Leadership Profile

This leadership profile is intended to provide information about the University of Vermont and the position of Dean of the College of Engineering and Mathematical Sciences. It is designed to assist qualified individuals in assessing their interest in this position.
Executive Summary

The University of Vermont invites nominations for the position of Dean of the College of Engineering and Mathematical Sciences (CEMS). This is an exciting opportunity for a motivated leader to shape the future. The College offers modern facilities, focused energies and unique interdisciplinary partnerships that span the campus, the state, and the region.

The University of Vermont (UVM) is experiencing transformative change under visionary and dynamic leadership by President Thomas Sullivan and Provost David Rosowsky. CEMS is enjoying a tremendously successful fundraising campaign to conclude in 2019, extensive construction that includes two STEM buildings (part of the new STEM Complex), and the launch of undergraduate and graduate academic programs, many of them transdisciplinary.

The next CEMS Dean will occupy a unique position to advance this agenda by utilizing UVM’s profound interdisciplinary expertise. One of ten colleges and schools, CEMS includes Civil and Environmental Engineering, Electrical and Biomedical Engineering, Mechanical Engineering, Computer Science, and Mathematical Sciences. The faculty and programs are highly collaborative, with established connections to virtually every other college at the University. The College is home to 1,333 undergraduates, 219 graduate students, 53 tenured/tenure-track faculty, 29 lecturers, 11 researchers, and 29 staff. In addition, CEMS houses several research centers: the Complex Systems Center, Smart Grid IGERT, UVM Transportation Research Center, Vermont Advanced Computing Center, and the Vermont Space Grant Consortium.

Enrollments have recently increased sharply and are anticipated to grow at both undergraduate and graduate levels. CEMS is on a sound financial footing; its budget and fundraising success have enabled continual strategic growth and investment. The College successfully completed ABET accreditation in 2015 and is embarking on a major faculty hiring initiative. The new Dean will be expected to shepherd this growth, manage finances strategically, develop new revenues, recruit and support distinguished faculty, and build innovative academic programs.

UVM seeks a distinguished scholar and educator with a record of academic and administrative excellence, leadership in institutional planning, and enrollment management (particularly international). This record will also include curriculum innovation, program assessment, fiscal management, policy and technology development, and promoting diversity. The Dean must exhibit a balanced appreciation for engineering, computer science, and mathematics, an aptitude for creating interdisciplinary collaborations across the University, and the desire to collegially promote UVM’s collective goals. Further, the candidate must have a demonstrated record of successful fundraising and philanthropic development. A doctorate in an appropriate discipline and a stellar record of teaching and scholarship, as evidenced through promotion to a full professor (or attributes enabling appointment as a full professor at UVM), are required. For information regarding nomination or expression of personal interest, please consult the section entitled Procedure for Candidacy.
Role of the Dean of Engineering and Mathematical Sciences

Appointed by the President, reporting to the Provost and Senior Vice President, the Dean of CEMS is its chief executive and academic officer. The Dean will establish the standard for intellectual accomplishment by the College faculty and provide strategic vision and operational leadership for all academic and scholarly programs in the College. The Dean will foster an environment supportive of the faculty, students, staff, alumni and other stakeholders. In particular, she or he will assure that the College serves its students by providing exceptional academic programs and scholarly distinction, and will promote excellence through diversity in faculty, student, and staff recruitment. To execute these responsibilities, the Dean will collaborate with the President, the Provost, CEMS Department Chairs and the campus leadership team. The Dean will be, in general, a conspicuous advocate for the College to garner resources and support that will assure success. This will include execution of UVM’s Incentive-based Budgeting model (IBB) and development and maintenance of facilities.

To fulfill these responsibilities, the Dean will be supported by a leadership team that comprises an Associate Dean, an Assistant Dean, department chairs, and a range of directors, managers, and assistants. For more information regarding staff, please see Appendix IV.

Opportunities and Expectations for Leadership

In collaboration with Dr. David V. Rosowsky, Provost and Senior Vice President, UVM’s new CEMS Dean will strengthen the College and University in an era of remarkable change in higher education. The Dean will work with the College leadership team and other scholars to create outstanding programs that use best practices in teaching, student learning, and educational outcomes. The new leader of the College of Engineering and Mathematical Sciences will inherit a healthy academic enterprise with rising accomplishments, a new STEM Complex, and ABET accreditation in 2015. Major goals of the Dean’s leadership include the following:

Articulate a unifying and compelling strategic vision
The departments within the College, although diverse, function as a cohesive unit. As chief executive and academic officer, the Dean must provide leadership by working with faculty to conceptualize initiatives that advance CEMS. The next dean will lead a college-wide conversation with faculty, staff, and students about a strategic vision, and ultimately collaborate in establishing goals and priorities aligned with the University’s vision.

