



## **Energy Management Specialist A.A.S.**

Career Community: Building Construction Trades

Curriculum Code: 1606

Effective: Fall 2024 – Summer 2029

### **Description**

Energy Management Specialists are involved in the commissioning, evaluation, planning, design, installation, and maintenance of a wide variety of energy systems in the built environment. The energy efficiency specialist will need a working knowledge of energy efficient building concepts and energy efficient design principles. Students completing this curriculum may also be eligible to apply for the Certificate of Completion in Alternative Energy Engineering Technology (1486). Not all courses in this program transfer to all colleges. Students planning to transfer should see an academic advisor before enrolling in any course.

### **Milestone**

In addition to the required General Education courses in Math and English, completion of HVAC 100 and HVAC 110 with a 2.0 or higher is a key component for success in completing this program. Knowledge obtained in these courses is the foundation for learning in other required courses. Students are encouraged to contact their faculty if they need additional assistance with learning the concepts presented in these courses.

### **Additional Information**

If students have already completed ELTE 102, HVAC 102, METS 102, TECH 102, or WELD 102 with a grade of 2.0 or higher, that will satisfy the DCTM 102 requirement. Any of these classes will fulfill the prerequisite for HVAC 110.

### **Contact Information**

For further information, including career options, course substitutions and waivers, etc., contact the Energy Management Program at the West Campus Building, Room M103, telephone number 517-483-5338 or Student Services West Campus, West Campus Building, Room M106, telephone number 517-267-5452.

### **General Education - Applied Degrees, Recommended Courses**

(For the full list of options, see [General Education](#))

- English Composition or Applied English – *Select one*  
ENGL 124, Technical Writing, 3 credits / 3 billing hours
- English Composition (second course)/Communication or Applied Communication – *Select one*  
COMM 110, Communication in the Workplace, 3 credits / 3 billing hours

- Humanities and Fine Arts or Social Sciences or Applied Social Sciences – *Select one*  
MGMT 234, Diversity in the Workplace, 3 credits / 3 billing hours
- Mathematics or Applied Mathematics – *Select one*  
MATH 115, Technical Mathematics, 4 credits / 4 billing hours
- Natural Sciences Lab or Applied Science and Technology Lab – *Select one*  
BIOL 120, Environmental Science, 4 credits / 6 billing hours  
CHEM 135, Chemistry in Society, 4 credits / 5 billing hours  
PHYS 200, Intro to Applied Physics, 4 credits / 5 billing hours

### Program of Study Required Courses

Course Code	Course Title	Credit/ Billing Hours
DCTM 100	Intro to the Built Environment	3 / 4
DCTM 101	Drafting/Intro to CAD	3 / 4
DCTM 102	Industrial/Construction Safety	2 / 3
DCTM 103	Codes and Specifications	3 / 3
HVAC 100	Fundamentals of HVAC	3 / 3
HVAC 110	Applied Electricity I	3 / 4
HVAC 111	Applied Electricity II	3 / 4
HVAC 120	Heating I	3 / 4
HVAC 130	Air Conditioning I	3 / 4
HVAC 140	Residential Energy	3 / 4
HVAC 220	Heating II	3 / 4
HVAC 230	Air Conditioning II	3 / 4
HVAC 231	Heat Pump	3 / 4
HVAC 240	Refrigeration I	3 / 4
HVAC 251	Fund of Direct Digital Control	3 / 4

### Program of Study Required Courses, Limited Choice – *Select one*

Course Code	Course Title	Credit/ Billing Hours
AEET 280	Alternative Energy Practicum	4 / 4
HVAC 210	Solar Energy Technologies	3 / 4

### Additional Credits

After completing the course and credit requirements as noted on this pathway, students who fall short of the 60-credit minimum required for an Associate Degree may select any course(s) needed to reach 60 credits, except those courses noted in number 7 in the [Institutional Requirements for Associate Degrees](#). Students are encouraged to use Degree Works and meet with an Advisor to ensure all requirements are met and for course recommendations.

## Minimum Total Credit Hours

65 credits / 79 billing hours

## Recommended Course Sequence

Semester I
Gen Ed – Humanities and Fine Arts or Social Sciences or Applied Social Sciences
Gen Ed – Mathematics or Applied Mathematics
DCTM 100
DCTM 102
HVAC 100 – Milestone course
HVAC 110 – Milestone course

Semester II
Gen Ed – English Composition or Applied English
HVAC 111
HVAC 120
HVAC 130
HVAC 140

Semester III
Gen Ed – English Composition (second course)/Communication or Applied Communication
DCTM 101
DCTM 103
HVAC 230
HVAC 240

Semester IV
Gen Ed – Natural Sciences Lab or Applied Science and Technology Lab
HVAC 220
HVAC 231
HVAC 251
Limited Choice

*LCC makes every effort to limit revisions to the pathways during their effective timeframe. However, the College reserves the right to update certificate and degree title changes, and make course changes as needed, without prior notice.*