

MECHANICAL ENGINEERING - PROFESSIONAL MASTER OF SCIENCE (MSME)

The Master of Science Professional is a degree program that offers possibilities for a wide range of prospective students. This coursework-focused degree program emphasizes both project-based and curriculum-driven learning. It is targeted at working engineers and undergraduates considering, or already pursuing, a career in industry, but can also be completed with the ultimate goal of matriculating in a PhD program.

A thesis is not required to earn this degree. If a student plans to earn a master's degree and then immediately continue on to a PhD, they can apply directly to the PhD program (<https://catalog.colorado.edu/graduate/colleges-schools/engineering-applied-science/programs-study/mechanical-engineering/mechanical-engineering-doctor-philosophy-phd/>); it is not necessary to earn a master's degree separately.

For more information, visit the department's Master of Science Professional (<https://www.colorado.edu/mechanical/current-students/graduate/master-science-professional/>) webpage.

Bachelor's–Accelerated Master's Degree Program

Students may earn this degree as part of the bachelor's–accelerated master's (BAM) degree program, which allows currently enrolled CU Boulder undergraduate students the opportunity to earn a bachelor's and master's degree in a shorter period of time.

For more information, see the Accelerated Master's tab for the associated bachelor's degree(s):

- Mechanical Engineering - Bachelor of Science (BSME) (<https://catalog.colorado.edu/undergraduate/colleges-schools/engineering-applied-science/programs-study/mechanical-engineering/mechanical-engineering-bachelor-science-bsme/>)
- Environmental Engineering - Bachelor of Science (BSEV) (<https://catalog.colorado.edu/undergraduate/colleges-schools/engineering-applied-science/programs-study/civil-environmental-architectural-engineering/environmental-engineering-bachelor-science-bsev/#acceleratedmasterstext>)
- Integrated Design Engineering - Bachelor of Science (BSIDE) (<https://catalog.colorado.edu/undergraduate/colleges-schools/engineering-applied-science/programs-study/integrated-design-engineering/integrated-design-engineering-bside/#acceleratedmasterstext>)

Requirements

The Master of Science Professional is a degree program that offers possibilities for a wide range of prospective students. It emphasizes project-based and curriculum-driven learning and is targeted for working engineers and undergraduates considering a career in industry.

This program offers courses in five focus areas, including a flex option that allows students to combine courses across the academic spectrum to meet their specific needs.

Students must complete at least 30 graduate-level credit hours, to include at least 18 credits in mechanical engineering. Students must take MCEN 5000 Sociotechnical Industry Skills as a part of the professional degree requirements. Up to 12 credits may be taken outside of the department. To have any course count towards the MS degree, they must be numbered 5000-level or above and earn a C or above. Students must have a 3.0 cumulative GPA or higher to graduate and to stay in good academic standing. A thesis is not required for this degree.

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Code	Title	Credit Hours
Required Courses		
MCEN 5000	Sociotechnical Industry Skills	3
Graduate courses (5000-level or higher) in MCEN		15
Elective Courses		
Graduate courses (5000-level or higher) from any department, MCEN or otherwise ¹		12
Total Credit Hours		30

¹ Approval to enroll in non-MCEN courses is at the discretion of the department offering the course. Approval is not guaranteed.

Learning Outcomes

By the completion of the program, students will be able to:

- Demonstrate working knowledge of core theoretical concepts utilized within the discipline of mechanical engineering, including opportunities for hands on and/or virtual learning.
- Demonstrate knowledge of the professional field of mechanical engineering, identify career goals and interact with alumni in the field of mechanical engineering, use effective communication to work collaboratively with others, integrate ethical thinking into engineering decision-making process, exhibit leadership behaviors, and work productively with a team to move toward common goals.