# Course Information Form (CIF)

**Course Code:** ACR 157

**Course Title:** Collision Repair HVAC System Repair

**Department:** Applied Sciences and Technologies
**PCS Code:** 1.2 - Occupational/Technical Instruction
**CIP Code:** 47.0603
**Repeatability:** 0

**Effective Date:** Summer 2026

## Credit Hours

**Catalog Notation:** 1-0.5-1
**Credit Hour Distribution:**

| Lecture: 1 | Lab: 0.5 | Clinical: 0 | **Total: 1** |
|---|---|---|---|

## General Course Information

### Catalog Description

Theory and repair of HVAC systems most often affected by collisions; includes air conditioning and cooling systems. Course to be used by automotive students that previously completed AFD 113.

### General Course Objectives

Students will learn how to make repairs on HVAC systems most often affected by collisions.

### Minimum Placement Levels

| English | Reading | Math |
|---|---|---|
| Placement into ENG 098 | Placement into CCS 098 | Placement into MAT 059 |

### Prerequisites

Credit in ACR 110 and AFD 113

### Methods of Evaluation

1- 2 written exams, 2-3 graded assignments, 2-3 lab worksheets, and 1 practical exam.

### Instructional Materials and Additional Supplies

Auto Collision Repair and Refinishing, Michael Crandell

## Course Content

### General Learning Outcomes (GLOs)

- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

### Course Segments and Student Learning Outcomes

| Course Segment | Learning Outcomes | Lecture Hours | Lab Hours | Clinical Hours |
|---|---|---|---|---|
| Cooling System Operation and Service | 1. Remove and replace radiator, pressure cap, coolant recovery system, and water pump.<br>2. Remove and replace thermostat, by-pass, and housing.<br>3. Recover, refill, bleed, and leak-test cooling system, and test level of protection.<br>4. Remove and replace fan, fan pulley, fan clutch, and fan shroud.<br>5. Remove and replace auxiliary oil coolers and check oil level.<br>6. Inspect, remove, and replace fan sensors and check operation. | 7 | 3.75 | 0 |
| Air Conditioning Operation and Service | 1. Apply knowledge of air conditioning theory of modern refrigerant systems.<br>2. Identify, recover, label, store, and recycle refrigerant from A/C systems.<br>3. Operate and maintain certified A/C equipment.<br>4. Inspect, remove, replace, and repair A/C system components.<br>5. Evacuate A/C system and check for leaks.<br>6. Identify oil type in A/C system, check level, and add correct amount.<br>7. Recharge A/C system and check for leaks.<br>8. Diagnose air conditioning system problems.<br>9. Inspect, test, and repair heating, ventilating, and A/C ducts, doors, hoses, and outlets. | 8 | 3.75 | 0 |

### Total Contact Hours

| Lecture Hours | Lab Hours | Clinical Hours |
|---|---|---|
| 15 | 7.5 | 0 |