

# AB R005A: AUTO BODY PAINTING AND REFINISHING I

**Originator**

ptrujillo

**Co-Contributor(s)**
**Name(s)**

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**College**

Oxnard College

**Discipline (CB01A)**

AB - Automotive Body Repair&amp;Paint

**Course Number (CB01B)**

R005A

**Course Title (CB02)**

Auto Body Painting and Refinishing I

**Banner/Short Title**

Painting &amp; Refinishing I

**Credit Type**

Credit

**Start Term**

Fall 2021

**Catalog Course Description**

This course is designed to prepare students for entry-level positions in the automotive refinishing industry by providing training in painting fundamentals. Topics to be covered include a history of the industry, shop safety, shop equipment and layout, required tools and materials, and surface preparation techniques.

**Taxonomy of Programs (TOP) Code (CB03)**

0949.00 - \*Automotive Collision Repair

**Course Credit Status (CB04)**

D (Credit - Degree Applicable)

**Course Transfer Status (CB05) (select one only)**

C (Not transferable)

**Course Basic Skills Status (CB08)**

N - The Course is Not a Basic Skills Course

**SAM Priority Code (CB09)**

C - Clearly Occupational

**Course Cooperative Work Experience Education Status (CB10)**

N - Is Not Part of a Cooperative Work Experience Education Program

**Course Classification Status (CB11)**

Y - Credit Course

**Educational Assistance Class Instruction (Approved Special Class) (CB13)**

N - The Course is Not an Approved Special Class

**Course Prior to Transfer Level (CB21)**

Y - Not Applicable

**Course Noncredit Category (CB22)**

Y - Credit Course

**Funding Agency Category (CB23)**

Y - Not Applicable (Funding Not Used)

**Course Program Status (CB24)**

1 - Program Applicable

**General Education Status (CB25)**

Y - Not Applicable

**Support Course Status (CB26)**

N - Course is not a support course

**Field trips**

May be required

**Grading method**

Letter Graded

**Alternate grading methods**

Credit by exam, license, etc.  
Student Option- Letter/Pass  
Pass/No Pass Grading

**Does this course require an instructional materials fee?**

No

**Repeatable for Credit**

No

**Is this course part of a family?**

No

**Units and Hours**

**Carnegie Unit Override**

No

**In-Class**

**Lecture**

**Minimum Contact/In-Class Lecture Hours**

17.5

**Maximum Contact/In-Class Lecture Hours**

17.5

**Activity**

**Laboratory**

**Minimum Contact/In-Class Laboratory Hours**

52.5

**Maximum Contact/In-Class Laboratory Hours**

52.5

**Total in-Class**

**Total in-Class**

**Total Minimum Contact/In-Class Hours**

70

**Total Maximum Contact/In-Class Hours**

70

**Outside-of-Class**

**Internship/Cooperative Work Experience**

**Paid**

**Unpaid**

**Total Outside-of-Class**

**Total Outside-of-Class**

**Minimum Outside-of-Class Hours**

35

**Maximum Outside-of-Class Hours**

35

**Total Student Learning**

**Total Student Learning**

**Total Minimum Student Learning Hours**

105

**Total Maximum Student Learning Hours**

105

**Minimum Units (CB07)**

2

**Maximum Units (CB06)**

2

**Student Learning Outcomes (CSLOs)**

**Upon satisfactory completion of the course, students will be able to:**

- |   |  |
|---|--|
| 1 | Use a 7" and 5" air grinders safely, using the buffing and cross-cut techniques to remove paint and rust on a sheet metal panel. |
| 2 | Students will know how to prepare surface for a spot, and panel repair.  |
| 3 | Use a spray gun to apply primers and paints.   |

**Course Objectives**

**Upon satisfactory completion of the course, students will be able to:**

- |   |   |
|---|---|
| 1 | Identify the various types of equipment used in auto refinishing.                             |
| 2 | Explain how a spray gun works.  |
| 3 | Identify the various types of spray coats.  |
| 4 | Clean and properly care for a spray gun.  |
| 5 | Properly repair scratches, nicks, dings, and surface rust with body filler and glazing putty. |
| 6 | Mask a car, panel, or spot repair for refinishing.  |
| 7 | Select the correct abrasive and sanding techniques for specific final sanding operations.     |