The Dean will build on synergistic ties across engineering, computer science, and mathematical sciences, and promote collaborations among faculty and external stakeholders. The Dean must be adept at advocating across the University for the faculty, staff, and students of the College and collaborate with colleagues on interdisciplinary programs, joint appointments, new degree programs and research initiatives. For example, concurrent recruitment is underway for the Dean of the Larner College of Medicine; the next CEMS Dean will be expected to partner with the new dean and colleagues across the UVM Medical Center to develop research in biomedical engineering and health sciences. Further, opportunities occur to collaborate with the
Recruit and retain excellent faculty
Over the past year, the College has recruited an impressive cohort of nearly a dozen young scholars. Today the CEMS faculty, which comprises 53 tenured/tenure-track faculty, 29 lecturers, and 11 researchers, is highly regarded both within the University and internationally. It is vital that faculty excellence remains foremost. As the College adds faculty to expand and replace retirees, the Dean must ensure faculty development and mentorship that promotes a culture of excellence, especially as junior faculty advance their careers in teaching and research within the shared governance environment. As the intellectual leader of the College, the Dean will motivate and inspire faculty, students, and staff through transparent, open communication and the pursuit of common goals. Opportunities for department chairs to advance the mission of the College should be emphasized.

The new Dean will find a solid foundation: financial reserves, an entrepreneurial budgeting model, new facilities, and a successful philanthropic campaign. This will provide the Dean, in concert with colleagues, a compelling opportunity to recruit faculty across levels and disciplines, particularly in computer science, data sciences, cybersecurity, complex systems, energy and the environment, and the biomedical sciences. Of special importance is the imperative to increase the diversity and gender representation of the faculty through recruitment and retention efforts.

Implement strategic goals and administrative effectiveness
In 2016, UVM implemented a decentralized, Incentive-based Budgeting model (IBB) that offers the College and the Dean more autonomy and financial decision-making authority, but also enhanced accountability. Extensive efforts have sought to adapt this budget model throughout the University, and the CEMS Dean will be expected to utilize the IBB model to make the College more innovative and entrepreneurial in developing resources, sustaining finances and achieving goals.

The IBB model provides the College and the Dean significant control over revenue, expenditures, activities, and new initiatives. It increases transparency concerning stewardship of funds and offers incentives for academic entrepreneurship by generating revenue and allocating funds strategically. As a result of solid management, CEMS generated a budget surplus last year; the new Dean will be expected to utilize the model to ensure efficient administration in managing human, financial, and physical resources.

The College community values open communication, collaboration, and transparency, and seeks a collegial Dean who can build teams dedicated to the long-term, steady growth of this enterprise. This administrator will be expected to employ interpersonal skills to maintain a culture that promotes open dialogue and trust and encourages collaboration and teamwork. He or she will engage faculty, staff, and stakeholders in decisions that affect the future of the
College. Credibility will be earned by inclusive decision making and ensuring that all perspectives are given full consideration.

Engage stakeholders and develop resources and opportunities
As a public research and land-grant university, UVM is committed to providing leadership in STEM fields through CEMS — regionally, nationally and internationally. As the voice and advocate of the College for an array of audiences, the CEMS Dean must be engaging and able to create commitment. The Dean is responsible for bringing prominence to CEMS and for developing beneficial collaborations, opportunities, and resources. She or he will advocate within and beyond UVM for the many societal benefits of CEMS’ educational, research, and service programs.

As leader of the research enterprise, the Dean will ensure effective infrastructure and engage in strategic planning to enhance the breadth, depth, and impact of CEMS activities. Opportunities exist for significant expansion of extramural support for research in the College. The Dean will emphasize the importance of graduate students to advance the research agenda and advocate for the entire research spectrum — from basic to applied research, and the translation of technologies into commercial assets. The Dean must also appreciate how single investigator projects and multi-investigator transdisciplinary initiatives both contribute to the University’s overarching research mission.

The Dean’s interactions involve a wide range of constituencies within and beyond the School; these include the administration, deans, faculty, students, foundations, government and funding agencies, industry partners, civic leaders, donors, and alumni. Here the Dean serves as the principal architect for building and maintaining relationships with various partners to develop research opportunities and academic initiatives, to enhance revenue streams, and to stimulate economic growth and workforce development in the state and beyond. The Dean will support current partnerships within New England, especially its northern tier, and Canada, and will develop new partnerships to advance the mission of the College.

The Dean’s office is fortunate to have experienced communications professionals who increase outreach and engagement of the College; the Dean must coordinate with them and with the University of Vermont Foundation to spearhead fundraising activities with alumni and individual donors to stimulate gifts for special projects, endowed chairs, and scholarships. The Dean will also help secure extramural research resources from government agencies, foundations, and commercial partners. To accomplish these tasks, the Dean will be able to utilize several groups connected to the College and University, including the Vermont Complex Systems Center and the Vermont Advanced Computing Core, both of which are described in more detail later.

The University is now undergoing its most ambitious campaign, an eight-year, $500 million effort that was launched in October 2015 and will terminate on June 30, 2019. Both CEMS and UVM are performing well toward their goals, and the Dean will enjoy a time of significant fundraising success for the College.
Champion diversity, equity, and inclusion
UVM is committed to a culture of inclusive excellence in research, teaching, and service by recruiting faculty, students and staff from a wide variety of backgrounds. Diverse teams produce better outcomes and create a more inviting workplace. The Dean must be attentive to maintaining an organizational culture of openness, fairness, and transparency that celebrates diversity of thought and expression, a culture that promotes tolerance and inclusion. The new Dean must evince personal authority and passion regarding these efforts and ensure strong and consistent practices throughout the College and University.

