

Course Code: ACR 273

Course Title: Advanced Vehicle Systems

Department: Applied Sciences and Technologies

Effective Date: Summer 2026

PCS Code: 1.2 - Occupational/Technical Instruction

CIP Code: 47.0603

Repeatability: 0

Credit Hours

Catalog Notation: 2-2-3

Credit Hour Distribution:

Lecture: 2

Lab: 2

Clinical: 0

Total: 3

General Course Information

Catalog Description

Operation, diagnosis, and repair of advanced vehicle systems including anti-lock brakes, traction control, SRS airbag systems, convenience systems, navigation systems, speed control, power accessories, collision avoidance systems, and active suspensions.

General Course Objectives

To introduce the student to the many advanced electronic systems on today's vehicles in order to make the repair and diagnosis of these systems more effective and efficient.

Minimum Placement Levels

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

Prerequisites

Credit in ACR 116

Methods of Evaluation

4 tests, 2 in-class projects, 8 quizzes, 2 laboratory assignments, and 2 practical exams.

Instructional Materials and Additional Supplies

Auto Collision Repair and Refinishing, Michael Crandall

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
Repair Plan Review	1. Review repair plan and confirm that repairs needed match cost estimating.	1	1	0
Anti-lock Brakes/Traction Control Systems	1. Identify, examine, and repair all major ABS/TC systems and components.	6	5	0
SRS/Airbag Systems	1. Identify, examine, and repair all SRS and airbag systems and components.	6	5	0
Convenience Systems	1. Identify, examine, and repair all components and damage of keyless entry, heads up display, theft deterrent systems, power accessories, and communication systems.	6	4	0
Collision Avoidance/Active Suspension	1. Identify and locate systems and components of collision avoidance systems and active suspension systems. 2. Diagnose system failures using OEM troubleshooting procedures and schematics.	5	5	0
Scan Tool Selection and Communication Errors	1. Select scan tool for system communication. 2. Diagnose and repair scan tool system communication errors.	6	10	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
30	30	0