

Ferris Program: Mechanical Engineering Technology

Degree Type: Bachelor of Applied Science

Ferris College: College of Engineering Technology

Transfer School: Montcalm Community College (MONTCC)

Consortium Eligible: No

Total Credits Required: 130-131

Catalog Year: 2024-2025

GENERAL EDUCATION REQUIREMENTS – 56-57 Credits Required

Students are encouraged to work with an advisor to select appropriate general education courses. Diversity Competency -2 Courses Required. If not met by courses taken for Culture, Self and Society, or MTA, a student must meet the following: 1 course with the Global Diversity attribute and 1 course with the U.S. Diversity attribute. Ferris State University General Education www.ferris.edu/gened.

Communication Competency

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|---------------------------------|---------------------|-----------------|
| COMM 121 | Fundamentals of Public Speaking | 3 | |
| ENGL 150 | English 1 | 3 | |
| ENGL 250 | English 2 | 3 | |
| ENGL 311 | Advanced Technical Writing | 3 | |

Quantitative Literacy Competency

Requirements for Quantitative Literary Competency can be met with the following:

- Official Pre-2016 Math SAT Score of 560 or Higher
- Official Post-2016 Math SAT Score of 580 or Higher
- Official Math ACT Score of 24 or Higher

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|---|---------------------|-----------------|
| MATH 116 | Intermediate Algebra and Numerical Trigonometry | 4 | |
| MATH 120 | Trigonometry | 3 | |

Natural Sciences Competency

Two courses are required with a minimum of 6 credits: must have at least one lab course.

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|------------------------|---------------------|-----------------|
| PHYS 211 | Introductory Physics 1 | 4 | |
| PHYS 212 | Introductory Physics 2 | 4 | |

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Culture Competency

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one 200 level or higher course.

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|---------------------|---------------------|-----------------|
| Varies | Culture Electives | 9 | Varies |

Self and Society Competency

Three courses are required with a minimum of 9 credits: must be from two different disciplines, have at least one 200 level or higher course, and at least one Self and Society Foundation course.

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|----------------------------|---------------------|-----------------|
| Varies | Self and Society Electives | 9 | Varies |

Additional General Education Requirements

These courses are additional General Education courses to meet the requirements for this specific program.

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|-------------------------|--|---------------------|-----------------|
| CHEM 103 | Preparatory Chemistry | 3 | |
| MATH 126 or MATH 130 | Algebra and Analytic Trigonometry or Advanced Algebra Analytical Trigonometry | 4 | |
| MATH 216 or MATH 220 | Applied Calculus or Analytical Geometry and Calculus 1 | 4 | |
| MATH 226 or MATH 230 | Fourier Series and Applied Differential Equations or Analytical Geometry and Calculus 2 | 4 | |

COLLEGE REQUIREMENTS – 74 Credits Required

Major Courses

48 Credits Required.

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|--|---------------------|-----------------|
| MECH 111 | Mechanical Engineering Technology Seminar | 1 | |
| MECH 122 | Computer Apps 1 for Technology | 2 | |
| MECH 211 | Fluid Mechanics | 4 | |

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| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|--|---------------------|-----------------|
| MECH 212 | Kinematics of Mechanisms | 2 | |
| MECH 222 | Machine Design | 4 | |
| MECH 223 | Thermodynamics | 3 | |
| MECH 311 | Finite Element Analysis and Modeling | 2 | |
| MECH 322 | Computer Apps for Technology | 2 | |
| MECH 330 | Heat Transfer | 3 | |
| MECH 332 | Mechanical Measurements and Mechatronics | 3 | |
| MECH 340 | Statics and Strengths of Materials | 4 | |
| MECH 341 | Lab for Statics and Strengths of Materials | 1 | |
| MECH 360 | Dynamics | 3 | |
| MECH 393 | Industrial Internship | 4 | |
| MECH 421 | Mechanical Engineering Technology Senior Lab | 4 | |
| MECH 440 | Noise and Vibrations | 3 | |
| MECH 498 | Senior Project 1 | 1 | |
| MECH 499 | Senior Project 2 | 2 | |