Professional Qualifications and Personal Qualities
UVM seeks a visionary scholar with impeccable credentials to lead the College into the future. The background, skills, and qualities the successful candidate will offer, ideally, are these:

Leadership
Academic accomplishment: A record of instruction, scholarship, and research excellence that merits appointment as a tenured professor in one of the departments of the College.

Commitment to excellence: Sincere and intense appreciation for excellence in research and scholarly endeavors, and a record of recruiting and developing people and programs of the highest quality.

Strategic vision: Ability first to engage the community in crafting a compelling vision that builds on completed work, and then to create an environment that enables the College to achieve that vision.

Collaborative leadership: A collaborative and relationship-based leadership style; experience bring people together to solve challenges and empowering others.

Management
Management experience: A history of administrative leadership; strong human resource and financial management experience a well as being adept at conflict resolution and negotiation.

Diversity: A commitment to diversity and the underserved, particularly with respect to students, staff, and faculty; a track record of individual action and institutional leadership to advance diversity and inclusion in all its forms.

Breadth: Familiarity with issues and opportunities associated with colleges of engineering, computer science, and mathematics; natural and instinctive curiosity about widely diverse intellectual and creative endeavors.

Fundraising: The capacity to attract external resources to the College through fundraising initiatives.
Progressive management style: Experience leveraging the talents of faculty and staff to design and implement initiatives that enrich the University community. Evident commitment to contemporary research-based management strategies that enable faculty and staff to achieve their full potential within the university community. A leadership style that evinces respect for others and demonstrates focus on clearly defined goals over a significant period of time. A capacity to delegate to others.

Communication and Interpersonal Skills
Emotional Intelligence: Ability to negotiate and work with others; an inclination to circulate, listen, learn and to be a visible presence on campus; adeptness at working with faculty, students, staff, and the media, as well as high-level corporate, university and government leaders; exceptional listening skills; understanding of the intersection between emotions, motivations, and behavior.

Commitment to student success: Strong commitment to student success, demonstrated by advocacy for adequate resources, including human resources, to support innovative teaching and academic mentoring.

Commitment to mission: The ability to thrive in the UVM environment through passionate advocacy for the College; identification with its mission and a deep understanding of the role of the College and University in the broader higher education landscape.

Personal qualities: Unquestioned personal integrity; strong self-awareness; inspiring and energetic with the ability to earn the trust of faculty, staff, and students, and to work collegially with the President, the Provost, the other Deans, and the senior leadership team; the ability to empathize with others; resilience under pressure; a sense of humor and progressive outlook that is a balance of optimism and realism.

Procedure for Candidacy
Inquiries, nominations and candidate materials, including a CV and cover letter describing professional background and qualifications, may be sent in confidence to consultants Brian Bloomfield and Robert Luke via email at UVM-CEMSDean@wittkieffer.com. Materials should be received by February 23, 2018. Recruitment will be conducted in confidence until finalists are invited for campus visits, at which time professional references will be contacted.

The University of Vermont values diversity and is committed to equal opportunity for all persons regardless of age, color, disability, ethnicity, marital status, national origin, race, religion, sex, sexual orientation, veteran status or any other status protected by law.
The College of Engineering and Mathematical Sciences

The origins of the College of Engineering and Mathematical Sciences date back to the 19th century; the first engineering degree was offered at UVM in 1826. Engineering continued to grow, and in 1910 a separate engineering college was formed. It became the College of Technology in the 1940s and spanned engineering, chemistry, commerce and economics, and mathematics. In 1973, the academic unit became the College of Engineering, Mathematics, and Business Administration, with the addition of business administration and the transfer of chemistry to the College of Arts and Sciences. In 1981, when Business Administration became a detached School, the College of Engineering and Mathematical Sciences was established. In 2006, the engineering departments were consolidated into a School of Engineering, with an organizational structure headed by a director and program heads, alongside the Department of Computer Science and the Department of Mathematics and Statistics. In 2016, The School of Engineering reverted to a departmental structure. The College is home to 1,333 undergraduate students and 219 graduates. Its overarching goal is to provide an educational experience that develops substantial expertise in one or more of the core CEMS areas while also training students to work in highly collaborative and multidisciplinary environments.

CEMS is currently comprised of the Departments of Civil and Environmental Engineering, Electrical and Biomedical Engineering, Mechanical Engineering, Mathematics & Statistics and Computer Science. The engineering departments offer four accredited degrees: Civil, Environmental, Electrical and Mechanical Engineering. Interdisciplinary degree programs include B.S. and B.A. in Engineering Management and B.S. in Computer Science and Information Systems, in partnership with the Grossman School of Business; B.S. in Biomedical Engineering; and a B.S. in Data Science.

