

The HVEM degree addresses designing, retrofitting, testing, and balancing on a problem-solving level and prepares the HVEM engineering technologist to fill a wide technological gap between the service technicians and engineers. Challenging careers abound on a national level with firms who look for trained HVEM engineering technicians for a variety of positions: application and/or project engineering, systems control, estimating, engineering, field technician, systems reps, marketing, control systems training, and HVEM in-plant engineering.

**Communication Competency Requirements**

FSU Course	FSU Course Title	FSU Cr. Hrs.	MSU Equiv.	MSU Course Title	MSU Cr. Hrs.
ENGL 150	English 1	3	WRIT 101W	College Writing 1	3
ENGL 250	English 2	3	WRIT 201	College Writing 2	3
COMM 121	Fundamentals of Public Speaking	3	COMX 111US	Introduction to Public Speaking	3

**Quantitative Literacy Requirements**

FSU Course	FSU Course Title	FSU Cr. Hrs.	MSU Equiv.	MSU Course Title	MSU Cr. Hrs.
MATH 115	Intermediate Algebra	3	M 121 Q	College Algebra	3
MATH 130	Adv. Algebra-Analytical Trig.	4	M 151Q	Precalculus	4

OR

FSU Course	FSU Course Title	FSU Cr. Hrs.	MSU Equiv.	MSU Course Title	MSU Cr. Hrs.
MATH 126	Algebra – Analytic Trigonometry	4	M 151Q	Precalculus	4

Students are required to reach the Ferris MATH 126 or MATH 130 level. The path to MATH 126 is Ferris MATH 116 and MATH 126. The path to Ferris MATH 130 is MATH 115, MATH 120, and MATH 130.

**Natural Sciences Competency Requirements** - Select courses from the following subject areas: Astronomy, Biology, Chemistry, Geology, Physical Science - 1 course must have a lab

FSU Course	FSU Course Title	FSU Cr. Hrs.	MSU Equiv.	MSU Course Title	MSU Cr. Hrs.
Varies	FSU General Education - Natural Sciences Electives	6	Varies	Varies	6

**Self and Society Competency Requirements** – Minimum 9 credits from 2 different disciplines with 1 course at 200 level or higher

FSU Course	FSU Course Title	FSU Cr. Hrs.	MSU Equiv.	MSU Course Title	MSU Cr. Hrs.
Varies	FSU General Education – Self and Society Competency	6	Varies	Varies	6
ECON 221	Principles of Macroeconomics	3	ECNS 202	Principles of Macroeconomics	3

**Culture Competency Requirements** - Minimum 9 credits from 2 different disciplines with 1 course at 200 level or higher – Consult advisor for assistance

FSU Course	FSU Course Title	FSU Cr. Hrs.	MSU Equiv.	MSU Course Title	MSU Cr. Hrs.
Varies	FSU General Education - Culture Electives	9	Varies	Varies	9

<b>Total Credits Required for Degree</b>	<b>124</b>
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**Ferris State University General Education Program** Students are encouraged to work with an advisor to select appropriate general education courses

**General Admission Criteria**

To be admitted to this degree, students must have completed the Associate of Applied Science Degree in an HVACR Engineering or related technical area or equivalent with a minimum GPA of 2.5 (on a 4.0 scale), and completion or competency in the following Ferris courses or their direct equivalents: ENGL 150, ENGL 250 or ENGL 211, MATH 115 or MATH 116, and four credit hours in a science course (lab or non-lab). Official transcripts from all accredited colleges/universities must be submitted with the Ferris application. Financial aid is available and may include concurrent enrollment at both institutions.

**Program Contact Information:**
**Main Campus, Big Rapids**
**College of Engineering Technology**

[College of Engineering Technology Website](#) | (231) 591-2890 | [HVACR Website](#) | (231) 591-3062

**Ferris Online**

(800) 562-9130 | (231) 591-2340 | [Ferris Online Email](#)

[Transfer Partnerships Website](#)

**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.

**Ferris State University Residency Requirement**

- Earn a minimum of 120 total credits for a bachelor's degree
- Earn a minimum of 30 credits from Ferris State University for a bachelor's degree

**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.