

FACILITIES ENERGY SYSTEMS TECHNOLOGY A.A.S.

61 Semester Credit Hours; Curriculum: 0363

This program prepares students for maintenance and management of mechanical, electrical, and hygienic facilities; and to perform or delegate needed repairs. The program also provides opportunities for students to work as an intern at local companies.

Note: Refer to IAI General Education Courses page for guidelines on General Education course selection.

Code	Title	Hours
General Education Requirements		
See the list of IAI General Education Courses for more information		
<i>Area A - Communications</i>		
EGL 101	Composition I	3
Select one of the following:		3
EGL 102	Composition II	
EGL 111	Introduction to Business and Technical Writing (recommended)	
EGL 212	Technical Writing Applications	
SPE 103	Effective Speech	
<i>Area B - Mathematics</i>		
Select one course from Area B		3
MAT 114	Applied Mathematics I (recommended)	
<i>Area C - Science</i>		
No course needed		0-3
PHY 101	Applied Physics (recommended)	
<i>Area D - Social and Behavioral Sciences</i>		
Select one course from a social or behavioral science discipline		3
ECO 110	Elements of Economics (recommended)	
<i>Area E - Humanities/Fine Arts</i>		
Select one course from a humanities or fine arts discipline		3
<i>Area F - Global Studies</i> ¹		
Select one course that satisfies Global Studies requirement		0-3
<i>Area G - U.S. Diversity Studies</i> ²		
Select one course that satisfies U.S. Diversity Studies requirement		0-3
Select other General Education credits: Additional credits from Areas B, C, D, E, F or G if needed to meet 18-credit-hour minimum		0-3
Total Hours		18

¹ Students may take a Global Studies course that satisfies both Area F and another Area requirement.

² Students may take a U.S. Diversity Studies course that satisfies both Area G and another Area requirement.

Code	Title	Hours
Major Requirements		
AHR 101	Introduction to Air Conditioning and Refrigeration	4
AHR 105	EPA Section 608 Certification	1
AHR 206	Residential Hot Water Boilers and Hydronics Technology	4
CIS 101	Introduction to Computer Information Systems	3

or CIS 103	Computer Software and Concepts	
FME 101	Introduction to Facilities Management and Engineering	3
FME 107	Blueprint Reading for Building Trades	4
FME 201	Mechanical, and Electrical Systems in Buildings	4
FME 240	Energy Management and DDC Controls	3
MFG 135	Fluid Power and Controls	4
Select courses of at least 13 credit hours from the following		13
AHR 104	Introduction to Electricity and Automatic Controls	
AHR 208	Advanced Automatic Controls	
AHR 212	Indoor Air Quality	
AHR 213	Commercial HVAC Systems Applications	
AHR 214	Energy Audit, Analysis and Management	
AHR 215	Steam Boiler Operations	
CAD 116	Basic AutoCAD	
ELT 101	Introduction to Electronics	
MFG 240	Programmable Logic Controllers (PLC)	
Total Hours		43

Program Learning Outcomes

1. Interpret drawings of various types of HVAC systems for comfort controls.
2. Detect and demonstrate the ability to manage repairs of mechanical systems for proper operation.
3. Describe lighting and power distribution of electricity issues and demonstrate the ability to manage repairs.
4. Demonstrate the ability to make required modifications as per the needs of the facility.
5. Demonstrate the ability to check and maintain fire protection systems in working order.
6. Demonstrate the ability to manage equipment for high efficiency for energy management.
7. Define and solve problems individually and with groups, using a variety of resources and methods, including technology.
8. Communicate findings effectively in writing and in speech.