Technical Related Courses

26 Credits Required. In addition to the required courses within this section, 6 credits are required in Approved Technical Electives. Any combination of 6 credits or more can be taken between the two electives.

| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|------------------------------------|---------------------|-----------------|
| ETEC 140 | Engineering Graphics Comprehensive | 3 | |
| MFGT 150 | Manufacturing Processes | 2 | |
| EAET 201 | Electrical Fundamentals | 3 | |
| MATL 240 | Introduction to Material Science | 4 | |
| MATL 341 | Material Selection Metals | 3 | |
| MFGE 341 | Quality Science Statistics | 3 | |

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| Ferris Course | Ferris Course Title | Ferris Credit Hours | Transfer Course |
|---------------|-----------------------------|---------------------|-----------------|
| MFGE 423 | Engineering Economics | 2 | |
| Varies | Approved Technical Elective | 6 | Varies |

PROGRAM CONTACT INFORMATION

Mechanical Engineering Technology Programs
(231) 591-2755
mech@ferris.edu
Ferris Statewide - Montcalm Community College
(616) 451-4777
FSUGR@Ferris.edu

ADMISSION REQUIREMENTS

New Student Admission Requirements

- The Mechanical Engineering Technology, BS degree is only open to students who meet the Transfer Student Admission Requirements below.
- High school students interested in this program may apply to the Mechanical Engineering Technology, AAS program.

Transfer Student Admission Requirements

- Must have completed an Associate of Applied Science degree in Mechanical Engineering Technology or 64 semester hours of college coursework satisfying specified prerequisites
- 2.0 College GPA (on a 4.00 scale)
- Competency in MATH 216/220
- Competency in PHYS 211/241

MORE INFORMATION

To fulfill the residency requirement for a bachelor's degree a student must earn a minimum of 30 credits from Ferris State University.

Steps to Apply

- Complete your [free application](#).
- Submit official transcripts
 - Submit official transcripts from every school attended to Transfer@Ferris.edu
 - Or mail to:
Ferris State University Admissions Office
1201 S. State St., CSS 201
Big Rapids, MI 49307
- Submit test scores (if required)
 - ACT Scores; go to the [ACT website](#) - Ferris State University School Code: 1994
 - SAT, CLEP and AP Scores; go to the [College Board website](#) - Ferris State University School Code: 1222

Advising Notes

It is recommended that potential applicants meet with an advisor to review the degree, course schedule, transfer policies and have any questions answered prior to completing an application. Ferris accepts transfer courses in which the student earned a letter grade of "C" or better. Additional policies such as the Ferris Sunset and Residency Requirement should be discussed with a Ferris advisor. Students who are completing the MTA may have different general education course requirements for the particular degree selected.

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Meeting with a Ferris advisor prior to the selection of general education or elective coursework may reduce the chance of completing a course that will not apply toward the selected degree. Students must work with their Ferris advisor to declare a Minor or Concentration and for the selection of Directed Electives.

Once admitted, students are required to complete an orientation and should continue to meet with an advisor as they work toward graduation.

To schedule an appointment or for additional transfer resources and policies see our [Transfer Resource page](#).

*Indicates an approved Ferris course substitution

Reverse Transfer Agreement

Ferris has reverse transfer agreements with several Michigan Community Colleges. Under such agreement, Ferris will provide your official University transcript to a partner school you have attended, so that they may grant you an associate or bachelor's degree upon completion of sufficient and appropriate credit hours from both institutions. In turn, the degree-granting institution will provide Ferris with an updated transcript reflecting the newly earned credential.

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.

Transfer Equivalencies Tools

The transfer equivalencies link is located in the Transfer Resources section at transfer.ferris.edu.

Disclaimer

Transfer guides are not intended to be a contract with Ferris. The information in this guide is subject to change and is aligned with the catalog year listed above. Students should contact their community college and/or Ferris to keep informed of changes. Students' final responsibility for verifying all transfer information lies with the student. Please refer to the [Ferris catalog](#) for the most current curriculum.

Partners may contact the Office of Transfer and Secondary School Partnerships with questions or updates at TransferGuidesArticulations@Ferris.edu.