

AUTE-119-HEATING AND AIR CONDITIONING 4 CREDITS

SYLLABUS

CATALOG DESCRIPTION

A theory and shop course to teach the student automotive heating, air conditioning & ventilation systems as they apply to the automotive industry. The use of test equipment will be emphasized and the student will learn to diagnose, evacuate, recover and recharge air conditioning systems. Safety is emphasized.

Prerequisites: AUTE-113 Corequisites: AUTE-118

Semester Offered: Fall

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in...

BROAD AND SPECIALIZED LEARNING

Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING

Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT

Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION

Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY

Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES

Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to...

1. To provide the student with the knowledge to diagnose and repair heating and air conditioning systems.
2. Completion of 100% of NATEF priority 1 tasks.
3. Completion of 85% of NATEF priority 2 tasks.

4. Completion of 75% of NATEF priority 3tasks.

Specific Learning Outcomes

Upon successful completion of the course, the student will be able to...

1. Demonstrate the manufacturers' safe techniques while working with refrigerant systems.
2. Leak test a refrigerant system.
3. Service an air conditioning system in compliance with current environmental requirements.
4. Diagnose an air conditioning system using pressure gauges.
5. Replace seals, clutches, and bearings in A/C compressors.
6. Diagnose and repair A.C. electrical systems.
7. Replace refrigerant lines.
8. Remove & replace a receiver dryer.
9. Remove & replace a condenser.
10. Remove & replace an evaporator.
11. Remove and replace a heater core.
12. Service a heater control valve.
13. Diagnose and repair an in-operative A/C system.
14. Remove and replace a blower motor.
15. Diagnose and repair conditions related to the blower motor circuits.
16. Diagnose and service climate control systems.
17. Test vacuum components.