cultivate key external constituencies, attract partners, raise funds, generate enthusiasm among alumni, and obtain commitments to support the college.
- A leader whose experience enables understanding the needs and challenges of our evolving world and the opportunities that exist for the college to collaborate with external partners in service of the university’s vision.
- A dedication to the mission and vision of Virginia Tech and the college; a tireless advocate for access, interdisciplinary research and teaching, and engagement.
- Committed to inclusion, diversity, and equity in all aspects of organizational operation, having demonstrated success at building diverse and inclusive communities and understanding the importance inclusion and diversity to the mission and richness of the College of Engineering and its ongoing success.
• A person of high energy, optimism, and perseverance to bring initiatives to fruition.

To Apply

Nominations and applications are welcome. All applications will be considered until the position is filled.

Nominations and inquiries should be sent to:
Mirah Horowitz
Russell Reynolds Associates
Consultant to the Search Committee
VT.Engineering@RussellReynolds.com

Virginia Tech does not discriminate against employees, students, or applicants on the basis of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law.
APPENDIX: UNIVERSITY BACKGROUND

Virginia Tech

Dedicated to its motto, *Ut Prosim* (That I May Serve), Virginia Tech takes a hands-on, engaging approach to education, preparing scholars to be leaders in their fields and communities. Founded as a land-grant institution in 1872, Virginia Tech is Virginia’s most comprehensive university and its leading research institution as well as one of only six senior military colleges in the nation. With more than 1,400 instructional faculty, Virginia Tech offers 240 undergraduate and graduate degree programs to more than 31,000 students, and manages an annual research portfolio of about $496 million. Its operating budget for 2014-15 was $1.35 billion. Its endowment was approximately $817.8 million as of June 30, 2015.

The university offers more than 80 bachelor’s degree programs through its seven undergraduate academic colleges: Agriculture and Life Sciences, Architecture and Urban Studies, Engineering, Liberal Arts and Human Sciences, Natural Resources and Environment, Pamplin College of Business, and Science. It offers approximately 160 master’s and doctoral degree programs through the graduate school and a professional degree from the Virginia-Maryland Regional College of Veterinary Medicine. In addition, the Virginia Tech Carilion School of Medicine and Research Institute in Roanoke will welcome its seventh class this fall.


Location and Campus

Virginia Tech’s 2,600-acre main campus is located in Blacksburg. The town has approximately 43,000 residents and is one of three central communities that make up the New River Valley, one of the fastest-growing areas in the state. Situated on a plateau between the Blue Ridge and Allegheny Mountains, Blacksburg offers a high quality of life and low cost of living with nearby outdoor attractions such as the New River and the Appalachian Trail. In 2011, Blacksburg was named the “Best Place in the U.S. to Raise Kids,” by Bloomberg Businessweek and “The Best College Town in the South” by Southern Living. Nearby metropolitan areas include Roanoke (45 minutes to the north), Charlotte, North Carolina (less than three hours to the south), and Washington, D.C. (four hours to the northeast).

Virginia Tech’s campus reaches well beyond Blacksburg through the Virginia Cooperative Extension and from campuses and research facilities throughout Virginia. These include: The Virginia Tech Carilion School of Medicine and Research Institute in Roanoke; the Marion DuPont Scott Equine Medical Center in Leesburg; several locations in Northern Virginia including the recently opened Virginia Tech Research
Center; regional centers in Richmond, Roanoke, and Abingdon; and the Institute for Advanced Learning and Research in Danville. Virginia Tech’s international facilities include the Center for European Studies and Architecture in Riva San Vitale, Switzerland and the Caribbean Center for Education and Research in the Dominican Republic.

Leadership

In June 2014, Timothy Sands succeeded President Steger to become the 16th president of Virginia Tech after spending 11 years at Purdue University, where he served as provost and held an endowed chair in engineering. Sands served as interim president at Purdue in the fall semester of 2012. As an administrator, he led the development of Purdue’s first comprehensive academic program assessment and launched the university’s online teaching and learning platform, known as Purdue NExT. He holds bachelor’s, master’s, and doctoral degrees from the University of California, Berkeley.

Thanassis Rikakis succeeded Mark McNamee as provost in August 2015. Formerly the vice provost for design, arts, and technology at Carnegie Mellon University, Rikakis was a full professor in the School of Design and the School of Music at Carnegie Mellon and held a courtesy appointment in the Biomedical Engineering Department. His research work and publications are in the areas of experiential media, mixed reality rehabilitation, interdisciplinary graduate education, pitch perception, and media arts systems for education. Prior to Carnegie Mellon, he served as the founding director of the School of Arts, Media, and Engineering at Arizona State University. He was associate director of the Computer Music Center at Columbia University, where he held a faculty appointment from 1995 to 2001. He holds a bachelor’s degree in music composition from Ithaca College and master’s and doctoral degrees in music composition from Columbia University.

For more information about Virginia Tech, please visit www.vt.edu.