

The Manufacturing Engineering Technology program (with Quality Concentration) at Ferris offers instruction and practical experience in all facets of quality engineering. Graduates of the program determine how to interpret, monitor, and develop quality systems to ensure products meet customer expectations. Study through hands on applied coursework/projects in statistics, quality control, manufacturing methods, industrial engineering, design of experiments, and quality planning allows graduates to participate in the design of a Quality system. These abilities are always in demand, and the Manufacturing Engineering Technology program gives the student the skills necessary to enter into a professional position with an excellent salary. This unique concentration was designed with representatives from industry and the American Society for Quality Control. Although completion of a technical Associates degree is encouraged, it is not required for entry to the bachelor's degree.

Manufacturing Engineering Technology Admission Requirements

Transfer Students

- 2.5 College GPA (on a 4.0 scale)
- 57 semester hours of college coursework, including technical courses, general courses, and technical related courses.
- Completed Math through MATH 126 or 130.
- Completed COMM 121 or equivalent.
- Completed ENGL 150 and 211 or 250 or equivalent.
- Completed 3 credit hours of a Natural Science Competency course; preferred Chemistry.
- Completed MATL 240 or equivalent.
- Completed ISYS 105 or equivalent or completed competency exam.
- It is recommended that at least one Culture and one Self and Society Competency course be completed.

Transfer Students – Grand Rapids

- If applying to Grand Rapids the time to apply is best determined thru meeting with an advisor. The Grand Rapids campus admittance occurs year round, however, the Fall a student begins in dictates their graduation date.

Communication Competency Requirements

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
COMM 121	Fundamentals of Public Speaking	3	COM 131	Fundamentals of Public Speaking	3
ENGL 150	English 1	3	EN 100 or EN 101	College Writing or English Composition 1	3
ENGL 250 or ENGL 211	English 2 or Industrial & Career Writing	3	EN 102	English Composition 2	3
ENGL Upper	3 WIC's (MFGE 324 + 393 + 421) or ENGL 321 or ENGL 311	11 or 3	No Equivalent or EN 249	No Equivalent or Technical Writing	No Equivalent or 3

Quantitative Literacy Requirements

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
MATH 130	Advanced Algebra & Analytical Trigonometry + MATH 100 Gen Cr	5 or 7	MA 131 or MA 108 + 110	Pre-Calculus or Trigonometry + College Algebra	5 or 7
MATH 220	Analytical Geometry – Calculus 1	4	MA 133	Calculus with Analytic Geometry 1	5

Natural Sciences Competency Requirements

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
PHYS 211	Introductory Physics 1	4	PH 125	College Physics	5
Varies	FSU General Education – Natural Sciences Elective	3	Varies	Varies	3 - 4

Culture Competency Requirements - 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.

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
Varies	FSU General Education – Culture Electives	9	Varies	Varies	9

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

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
Varies	FSU General Education – Self & Society Electives	9	Varies	Varies	9

Ferris State University General Education Program

Students who wish to fulfill MTA are encouraged to work with an advisor to select appropriate general education courses.

Diversity - Competency met by 2 courses designated as Global and U.S. Diversity is satisfied by: These courses can be met through the Culture and Self and Society Competency requirements.

Additional Classes to meet credits for degree

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
ISYS 105	Intro Micro Systems – Software	3	BA 145 or CIS 103	Computer Applications in Business 1 or Introduction to Windows and Microsoft Office	3
MATL 240	Intro to Material Science	4	TE 114	Material Science	4

College Requirements – 83 Credits Required

Major Courses - 29 Credits Required

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
MECH 340	Statics and Strengths of Materials	4	No Equivalent	No Equivalent	No Equivalent
MFGE 311	Industrial Engineering	4	No Equivalent	No Equivalent	No Equivalent
MFGE 321	Metrology	3	No Equivalent	No Equivalent	No Equivalent
MFGE 322	Production Processes	3	No Equivalent	No Equivalent	No Equivalent
MFGE 341	Quality Science Statistics	3	No Equivalent	No Equivalent	No Equivalent
MFGE 342	Statistical Process Engineering	3	No Equivalent	No Equivalent	No Equivalent
MFGE 393	Internship (Department Approval)	4	No Equivalent	No Equivalent	No Equivalent
MFGE 423	Engineering Economics	2	No Equivalent	No Equivalent	No Equivalent
MFGE 442	Design of Experiments I	3	No Equivalent	No Equivalent	No Equivalent

Quality Concentration (QTY) – 18 Credits Required (Available at the Grand Rapids Campus only)

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	CC Course Title	CC Cr. Hrs.
MATL 341	Material Selection Metals	3	No Equivalent	No Equivalent	No Equivalent
MFGE 443	Continuous Improvement	3	No Equivalent	No Equivalent	No Equivalent
MFGE 444	Quality Auditing	3	No Equivalent	No Equivalent	No Equivalent
MFGE 446	Design of Experiments 2	3	No Equivalent	No Equivalent	No Equivalent
MFGE 447	Quality Planning	3	No Equivalent	No Equivalent	No Equivalent

Electives- 34 – 36 Credits Required (Consult Advisor) The credits required may vary depending on courses taken.

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 34 to 36 credits of elective courses to meet the required 120 credit minimum.

Total Credits Required for Degree	120 - 124
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Program Delivery Locations and Contact Information:

Main Campus, Big Rapids

College of Engineering Technology

Manufacturing Engineering Technology

(231) 591-2511 | [Manufacturing Degrees Email](#) | [Manufacturing Technology Website](#)

Ferris Statewide – Grand Rapids

(616) 451-4777 | [Ferris Grand Rapids Email](#) | [Ferris Statewide Website](#)

[Transfer Partnerships Website](#)

*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 either Grand Rapids Community College, the Ferris Main Campus or at an off-campus location).

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.

1. Earn 40 credits of 300 level or higher courses.

Transfer Student Orientation

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

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.