At the graduate level, CEMS provides eight Master’s degree programs and five Doctoral offerings, as well as a Certificate of Graduate Study. Graduate degree programs (M.S. and Ph.D.) exist in Civil and Environmental Engineering, Electrical Engineering and Mechanical Engineering, Computer Science, and Mathematics and Statistics. Interdisciplinary graduate degrees are available in Biomedical Engineering (M.S.) and Bioengineering (Ph.D. and Graduate Certificate), Complex Systems and Data Science (M.S. and Ph.D.). An accelerated M.S. Program permits students to earn a B.S. and M.S. in five years. In cooperation with the College of Arts and Sciences, CEMS offers a B.A. in Mathematics and an M.S. and Ph.D. in Materials Science.

Vision Statement

The College of Engineering and Mathematical Sciences aspires to provide the highest quality science and engineering education with state of the art facilities that will foster collaborative learning and research to enable students and faculty to achieve their full potential.

Mission Statement

To inspire students and faculty to boldly address the challenges of society and provide students with practical skills and a passion for life-long learning.
To realize the vision and achieve the mission of the College, it is implementing an ambitious action plan available online at Strategic Plan.

CEMS currently includes 122 full- and part-time faculty, and 29 staff members. Fourteen full-time faculty recruitments are underway in these areas: Computer Science (5); Electrical and Biomedical Engineering (4); Mathematics and Statistics (3); and Civil and Environmental Engineering (2). The student-faculty ratio across the College is 24:1 in fiscal year 2018.

The College faculty are passionate about both teaching and developing knowledge in their areas of expertise. They have been recognized for their scholarly achievements — as members of the National Academy of Engineers, fellows of the leading professional engineering organizations, recipients of the Presidential Early Career Award for Scientists and Engineers, and National Science Foundation CAREER awards.

Research expenditures in the College for fiscal 2017 totaled $9.4 million, which reflects an increase of approximately 42 percent over the past five years. Sponsors include such federal agencies as NASA, NSF, USDOT, DOE, ONR, and NIH, as well as various Vermont state agencies. The College has an annual general fund budget of $19 million that includes both operating funds and personnel.

UVM’s fiscal 2018 budget totals $669.3 million. For the same period, the total general fund budget, excluding auxiliaries and sponsored research, is $363.3 million. State support represents $40.7 million annually and has remained constant in recent years; it represents approximately seven percent of the overall budget and three percent of the general fund. The market value of the University’s endowment on August 31, 2017, totaled $505 million.

CEMS takes pride in supporting student engagement in research and industry; our upper-division undergraduate students work in teams on real-world problems, in collaboration with clients from industry, with faculty on research-related problems, and with local municipalities and non-profits. In addition to capstone and project-based courses that involve external stakeholders, the College also supports robust internship and co-op programs to help students gain experience in industry, and operates its own internal Research Experience for Undergraduates program to support student involvement in faculty research.

Department of Civil and Environmental Engineering
The Civil and Environmental Engineering program emphasizes rigorous technical education and social awareness to prepare students to become leaders and innovators who are empowered to make the world better for all. The program teaches students to develop sustainable systemic solutions that confront short and long-term environmental, social, political, regulatory and economic issues while identifying, defining and solving engineering problems. Students master essential skills such as critical thinking, data analysis and modeling, use of information and advanced engineering technology, as well as interpersonal communication through project-based and service learning.
Undergraduate degrees in Civil and Environmental Engineering are accredited, deeply rooted in stewardship, sustainability. At the graduate level, individualized M.S. and Ph.D. programs are concentrated around one or more subdisciplines. Faculty research addresses critical worldwide issues related to sustainability and energy; infrastructure systems; climate change, hazard mitigation and adaptation; and environmental and public health. The program emphasizes interdisciplinary education with research and collaborative opportunities across campus that include not only other engineering and science departments but also social science, policy, and medicine.

**Department of Electrical and Biomedical Engineering**

The Electrical Engineering program trains students to innovate and lead and provides them with both the fundamentals of engineering science and the practical experience essential for the electrical engineering industry. The curriculum comprises four semesters of laboratory experience in circuits and electronics and four semesters of team-based design experience. In addition, students study microprocessor-based design, and control, communication, and energy systems that also offer significant laboratory experience. The curriculum provides a great deal of flexibility, which enables students to tailor their studies to reflect both their technical and non-technical interests.

The Biomedical Engineering program trains students to operate at the interface between engineering and the biomedical sciences. The curriculum structure has two phases: foundational and specialization. The former establishes a math and science core, builds a solid foundation in quantitative engineering methods and biomedical sciences, and exposes students to opportunities in the field. In the latter phase, students focus their studies on one of three specialties: Biosensing and Instrumentation; Cell, Tissue and Organ Biomechanics; and Systems and Network Biology. The program profits from strong ties between UVM’s College of Engineering and Mathematical Sciences and the Robert Larner, College of Medicine. This collaboration provides students with unique biomedical opportunities in a professional setting.

**Department of Mechanical Engineering**

The Mechanical Engineering Program provides a modern mechanical engineering education with a focus on decision-making; on the foundations of mathematics, physical science, engineering science and design; and on an appreciation of the societal impact of engineering practice. The curriculum, which culminates with the senior design project, gives students experience that can be applied immediately to an engineering career or expanded into more advanced education in other engineering or related fields. Many UVM engineering graduates have gone on to pursue advanced degrees in such fields as law, medicine, and business administration.

