# **Clackamas Community College**

Online Course/Outline Submission System

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## **Section #1 General Course Information**

**Department:** Automotive: Collision Repair/Refinishing Technology

Submitter

First Name: Dave
Last Name: Bradley
Phone: 3051
Email: Bradleyd

Course Prefix and Number: AB - 224

# Credits: 6

**Contact hours** 

Lecture (# of hours): Lec/lab (# of hours): 132

Lab (# of hours):

Total course hours: 132

For each credit, the student will be expected to spend, on average, 3 hours per week in combination of in-class and out-of-class activity.

Course Title: Collision Repair IV/Advanced Structural

Course Description:

Advanced frame and Unibody repair procedures. Electronic measurement and dimensioning, repair documentation, brakes, suspension, and alignment as they relate to collision repair.

Type of Course: Career Technical Preparatory

Is this class challengeable?

No

Can this course be repeated for credit in a degree?

No

Is general education certification being sought at this time?
No
Does this course map to any general education outcome(s)?
No
Is this course part of an AAS or related certificate of completion?
Yes
Name of degree(s) and/or certificate(s): Collision Repair and Refinishing Technology AAS Degree & Career Pathway Certificate
Are there prerequisites to this course?
Yes
Pre-reqs: AB-222
Have you consulted with the appropriate chair if the pre-req is in another program?
No
Are there corequisites to this course?
No
Are there any requirements or recommendations for students taken this course?
No
Are there similar courses existing in other programs or disciplines at CCC?
No
Will this class use library resources?
No
Is there any other potential impact on another department?
No
Does this course belong on the Related Instruction list?
No
GRADING METHOD:
A-F or Pass/No Pass
Audit: Yes

When do you plan to offer this course?

- √ Fall
- ✓ Winter
- ✓ Spring

Is this course equivalent to another?

If yes, they must have the same description and outcomes.

### No

Will this course appear in the college catalog?

#### Yes

Will this course appear in the schedule?

### Yes

**Student Learning Outcomes:** 

Upon successful completion of this course, students should be able to:

- 1. demonstrate advanced frame and Unibody repair;
- 2. demonstrate advanced electronic frame measuring,
- 3. perform precise dimensional correction on unibody and full frame vehicles.

This course does not include assessable General Education outcomes.

#### **Major Topic Outline:**

- 1. Vehicle Measurement and Damage Analysis.
- a. Sway.
- b. Sag.
- c. Mash.
- d. Diamond.
- e. Twist.
- 2. Gauges, Trams, Ladders, and Fixtures.
- a. Dimensional References and Data Retrieval.
- a1. Datum Plane.
- a2. Center Plane.
- 3. Electronic Measuring Systems.
- a. Computerized Laser Measuring Systems.
- b. Robot Arm measuring Systems.
- 4. Anchoring and Pulling.
- a. Anchoring Full Frame Vehicles.
- b. Anchoring Unibody Vehicles.
- c. Single and Multiple Pulls.
- d. Pulling Sequence.
- e. Measuring when Pulling.
- 5. Suspension and Brakes.
- a. Component alignment or replacement.
- a1. Diagnosis and troubleshooting.
- a2. Caster, Camber, Toe, and Steering Axis Inclination.

- b. Thrust Axis Analysis.
- c. Brake Component inspection and replacement.

Does the content of this class relate to job skills in any of the following areas:

Increased energy efficiency
 Produce renewable energy
 Prevent environmental degradation
 Clean up natural environment
 Supports green services

Percent of course: 0%

First term to be offered:

# Next available term after approval

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