

Ferris Program: Product Design Engineering Technology

Degree Type: Bachelor of Science

Ferris College: College of Engineering Technology

Transfer School: Muskegon Community College (MUSKCC)

Consortium Eligible: Yes

Total Credits Required: 120-124

Catalog Year: 2024-2025

GENERAL EDUCATION REQUIREMENTS – 40-43 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 [general education page](#) for more information.

Communication Competency

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
COMM 121	Fundamentals of Public Speaking	3	COM 201
ENGL 150	English 1	3	ENG 101
ENGL 250	English 2	3	ENG 102
ENGL 321	Advanced Composition	3	No Equivalent

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 or MATH 120	Intermediate Algebra and Numerical Trigonometry or Trigonometry	4 or 3	No Equivalent or MATH 112

Natural Sciences Competency

Two courses are required with a minimum of 6 credits: must have at least one lab course. The courses depend on chosen minor, please see your advisor prior to registering for courses.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
CHEM 103 or CHEM 114 or CHEM 121	Preparatory Chemistry or Introduction to General Chemistry or	3 or 4 or 5	No Equivalent or No Equivalent or CHEM 101

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Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
	General Chemistry 1		
PHYS 211	Introductory Physics 1	4	PHYS 201CL&L

Culture 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
ARTS 101	Basic Art	3	ART 104
Varies	Culture Electives	6	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
GEOG 100	Geography of World Regions	3	GEOG 105
Varies	Self and Society Electives	6	Varies

COLLEGE REQUIREMENTS – 80 Credits Required

Major Courses

27 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
PDET 100	Product Design Engineering Technology Orientation and Degree Planning	1	No Equivalent
PDET 210	Design Career Preparation	1	No Equivalent
PDET 311	Seminar in Product Design	1	No Equivalent
PDET 312	Advanced Tolerancing	2	No Equivalent
PDET 321	Applied Mechanics and Kinematics	3	No Equivalent
PDET 322	Model and Prototype Development	2	No Equivalent

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Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
PDET 411	Machine Design	3	No Equivalent
PDET 412	Statistics and Ergonomics	2	No Equivalent
PDET 413	Applied Fluids and Thermodynamics	3	No Equivalent
PDET 415	Advanced Solid Modeling CAD	2	No Equivalent
PDET 422	Advanced Machine Design	4	No Equivalent
PDET 498	Senior Project 1	1	No Equivalent
PDET 499	Senior Project 2	2	No Equivalent

Additional Requirements

35 Credits Required.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
MATH 126 or MATH 130	Algebra and Analytic Trigonometry or Advanced Algebra and Analytical Trigonometry	4	MATH 111 and MATH 112
MATH 216 or MATH 220	Applied Calculus or Analytical Geometry and Calculus 1	4	MATH 151 or MATH 161
PDET 122 or ETEC 140	Parametric Modeling or Engineering Graphics Comprehensive	3	No Equivalent
COMM 336	Technical and Professional Presentation	3	No Equivalent
EAET 201	Electrical Fundamentals	3	ELTC 101 AL&L
MATL 240	Introduction to Material Science	4	No Equivalent
MATL 341	Material Selection Metals	3	No Equivalent
MECH 340	Statics and Strengths of Materials	4	No Equivalent
MFGE 352	Design for Manufacturing	2	No Equivalent
MFGT 150	Manufacturing Processes	2	No Equivalent
PLTS 342	Plastic Material Selection	3	No Equivalent

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Electives

18 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 18 credits of elective courses to meet the required 120 credit minimum.

Ferris Course	Ferris Course Title	Ferris Credit Hours	Transfer Course
Varies	Electives (Advisor Approval)	18	Varies

PROGRAM CONTACT INFORMATION

College of Engineering Technology
Product Design Engineering Technology Program
(231) 591-2755
PDET@Ferris.edu

Ferris Statewide - Muskegon Community College
(616) 451-4777
FerrisMuskegon@Ferris.edu

ADMISSION REQUIREMENTS

New Student Admission Requirements

- 2.75 High School GPA (on a 4.00 scale) (2.50 -2.74 with college approval)
- Minimum Composite Score of ACT 20/SAT 1030, Math Score of ACT 19/SAT 500, English Score of ACT17/SAT 450 ERW
- Placement into MATH 115 or higher
- Placement into ENGL 150 or higher

Transfer Student Admission Requirements

- 2.5 Cumulative College GPA (on a 4.00 scale)
- Placement into MATH 115 or higher
- Placement into ENGL 150 or higher For Junior Status and smooth transition into the GRCC off campus cohort
 - Minimum completion of 60 transferable semester credit hours or more with a combined college or university GPA of 2.50 (on a 4.00 scale) from all institutions attended.
 - Successful completion of COMM 121, ENGL 150, ENGL 250, MATH 126 or MATH 130, PHYS 211, MATL 240, Introductory Computer Aided Design (CAD) course, a Culture Competency course, a Self and Society Competency course, or transfer equivalent courses of C grade or higher.

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](#).

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- 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.

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

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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.