Although small, the Mechanical Engineering Faculty is composed of many recipients of early-career awards. The department maintains a high level of externally funded research with awards from nearly all major federal agencies, including NSF, NASA, DoE, DoD, DARPA and NIH, and some industrial partners. Our undergraduate and graduate programs offer concentrations aligned with the Department’s research strengths, specifically in material science,
computational mechanics, fluid dynamics, aerospace engineering, health-monitoring and sensing of structures, manufacturing, biomechanics and tissue engineering.

**Department of Mathematics and Statistics**
The Department of Mathematics and Statistics has a long and proud tradition of excellence in teaching. Class sizes tend to be small, and the faculty take pride in their dedication and accessibility. Members have won multiple UVM teaching excellence awards and several University Scholar awards. As a reflection of the importance of mathematics and statistics to all areas of human endeavor, graduates of the Department’s programs go on to a wide variety of careers and graduate programs.

Through CEMS, students can earn a B.S. in Mathematical Science with a major in either Mathematics or Statistics. A B.S. in Data Science is offered in partnership with the Department of Computer Science. At the graduate level, the Department offers M.S. programs in Mathematical, Statistical, and Biostatistical Sciences. and a Ph.D. in Mathematical Sciences; the Department is also fundamental to interdisciplinary graduate degrees in Complex Systems and Data Science. The B.S. and M.S. degrees can also be combined through an Accelerated Masters Program.

This Department also houses internationally acclaimed researchers in a wide variety of specialties. The scope of research spans practical collaborations with scholars in other areas (especially the Larner College of Medicine) through investigation of theoretical mathematical or statistical problems. The department is highly interdisciplinary; members regularly collaborate with one another and with authorities in other fields. The department’s research falls in six areas: algebra and number theory; analysis; applied mathematics; combinatorics and graph theory; complex systems and data science; and statistics and biostatistics.

**Department of Computer Science**
The Department of Computer Science offers several undergraduate degrees, including a B.S. in Computer Science, a B.S. in Computer Science and Information Systems in partnership with the Grossman School of Business, a B.A. in Computer Science through the College of Arts and Sciences, and a B.S. in Data Science in collaboration with the Department of Mathematics and Statistics. We also offer several graduate programs through the Graduate College: an M.S. in Computer Science; an interdisciplinary Ph.D. in Computer Science; and, in collaboration with other units in the College, the transdisciplinary Certificate of Graduate Study, M.S., and Ph.D. in Complex Systems and Data Science (pending approval by the Board of Trustees in February 2018).

The Computer Science Department prides itself on a strong sense of community; in addition to supporting our student groups (the CS Crew and the Society of Women in CS) we annually host popular extracurricular activities, including the Computer Science Fair and the Agile CodeFest, both with industry support. We are one of only 15 Computer Science Departments supported by the BRAID Initiative (Building, Recruiting, and Inclusion for Diversity), co-directed by AnitaB.org and Harvey Mudd College. This initiative fosters research, development, and
incorporation of best practices for inclusiveness, and has enabled us each year to send groups of students and faculty to the Grace Hopper Celebration of Women in Computing.

Although small, the Department boasts recipients of the prestigious Presidential Early Career Award for Scientists and Engineers and the Career Awards. The Department of Computer Science faculty pursue research in such areas as evolutionary robotics, complex systems, data science, deep learning, programming languages, and cybersecurity. Computer Science faculty are involved in many transdisciplinary collaborations in environmental, biological, medical, engineering, and mathematical areas.

**Vermont Complex Systems Center (VCSC)**
The Vermont Complex Systems Center (VCSC) comprises a transdisciplinary group of faculty and their graduate students and postdocs who collaborate to analyze, model, and investigate complex physical, biological, technological, and sociological systems. The Center sponsors a bi-weekly Student Complexity Research and Pizza Seminar (SCRAPS), an invited seminar series, a bi-weekly reading group, research symposia, and TEDxUVM events. Although VCSC is not a degree-granting unit, the faculty associated with it are largely responsible for the development and coordination of the transdisciplinary Graduate Certificate, M.S., and (pending) Ph.D. in Complex Systems and Data Science.

The VCSC is administered from within the College of Engineering and Mathematical Sciences, although there are faculty affiliates from across campus. It focuses on the use of sophisticated mathematical and computational modeling and analysis techniques to engage real-world challenges. These include the development of next-generation information technology for a national smart grid, evolution of intelligent robots, improving dissemination of innovation and information in healthcare, and mapping the global influence of social media.

The VCSC has an outstanding cadre of nationally recognized faculty who have developed often cited complex systems scholarship in their disciplines. They have attracted significant funding to the University as well as public and private partnerships. The VCSC association includes faculty from all units in CEMS and others from across the University whose expertise spans biology, economics, medicine, environmental science, psychology, and community development and applied economics.