## Course Content

### Lecture/Course Content

1. Introduction and Career
  - a. Auto body careers
  - b. Body shop repairs
  - c. What are collision repairs
2. Shop Safety and Efficiency
  - a. Good shop housekeeping
  - b. General shop safety procedures
  - c. Fire safety
  - d. Hazardous materials safety
  - e. Tool and equipment safety
3. Personal Safety
  - a. Lung protection
  - b. Eye protection
  - c. Head and hair protection
  - d. Ear protection
  - e. Safety shoes
  - f. Protective clothing
  - g. Painter's suit
4. Vehicle Construction
  - a. Auto body repair history
  - b. Major body sections
  - c. Body and chassis
  - d. Unibody design factors
5. Hand Tool Technology
  - a. General purpose tools
  - b. Body working tools
  - c. Hand tool safety
6. Power Tool Technology
  - a. Air-powered tools
  - b. Electric-powered tools
7. Basic Shop Materials and Their Use
  - a. Types of sandpaper and grits
  - b. Types of grinding discs and grits
  - c. Sanding techniques
  - d. Types of sanding
  - e. Sand scratches swelling
8. Using Body Fillers
  - a. Body fillers
  - b. Preparing surfaces for plastic filler
  - c. Applying body filler
  - d. Grating and sanding body filler
  - e. Repairing paint surface imperfections with glazing putty
9. Vehicle Surface Preparation and Masking
  - a. Evaluate surface conditions
  - b. Paint removal
  - c. Preparing bare metal
  - d. Undercoat selection
  - e. Final sanding
  - f. Masking
  - g. Surface cleaning
10. Refinishing Procedures
  - a. Purpose of refinishing
  - b. Topcoats
  - c. Prime coats
  - d. Applying prime-coats

- e. Flash times
- f. Applying single-stage paints
- g. Removal of masking material
- 11. Refinishing Equipment Technology
  - a. Spray guns
  - b. Using a spray gun
  - c. Spray gun maintenance
  - d. Spray gun setup
  - e. Spray booth
  - f. Spray booth maintenance

### **Laboratory or Activity Content**

1. Introduction and Career
  - a. Auto body careers
  - b. Body shop repairs
  - c. What are collision repairs
2. Shop Safety and Efficiency
  - a. Good shop housekeeping
  - b. General shop safety procedures
  - c. Fire safety
  - d. Hazardous materials safety
  - e. Tool and equipment safety
3. Personal Safety
  - a. Lung protection
  - b. Eye protection
  - c. Head and hair protection
  - d. Ear protection
  - e. Safety shoes
  - f. Protective clothing
  - g. Painter's suit
4. Vehicle Construction
  - a. Auto body repair history
  - b. Major body sections
  - c. Body and chassis
  - d. Unibody design factors
5. Hand Tool Technology
  - a. General purpose tools
  - b. Body working tools
  - c. Hand tool safety
6. Power Tool Technology
  - a. Air-powered tools
  - b. Electric-powered tools
7. Basic Shop Materials and Their Use
  - a. Types of sandpaper and grits
  - b. Types of grinding discs and grits
  - c. Sanding techniques
  - d. Types of sanding
  - e. Sand scratches swelling
8. Using Body Fillers
  - a. Body fillers
  - b. Preparing surfaces for plastic filler
  - c. Applying body filler
  - d. Grating and sanding body filler
  - e. Repairing paint surface imperfections with glazing putty
9. Vehicle Surface Preparation and Masking
  - a. Evaluate surface conditions
  - b. Paint removal
  - c. Preparing bare metal

- d. Undercoat selection
- e. Final sanding
- f. Masking
- g. Surface cleaning
- 10. Refinishing Procedures
  - a. Purpose of refinishing
  - b. Topcoats
  - c. Prime coats
  - d. Applying prime-coats
  - e. Flash times
  - f. Applying single-stage paints
  - g. Removal of masking material
- 11. Refinishing Equipment Technology
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  - b. Using a spray gun
  - c. Spray gun maintenance
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## Methods of Evaluation

**Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):**

Problem solving exercises  
Skills demonstrations

**Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):**

Laboratory activities  
Other (specify)  
Projects  
Problem-Solving Assignments  
Quizzes  
Skills demonstrations  
Skill tests or practical examinations

### Other

Textbook Assignments

## Instructional Methodology

**Specify the methods of instruction that may be employed in this course**

Audio-visual presentations  
Class discussions  
Distance Education  
Demonstrations  
Guest speakers  
Instructor-guided interpretation and analysis  
Laboratory activities  
Lecture

**Describe specific examples of the methods the instructor will use:**

1. Discussion of previous textbook assignment followed by specific examples from textbook and automotive technical manual.
2. The use of audio and video aids.
3. Use of computers.
4. Hands on shop demonstrations.

## Representative Course Assignments

### Writing Assignments

1. Students will be required to take test and answer the review questions at the end of each assigned textbook chapter.
2. Students will be required to do online work in canvas.

