

AIR CONDITIONING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE



Program Information

The heating, ventilating, air conditioning and refrigeration (HVACR) industry continues to advance technologically, especially in the areas of computerization and sophisticated control systems. Thus, an upward trend is emerging in the changing skill sets required for successful service technicians. If you're passionate about progressive technology and are interested in a satisfying high-demand career based on skill, then the San Jacinto College Air Conditioning Technology program is right for you.

The San Jacinto College Air Conditioning Technology (HVACR) program:

- Is designed to provide students with the necessary skills required to become a state-licensed independent business owner/contractor or for employment in the industry as a technician in residential, commercial, and/or industrial air conditioning, refrigeration, and heating; and
- Is made up of a curriculum that provides the basic preparation for entry-level jobs in the fields of residential and commercial air conditioning, refrigeration, and heating with initial focus on installation, troubleshooting, and service. As students advance through the program, they will learn related topics of indoor air quality, load calculation, system design, and industry code standards.

Additional Information

The Fast Track to HVACR program allows students to complete an Occupational Certificate in just 16 weeks – one semester.

Upon completion of each certificate, students may become registered with the state by registering with the Texas Department of Licensing and Regulation (TDLR).

Career Opportunities

Graduates of the Air Conditioning Technology program will enter a high demand field with excellent wage-earning potential. Presently, industry advisors say the demand for technicians has a 10-year backlog, and a 21 percent growth rate, faster than the average for all occupations.

Graduates of the San Jacinto College Air Conditioning Technology program have the opportunity to work as:

- Residential/commercial technicians,
- Industrial or maintenance technicians,
- Independent business owners or contractors, and
- Refrigeration technicians.

Earning Potential

Heating, Air Conditioning, and Refrigeration Mechanic and Installer: \$49,087¹

¹ Source: texaswages.com (<http://texaswages.com>), median salary Gulf Coast region, 2021

For more information, students may contact North campus at 281-998-6150, x7264 or South campus at 281-998-6150, x3587.

Campuses

North Campus
South Campus

Information

The Air Conditioning Technology program is offered at the San Jacinto College South campus and the North campus. Both programs offer an Occupational Certificate, a Certificate of Technology, and an Associate of Applied Science (AAS) degree. The North campus also offers the Level 2 Certificate. The Air Conditioning Technology program focuses on residential and commercial air conditioning as well as commercial refrigeration. All courses in each certificate apply to the AAS degrees.

Students enrolling into San Jacinto College programs with external learning experiences (i.e., clinical, practicum, externship, cooperative, etc.) will be required to comply with the immunization requirements and policies of the clinical/external learning sites to engage in all clinical/external learning experiences. Vaccination requirements at clinical/external learning sites are implemented pursuant to the independent authority of such facilities and are not mandated by San Jacinto College. Failure to meet the immunization requirements mandated by clinical/external learning sites may limit a student's ability to complete the program and/or may delay the student's graduation date. San Jacinto College does not process exemptions, and students should address potential vaccination exemptions directly with the clinical/external learning site.

Associate of Applied Science

The College designed the Air Conditioning Technology program to provide students with a study of electrical and mechanical knowledge, skills, and abilities needed for employment in today's residential and light commercial Heating Ventilation Air Conditioning and Refrigeration (HVACR) careers. These skills help prepare students for employment as installers, salespersons, and technicians in residential and light commercial air conditioning, refrigeration, and heating. A graduate of this program will have a good foundational knowledge in the principles of air conditioning, heating, and refrigeration, with main emphasis on installation, troubleshooting, and customer service. Related topics of energy conservation, air systems design and analysis, advanced HVACR controls, and air conditioning codes are thoroughly covered. While this degree provides the student with 45 credit hours of HVACR specific courses, it also provides the student with 15 credit hours of general education courses should the student look to pursue a higher degree in the future.

Admission

No admission requirements.

Job entry requirements:

In accordance with Texas House Bill 1508, the College informs all students in this program who may have a criminal background that a criminal history could keep graduates from being licensed by the state of Texas. Students with any questions about their background and licensure may speak with the Department Chair.

Plan of Study

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First Term		Credits
HART 1401	Basic Electricity for HVAC	4
HART 1407	Refrigeration Principles	4
HART 1441	Residential Air Conditioning	4
HART 1445	Gas and Electrical Heating	4
Credits		16

Second Term		Credits
HART 2331	Advanced Electricity for HVAC	3
HART 2301	Air Conditioning and Refrigeration Codes	3
HART 2334	Advanced A/C Controls	3
HART 2442	Commercial Refrigeration	4
HART 2368 or HART 2338	Practicum (or Field Experience) - HVAC/R Technology/Technician or Air Conditioning Installation and Startup	3
Credits		16

Third Term		Credits
HART 2441	Commercial Air Conditioning	4
EECT 1300 or HART 2343 or HART 2349 or HART 2357	Technical Customer Service or Industrial Air Conditioning or Heat Pumps or Specialized Commercial Refrigeration	3
HART 2345 or HART 2302	Residential A/C System Design or Commercial Air Conditioning System Design	3
Select one of the following:		3
SPCH 1311	Introduction to Speech Communication	
SPCH 1315	Public Speaking	
SPCH 1318	Interpersonal Communication	
SPCH 1321	Business and Professional Speech	
ENGL 1301	Composition I	3
Credits		16

Fourth Term		Credits
HART 2336	Air Conditioning Troubleshooting	3
Social and Behavioral Sciences or Government/Political Science or American History		3
MATH 1332 or MATH 1314	Contemporary Mathematics (Quantitative Reasoning) or College Algebra	3

Language, Philosophy and Culture (Humanities) or Creative Arts (Fine Arts)	3
Credits	12
Total Credits	60

Capstone Experience: HART 2336 Air Conditioning Troubleshooting