**Vermont Advanced Computing Core (VACC)**
The Vermont Advanced Computing Core (VACC) is a research facility that offers high performance computing capability and research support services to UVM faculty, staff, and students, as well as to strategic partners in academia, government, and businesses statewide. VACC supports researchers across disciplines at UVM and throughout Vermont by enabling complex research questions to be explored in depth while making additional funding accessible for projects that use advanced computing techniques. The VACC is supervised by the Office of Research and is closely connected to CEMS and the needs of its researchers.

In 2003, with early support from NASA and Senator Patrick Leahy, UVM undertook a
campuswide assessment of current needs and future directions for high-performance computing in its research enterprises. This effort included discussions with an expert panel from the American Association for the Advancement of Science as well as UVM research leadership and faculty members across disciplines.

Affectionately known to its many users as the "Bluemoon cluster," the UVM VACC supercomputer has been developed largely with IBM systems architecture. The facility has received three upgrades since its initial development that incorporated next-generation, IBM high-performance hardware in order to optimize performance and data storage for an increasing number of users while maximizing data security and energy efficiency.

**Transportation Research Center**

The [Transportation Research Center](#) is a team member of the National Center for Sustainable Transportation. The TRC is an interdisciplinary hub for research, workforce development, and outreach on sustainable transportation system solutions. Its faculty and professional staff focus on transportation planning as related to resilience, energy, and equity. It hosts the Vermont Clean Cities Coalition, one of five Federal Highway Administration centers around the country. The TRC manages the New England Transportation Consortium for the six state DOTs in New England, and the Vermont Transportation Research Collaborative for the Vermont Agency of Transportation.

**NASA Space Grant Consortium**

The [Vermont Space Grant Consortium (VTSGC)](#) consists of academic institutions, private industry, and public organizations. Funded in part by a grant from NASA's National Space Grant College and Fellowship Program, the goals of the VTSGC are: to build aerospace-related research infrastructure within the state; to promote science, technology, engineering and mathematics (STEM) education among Vermont students; and to train and encourage students to pursue careers in aerospace-related areas.

**Move Mountains: The Campaign for The University of Vermont**

The University is in the midst of a $500 million effort, [Move Mountains: The Campaign for The University of Vermont](#), which has secured $460 million in gifts and commitments as of January 2 of this year. The College had a campaign goal of raising $11 million, which it exceeded in the fall of 2017. Current gifts and commitments to the College stand at $11.2 million, and we continue to focus on securing commitments in support of priority areas that include scholarships, fellowships, professorships and chairs, and programmatic support. The campaign concludes on June 30, 2019.

The STEM Complex planning occurred after the campaign started, so it has a separate campuswide $26 million goal, of which roughly $10.5 million has been raised. Most of this has come through CEMS, and the greatest potential for additional funds for the Complex rest with CEMS alumni, where several proposals are under current consideration.
Typically, the Dean participates in 40 visits and travels with the gift officer on about eight trips per year. The Dean and the gift officer regularly confer on strategies for the current pool of about 180 prospective donors.

UVM STEM Complex
When completed, UVM’S largest capital project in its history will constitute a state-of-the-art complex of laboratories, classrooms and research facilities in science, technology, engineering and mathematics (STEM) to prepare our students for careers in rewarding, rapid-growth fields.

This new STEM complex will house chemistry, physics, engineering, mathematics, and computer science. It will provide twenty state-of-the-art teaching labs; seven media-rich classrooms to foster engaging, problem-based teaching and team-based learning; faculty labs that promote innovation and collaboration; and comfortable meeting spaces for student and faculty interaction. Its three interconnected buildings include a selectively renovated Votey Hall (completed August 2017); a teaching and research laboratory building (the Discovery Building, which opened in May 2017); and a new building for classrooms, team-based learning spaces, and offices (the Innovation Building, scheduled to open in May 2019). The STEM Complex will be the figurative spine of the Central Campus. It will bridge the magnificent buildings of University Row to the west with the health sciences complex to the east and the Davis Student Center and the residential areas to the south. A video image of the finished Complex is available online at UVM STEM Complex.

University of Vermont: An Overview
UVM’s hilltop campus offers an unsurpassed vista of Lake Champlain, the Adirondack Mountains beyond, and the vibrant, livable small city of Burlington. Our location enriches the educational experiences of our students through the energy and welcoming atmosphere of the community, and the forests, farms, and independent spirit of the state.

As the single research university in Vermont and the state’s land-grant institution, UVM enrolls over 13,000 students, including some 10,500 undergraduates, 1,400 graduate students, 450 medical students, 800 non-degree students, and 25 who pursue post-baccalaureate certificates. UVM combines faculty-student relationships prized in a liberal arts college with the scholarship and resources of a major research institution. The University is home to seven undergraduate schools and colleges, an Honors College, a graduate college and a medical school, and it provides continuing and distance education. It attracts an increasingly distinguished faculty and has steadily built its research enterprise, with sponsored projects now of over $120M per year.