### Critical Thinking Assignments

1. Identify the various types of equipment used in auto refinishing.
2. Explain how a spray gun works.
3. Identify the various types of spray coats.
4. Clean and properly care for a spray gun.

### Reading Assignments

1. In addition to the textbook assignment, students will be required to do outside readings in professional journals.
2. Students will be required to do online work in canvas.

### Skills Demonstrations

1. Properly repair scratches, nicks, dings, and surface rust with body filler and glazing putty.
2. Mask a car, panel, or spot repair for refinishing.
3. Select the correct abrasive and sanding techniques for specific final sanding operations.

### Other assignments (if applicable)

1. Students will be required to visit websites and complete worksheets, an example would be to visit the <https://www.SP2.org> Autobodyshopsafety website and complete the Test on Body Shop Safety.

## Outside Assignments

### Representative Outside Assignments

1. Students will be required to take test and answer the review questions at the end of each assigned textbook chapter.
2. Students will be required to do online work in canvas.
3. Students will be required to visit websites and complete worksheets, an example would be to visit the <https://www.SP2.org> Autobodyshopsafety website and complete the Test on Body Shop Safety.

**District General Education**

**A. Natural Sciences**

**B. Social and Behavioral Sciences**

**C. Humanities**

**D. Language and Rationality**

**E. Health and Physical Education/Kinesiology**

**F. Ethnic Studies/Gender Studies**

**CSU GE-Breadth**

**Area A: English Language Communication and Critical Thinking**

**Area B: Scientific Inquiry and Quantitative Reasoning**

**Area C: Arts and Humanities**

**Area D: Social Sciences**

**Area E: Lifelong Learning and Self-Development**

**Area F: Ethnic Studies**

**CSU Graduation Requirement in U.S. History, Constitution and American Ideals:**

**IGETC**

**Area 1: English Communication**

**Area 2A: Mathematical Concepts & Quantitative Reasoning**

**Area 3: Arts and Humanities**

**Area 4: Social and Behavioral Sciences**

**Area 5: Physical and Biological Sciences**

**Area 6: Languages Other than English (LOTE)**

**Textbooks and Lab Manuals**

**Resource Type**

Textbook

**Description**

James E. Duffy, and Jonathan Beaty (2020). *Text book and mind-Tap. Auto Body Repair Technology* (7th). Cengage Learning. 200 Pier 4 Boulevard Boston, MA 02210.

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**Resource Type**

Textbook

**Description**

James E. Duffy, and Jonathan Beaty (2020). *Text book and mind-Tap. Auto Body Repair Technology* (7th). Cengage Learning. 200 Pier 4 Boulevard Boston, MA 02210.

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**Resource Type**

Other Instructional Materials

**Description**

Safety Glasses.

**Distance Education Addendum**

**Definitions**

**Distance Education Modalities**

Hybrid (1%–50% online)

**Faculty Certifications**

Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.

Yes

Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.

Yes

**Regular Effective/Substantive Contact**

**Hybrid (1%–50% online) Modality:**

Method of Instruction	Document typical activities or assignments for each method of instruction
Face to Face (by student request; cannot be required)	Students will have hands on face to face contact with projects and skill instruction on campus and instructor lead. Many skills developed through this course can not be performed online. Welding, metal grinding, metal repair, sanding, structural repairs, painting and many hands on activities must be observed and demonstrated by instructor.
Video Conferencing	Recordings of proper techniques and processes will be available. Real time video available scheduled and unscheduled.
Other DE (e.g., recorded lectures)	Faculty may use a variety of tools and media along with the learning management system to insure ADA compliance. Not limited to but inclusive of a broad range of options online and on campus, such as library resources, websites and multimedia suppliers.
E-mail	Email communication is available at any time. Announcements and messages will be used regularly to update and clarify assignments.
Synchronous Dialog (e.g., online chat)	Students may be notified of special instances of synchronous contact through online means.
Telephone	Will be available when on ground labs are available.
Asynchronous Dialog (e.g., discussion board)	Regular use of asynchronous discussion boards will be used for online activities. Questions and topics will be posted for meaningful discussion between faculty and required between students.

**Examinations**

**Hybrid (1%–50% online) Modality**

Online  
On campus

**Primary Minimum Qualification**

AUTO BODY TECHNOLOGY

**Review and Approval Dates**

**Department Chair**

09/16/2020

**Dean**

09/16/2020

**Technical Review**

10/28/2020

**Curriculum Committee**

10/28/2020

**DTRW-I**

MM/DD/YYYY

**Curriculum Committee**

12/09/2020

**Board**

MM/DD/YYYY

**CCCCO**

MM/DD/YYYY

**Control Number**

CCC000262709

**DOE/accreditation approval date**

MM/DD/YYYY