



# Associate in Applied Science

## Toward a Degree in

# Heating and Air Conditioning

Career Curriculum HAC0095  
 Minimum Hours: 66  
 Major Code: 1.2 470201C  
 Effective Date: Fall 2018

### FIRST YEAR – FALL SEMESTER

Dept. No.	Hrs.	Grade
HAC 102 Residential Electrical Wiring	4	_____
HAC 121 Heating I	4	_____
MAT 113 Introduction to Contemporary Mathematics OR MAT 100 Mathematics for Applied Technologies OR MAT 120 Elementary Statistics	3	_____
IAI Social & Behavioral Science Elective	3	_____
WEL 150 Oxy-Acetylene Fusion Welding I	1	_____
WEL 152 Brazing and Soldering	1	_____
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### NOTES AND INFORMATION

Fall Only Courses:	Spring Only Courses:	
HAC 102	HAC 105	HAC 142
HAC 106	HAC 107	HAC 207
HAC 121	HAC 122	HAC 224
HAC 132	HAC 131	HAC 279
HAC 140		
HAC 222		
HAC 240		

<sup>1</sup> Requires a grade of "C" or higher.

<sup>2</sup> Although this class is recommended, it is not required for graduation from this program and therefore is ineligible for Title IV financial aid funding.

### FIRST YEAR – SPRING SEMESTER

Dept. No.	Hrs.	Grade
HAC 105 Basic Sheet Metal Layout	3	_____
HAC 107 Electrical Controls and Circuitry	3	_____
HAC 122 Heating II	4	_____
HAC 131 Refrigeration & Air Conditioning I	4	_____
SPE 115 Speech OR SPE 116 Interpersonal Communication	3 17	_____

The Heating and Air Conditioning Degree Program (HAC0095) is the parent program to:

- Heating and Air Conditioning Certificate Program (HAC 0006)

The minimum general education component for the Associate in Applied Science degree requires satisfactory completion of at least 15 semester credits of coursework distributed over the disciplines of Communications, Mathematics, Arts and Humanities, Physical and Life Sciences, and Social and Behavioral Sciences. The curriculum guide for each Associate in Applied Science degree program will spell out the course requirements or options available for satisfying the general education component. With appropriate justification and in consultation with your academic advisor, a request to substitute a course for one recommended in this guide may be granted with the appropriate approvals from the Department Chair, Dean for Instruction and Vice-President for Instruction. However, no substitutions are allowed in Groups I-III (General Education Component; GECC) of the curriculum guide (see the Associate in Applied Science general degree requirements worksheet in the John A. Logan College Catalog).

### FIRST YEAR – SUMMER SEMESTER (OPTIONAL)

Dept. No.	Hrs.	Grade
ATI 200 Applied Technologies Internship <sup>2</sup> (Summer only)	1-3 1-3	_____

Students planning to transfer and pursue a baccalaureate degree should, when given a choice, enroll in the general education course that is IAI GECC approved and articulated with participating Illinois institutions.

### SECOND YEAR – FALL SEMESTER

Dept. No.	Hrs.	Grade
CMG 107 Construction Document Interpretation	3	_____
ENG 101 English Composition I <sup>1</sup> OR ENG 113 Professional Technical Writing <sup>1</sup>	3	_____
HAC 106 Advanced Sheet Metal Layout	2	_____
HAC 132 Refrigeration and Air Conditioning II	4	_____
HAC 222 Advanced Heating Systems	3	_____
HAC 240 Installation of HVAC Systems	3 18	_____

**Additional Information:** This program prepares students for careers in the heating and air conditioning industry. The curriculum provides theory as well as sufficient laboratory experience to prepare graduates for immediate employment. Students will be trained for competency in installing, operating, troubleshooting, and maintaining all types of environmental control equipment. The graduate will receive an AAS degree.

### SECOND YEAR – SPRING SEMESTER

Dept. No.	Hrs.	Grade
HAC 142 Commercial Refrigeration	4	_____
HAC 207 Advanced Controls and Circuitry	3	_____
HAC 224 Geothermal Systems	3	_____
HAC 279 ICE Testing	2	_____
IAI Physical/Life Science OR IAI Humanities/Fine Arts Elective	3 15	_____

All students registered for heating and air conditioning classes will be required to furnish a basic tool set. The basic tool set will be necessary by the beginning of the fifth week of the semester. The set includes the following:

- |   |   |  |
|---|---|--|
| <b>Nutdrivers</b> <ul style="list-style-type: none"> <li>• Nutdriver ND5 ¼"</li> <li>• Nutdriver ND7 5/16"</li> <li>• Manifold Gauge Set</li> </ul> | <b>Pliers</b> <ul style="list-style-type: none"> <li>• 7" Diagonal Pliers</li> <li>• 7 ½" Longnose Pliers</li> <li>• 6" Slip Joint Pliers</li> <li>• ARC Joint 9-1/2" Pliers</li> </ul> | <b>Screwdrivers</b> <ul style="list-style-type: none"> <li>• Phillips Stubby Screwdriver</li> <li>• #2 x 4" Phillips Screwdriver</li> <li>• Flat Stubby Screwdriver</li> <li>• 3/16" x 6" Slotted Screwdriver</li> <li>• 5/16" x 6" Slotted</li> </ul> |
|---|---|--|

**Sockets**

- 1/4" Socket Set
- 3/8" Socket Set

**Wrenches**

- 6" Adjustable Wrench
- 8" Adjustable Wrench
- 10" Adjustable Wrench
- 12" Adjustable Wrench
- Hex Wrench Set
- Service Valve Wrench

**Additional Tools**

- Wire Strippers
- AW Sperry SPR Clamp-On Amp Meter
- UEI M110A Multimeter
- Pocket Thermometer
- Inspection Mirror
- Sling Psychrometer
- Red and Green Tin Snips
- Tinnerns Hammer
- Dividers

*Note:* Costs of supplies vary by supplier. Tools may be purchased at Sears, Snap-On, True Value, etc.

**The Heating & Air Condition Program is accredited by the:**

**Partnership of Air Conditioning, Heating, and Refrigeration Accreditors (PAHRA)**

2111 Wilson Blvd., Suite 500  
Arlington, VA 22201-3001

**Career Opportunities:** Technician, installer, maintenance, service manager, self-employment.

*John A. Logan College reserves the right to modify this curriculum guide as needed. Please verify with your academic advisor the accuracy and time lines of this document.*