

FERRIS STATE UNIVERSITY

HVACR TECHNOLOGY (HVAR) – 65 TO 66 CREDITS

2020-2021

Associate of Applied Science (AAS)

College of Engineering Technology

Student Name	Student ID

CREDIT VARIANCE

Credits required may vary based on course placement, prerequisites, etc. If you have questions, contact your advisor.

UNIVERSITY REQUIREMENTS – 22 TO 23 CREDITS REQUIRED

(Course prerequisites are shown in parentheses)

FIRST YEAR SEMINAR REQUIREMENT (FSUS 100 OR EQUIVALENT) – 0 TO 1 CREDITS REQUIRED

All First-Time-In-Any-College Freshmen (FTIACs) must complete a one-credit FSUS 100 course, or its equivalent. Additional information and the definition of FTIAC for FSUS purposes can be found in the: [Ferris State University Academic Affairs FSUS Policy](#)

Prefix	Code	Course Title	Credits	Grade

UNIVERSITY GENERAL EDUCATION REQUIREMENTS – 22 CREDITS REQUIRED

Courses in this section are required to satisfy the University General Education Requirements for an associate degree. The University General Education requirements can be found on the: [Ferris State University General Education Requirements Webpage](#)

COMMUNICATION COMPETENCY – 6 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
ENGL	150	English 1 (ENGL 074 or English ACT 14 or (Pre-2016) Reading SAT 370 or (Post-2016) ERW SAT 450 or TOEFL Internet Total Score 61 or MSU-ELT Composite 73 or IELTS Overall 5.5)	3	
ENGL	250	English 2 (ENGL 150 with C- or higher)	3	

QUANTITATIVE LITERACY COMPETENCY – 4 CREDITS REQUIRED (OR THEIR EQUIVALENT)

Prefix	Code	Course Title	Credits	Grade
CHOOSE 1 OF 4	MATH 116	Intermediate Algebra and Numerical Trigonometry (MATH 109 or 110 either with C- or higher or Math ACT 19 or (Pre-2016) Math SAT 460 or (Post-2016) Math SAT 500)	4	
		<i>Official Pre-2016 Math SAT Score of 590 or Higher</i>		
		<i>Official Post-2016 Math SAT Score of 620 or Higher</i>		
		<i>Official Math ACT Score of 26 or Higher</i>		

NATURAL SCIENCES COMPETENCY – 3 CREDITS REQUIRED

One course is required with a minimum of 3 credits: must be a lab course.

Prefix	Code	Course Title	Credits	Grade

CULTURE COMPETENCY – 3 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

SELF AND SOCIETY COMPETENCY – 3 CREDITS REQUIRED

Prefix	Code	Course Title	Credits	Grade

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ADDITIONAL GENERAL EDUCATION REQUIREMENTS – 3 CREDITS REQUIRED

These courses are additional General Education courses to meet the requirements for this specific program.

Prefix	Code	Course Title	Credits	Grade
COMM	121	Fundamentals of Public Speaking (None)	3	

COLLEGE REQUIREMENTS – 43 CREDITS REQUIRED

(Course prerequisites are shown in parentheses)

MAJOR COURSES – 43 CREDITS REQUIRED

These courses are used to calculate the major 2.00 GPA requirement.

Prefix	Code	Course Title	Credits	Grade
HVAC	101	Introduction to Refrigeration and AC Systems (None; Co-Requisite MATH 116)	4	
HVAC	102	Advanced Refrigeration and AC (HVAC 101 and 111 both with C- or higher)	4	
HVAC	111	Electricity, Blueprints, and Fabrication (None; Co-Requisite MATH 116)	4	
HVAC	117	Advanced Electricity and Circuits (None)	4	
HVAC	127	Advanced HVACR Controls (HVAC 117 with C- or higher)	3	
HVAC	132	Fundamentals of Heating and Mechanical Systems (HVAC 111 with C- or higher)	5	
HVAC	207	Commercial Refrigeration Systems (HVAC 102, 116, and 117 all with C- or higher)	5	
HVAC	208	Air Conditioning Applications (HVAC 102, 116, and 117 all with C- or higher)	5	
HVAC	235	Advanced Heating and Mechanical Systems (HVAC 116, 117, and 132 all with C- or higher)	5	
HVAC	245	HVAC Unitary System Design (HVAC 101, 132, and MATH 116 all with C- or higher)	4	

NOTES

- Students who return to the university after an interrupted enrollment, not including summer semester, must normally meet the requirements of the curriculum which are in effect at the time of their return, not the requirements which were in effect when they were originally admitted.
- Students must have a C- or higher in the following first-year HVAC courses to meet second-year prerequisites: HVAC 101, 102, 111, 117, and 132

ADMISSION REQUIREMENTS

NEW STUDENT ADMISSION REQUIREMENTS

- High School GPA of 2.70 (on a 4.00 scale)
- Minimum Composite ACT 18 or Post-2016 Composite SAT 950
- Math ACT 19 or Post-2016 Math SAT 500

TRANSFER STUDENT ADMISSION REQUIREMENTS

- College GPA of 2.00 (on a 4.00 scale)
- Placement in MATH 116
- Placement in ENGL 150

PROGRAM OUTCOMES

1. Demonstrate installation techniques for residential/light commercial Heating, Ventilation, and Air Conditioning (HVAC) systems.
2. Service residential/light commercial Heating, Ventilation, and Air Conditioning (HVAC) equipment.
3. Service commercial refrigeration equipment.
4. Systematically troubleshoot and repair commercial refrigeration equipment.
5. Systematically troubleshoot and repair residential/light commercial Heating, Ventilation, and Air Conditioning (HVAC) equipment.
6. Design residential/light commercial Heating, Ventilation, and Air Conditioning (HVAC) systems.
7. Demonstrate ability to install, troubleshoot and repair Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR) controls.

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GRADUATION REQUIREMENTS

In order to graduate from Ferris State University, students must meet both University and Programmatic Graduation Requirements.

UNIVERSITY GRADUATION REQUIREMENTS

These are the minimum graduation requirements for an associate degree at Ferris State University:

- All requirements as specified in the [University Requirements](#) section must be met.
- A minimum of 60 credits must be earned.
- A 2.00 or higher cumulative Ferris State University GPA is required.
- A minimum of 15 credits must be earned from Ferris State University to meet the Residency requirement.

PROGRAMMATIC GRADUATION REQUIREMENTS

These are the additional graduation requirements mandated by the program:

- All requirements as specified in the [College Requirements](#) section must be met.
- A 2.00 or higher cumulative GPA is required in the [Major Courses](#) section.
- A minimum grade of C- must be earned in all HVAC courses.

CONTACT INFORMATION

COLLEGE: College of Engineering Technology
DEPARTMENT/SCHOOL: Built Environment

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EMAIL: HVACRProgram@ferris.edu

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SUGGESTED SEMESTER LAYOUT

Consult Advisor to Approve Your Customized Plan in MyDegree

FIRST YEAR

Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
HVAC 101	4	HVAC 102	4		
HVAC 111	4	HVAC 127	3		
HVAC 117	4	HVAC 132	5		
MATH 116	4	ENGL 150	3		
FSUS 100	1	Culture Competency	3		
Total Credits	17	Total Credits	18	Total Credits	

SECOND YEAR

Fall Courses	Credits	Spring Courses	Credits	Summer Courses	Credits
HVAC 235	5	HVAC 207	5		
HVAC 245	4	HVAC 208	5		
ENGL 250	3	COMM 121	3		
Natural Sciences Competency	3-4	Self and Society Competency	3		
Total Credits	15-16	Total Credits	16	Total Credits	