

# MATERIALS SCIENCE AND ENGINEERING - MASTER OF SCIENCE (MS)

CU Boulder's Master of Science degree in Materials Science and Engineering provides students with a wide range of knowledge within the broad industry of materials engineering. Students in the master's program complete 30 hours of coursework covering cutting-edge industry topics, such as traditional and emerging materials systems, experimental methods and advanced computational analyses.

For more information, visit the program's Master's Degree (<http://www.colorado.edu/mse/professional-masters-degree/>) 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):

- Biological Engineering - Bachelor of Science (BSCB) (<https://catalog.colorado.edu/undergraduate/colleges-schools/engineering-applied-science/programs-study/chemical-biological-engineering/biological-engineering-bachelor-science-bscb/#acceleratedmasterstext>)
- Chemical Engineering - Bachelor of Science (BSCHE) (<https://catalog.colorado.edu/undergraduate/colleges-schools/engineering-applied-science/programs-study/chemical-biological-engineering/chemical-engineering-bachelor-science-bsche/#acceleratedmasterstext>)
- 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/#acceleratedmasterstext>)

## Requirements

All master's students must declare a track by their second semester. Students enrolled in the master's program are not eligible to hold a teaching assistantship or research assistantship appointment. The following course requirements are subject to change; for the most current information, visit the department's coursework (<https://www.colorado.edu/mse/current-students/coursework/>) webpage.

Code	Title	Credit Hours
<b>Required Core Courses for All Tracks</b>		
MSEN 5919	Special Topics in MSE: Mass Transport (Functional Materials Chemistry)	3
MSEN 5370	Materials Thermodynamics and Kinetics	3

MSEN 5919	Special Topics in MSE: Mass Transport (Materials Characterization in Engineering)	3
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**Specialized Track Courses** 12

Students must take four approved track-specific courses

**Breadth Electives** 9

Students must select three breadth electives with approved of the MSE Graduate Advisor. Independent study and MSEN 5000 may count as breadth electives. Prof. MS students may also take up to 6 credit hours of Engineering Management courses.

**Total Credit Hours** 30

## Learning Outcomes

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