

### Northwestern Michigan College

#### Transfer Guide

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.

#### General Admission Criteria

There are several ways to use the community college as a start for the BS in Mechanical Engineering Technology. One option would be to take essential math and science courses, especially pre-calculus and Physics 1, at the community college then transfer after 1-3 semesters. A second option, shown below, would include completing at least four semesters at the community college and taking as many math, science, technology, and general education credits as could be applied. To transfer to Ferris State, students must have an over GPA of 2.00. Note that only classes with grades of C or better (not C-) will transfer to Ferris State. Official transcripts from all accredited colleges/universities must be submitted with the Ferris application. Financial Aid may be available and may include concurrent admission at both institutions.

#### Course Requirements

Northwestern Michigan College			
Course	Ferris Equiv.	NMC Course Titles	Cr. Hrs.
CIT 100	MECH 122	Computer Apps 1 for Technology	2
EGR 113	ETEC 140	Engineering Graphics	3
ENG 111	ENGL 150	English 1	3
ENG 112	ENGL 250	English 2	3
MATH121*	MATH 116	Intermediate Algebra	4
MATH122*	MATH 126	Adv. Algebra and Analytical Trig.	4
MATH 141	MATH 220	Analytical Geometry and Calculus 1	4
MATH 142	MATH 230	Analytical Geometry and Calculus 2	4
CHM 150,150R	CHEM 114	Introduction to Chemistry	4
PHYS 121	PHYS 211	Introductory Physics 1	4
PHYS 122	PHYS 212	Introductory Physics 2	4
COM 111	COMM 121	Public Speaking	3
EET 102	MECH 111	MET Seminar	1
MFG 103	MFGT 150	Manufacturing Processes	2
NMC	VARIABLES	FSU General Education - Self and Society Elective	9
NMC	VARIABLES	FSU General Education - Culture Elective	9
<b>Total Northwestern Michigan College Credits</b>			<b>63</b>

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

#### Please refer to FSU's General Education Requirements at:

<http://www.ferris.edu/htmls/academics/gened/index.htm>

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 are encouraged to work with their Ferris advisor for selection of any electives, to ensure transferability and to minimize credits taken.

Ferris State University		
Course	Ferris Course Titles	Cr. Hrs.
EEET 201	Electrical Fundamentals	3
ENGL 311	Advanced Technical Writing	3
MATL 240	Intro to Material Science	4
MATL 341	Material Selection – Metals	3
MECH 211	Fluid Mechanics	4
MECH 212	Kinematics of Mechanisms	2
MECH 222	Machine Design	4
MECH 223	Thermodynamics	3
MECH 311	Finite Elem Analysis/Modeling	2
MECH 322	Computer Apps 2 for Technology	2
MECH 330	Heat Transfer	3
MECH 332	Mech.Measurements/Mechatronics	3
MECH 340	Statics and Strength of Materials	4
MECH 341	Statics and Strength of Mat'ls Lab	1
MECH 360	Dynamics	3
MECH 393	Industrial Internship	4
MECH 421	MET Senior Lab	4
MECH 440	Noise and Vibrations	3
MECH 499	Senior Project	3
MFGE 341	Quality Science Statistics	3
MFGE 423	Engineering Economics	2
Main Campus, or possibly NMC	Technical Electives (see FSU advisor)	6
<b>Total Ferris Credits</b>		<b>69</b>
<b>Credits Required for Degree</b>		<b>132</b>

**Program Offered at:**  
**Main Campus, Big Rapids**  
 Mechanical Engineering Technology  
<http://www.ferris.edu/mech>  
[mec@ferris.edu](mailto:mec@ferris.edu)  
 231-591-2755

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

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**Transfer Student Orientation**

All new students to Ferris State University are required to complete an orientation. Orientation for incoming freshmen is a one-day session that occurs on campus and includes class registration. Eligible transfer students have the option of completing an online orientation or attending an on campus session.

**Advising Notes**

It is strongly recommended that potential transfer students make contact with the MET program for advising as well as with a community college counselor to be sure all requirements are met in an efficient way. Credits will occasionally vary between colleges for similar or equivalent courses. These discrepancies can be ignored provided the student completes 60 credits towards an AAS degree from FSU and 124 credits (including the internship) for a BS from FSU. 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.

Special Note on Math: For the AAS in MET, math through a Calculus 1 course similar to FSU's MATH 216 or 220 is required. For the BS in MET, math through Calculus 2 with a course similar to FSU's MATH 226 or 230 is required. The path to these classes varies from one college to another. Please keep the end in mind when planning.

**Online Learning**

Orientation is required for students who register for an online **course** or are completing an online **degree**. Students must demonstrate competency in FerrisConnect 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.

**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.

**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 Ferris to keep informed of changes. Final responsibility for verifying all transfer information lies with the student.