

ESSENTIAL REQUIREMENTS FOR THE AIR CONDITIONING, REFRIGERATION, AND HEATING SERVICE TECHNOLOGY (HARV) CERTIFICATE PROGRAM

In recent years, the installation and servicing of heating, refrigeration and environmental air conditioning equipment has increased significantly. This emphasis has especially been felt in the southeastern part of the United States. The state of the art for this industry has become more and more complex, requiring skilled mechanics for entry-level positions.

To meet this demand for skilled mechanics, SFC offers a one-year certificate in Air Conditioning, Refrigeration and Heating. This program is designed to enable persons to acquire the knowledge and skills necessary for entry-level employment.

Section 1. Essential Observational Requirements for HARV Certificate Students.

The HARV student must be able to:

- observe laboratory demonstrations in which residential / commercial HARV mechanical systems with technical and mechanical problems are diagnosed and repaired.
- describe the condition of a residential / commercial HARV mechanical system verbally and in writing.
- use diagnostic equipment effectively by correctly placing sensors on the appropriate wiring and instruments of a residential / commercial HARV mechanical system.
- read and comprehend text, numbers, and graphs displayed in print and on a video monitor or screen.

Section 2. Essential Movement Requirements for HARV Certificate Students.

The HARV student must be able to:

- be in the HARV classroom as well as the service lab at the designated times as described in the course syllabus for educational experiences.
- demonstrate sufficient tolerance to work in tight, confined spaces for moderate periods of time.
- move safely around the classroom and HARV service lab.
- reach various areas within a residential / commercial HARV mechanical system which may include the use of ladders to reach rooftops and working in small enclosures such as a commercial air handler.
- demonstrate sufficient endurance to perform moderately taxing continuous physical work, often requiring prolonged standing over several hours and overhead arm use for extended periods.
- demonstrate sufficient strength, balance, and mobility in order to frequently handle dirty and cumbersome parts that can be heavy, e.g. removing and replacing an A/C compressor.
- demonstrate sufficient chemical tolerance to withstand contact with various refrigeration products that may cause skin / eye irritations, e.g. fluxes, oils, and refrigerants under pressure.
- demonstrate proper use and control of power tools as well as diagnostic equipment.
- use an electronic keyboard (e.g. 101 -key IBM computer keyboard) to operate lab equipment and to calculate, record, evaluate, and transmit HARV information.
- demonstrate the ability to operate residential / commercial HARV mechanical systems safely.

Section 3. Essential Communication Requirements for HARV Certificate Students.

The HARV student must consistently demonstrate the ability to:

- read and comprehend technical and professional materials (e.g. textbooks, schematics, handbooks, procedure and instruction manuals).
- comprehend verbal communications, including lectures, discussions, and conversations with HARV professionals and clients.
- follow verbal and written instructions in order to correctly and independently perform shop duties.
- effectively communicate with residential / commercial HARV mechanical system owners about problems and repairs.
- independently prepare papers and homework, and take paper, computer, and laboratory practical examinations.

Section 4. Essential Cognitive Requirements for the HARV Certificate Program.

The HARV student must:

- independently possess the following cognitive and problem-solving skills: comprehension, measurement, mathematical calculation, reasoning, integration, analysis, self-expression, and patience. The student must also be able to demonstrate these skills by achieving the state mandated TABE test scores (9.0 Reading; 9.0 Language; 10.0 Math) by the end of the program.
- be able to use a diagnostic approach to thoroughly examine residential / commercial HARV mechanical systems to determine not only any current problems but also to find any worn parts that may cause the residential / commercial HARV mechanical system_(and user) problems in the future.

Section 5. Essential Behavioral Requirements for the HARV Certificate Program.

The HARV student must consistently demonstrate the ability to:

- manage the use of time and organize work in order to complete multiple tasks and responsibilities within realistic constraints.
- independently exercise appropriate judgment and apply cognitive skills in the classroom, HARV lab, and HARV service settings.
- provide professional and technical services while experiencing the stresses of task-related uncertainty (e.g. impatient customers, the occasional cut and bruise), emergent demands (high levels of service calls and a distracting environment (e.g. high noise levels, hot, cold, and other extreme outdoor conditions).
- be flexible and creative and adapt to professional and technical change.
- recognize potentially hazardous materials, equipment, and situations and work safely in order to minimize risk of injury to customers, self and nearby individuals.
- adapt to working with unpleasant substances (e.g. extremely dirty and dusty duct systems).
- foster a team approach by supporting and promoting the activities of fellow students and HARV professionals in learning, task completion, problem solving, and customer service.
- admit when an error has been made, when uncertain about a diagnostic result, or when unsure about the appropriate response in professional situations.
- critically evaluate his or her own performance, accept constructive feedback, and seek ways for improvement (e.g. participate in enriching educational activities).
- evaluate the performance of fellow students, faculty, advisors, and the program as well as tactfully offer constructive feedback.
- adhere to all course policies and procedures as outlined in the course syllabus
- adhere to all college policies and procedures as outlined in the student handbook.