

Manufacturing Engineering (MFE)**Minor in Manufacturing Engineering****Department of Materials Science and Engineering, College of Engineering and Applied Sciences**

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Manufacturing Engineering (MFE)

The Department of Materials Science and Engineering offers the minor in Manufacturing Engineering, suitable for Engineering Science students or for non-Engineering Science students who seek to obtain a more thorough understanding of the engineering sciences. The rapidly changing nature of technology in the manufacturing industries creates a need for graduates with a background in such areas as modern materials processing, design, thermodynamics, statistics, and analysis. The courses in the minor in Manufacturing Engineering provide the student with a broad introduction to the engineering science principles and applications associated with manufacturing engineering and provide important skills for careers in manufacturing, process and systems engineering, and quality engineering.

Engineering science, computer engineering, electrical engineering, mechanical engineering, and applied mathematics and statistics students can assemble a sequence of courses with 18 to 24 credits to satisfy the minor. Courses used to satisfy requirements of another minor in engineering science may not be used to satisfy requirements of another minor in engineering science. The student's program must be approved by the undergraduate program director.

Requirements for the Minor in Manufacturing Engineering (MFE)

Completion of the minor requires 18 to 24 credits.

Requirements for students majoring in Engineering Science (ESG)

1. ESM 334 Materials Engineering and ESM 335 Strength of Materials or MEC 310 Introduction to Machine Design and MEC 410 Design of Machine Elements
2. Five courses chosen from:
AMS 310 Survey of Probability and Statistics
ESG 201 Engineering Responses to Society
ESM 336 Electronic Materials
ESM 353 Biomaterials: Manufacture, Properties, and Applications
ESM 369 Polymer Engineering
ESM 488 Cooperative Industrial Practice
ESM 499 Research in Materials Science
EST 392 Engineering and Managerial Economics
MEC 305 Heat and Mass Transfer

Requirements for all other students

1. ESM 334 Materials Engineering and ESM 335 Strength of Materials or MEC 310 Introduction to Machine Design and MEC 410 Design of Machine Elements
2. AMS 310 Survey of Probability and Statistics
3. One course chosen from the following:
ESE 123 Introduction to Electrical and Computer Engineering
ESG 100 Introduction to Engineering Science
MEC 101 and 102 Engineering Computing and Problem Solving I, II
4. ESG 201 Engineering Responses to Society
5. ESM 335 Strength of Materials
ESM 369 Polymer Engineering
6. Two courses from:
ESM 353 Biomaterials: Manufacture, Properties, and Applications
ESM 488 Cooperative Industrial Practice
ESM 499 Research in Materials Science
EST 392 Engineering and Managerial Economics
MEC 305 Heat and Mass Transfer

No courses are associated with this academic program.