UVM is continually recognized for academic excellence and extraordinary overall value. It is ranked among the top 10 Rising Stars by Forbes magazine and among the top 14 up-and-coming universities by U.S. News & World Report. Since 1985, it has held the distinction of being named a “Public Ivy” with seven other institutions. Its strong teaching mission and dedication to advancing fields of knowledge through research and graduate education have led UVM to be consistently ranked among the nation’s top 50 public universities in U.S. News & World Report.
UVM provides a rich environment for teaching, research, and scholarship in many realms of inquiry, achieved through a distinguished faculty of accomplished mentors and scholars. The University was ranked fourth on Princeton Review’s list of Top Green Colleges. The University received STARS Gold Rating (Sustainability Tracking, Assessment and Rating System) for its efforts by the Association for the Advancement of Sustainability in Higher Education (AASHE) and was ranked in the top 12 percent of all rated institutions.

UVM is classified as a Doctoral University with Higher Research Activity by the Carnegie Classification of Institutions of Higher Learning (a registered trademark of the Carnegie Foundation for the Advancement of Teaching). We offer an unusually rich complement of academic programs that includes over 100 undergraduate majors, 46 master’s programs, 8 graduate certificate programs, 21 doctoral programs, and an M.D. degree. Our Colleges and Schools include: Agriculture and Life Sciences (including UVM Extension and the Vermont Agricultural Experiment Station), Arts and Sciences, Education and Social Services, Engineering and Mathematical Sciences, Larner College of Medicine, and Nursing and Health Sciences, the Rubenstein School of Environment and Natural Resources, the Grossman School of Business, the Honors College, the Graduate College, the Division of Continuing and Distance Education, and the UVM Libraries. UVM has invested $418M in the campus over the past decade and increased its physical plant by 25 percent. The University has been accredited by the New England Association of Schools and Colleges since 1929 and will be reviewed for reaccreditation in 2019.

Since 1791, the University of Vermont has endeavored to improve humankind through a commitment to liberal education, environment, health, and public service. The fifth oldest university in New England, we host a legacy of significant innovations in education: we were the first college to declare public support of freedom of religion and the first to admit women and African-Americans to Phi Beta Kappa. Today, the University continues to provide endless ways to explore the world, challenge the status quo, and engage in the most pressing issues of our time.

At a glance

- Founded in 1791, we became a Land Grant university in 1862
- We are home to seven undergraduate schools and colleges, as well as the Honors College, Graduate College, Larner College of Medicine, and Division of Continuing and Distance Education
- Enrollment comprises 10,519 undergraduates, 1,427 graduate students, 459 medical students, 25 post-baccalaureate certificates, and 826 non-degree students
- We support 1,556 full- and part-time faculty
- We offer over 100 bachelor’s degree programs, 50 master’s programs, 29 accelerated master’s programs, and 22 doctoral programs
- We field 18 Division I athletic teams
- UVM stands for "Universitas Viridis Montis," Latin for University of the Green Mountains
- Additional information about the University and the College is available on the Office of Institutional Research website
UVM Vision
We seek to be among the nation’s premier small research universities, pre-eminent in our comprehensive commitment to liberal education, the environment, health and public service.

UVM Mission
We create, evaluate, share and apply knowledge and prepare students to be accountable leaders who will conduct their careers with a dedication to the global community, a grasp of complexity, effective problem-solving and communication skills, and an enduring commitment to learning and ethical conduct.

Burlington, Vermont
UVM’s hometown is a perennial entry as a top college town on national rankings that laud its livability and access to nature and recreation (including the best skiing in the northeast), its rising identity as a hub for technology and innovation, and its thriving dining and music scene. Residents enjoy a pedestrian marketplace in the heart of downtown, eight miles of waterfront along Lake Champlain, stunning sunsets over the Adirondacks, and a 12-mile paved bike trail along the lake. Its airport, BTV, is just 10 minutes from campus. Montreal is 90 minutes by car, and Boston but a 3.5-hour drive, so international and metropolitan culture are readily accessible for weekend adventures.

Burlington is Vermont’s largest city, with a combined urban and suburban area population of 210,000. Besides UVM, major local employers include the UVM Medical Center, Global Foundries, GE Healthcare, Keurig Green Mountain, Dealer.com, Seventh Generation and Ben & Jerry’s Ice Cream. Vermont’s K-12 public schools are continually ranked among the nation's best.

The material presented in this leadership profile should be relied on for informational purposes only. This material has been copied, compiled, or quoted in part from the University of Vermont documents and personal interviews and is believed to be reliable. While every effort has been made to ensure the accuracy of this information, the original source documents and factual situations govern.
Appendix I – University President Biography

Tom Sullivan became the 26th President of the University of Vermont in July 2012. Prior to becoming President, he served as Senior Vice President for Academic Affairs and Provost at the University of Minnesota, 2004-2012. He served as the eighth dean of the University of Minnesota Law School from 1995 to 2002. Upon finishing his term as dean, he returned to full-time research and teaching. In June 2003, he received the J. William Elwin, Jr., Award from the American Bar Association for leadership and contributions to law school development. At the University of Minnesota Law School, he has received the Stanley V. Kinyon Teacher of the Year Award for Excellence in Teaching. He has chaired the ABA Section of Legal Education and has chaired the Association of American Law Schools Section on Antitrust and Economic Regulation. On several occasions, he has been a consultant to the U.S. Senate Judiciary Committee on judicial nominations to the Supreme Court, and to the U.S. Senate Commerce Committee on mergers. In 2015, he received the Robert J. Kutak Award from the American Bar Association for his contributions to the legal academy, the judiciary, and the Bar. Since 1984, he has been an elected member of the American Law Institute (ALI), and a Fellow of the American Bar Foundation since 1994.


