

Michigan State University
Department of Mechanical Engineering

ENGINEERING MECHANICS OPTION

(12 Credits)

Leonardo DaVinci reportedly described the study of mechanics as “the paradise, the Garden of Eden of mathematics, for therein it bears its fruit.” The engineering mechanics option is designed to provide undergraduate students with a more thorough understanding of analytical, computational and experimental methods for investigating the response of structures and fluids to external forces, pressures, thermal effects and other environmental loads. These skills have applications in all areas of mechanical engineering as well as in many interdisciplinary fields, and they are the key to modern mathematics-based design processes that are used by all major engineering firms. This option is also well suited for preparing students for graduate study in mechanical engineering or engineering mechanics.

To complete a Bachelor of Science degree in mechanical engineering with an engineering mechanics option, students must complete the requirements for the B.S. degree, including the following 12 credits:

- ME 423 Intermediate Mechanics of Deformable Solids–3 credits (Fall Semester)
- ME 475* Computer Aided Design of Structures–3 credits (Spring Semester)

Plus 6 credits from the following list:

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| •ME 425 Experimental Mechanics | 3 credits (Fall Semester) |
| •ME 432 Intermediate Fluid Mechanics | 3 credits (Spring Semester) |
| •ME 464 Intermediate Dynamics | 3 credits (Spring Semester) |

CREDIT DISTRIBUTION: The 12 credits in the option will fulfill the Senior Elective requirement, including the “design intensive” course component. Completion of the option will be noted on the final transcript.

*Design intensive.