

The Mechanical Engineering Technology program prepares students for a broad range of occupations and challenges. Beginning with foundation courses in math, applied science, CAD, manufacturing processes and communication, students move on to the applied engineering courses that give them a solid technical background for their careers. Students develop strong analytic and problem-solving skills. Their understanding of the principles taught in the classroom is enhanced with many hands-on labs and real-world applications provided by faculty with extensive industrial experience.

The Bachelor of Science in Mechanical Engineering Technology is accredited by the Engineering Technology Accreditation Commission of ABET Accreditation (ETAC-ABET), <http://www.abet.org>.

**Communication Competency Requirements**

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
COMM 121	Fundamentals of Public Speaking	3	SPE 101	Public Speaking	3
ENGL 150	English 1	3	ENG 111	English 1	3
ENGL 250	English 2	3	ENG 112	English 2	3
ENGL 311	Advanced Technical Writing	3	No Equivalent	No Equivalent	No Equivalent

**Quantitative Literacy Requirements**

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
MATH 116	Intermediate Algebra-Numerical Trigonometry	4	MTH 122*	Analytical Trigonometry	3

**Natural Sciences Competency Requirements - 1 course with lab**

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
PHYS 211	Introductory Physics 1	4	PHY 232	Introductory Physics 1	4
PHYS 212	Introductory Physics 2	4	PHY 233	Introductory Physics 2	4

**Self and Society Competency Requirements – Minimum 9 credits from 2 different disciplines with 1 at 200 level or higher**

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
Varies	FSU General Education – Self and Society Competency Electives	9	Varies	Varies	9

**Culture Competency Requirements - Minimum 9 credits from 2 different disciplines with 1 at 200 level or higher**

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
Varies	FSU General Education - Culture Electives	9	Varies	Varies	9

**Additional General Education Requirements**

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
MATH 126	Algebra-Analytical Trigonometry	4	MTH 151*	College Algebra	4
MATH 220	Analytical Geometry – Calculus 1	4	MTH 222	Analytical Geometry – Calculus	5
MATH 230	Analytical Geometry – Calculus 2	4	MTH 223	Analytical Geometry – Calculus	5
CHEM 114	Intro to Gen Chemistry	4	CHM 122	Introduction to Chemistry	4

[Ferris State University General Education Courses](#) Students are encouraged to work with an advisor to select appropriate general education courses. General Education Requirements - “Diversity (both Global and U.S. Diversity)” and “Self and Society Foundation” requirements must be met either through Culture or Self and Society or other courses; must have a 200 level course in both Culture and Self and Society Courses. The Self and Society Foundation course can be your 200+ course. Some courses include both Collaboration and Problem Solving attributes.

\*The Math equivalents shown above are not exact matches. There are often several options in math that lead up to calculus. Consultation with a counselor at the community college is recommended.

**Major Requirements – 48 Credits Required**

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
MECH 111	MET Seminar	1	No Equivalent	No Equivalent	No Equivalent
MECH 122 or ISYS 105	Computer Apps 1 for Technology or Intro Micro Systems - Software	2	CIS 165	Adv Desktop Applications	3
MECH 211	Fluid Mechanics	4	No Equivalent	No Equivalent	No Equivalent
MECH 212	Kinematics of Mechanisms	2	No Equivalent	No Equivalent	No Equivalent
MECH 222	Machine Design	4	No Equivalent	No Equivalent	No Equivalent
MECH 223	Thermodynamics	3	No Equivalent	No Equivalent	No Equivalent
MECH 340	Statics and Strengths of Materials	4	No Equivalent	No Equivalent	No Equivalent

## Major Requirements (cont'd.)

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
MECH 341	Statics and Strengths of Materials Lab	1	No Equivalent	No Equivalent	No Equivalent
MECH 311	Finite Element Analysis / Solid Modeling	2	No Equivalent	No Equivalent	No Equivalent
MECH 322	Computer Apps 2 for Technology	2	No Equivalent	No Equivalent	No Equivalent
MECH 330	Heat Transfer	3	No Equivalent	No Equivalent	No Equivalent
MECH 332	Mechanical Measurements / Mechatronics	3	No Equivalent	No Equivalent	No Equivalent
MECH 360	Dynamics	3	No Equivalent	No Equivalent	No Equivalent
MECH 393	Industrial Internship	4	No Equivalent	No Equivalent	No Equivalent
MECH 421	MET Senior Lab	4	No Equivalent	No Equivalent	No Equivalent
MECH 440	Noise and Vibration	3	No Equivalent	No Equivalent	No Equivalent
MECH 499	Senior Project	3	No Equivalent	No Equivalent	No Equivalent