On two occasions, he has been a visiting faculty member at Georgetown University Law Center in Washington, D.C. He twice has been a visiting scholar at Cambridge University in England. During the fall semester 2002, he was a visiting professor of law at the University of California, Berkeley (Boalt Hall) and in 2012 he was a visiting faculty member at New York University. Before coming to the University of Minnesota, Sullivan served for six years as dean of the University of Arizona College of Law and as associate dean at Washington University in St. Louis. He began his career in higher education as a faculty member at the University of Missouri, Columbia. He graduated magna cum laude from law school at Indiana University in 1973, where he served as an editor on the Indiana Law Review. After law school, he clerked for a federal judge, in Miami Florida, and thereafter was a trial attorney in the U.S. Department of Justice in the Attorney General’s Honors Program. Before entering Law School teaching in 1979, he was an antitrust litigator with the New York and Washington, D.C., firm of Donovan, Leisure, Newton, and Irvine. Throughout his career he has continued to serve as a consultant on antitrust, complex litigation, constitutional law, and Federal Court matters.
Appendix II – University Provost Biography

David V. Rosowsky was named Provost and Senior Vice President of the University of Vermont in August 2013. He came to UVM from Rensselaer Polytechnic Institute where he served as Dean of Engineering. Prior to that, he served as Head of the Zachry Department of Civil Engineering at Texas A&M University, where he also held the A.P. and Florence Wiley Chair in Civil Engineering.

He earned BS and MS degrees in civil engineering from Tufts University, and a Ph.D. in civil engineering from Johns Hopkins University.

A recognized expert in structural reliability, design for natural hazards, stochastic modeling of structural and environmental loads, and probability-based codified design, Dr. Rosowsky has authored or co-authored more than 150 papers in peer-reviewed journals and more than 160 papers appearing in conference proceedings. He has been invited to present his research work around the world including invited lecturers in France, Italy, Canada, Japan, Australia and New Zealand. He has supervised more than 20 Masters and Doctoral students. He is the recipient of the ASCE Walter L. Huber Research Prize, the T.K. Hseih Award from the Institution of Civil Engineers (UK), and the ASCE Norman Medal.

He currently serves on the Editorial Board of the journal Structural Safety and is a past editorial board member of the ASCE Journal of Infrastructure Systems, the ASCE Journal of Structural Engineering and Natural Hazards Review.

He maintains an active research program in wind and earthquake engineering and continues to supervise graduate students and post-doctoral researchers.

He was registered as a Professional Engineer in Texas and currently and holds the rank of Fellow of the American Society of Civil Engineers and Fellow of the Structural Engineering Institute.
Appendix III – Search Committee

Search Committee Chairs

Nancy E. Mathews, Dean, Rubenstein School of Environment and Natural Resources, Professor of Wildlife and Fisheries Biology

Scott Thomas, Dean, College of Education and Social Services, Professor of Higher Education

Search Committee Members

Lisa Aultman-Hall, Professor of Civil Engineering, College of Engineering and Mathematical Sciences

Jason Bates, Professor Medicine and Professor of Biomedical Engineering, Larner College of Medicine and College of Engineering and Mathematical Sciences

Joshua Bongard, Professor of Computer Science, College of Engineering and Mathematical Sciences

Mandar Dewoolkar, Professor and Chair Civil and Environmental Engineering, College of Engineering and Mathematical Sciences

Nevin Diparlo, Undergraduate Student, Mechanical Engineering

Yves Dubief, Associate Professor and Chair of Mechanical Engineering, College of Engineering and Mathematical Sciences

Jennifer Etter, Graduate Student, Mechanical Engineering

Margaret Eppstein, Professor and Chair of Computer Science, College of Engineering and Mathematical Sciences

Ryan Hargraves, Director of Admissions

Paul Hines, Associate Professor of Electrical Engineering, College of Engineering and Mathematical Sciences

Jennifer Karson, Director of Communications, Dean’s Office

Karla Karstens, Senior Lecturer of Mathematics and Statistics, College of Engineering and Mathematical Sciences

Ken Pidgeon, UVM Alum 1983, President, Engineers Construction Incorporated

George Pinder, University Distinguished Professor and Professor of Civil Engineering, College of Engineering and Mathematical Sciences

Donna Rizzo, Professor of Civil Engineering, Acting Director of the Gund Institute for Environment

Judith Van Houten, University Distinguished Professor and George H. Perkins Professor of Biology, Director Vermont EPSCOR and Director of the Vermont Genetics Network

Greg Warrington, Associate Professor and Associate Chair of Mathematics and Statistics, College of Engineering and Mathematical Sciences
Appendix IV – CEMS Organizational Chart
Witt/Kieffer is the preeminent executive search firm that identifies outstanding leadership solutions for organizations committed to improving the quality of life. The firm’s values are infused with a passion for excellence, personalized service and integrity.