



Bachelor of Science in Engineering (BSE)

The state's only evening undergraduate engineering degree program

Take the next step in your career by earning your bachelor's degree in engineering. MSOE's BSE degree is designed for working adults who want to enhance their knowledge and professional credentials with an engineering degree.

If you need to take classes part time and in the evening, or if you are a transfer student, the BSE program is designed for you. Students from a variety of educational paths, such as non-engineering bachelor degree programs, two-year pre-engineering or technology programs, will find it easy to pursue an engineering degree at MSOE.

You'll get comprehensive coverage of the basic sciences, engineering sciences and design with the opportunity to tailor the program to your unique career goals through numerous electives, including product design and enterprise systems.

Program Goals

The BSE degree is designed to provide:

- a program tailored to the working professional who may already have previous college experience, an engineering-related career, and/or very clear professional objectives for continued study of engineering
- a firm grounding in the fundamentals of engineering science and engineering design

- numerous elective options to allow for flexibility and customization of the technical focus of the degree.

Suggested elective tracks include:

- product design – mechanical design, CAD, materials, design for quality
- enterprise systems – manufacturing systems, facilities, lean manufacturing, quality assurance
- other interdisciplinary specialties

The MSOE Advantage

MSOE's solid reputation makes your degree more competitive than those from many other colleges or universities. And the foundation in science, math and engineering will give you the skills to move ahead in your career.

Your classes will be taught by professors, not teaching assistants. Class sizes will be small, allowing personalized attention from the professor. This also encourages student interaction and networking.

Program Director: Dr. Cynthia Barnicki;
barnickc@msoe.edu

Bachelor of Science in Engineering Course Listing*

EG124 CAD Graphics I	ME321 Materials Science
MA128 Analytic Geometry and Calculus I	GE3101 Fluid Mechanics
OR100 Freshman Orientation ¹	MA3501 Engineering Mathematics I
MA225 Calculus II	IE340 Project Management
PH113 College Physics I	MA3502 Engineering Mathematics II
MA226 Calculus III	ME354 Thermodynamics and Heat Transfer
EN131 Composition	MS354 Principles of Accounting
MA262 Probability and Statistics	TC452 Interpersonal Communications
PH123 College Physics II	IE423 Engineering Economy
CH200 Chemistry I	MS356 Business Finance
EN132 Technical Composition	GE3650 Engineering Systems Design
CH201 Chemistry II	GE3651 Computer-aided Engineering Design
HU100 Contemporary Issues in the Humanities	GE3301 Instrumentation and Control of Engineered Systems
ME 255 Engineering Statics for Nonmechanical Engineers	SS461 Organizational Psychology
GE3601 Solid Modeling and Design	HU432 Ethics for Professional Managers and Engineers
ME256 Engineering Dynamics for Nonmechanical Engineers	GE4901 Capstone Design I
GE3602 Solid Modeling and Design II	OR402 Professional Guidance
ME207 Mechanics of Materials	GE4902 Capstone Design II
EN241 Speech	GE4903 Capstone Design III
GE3901 Computer Tools	5 Humanities/Social Science Electives ²
EE2501 DC Circuit Analysis	2 Math/Science Electives ²
MS331 Business Law	6 Technical Electives ²
Economics Elective	6 Free Electives ²
EE2502 Time-varying Circuit Analysis	

* Shown are the complete degree requirements. Students with an associate degree or college credits will receive transfer credit depending upon their college transcripts.

¹ Transfer students who have completed 36 quarter or 24 semester credits will be waived from OR-100, but will be required to complete OR-301 Transfer Student Orientation.

² There are 57 credits of elective subjects in the engineering program, which must be taken as follows:

- 15 credits from humanities and social sciences (HU/SS), distributed as follows:
 - 3 credits from the sociology series (SS-47X).
 - 3 credits from the political science series (SS-45X).
 - 6 credits from courses with an HU designation.
 - 3 credits with either an HU or SS designation.
- 6 credits from the MA, PH, CH, or SC designations, from an approved list.
- 18 credits from the technical electives list.
- 18 credits from any 200-, 300- or 400- level subject (free elective), subject to an approved plan of study.