South Central College

ABCT 2805  Auto Body and Collision Air Conditioning

Course Outcome Summary

Course Information

Description
This course covers the principles of air conditioning. Various system types, collision
damage analysis, malfunction diagnosis, testing, and repair are studied in the
classroom. Practical worksuch as component replacement, system evacuation,
charging, and performance testing will be included.

Total Credits 2
Total Hours 48

Types of Instruction

Instruction Type Credits/Hours
Lecture
Lab

Pre/Corequisites
None

Institutional Core Competencies

Civic Engagement and Social Responsibility - Students will be able to demonstrate the ability to engage in the social responsibilities expected of a community member.

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

Course Competencies

1. The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives.[HP-I] designates an individual goal. [HP-G] designates a group goal.

2. Exhibit professionalism.

3. Comply with personal and environmental safety practices associated with clothing and the use of gloves; respiratory protection; eye protection; hand tools; power equipment; proper
ventilation; and the handling, storage, and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

4. [HP-I] Check voltages in electrical wiring circuits with a DMM (digital multimeter).

5. [HP-I] Check for voltage drop and/or current flow in electrical wiring circuits and components with a DMM (digital multimeter).


7. [HP-G] Identify and comply with environmental concerns relating to refrigerants and coolants.

8. [HP-G] Maintain and verify correct operation of certified refrigerant recovery and recharging equipment.

9. [HP-I] Locate and identify A/C system service ports.

10. [HP-G] Identify and recover refrigerant from A/C system.

11. [HP-G] Recycle refrigerant in accordance with EPA regulations.

12. [HP-G] Identify, label, and store refrigerant.


15. [HP-G] Recharge A/C system with refrigerant; perform leak test.

16. [HP-G] Identify oil type and maintain correct amount in A/C system.

17. [HP-G] Inspect, adjust, and replace A/C compressor drive belts; check pulley alignment.

18. [HP-G] Remove and replace A/C compressor; inspect, repair or replace A/C compressor mount.

19. [HP-G] Inspect, repair or replace A/C system mufflers, hoses, lines, fittings, orifice tube, expansion valve, and seals.

20. [HP-G] Inspect and replace receiver/drier or accumulator/drier.


22. [HP-G] Remove and replace fan (both electrical and mechanical), fan pulley, fan clutch, and fan shroud.

23. [HP-G] Inspect, remove, and replace electric fan sensors; check operation.

24. Identify Air Conditioning / A/C system designs.

25. Explain A/C system operation.

26. Identify A/C system parts terminology, location, and function.

27. Identify A/C oil types and usage.

28. Identify A/C service equipment, its proper usage, and maintenance.

29. Identify A/C air distribution parts terminology, location, and function.

30. Identify the use of A/C retro-fit kits and their use in automotive A/C systems.

SCC Accessibility Statement
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Additional information and forms can be found at:  [www.southcentral.edu/disability](http://www.southcentral.edu/disability)

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