Overview
Increase your skills and take your career to a new level in the field of engineering with advanced training in mechanical engineering. In a recent study, EMSI determined that mechanical engineering is among the top 25 occupations facing potential skill shortages. Prepare yourself to meet this market demand with our online Master of Engineering – mechanical engineering specialization which focuses specifically on materials engineering.

Advanced analysis and detailed knowledge of material properties are required when choosing or assessing materials for various engineering projects. Equally important is an understanding of the design, costs, and environmental impact involved. As a practitioner-oriented program, this mechanical engineering degree is designed to equip you with that knowledge and the technical skills for fieldwork practice.

A variety of materials engineering courses offer advanced training in manufacturing, metals and alloys, advanced composite materials, and mechanical design, including material aspects in the context of engineering design and manufacturing processes. Graduates finish this program both technically competent and able to balance business and management principles.

In addition to core courses, flexibility within the online mechanical engineering degree electives allows you to choose coursework that aligns with specific educational or career goals. From systems engineering to experimental optimization, you’re able to choose which 12 credits best round out your degree.
Minimum Admission Requirements

- Bachelor’s degree in engineering or engineering-related field
- Minimum GPA of 3.0 on a 4.0 scale or first class standing*
- Calculus 1, 2, 3*
- Ordinary differential equations*
- Physics 1 and 2 (calculus-based)*
- For international students: The minimum TOEFL score for admission without condition is 80, and IELTS is 6.5.
- GRE test scores are not required, but may be submitted if you feel these will strengthen your application.

*If you do not meet minimum requirements, please contact megradstudies@engr.colostate.edu to get your transcripts/credentials evaluated before formally applying for the program.

Completion Requirements

- A minimum of 30 credits of graduate work in an approved course of study is required
- 24 credits at the 500-level must be earned at Colorado State University, 21 of which must be earned after formal admission, and 15 of which must be within the mechanical engineering department.
- This is a coursework-only degree; a thesis, project paper, or final examination is not required. Professional experience is not required, but strongly preferred.