

FERRIS STATE UNIVERSITY

MANUFACTURING ENGINEERING TECHNOLOGY ARTICULATION AGREEMENT AND TRANSFER GUIDE FOR

GRAND RAPIDS COMMUNITY COLLEGE

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**Ferris Program:** Manufacturing Engineering Technology  
**Degree Type:** Bachelor of Science  
**Ferris College:** College of Engineering Technology  
**Transfer School:** Grand Rapids Community College (GRCC)  
**Consortium Eligible:** Yes  
**Articulation Agreement:** Yes  
**Total Credits Required:** 120-124  
**Catalog Year:** 2024-2025

The effective dates for this articulation agreement are March 1, 2024 to March 1, 2027.

**GENERAL EDUCATION REQUIREMENTS – 40 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.

Visit the Ferris State for more information.

**Communication Competency**

If the Process Development Concentration (PDV) is chosen, MFGE 324, 393, and 421 are major and concentration courses that are also considered Communication Across the Curriculum (CATCs) courses and satisfy the upper-level Communication requirement. If the Quality Concentration (QTY) is chosen, the upper-level Communication requirement is met by ENGL 311.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
COMM 121	Fundamentals of Public Speaking	3	COM 131
ENGL 150	English 1	3	EN 101
ENGL 211 or ENGL 250	Industrial and Career Writing or English 2	3	No Equivalent or EN 102
Choose 1 of 3 ENGL 311	Advanced Technical Writing	3	EN 249
Choose 1 of 3 ENGL 321	Advanced Composition or Advanced Business Writin	3	No Equivalent
Choose 1 of 3 MFGE 324 and MFGE 393 and MFGE 421	Principles of Process Planning 1 + Internship in Manufacturing Engineering + Automation and Systems Design	3 + 4 + 4	No Equivalent

# FERRIS STATE UNIVERSITY

## Quantitative Literacy

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
MATH 220	Analytical Geometry and Calculus 1	4	MA 133

## 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	PH 125
Varies	Natural Sciences Elective	2	Varies

## Cultural Competency

Three courses are required with a minimum of 9 credits: must be from two different disciplines and have at least one at FSU 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 and have at least one at FSU 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

## COLLEGE REQUIREMENTS – 81-85 Credits Required

### Major Courses

32 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
MFGE 311	Industrial Engineering	4	No Equivalent
MFGE 321	Metrology	3	No Equivalent
MFGE 322	Production Processes	3	No Equivalent
MFGE 340	Statics and Strengths of Materials	4	No Equivalent
MFGE 341	Quality Science Statistics	3	No Equivalent
MFGE 342	Statistical Process Engineering	3	No Equivalent

# FERRIS STATE UNIVERSITY

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
MFGE 354	Lean Manufacturing	3	No Equivalent
MFGE 393	Internship in Manufacturing Engineering	4	No Equivalent
MFGE 423	Engineering Economics	2	No Equivalent
MFGE 442	Design of Experiments 1	3	No Equivalent

## Electives

31-33 Credits Required. In order to graduate with a bachelor's degree, a student must have a minimum of 120 credits. The electives required for each student may vary depending on courses taken. Based on how a student meets the programmatic requirements, they may need more or less than 31 to 33 credits of elective courses to meet the required 120 credit minimum. The total number of elective credits required depends on the chosen concentration in the Concentration section.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
MECH 122 or ISYS 105	Computer Applications 1 for Technology or Introduction to Microcomputer Systems and Software	2 or 3	CIS 103 or BA 145
MATH 126 or MATH 130	Algebra and Analytical Trigonometry or Advanced Algebra and Analytical Trigonometry	4	MA 108 and MA 110 or MA 131
MATL 240	Introduction to Material Science	4	TE 114
MFGT 150	Manufacturing Processes	2	MN 119
PDET 122	Parametric Modeling	1	DR 150 or DR 258 or DR 260
Varies	Electives (Consult Advisor)	31-33	Select MN 224, MN 242, and MN 244 and <i>one</i> of the following courses: DR 241, EG 110, MN 165, MN 217, or MN 219

## CONCENTRATION – 18-20 Credits Required (Advisor Approval)

Choose One Concentration

### Process Development Concentration (PDV)

20 Credits Required. Available at Both Big Rapids and Grand Rapids Campuses.

# FERRIS STATE UNIVERSITY

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
MFGE 312	CNC and CAM	4	No Equivalent
MFGE 324	Principles of Process Planning 1	3	No Equivalent
PLTS 325	Plastics Technology	2	MN 220
MFGE 411	Principles of Process Planning 2	2	No Equivalent
WELD 416	Production Welding Processes	2	No Equivalent
MFGE 421	Automation and Systems Design	4	No Equivalent
MFGE 422	Manufacturing Facilities Planning	3	No Equivalent

## Quality Concentration (QTY)

18 Credits Required. Available at Grand Rapids Campus Only.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
ENGL 311	Advanced Technical Writing	3	EN 249
MATL 341	Material Selection Metals	3	No Equivalent
MFGE 443	Continuous Improvement	3	No Equivalent
MFGE 444	Quality Auditing	3	No Equivalent
MFGE 446	Design of Experiments 2	3	No Equivalent
MFGE 447	Quality Planning	3	No Equivalent

## PROGRAM CONTACT INFORMATION

Manufacturing Engineering Technology Programs  
(231) 591-2511

(616) 451-4777

## ADMISSION REQUIREMENTS

### New Student Admission Requirements

- The Manufacturing 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 Manufacturing Technology, AAS program.

# FERRIS STATE UNIVERSITY

## Transfer Student Admission Requirements

- Combined college or university GPA of 2.50 (on a 4.00 scale) from all institutions attended. Developmental courses will not be considered in computing the GPA requirement.
- Minimum 57 transferable semester credit hours (C or higher) from an accredited college or university, including technical courses, general and technical related courses.
- Successful completion of COMM 121, ENGL 150 and (ENGL 211 or ENGL 250), MATH 126 or MATH 130, MATL 240, MFGE 150, PDET 122, MECH 122 or ISYS 105, a Natural Science Competency course (preferably Chemistry), a Culture Competency course, a Self and Society Competency course, or transfer equivalent courses of C grade or higher.

## MORE INFORMATION

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 a statewide location).

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 .
- Submit official transcripts
  - Submit official transcripts from every school attended to
  - 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 - Ferris State University School Code: 1994
  - SAT, CLEP and AP Scores; go to the - 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.

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 .

\*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.

# FERRIS STATE UNIVERSITY

## 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 .

## 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 for the most current curriculum.

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

## ARTICULATION AGREEMENT

The original, signed document is kept on file in the Office of Transfer and Secondary School Partnerships. To obtain a copy of the original, signed document, contact the Office of Transfer and Secondary School Partnerships at .