FERRIS STATE UNIVERSITY

Automotive Engineering Technology

Bachelor of Science Degree

Triton College (TC)

Transfer Guide

AET is an instructional program that prepares individuals to apply basic engineering principles and technical skills in support of engineers and other professionals engaged in developing, manufacturing and testing self-propelled ground vehicles and their systems. Includes instruction in vehicular systems technology, design and development testing, instrument calibration, test equipment operation and maintenance, and report preparation.

Communication Competency Course Requirements

FSU Course	FSU Course Title	FSU Cr. Hrs.	TC Equiv.	TC Course Title	TC Cr. Hrs.
COMM 221	Small Group Decision Making	3	SPE 113	Small Group Communication	3
ENGL 150	English 1	3	RHT 101	Freshman Rhetoric & Comp 1	3
ENGL 250	English 2	3	RHT 102	Freshman Rhetoric & Comp 2	3
ENGL 311	Advanced Technical Writing	3	No Equivalent	No Equivalent	0

Quantitative Literacy Course Requirements

FSU Course	FSU Course Title	FSU Cr. Hrs.	TC Equiv.	TC Course Title	TC Cr. Hrs.
MATH 116	Intermediate Algebra – Numerical Trigonometry	4	MAT 111	Pre-Calculus	5

Natural Sciences Competency Course Requirements – minimum 6 credits required – one course must have a lab

FSU Course	FSU Course Title	FSU Cr. Hrs.	TC Equiv.	TC Course Title	TC Cr. Hrs.
CHEM 114	Introduction to General Chemistry	4	CHM 140	General Chemistry	4
PHYS 211	Introductory Physics 1	4	PHY 101	General Physics	5

Culture Competency Course Requirements – 9 credits required – courses must come from 2 different disciplines

FSU Course	FSU Course Title	FSU Cr. Hrs.	TC Equiv.	TC Course Title	TC Cr. Hrs.
Varies	FSU General Education – Culture Electives	6	Varies	Varies	6
SURE 331	Ethics - Prof In Engineering Technology	3	No Equivalent	No Equivalent	0

Self and Society Competency Course Requirements – 9 credits required - courses must come from 2 different disciplines

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

Additional General Education Course Requirements

FSU Course	FSU Course Title	FSU Cr. Hrs.	TC Equiv.	TC Course Title	TC Cr. Hrs.
MATH 126	Algebra & Analytical Trig	4	No Equivalent	No Equivalent	0
MATH 216	Applied Calculus	4	No Equivalent	No Equivalent	0

Ferris State University General Education Program

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 Michigan Transfer Agreement (MTA), a student must have one course with the Global Diversity attribute and one course with the U.S. Diversity attribute. Some courses include both Global Diversity and U.S. Diversity attributes. Courses with both attributes satisfies the entire Diversity competency.

Collaboration Competency – 2 Courses Required
If not met by courses taken in the bachelor degree program, a student must have two courses with the Collaboration attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Collaboration requirement:

- AUTO 310 - Engine Air Flow Analysis
- AUTO 320 - Dynamometer Analysis

Problem Solving Competency – 2 Courses Required
If not met by courses taken in the bachelor degree program, a student must have two courses with the Problem Solving attribute. Some courses include both Collaboration and Problem Solving attributes. Of the required courses in this specific program, these courses will meet the Problem Solving requirement:

- AUTO 310 - Engine Air Flow Analysis
- AUTO 320 - Dynamometer Analysis

Major Requirements – 53 Credits Required

FSU Course	FSU Course Title	FSU Cr. Hrs.	TC Equiv.	TC Course Title	TC Cr. Hrs.
AUTO 111	Manual Transmission and Drive Lines	4	AUT 275	Manual Transmission & Drive	6
AUTO 112	Automotive Brake Systems	4	AUT 136	Brakes Systems	4
AUTO 113	Automotive Electricity/Electronics	4	AUT 127	Automotive Electricity & Electronics 1	4
AUTO 114	Automotive Engines	4	AUT 150	Automotive Power Plants	5
AUTO 115	Suspension, Steering, Alignment Services	4	AUT 240	Steering, Suspension & Alignment	4
AUTO 117	Electronic Fuel Management Systems	4	AUT 114 AUT 226 AUT 230	Fuel Management Systems Engine Performance & Diagnosis Computerized Engine Controls	4 5 5
AUTO 200	Service Area	6	AUT 296	Automotive Internship 1	2
AUTO 213	Chassis Electrical/Electronics	4	AUT 129	Automotive Electricity & Electronics 2	3
AUTO 310	Engine Air Flow Analysis	3	No Equivalent	No Equivalent	0
AUTO 320	Dynamometer Analysis	3	No Equivalent	No Equivalent	0
AUTO 450	Automotive Fuels and Lubes	3	No Equivalent	No Equivalent	0
AUTO 460	Emission Systems	3	No Equivalent	No Equivalent	0
AUTO 480	Alternate Fuel and Vehicle System	3	No Equivalent	No Equivalent	0
AUTO 493	Internship	4	No Equivalent	No Equivalent	0

Additional Requirements – 28 Credits Required

FSU Course	FSU Course Title	FSU Cr. Hrs.	TC Equiv.	TC Course Title	TC Cr. Hrs.
MECH 212	Kinematics and Mechanisms	2	No Equivalent	No Equivalent	0
MATL 240	Intro to Material Science	4	No Equivalent	No Equivalent	0
MFGE 321	Metrology	3	No Equivalent	No Equivalent	0
PDET 322	Model and Prototype Development	2	No Equivalent	No Equivalent	0
MATL 341	Material Science Metals	3	No Equivalent	No Equivalent	0
MFGE 341	Quality Science Statistics	3	No Equivalent	No Equivalent	0
MFGE 342	Statistical Process	3	No Equivalent	No Equivalent	0
PDET 413	Fluids/Thermodynamics	3	No Equivalent	No Equivalent	0
PDET 415	Advanced Solid Modeling CAD	2	No Equivalent	No Equivalent	0
MFGE 442	Design of Experiments	3	No Equivalent	No Equivalent	0
Total Credits Required for Degree					**131**

Program Delivery Locations and Contact Information:

Main Campus, Big Rapids
College of Engineering Technology
(800) 433-7747 | (231) 591-2890 | Ferris Automotive Email
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 the Ferris Main Campus or at an off-campus location).

General Admission Criteria
Transfer Students

- 2.5 College GPA Overall
- MATH 116 Placement
- ENGL 150 placement

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.

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

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.