AIR CONDITIONING TECHNOLOGY, ASSOCIATE OF APPLIED SCIENCE

Program Information

The Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR) industry is rapidly evolving with technological advancements, particularly in computerization and sophisticated control systems. These changes are driving a high demand for highly skilled service technicians, a demand that you, as a prospective student, can fulfill. If you're passionate about cutting-edge technology and seeking a rewarding, high-demand career, the San Jacinto College Air Conditioning Technology program is an excellent choice.

San Jacinto College Air Conditioning Technology (HVACR) Program Highlights:

- Comprehensive Skill Development: This program equips students with the skills to pursue careers as state-licensed independent business owners/contractors or as technicians specializing in residential, commercial, and industrial HVACR systems.
- Career-Focused Curriculum: The program is designed to equip you with the skills and knowledge needed for a successful career in the HVACR industry. It begins with foundational training for entry-level positions, emphasizing installation, troubleshooting, and servicing of air conditioning, refrigeration, and heating systems. As you progress, you will explore advanced topics, including indoor air quality, load calculations, system design, and adherence to industry code standards, ensuring you are well-prepared for the challenges of the industry.

Whether you aspire to start your own business or build a career in the HVACR industry, this program prepares you for success in this ever-evolving field.

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: $58,069[1]

[1] Source: texaswages.com (http://texaswages.com), median salary Gulf Coast region, 2023

For more information, students may contact North campus at 281-998-6150, x7264 or South campus at 281-998-6350, x3587.

Campuses

North Campus
South Campus

Information

The Heating, Ventilation, Air Conditioning, and Refrigeration (HVAC/R) field is teeming with exciting opportunities and the potential for significant career growth. As an essential component of modern infrastructure, HVAC/R systems are crucial for maintaining comfortable living and working environments worldwide. Here's why a career in this industry could be your ideal choice:

Why Choose a Career in HVAC/R?

- **High Demand and Job Security**: HVAC/R technicians are consistently in demand due to the necessity of climate control systems in homes, businesses, hospitals, and more. This demand ensures long-term job security and stability.
- **Diverse Work Environments**: Technicians have the opportunity to work in a variety of settings, from residential homes to large commercial facilities like office buildings and hospitals, making the work dynamic and engaging.
- **Hands-On and Independent Work**: Experience the satisfaction of solving complex problems and working with your hands. HVAC/R careers involve diagnosing issues, troubleshooting, and repairing systems either independently or within small teams.

Career Growth and Specialization Opportunities

- **Specialization Options**: The HVAC/R field offers numerous paths for specialization, such as residential HVAC, commercial refrigeration, energy management, or green technologies like solar-powered systems. This allows you to tailor your career to your interests.
- **Pathways to Advancement**: Begin as an entry-level technician and progress to senior roles like project manager or service manager. With experience, you might even start your own business.
- **Continued Learning**: The industry encourages ongoing education with certifications that enhance skills and earning potential. Certifications

are highly valued across the industry and can significantly boost your career.

Future-Proof Your Career

- **Technological Advancements**: Stay at the forefront of innovation with smart thermostats, IoT integration, and advanced diagnostic tools transforming the industry. Keeping up with these advancements ensures a competitive edge.
- **Green Energy Opportunities**: As the world shifts towards sustainability, expertise in green HVAC/R systems becomes increasingly valuable. This aligns with global environmental goals and offers a fulfilling career path.

Embark on an exciting journey in the HVAC/R industry where every day presents new challenges and opportunities for growth. Whether you're passionate about technology, sustainability, or hands-on problem-solving, this field has something to offer everyone.

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.

Students who wish to pursue a bachelor's degree after graduation from San Jacinto College may want to consider programs at Lamar University. Lamar will accept credit for students with an AAS in Air Conditioning Technology. Interested students may find more information on the Lamar transfer website (https://www.thinklamar.com/transfer-students.html).

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

3AIRCON

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		
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		
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		
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

If you do not see your transfer school, please follow the Plan of Study (p. 2). For more information, contact the Department Chair on your campus. Please speak to an advisor at San Jacinto College and the transfer institution to ensure this Transfer Plan is accurate and complete. For a list of all MAPs, students may go to Transfer Plans A-Z (https://publications.sanjac.edu/transfer-plan-maps/). Students may filter for specific universities, disciplines, or degrees, and print individual MAPs.

Air Conditioning Technology

Lamar, Air Conditioning Tech, Industrial Tech, BSIT Full-time (https://publications.sanjac.edu/map-lamar-air-cond-indust-tech-bsft/)

Lamar, Air Conditioning Tech, Industrial Tech, BSIT Part-time (https://publications.sanjac.edu/map-lamar-air-cond-indust-tech-bspt/)