

Michigan State University
Department of Mechanical Engineering

BIOMEDICAL ENGINEERING OPTION

(16-17 Credits)

The Biomedical Engineering Option is designed for undergraduates who plan to pursue graduate work in a biomedical area or seek employment in selected medical areas. The option, which is administered by the College of Engineering, is available to students who are enrolled in bachelor's degree programs in the College of Engineering.

To complete a Bachelor of Science degree in *mechanical engineering* with a Biomedical Engineering Option, students must complete the requirements for the B.S. degree, including the following 16-17 credits:

- PSL 250 Introductory Physiology—4 credits (Fall and Spring)

Plus one of the following courses:

- BS 110 Organisms and Populations—4 credits (Fall and Spring)
- BS 111 Cells and Molecules—3 credits (Fall, Spring and Summer)

Plus 9 credits from the following list:

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| •ME 490 Independent Study | 1-4 credits (Fall, Spring, Summer) |
| •ME 491 Selected Topics | 1-4 credits (Fall, Spring, Summer) |
| •ME 494 Biofluid Mechanics & Heat Transfer | 3 credits (Fall Only) |
| •ME 495 Tissue Mechanics | 3 credits (Spring Only) |
| •ME 497 Biomechanical Design | 3 credits (Spring Only) |
| •BME 401 Quantitative Human Biology (<i>see note below</i>) | 3 credits (Spring Only) |
| •MSE 425 Biomaterials & Biocompatibility | 3 credits (Spring Only) |

CREDIT DISTRIBUTION: PSL 250 will be applied to the Bioscience requirement, and BS 110 or 111 will be applied to Other Electives. The nine engineering credits will be applied to the Senior Elective requirement (*not* the “design intensive” course component, however). Completion of the option will be noted on the final transcript.

NOTE: One of the prerequisites for BME 401 is (ANTR 350 or concurrently).