

# LANSING COMMUNITY COLLEGE

## CURRICULUM GUIDE

HVAC/R–Energy Management Engineering Technology  
Associate in Applied Science Degree

Curriculum Code: 1257 (Effective Fall 2011 – Summer 2016)

This curriculum will teach students current methods of identifying and performing efficiency evaluations on different types of heating, ventilation and air conditioning systems found in commercial and industrial buildings and methods of adjusting and balancing equipment for maximum performance. This curriculum also addresses designing, retrofitting, testing and balancing on a problem-solving level to prepare technologists to fill the wide technological gap between service technicians and engineers. Graduates will be able to seek employment in manufacturing, contracting, building operations, and in the engineering of commercial, institutional and industrial building systems. **Not all courses in this program transfer to all colleges.** Students planning to transfer should see an academic advisor before enrolling in any course.

### PREREQUISITES

Students should see *Course Descriptions* or *Course Offerings* for course prerequisite information. See the *Assessment and Placement Testing* section for skills assessment and advising information.

### INFORMATION

Contact the Utility & Energy Systems Program, West Campus Building, Room M127, telephone number (517) 483-1570 (Website: [www.lcc.edu/utility/hvac/](http://www.lcc.edu/utility/hvac/)) or Student Services West Campus, West Campus Building, Room M106, telephone number (517) 267-5452.

### REQUIREMENTS

CODE	TITLE	TOTAL: 72 CREDITS CREDIT HOURS
ELTE 111	Intro to Industrial Automation	4
HUMS 213	World Civilizations to 1600	4
HVAC 100	Fundamentals of HVAC	3
HVAC 102	Industrial/Construction Safety (See Note 1)	2
HVAC 110	Applied Electricity I (See Note 1)	3
HVAC 111	Applied Electricity II	3
HVAC 120	Heating I	3
HVAC 130	Air Conditioning I	3
HVAC 201	Mechanical Code	4
HVAC 220	Heating II	3
HVAC 221	Introduction to Hydronics	3
HVAC 230	Air Conditioning II	3
HVAC 240	Refrigeration I	3
HVAC 241	Refrigeration II	3
HVAC 251	Fund of Direct Digital Control	3
MATH 114	Technical Math I	4
MATH 115	Technical Math II	4
PHYS 120	The Art of Physics	4
POLS 260	Comparative Political Systems	3
SPCH 130	Fund of Public Speaking	3
WRIT 121	Composition I	4
WRIT 124	Technical Writing	3

**LIMITED CHOICE REQUIREMENTS****TOTAL: 0 CREDITS**Complete the indicated number of credits from **EACH CHOICE** listed below.**CHOICE 1: General Education Core Areas****0 Credits**(See *General Education Core Requirements* for information on how to fulfill these requirements.)

Core area proficiency exams, where appropriate, are available for each core area.)

Communication Core Area (See Note 2)	0
Global Perspectives and Diversity Core Area (See Note 2)	0
Mathematics Core Area (See Note 2)	0
Science Core Area (See Note 2)	0
Writing Core Area (See Note 2)	0

<b>MINIMUM TOTAL</b>	<b>72</b>
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**NOTES:**

1. Students who have already completed ELTE 102, METS 102, or WELD 102 with a grade of 2.0 or higher may substitute one of these courses for HVAC 102. Any of these four courses may also be used to fulfill the prerequisite for HVAC 110.
2. Students completing "REQUIREMENTS" have fulfilled the requirements for this Core area.
3. This program is the first two years of a 2 + 2 agreement with Ferris State University for a Bachelor of Science Degree in HVACR Engineering Technology.

**SUGGESTED COURSE SEQUENCE**

Students should see course descriptions to find out when departments plan to offer courses. Students who for any reason are unable to follow the course sequence suggested below (for example, those who are part-time, have transferred in courses from another school, or have prerequisites to fulfill) should contact an academic advisor for help with adjustments.

<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>
HVAC 100	ELTE 111	HUMS 213	HVAC 201
HVAC 102	HVAC 111	HVAC 220	HVAC 221
HVAC 110	HVAC 120	HVAC 230	HVAC 241
MATH 114	HVAC 130	HVAC 240	POLS 260
SPCH 130	MATH 115	WRIT 124	
<b>V</b>			
HVAC 251			
PHYS 120			
WRIT 121			