

BS in Engineering Technology with Emphasis in Manufacturing

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Degree Program Description

B.S. in Engineering Technology program with Emphasis in Manufacturing prepares graduates to apply basic mathematics, science, engineering, and technology principles and technical skills that enable them to engage in a variety of engineering technology projects. Coursework includes various engineering technology topics, including laboratory and design projects that lead to careers in manufacturing systems and general engineering technology areas.

Major Program Requirements

The BS in Engineering Technology requires a total of 120 credit hours for completion. The students are required to complete all University general education (<https://catalog.missouri.edu/academicdegreerequirements/generaleducationrequirements/>), University undergraduate requirements (<https://catalog.missouri.edu/academicdegreerequirements/universityrequirements/>), degree, and major requirements, including selected foundational courses, which may fulfill some University general education requirements. These include 15 credits of general education requirements, 27 credits of technical core requirements, 63 credits of required core courses, and 15 credits of technical electives.

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|---|-----------|
| General Education Requirements | 15 |
| ENGLSH 1000 Writing and Rhetoric | 3 |
| American History/Government (Social and Behavioral Science) | 3 |
| COMMUN 1200 Public Speaking | 3 |
| PHIL 1100 The Difference Between Right and Wrong: An Introduction to Ethics | 3 |
| or PHIL 1200 How to Think: Logic and Reasoning for Everyday Life | |
| HUM/FA 2000+ level | 3 |
| Technical Support Core Requirements | 27 |
| ECONOM 1014 Principles of Microeconomics | 3 |
| MATH 1400 Calculus for Social and Life Sciences I | 3 |
| PHYSICS 1210 College Physics I | 4 |
| PHYSICS 1220 College Physics II | 4 |
| CHEM 1100 Atoms and Molecules with Lab | 4 |
| STAT 2500 Introduction to Probability and Statistics I | 3 |
| ISE 2710 Engineering Economic Decision-Making | 3 |
| MANGMT 3000 Principles of Management | 3 |
| Required Core Courses | 63 |
| Engineering Technology Core Courses | 28 |
| ENGINR 1000 Introduction to Engineering | 1 |
| INFOTC 1040 Introduction to Problem Solving and Programming | 3 |

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|--|-----------|
| MAE 1100 Introduction to Computer Aided Design | 3 |
| ENGTC 1250 Statics for Engineering Technology | 3 |
| ENGTC 2150 Fundamental Electronics | 3 |
| ENGTC 2250 Mechanics for Technology | 3 |
| ENGTC 2350 Materials, Processes, and Testing | 3 |
| ENGTC 3350 Machine Tool Technology | 3 |
| ENGTC 3450 Fluid Power for Technology | 3 |
| ENGTC 4800 Industrial Safety and Risk Assessment | 3 |
| Manufacturing Engineering Technology Core Courses | 35 |
| MFGET 1500 Introduction to Manufacturing | 3 |
| ISE 2030 Fundamentals of Systems Design and Analysis | 3 |
| MFGET 2500 Manufacturing Methods | 3 |
| MFGET 2600 Computer Aided Manufacturing | 3 |
| MFGET 3200 Intro Robotics * | 3 |
| MFGET 3400 Manufacturing Process Improvement | 3 |
| MFGET 3700 Industrial Automation I | 3 |
| MFGET 3800 Smart Manufacturing Technology | 3 |
| MFGET 4700 Industrial Automation II | 3 |
| ENGTC 4950 Industrial Internship/Cooperative Education * | 3-6 |
| ENGTC 4970W Capstone Design I * | 3 |
| ENGTC 4980W Capstone Design II * | 3 |
| Technical Electives (select 5 courses from list) | 15 |
| MECET 2500 AC/Linear and Solid-State Electronics | 3 |
| MECET 2600 Industrial Electricity and Control | 3 |
| INFOTC 2810 Fundamentals of Network Technology | 3 |
| INFOTC 2910 Cyber Security | 3 |
| INFOTC 3650 Leadership and Ethics in Information Technology | 3 |
| ENGTC 3100 Microprocessors Systems with lab * | 3 |
| MECET 3400 Advanced Robotics | 3 |
| INFOTC 3810 Computer Network Security | 3 |
| MECET 3800 Digital and Microcontroller Systems | 3 |
| ENGTC 4100 Instrumentation & Process Control * | 3 |
| MFGET 4600 Introduction to Adaptive (Additive) Manufacturing * | 3 |

* Courses are in development.

