# Ferris State University

## HVACR Engineering Technology & Energy Management

**Bachelor of Science Degree** 

### Columbus State Community College

Articulation Agreement and Transfer Guide

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.	CC Equiv.	Columbus CC Course Title	CC Cr. Hrs.
ENGL 150	English 1	3	ENGL 1100	Composition 1	3
ENGL 250 or	English 2	3	ENGL 2367	Composition 2 or	
ENGL 211			COMM 2200	Business Communication	
COMM 121	Fundamentals of Public Speaking	3	COMM 1105	Oral Communication	3

#### **Quantitative Literacy Requirements**

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	Columbus CC Course Title	CC Cr. Hrs.
MATH 130 +	Adv. Algebra-Analytical Trig.	6	MATH 1148 <b>+</b>	College Algebra +	5
MATH 1-Q			MATH 1149 or	Trigonemtry or	or
			MATH 1150	Pre-Calculus	6

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.	CC Equiv.	Columbus CC Course Title	CC Cr. Hrs.
Varies	FSU General Education - Natural	6	Varies	Varies	6
	Sciences Electives				
Self and Society	y Competency Requirements – Mini	mum 9 credits fr	om 2 different	disciplines with 1 course at 200 level o	r higher

FSU Course	FSU Course Title	FSU Cr. Hrs.	CC Equiv.	Columbus CC Course Title	CC Cr. Hrs.
Varies	FSU General Education – Self	9	Varies	Varies	9
	and Society Competency				

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.	CC Equiv.	Columbus CC Course Title	CC Cr. Hrs.
Varies	FSU General Education - Culture Electives	9	Varies	Varies	9
Total Credits F	Required for Degree				124

Total Credits Required for Degree

Ferris State University General Education Program

Students 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.

#### **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.

Ferris State University and Columbus State Community College- HVACR Engineering Technology & Energy Management - Articulation Agreement and Transfer Guide

Effective December 1, 2019 - December 1, 2022

Ferris State University is an equal opportunity institution. For information on the University's Policy on Non-Discrimination, visit ferris.edu/non-discrimination. Page 1

#### Program Delivery Locations and 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.

#### **Graduation Requirements**

In addition to meeting all the programmatic requirements, students must:

- 1. Meet University General Education requirements.
- 2. Earn a minimum of 120 credits.
- 3. Maintain a 2.00 or higher cumulative FSU GPA.
- 4. Earn 30 credits from FSU (Residency).
- 5. Earn 40 credits of 300 level or higher courses.
- 6. Earn a C- or higher in all HVAC coursework.

#### 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

#### **Original Signed Articulation Agreement**

The original, signed document is kept on file in the Office of Transfer and Secondary School Partnerships. To obtain a copy of the original, signed document, contact the Office of Transfer and Secondary School Partnerships at 231/591-5983 or email your request to transfercenter@ferris.edu.

This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, e-mail, or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

#### Indemnification

To the extent permitted by law, Ferris State University and Columbus State Community College agree to indemnify and hold one another harmless from any and all claims initiated by student participants, their parents, survivors, or agents, arising from any negligent acts or omission on the part of either institution or any of their employees.

#### **Articulation Agreement**

#### Effective Dates: December 1, 2019 – December 1, 2022

This Agreement shall commence as of December 1, 2019 and shall be for an initial term of three years. Minor updates to the agreement may be made during this time. This agreement may be renewed at the end of three years. Either party may terminate this agreement by providing the other party with written notice of the intent to terminate the agreement. The agreement shall terminate not less than one hundred eighty (180) days from the date of the termination notice, unless otherwise agreed in writing by both parties.

#### Signatures

Ferris State University 1201 S. State Street Big Rapids, MI 49307 Phone: (231) 591-2000

December 1, 2019

Rich Goosen Interim Dean College of Engineering Technology Columbus State Community College 550 E. Spring Street Columbus, OH 43215 Phone: (614) 287-5353

December 1, 2019

Angelo Frole Dean Business, Engineering, and Technology Programs

December 1, 2019

Joseph Compton Program Coordinator Heating, Ventilating, Air Conditioning and Refrigeration December 1, 2019

Douglas House Chairperson Design, Construction and Trades

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