THE COLLEGE OF ENGINEERING AND MATHEMATICAL SCIENCES

http://www.uvm.edu/~cems/

The college offers stimulating, professionally-oriented programs for students interested in careers in engineering, computer science, mathematics, statistics and data science. An engineering education combines the study of mathematics and the physical, life, and engineering sciences with application to the analysis and design of devices, equipment, processes, and complete systems to serve the needs of humanity. The breadth and flexibility of the engineering programs at UVM provide a sound background for engineering practice in public or private domains, for graduate study in engineering and science, and for further professional study in such fields as business, law, or medicine. Computer science develops creative problem-solving ability, along with essential skills in current programming and computing environments. It offers the flexibility to gear studies toward business, science, engineering, mathematics, and the arts. The study of mathematics and statistics is designed to train students in critical thinking, problem solving, and sound reasoning, while developing a strong level of technical competence and a substantial breadth of exposure to other fields. Data science is a unique, interdisciplinary educational program that combines studies in computer science, mathematics and statistics to prepare students for careers in big data science and analytics, rapidly growing fields with huge unmet demand. Degrees in each of the CEMS disciplines provide distinctive recognition based on challenging course work, valuable field experience, and intensive student-faculty interaction.

HONORS THESIS PROGRAM

The undergraduate Honors Thesis program, designed for the superior student with unusual initiative and intellectual curiosity, provides an opportunity to pursue a special program without the restrictions of classroom routine. The Honors Thesis program consists of reading, research, design, or creation in a curricular area of the student's choice, leading to a written thesis. At the time of graduation, the student's transcript and the graduation program will be appropriately denoted with "Honors Thesis" and the title of the thesis, provided that Honor's level performance has been demonstrated.

The student must be matriculated in the college at the time of application for the program and have a cumulative grade-point average of at least 3.00 for sophomore and junior work.

A thesis committee consists of at least three UVM faculty members, at least two of whom are from the offering area. The chair of the committee, a permanent UVM faculty member, is also from the offering area. The thesis proposal must be approved by the student's thesis committee prior to the Add/Drop deadline of the student's first semester of matriculation into the Honor's Thesis Program. The thesis committee advises the student, approves of the thesis proposal, and approves of the oral defense of the thesis. The course grade is assigned by the committee chair based on consultation with the thesis committee. Six credits of effort are expected for the thesis, usually apportioned evenly over two semesters. Some programs within the college require senior projects as part of their prescribed curricula. Such projects can provide alternative opportunities to students interested in a design or research challenge.

MAJORS

- Biomedical Engineering B.S.BME.
- Civil Engineering B.S.CE.
- Computer Science B.S.CS.
- Computer Science and Information Systems B.S.
- Data Science B.S.
- Electrical Engineering B.S.EE.
- Engineering B.A.E.
- Engineering B.S.E.
- Engineering Management B.S.EM.
- Environmental Engineering B.S.EV.
- Mathematics B.S.MS
- Mechanical Engineering B.S.ME.
- Statistics B.S.MS.

MINORS

- Computer Science
- Electrical Engineering
- Geospatial Technologies
- Mathematics: Pure
- Statistics