

HVAC Residential Service Technician, A.A.S.

Modern residential, commercial, institutional and manufacturing operations depend on carefully monitored temperature conditions and well-trained installation and service technicians. Government researchers say graduates of training programs that emphasize hands-on experience will have a definite advantage when seeking employment in heating, ventilation and air conditioning technology. JCCC provides you the opportunity to work on actual equipment while pursuing a degree or certificate program. The 64-credit-hour associate of applied science degree program focuses on developing an awareness of basic mathematical and scientific principles. The curriculum is concerned with the manner by which these principles affect the control of temperature and the quality of air, design, testing, installation and development of heating and cooling systems.

If you select the residential degree, you will learn the theory of operation as well as installation, duct design, service and repair of gas and electric furnaces, heat pumps and central air conditioners. In addition to the 31 core hours, the following courses are required for the A.A.S. degree, residential option.

(Major Code 2880; State CIP Code 47.0201)

- HVAC (<http://www.jccc.edu/hvac>)

Associate of Applied Science Degree

First Semester

HVAC 121	Basic Principles of HVAC*	4
HVAC 123	Electromechanical Systems	4
HVAC 143	Reading Blueprints and Ladder Diagrams	2
HVAC 155	Workplace Skills	1
INDT 125	Industrial Safety/OSHA 30	3
ENGL 121	Composition I*	3
EMS 121	CPR I - Basic Life Support for Healthcare Provider	1
Total Hours		18

Second Semester

HVAC 146	Plumbing Systems Applications	3
HVAC 150	Refrigerant Management and Certification	1
HVAC 137	Residential Systems: Air Conditioning*	4
HVAC 124	Equipment Selection and Duct Design*	4
HVAC 167	Sheet Metal Layout and Fabrication	3
Total Hours		15

Third Semester

Technical Electives (see below)		4
MATH 130	Technical Mathematics I*	3
HVAC 127	Residential Systems: Heating*	4
HVAC 148	HVAC Installation and Start-up Procedures*	3
Social Science and/or Economics Elective ^		3
Total Hours		17

^ Social Science and/or Economics Elective (<http://catalog.jccc.edu/fall/degreecertificates/electives/social-sci-econ-aas>)

Fourth Semester

Technical Electives (see below)		4
General Education Elective (see below)		3
HVAC 235	Residential Heat Pump Systems*	4
Humanities Elective ^		3
Total Hours		14

^ Humanities Elective (<http://catalog.jccc.edu/fall/degreecertificates/electives/humanities-aas>)

Technical Electives

ELTE 122	National Electrical Code I	4
ELTE 125	Residential Wiring Methods*	4
HVAC 125	Energy Alternatives	2
HVAC 221	Commercial Systems: Air Conditioning*	4
HVAC 223	Commercial Systems: Heating*	4
HVAC 231	HVAC Rooftop Units*	3
HVAC 271	HVAC Internship*	3
HVAC 291	Independent Study*	1-7

General Education Electives

ENGL 123	Technical Writing I*	3
SPD 120	Interpersonal Communication	3

Total Program Hours: 64