## Technical Related – 26 Credits Required

FSU Course	FSU Course Title	FSU Cr. Hrs.	WSCC Equiv.	WSCC Course Title	WSCC Cr. Hrs.
EEET 201	Electrical Fundamentals	3	No Equivalent	No Equivalent	No Equivalent
ETEC 140	Engineering Graphics	3	No Equivalent	No Equivalent	No Equivalent
MFGT 150	Manufacturing Process	2	No Equivalent	No Equivalent	No Equivalent
MATL 240	Intro to Material Science	4	No Equivalent	No Equivalent	No Equivalent
MATL 341	Material Selection – Metals	3	No Equivalent	No Equivalent	No Equivalent
MFGE 341 / STQM 260	Quality Science Statistics	3	MTH 123*	Introduction to Statistics	3
MFGE 423	Engineering Economics	2	No Equivalent	No Equivalent	No Equivalent
Varies	Approved Technical Electives*	6	Varies	Varies	6

\*Any combination of six or more credits of advisor approved technical electives may be applied to degree.

<b>Total Credits Required for Degree</b>	<b>132-133</b>
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## Program Contact Information:

### Main Campus, Big Rapids

### College of Engineering Technology

(231) 591-2755 | ferris.edu/mece | mech@ferris.edu

[www.ferris.edu/transfer](http://www.ferris.edu/transfer)

## Delivery Locations

This degree and the Ferris courses are offered at the following locations:

- Ferris State University, Main Campus, Big Rapids
- Select courses may be delivered online and/or in a mixed delivery format (i.e. a mix of online and face-to-face instruction at the Ferris Main Campus or at an off-campus location).

## General Admission Criteria

### New Students

- Completion of the AAS degree for Mechanical Engineering Technology with a 2.5 GPA in Math, 2.7 in major, and MATH 216/220 competency.

### Transfer Students

- Contact the Mechanical Engineering Technology office to discuss options.
- Combined college or university GPA of 2.35 (on a 4.0 scale) from all institutions attended (GPA is based on completion of 12 credit hours or more). It is highly recommended that transfer credits include the FSU equivalency of ENGL 150, MATH 115, and the FSU equivalency of a social awareness or cultural enrichment course OR general education requirements. Developmental courses are not considered in computing the GPA requirement.
- Transfer equivalency for FSU ENGL 150 or placement during the first semester at FSU that would require an ACT English score of 16 or higher; Compass score 70 – 100.
- Transfer equivalency for FSU MATH 115 or placement during the first semester at FSU that would require an ACT Math score of 19 or higher; Compass Algebra score 46 - 74 and HS Algebra with 2.0.

## Advising Notes

It is recommended that potential applicants meet with an advisor to review the degree, course schedule, and have any questions answered prior to completing an application. Students who are completing the MTA may have different general education course requirements for the particular degree selected. Meeting with a Ferris advisor prior to the selection of general education or elective course work may reduce the chance of completing a course that will not apply toward the selected degree. Once admitted, students must continue to meet with an advisor as they work toward graduation.

## Transfer Student Orientation

All new students to Ferris State University are required to complete an orientation.

**Online Learning**

Select courses delivered online and/or in a mixed delivery format (i.e. a mix of online and face-to-face instruction at the Ferris Main Campus or at an off-campus location). The “Online Readiness Tutorial” is required for students who register for an online *course* or are completing an online *degree*. Students must demonstrate competency in Blackboard skills. This may be done by taking a tutorial and quiz, or, for students who have already taken and passed online courses, they can submit a waiver request. Students should check with the department that offers the class to determine its particular needs and/or the Ferris advisor regarding registration for online course work.

**Reverse Transfer Agreement**

The Community College and Ferris have entered into a partnership in order to work collaboratively and creatively to increase student completion of associate and bachelor degrees. The partners work together to provide a seamless transfer experience and increase student retention and completion at both the community college and Ferris.

**Michigan Transfer Agreement (MTA)**

Ferris participates in the Michigan Transfer Agreement (MTA). This agreement will facilitate the transfer of general education requirements from one Michigan institution to another. Students may complete the MTA as part of a degree program or as a stand-alone package. The MTA consists of a minimum of 30 general education credit hours as identified by the college or university.

Students transferring to Ferris with the Michigan Transfer Agreement (MTA) and entering a degree program will have met a 30-hour block of lower-level general education courses. However, this does not exempt students from completing program specific prerequisites or higher-level general education course requirements. Students should contact their advisor regarding classes that meet the MTA.

Students must work with their Ferris advisor to declare a Minor or Concentration and for selection of Directed Electives.

**Disclaimer**

This is a guide for students who plan to transfer to Ferris State University. This guide is not intended to be a contract with Ferris. The information on this guide is subject to change. Students should contact their community college or Ferris to keep informed of changes. Final responsibility for verifying all transfer information lies with the student. Please refer to effective and/or revised date on the bottom of this guide.