

UMass Dartmouth

2018-2019 UMass Dartmouth Undergraduate Catalog

Mechanical Engineering Minor

The minor in Mechanical Engineering introduces students to the core areas of the discipline and then allows them to create their own area of focus from our numerous course offerings or to focus in one of four traditional areas: controls, design, manufacturing, or thermal science. Every student in our minor will gain an understanding of moving systems, the transfer and use of energy and the ways materials bend and change as a result of stress. The focus areas allow more advanced study in particular areas of interest. The courses in our minor represent the heart of our discipline and consist of some of the most challenging courses in our department. While students with GPAs above 2.0 are eligible to participate, this minor is really only recommended for students with very strong academic records.

A student who plans to pursue a minor in mechanical engineering must take the following core courses, and then choose one of the paths. These paths are not mandatory; they are proposed to facilitate advising.

A minor must be completed at the time of the degree and will be so noted on the student's transcript. A student cannot be readmitted to the University to complete only a minor.

Complete the following courses - 10 credits

- [EGR 241 - Eng Mechanics I:Statics](#) Credits: 3
- [EGR 242 - Eng Mechanics II:Dynamics](#) Credits: 3
- [MNE 252 - Mechanics of Materials](#) Credits: 4

Also complete one path.

Typical paths are:

Controls - 10 credits

- [MNE 381 - Design of Machine Elements](#) Credits: 3
- [MNE 391 - Systems Design and Control](#) Credits: 4
- [MNE 466 - Control Systems Design](#) Credits: 3

Design - 10 or 11 credits

- [MNE 381 - Design of Machine Elements](#) Credits: 3
- [MNE 391 - Systems Design and Control](#) Credits: 4

Plus one of the following courses:

- [MNE 231 - Material Science](#) Credits: 4
- [MNE 441 - Mechanical Vibrations](#) Credits: 3
- [MNE 485 - Finite Element Method](#) Credits: 3

Manufacturing - 11 credits

- [MNE 231 - Material Science](#) Credits: 4
- [MNE 345 - Design for Manufacturing](#) Credits: 4

Plus one of the following courses:

- MNE 535 Advanced Statistical Quality Control - 3 credits
- [MNE 481 - Comptr Aided Manufactrng](#) Credits: 3
- [MNE 482 - Robotics](#) Credits: 3

Thermal Sciences - 10 credits

- [MNE 220 - Engineering Thermodynamics I](#) Credits: 3
- [MNE 311 - Heat Transfer](#) Credits: 3
- [MNE 332 - Fluid Mechanics](#) Credits: 4

Open - 12 credits

A student does not have to choose any of the above paths. Instead the student must take at least 12 credits of MNE courses including three MNE courses at the 300-level or higher.