Semester Plan

Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available.

| First Year | | | |
|-----------------------------|----|----------------------------|-----------|
| Fall | CR | Spring | CR |
| ENGINR 1000 | 1 | MAE 1100 | 3 |
| MATH 1400 | 3 | MFGET 1500 | 3 |
| PHYSICS 1210 | 4 | PHYSICS 1220 | 4 |
| ENGLSH 1000 | 3 | CHEM 1100 | 4 |
| American History/Government | 3 | Social/Behavioral Sciences | 3 |
| | | 14 | 17 |
| Second Year | | | |
| Fall | CR | Spring | CR |
| INFOTC 1040 | 3 | ISE 2030 | 3 |

| | | | |
|-------------|---|-------------------|---|
| ENGTC 1250 | 3 | ENGTC 2250 | 3 |
| STAT 2500 | 3 | MFGET 2500 | 3 |
| ENGTC 2150 | 3 | ENGTC 3450 | 3 |
| COMMUN 1200 | 3 | PHIL 1100 or 1200 | 3 |
| 15 | | 15 | |

| Third Year | | | |
|------------------------|----|------------------------|----|
| Fall | CR | Spring | CR |
| MFGET 2600 | | 3 MFGET 3400 | 3 |
| ENGTC 2300 | | 3 MFGET 3700 | 3 |
| ENGTC 3200 | | 3 ENGTC 3300 | 3 |
| ISE 2710 | | 3 MANGMT 3000 | 3 |
| Humanities 2000+ level | | 3 Technical Elective 1 | 3 |
| 15 | | 15 | |

| Fourth Year | | | |
|----------------------|----|------------------------|----|
| Fall | CR | Spring | CR |
| MFGET 3800 | | 3 Technical Elective 3 | 3 |
| ENGTC 4950 | | 3 Technical Elective 4 | 3 |
| ENGTC 4800 | | 3 Technical Elective 5 | 3 |
| Technical Elective 2 | | 3 MFGET 4700 | 3 |
| ENGTC 4970W | | 3 ENGTC 4980W | 3 |
| 15 | | 15 | |

Total Credits: 121

Degree Audit

The degree audit is an automated report reflecting a student's academic progress toward the completion of a degree.

MU students can request a degree audit by logging in to myDegreePlanner (<https://mydegreeplanner.missouri.edu>). Students may also access myDegreePlanner via myZou, in the Student Center, click on the Academic Progress Tile, then select Request Degree Audit. The audit automatically pulls in the student's MU course work, transfer courses and courses in progress. This is available to current students, admitted students, and those who last attended less than three terms ago.

Past MU students can request a degree audit by contacting the Academic Advising Unit of the division in which they were last enrolled at MU. For contact information, go to <https://advising.missouri.edu/contact/>.

Prospective students, can access a preliminary MU degree audit via <https://www.transferology.com> (<https://www.transferology.com/>). Information on the college credits already earned will have to be manually entered before it can be evaluated against current degree requirements.

For additional details on degree audits, go to <https://registrar.missouri.edu/degrees-audits/degree-audits/>.

Major and Career Exploration

The University of Missouri has many resources to assist you in exploring majors and career possibilities. For guidance, visit the Majors and Careers (<https://career.missouri.edu/majors-careers/>) website or view specific resources below.

- If you are considering a change of major or are exploring multiple majors, schedule an appointment with an advisor in the Discovery Center (<https://discoverycenter.missouri.edu/>) by calling (573)884-9700 or through MU Connect (<https://mizzou.starfishsolutions.com/starfish-ops/dl/instructor/>

[serviceCatalog.html?bookmark=service/3761489](https://catalog.missouri.edu/serviceCatalog.html?bookmark=service/3761489)) Discovery Center service in you success network.

- If you have decided on a major, visit an academic advisor in the School or College that you are interested in to discuss the process of declaring the major (<https://advising.missouri.edu/majors-minors/changing-major/>).
- If you would like to learn more about your career interests, abilities, values and talents, visit the MU Career Center (<https://career.missouri.edu/connect/>). No Appointment is necessary to explore career options with one of our staff members.
- If you would like information about MU majors and degree programs, visit:
 - the Degrees, Majors (Degree Programs), Emphasis Areas, Minors and Certificates (<https://catalog.missouri.edu/degreesanddegreeprograms/>) page in the catalog,
 - the MU Majors (<https://majors.missouri.edu>) website.

For additional major and career exploration resources, visit Major & Career Exploration (<https://catalog.missouri.edu/majorcareerexploration/>) in the catalog.