AB R005B: AUTO BODY PAINTING AND REFINISHING II

Originator
ptrujillo

Co-Contributor(s)

Name(s)
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College
Oxnard College

Discipline (CB01A)
AB - Automotive Body Repair&Paint

Course Number (CB01B)
R005B

Course Title (CB02)
Auto Body Painting and Refinishing II

Banner/Short Title
Painting/Refinishing II

Credit Type
Credit

Start Term
Fall 2021

Catalog Course Description
This course continues training in automotive painting and refinishing. Topics to be covered include application of undercoats and topcoats, spot repair procedures, paint job procedures, paint problems, and procedures for securing employment in the field.

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
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
35
Maximum Contact/In-Class Lecture Hours
35

Activity

Laboratory
Minimum Contact/In-Class Laboratory Hours
105
Maximum Contact/In-Class Laboratory Hours
105

Total in-Class

Total in-Class
Total Minimum Contact/In-Class Hours
140
Total Maximum Contact/In-Class Hours
140

Outside-of-Class

Internship/Cooperative Work Experience

Paid

Unpaid

Total Outside-of-Class

Total Outside-of-Class
Minimum Outside-of-Class Hours
70
Maximum Outside-of-Class Hours
70

Total Student Learning

Total Student Learning
Total Minimum Student Learning Hours
210
Total Maximum Student Learning Hours
210

Minimum Units (CB07)
4
Maximum Units (CB06)
4

Prerequisites
AB R005A

Entrance Skills

Entrance Skills

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.

Prerequisite Course Objectives

AB R005A-Identify the various types of equipment used in auto refinishing.
AB R005A-Explain how a spray gun works.
AB R005A-Identify the various types of spray coats.
AB R005A-Clean and properly care for a spray gun.
AB R005A-Properly repair scratches, nicks, dings, and surface rust with body filler and glazing putty.
AB R005A-Mask a car, panel, or spot repair for refinishing.
AB R005A-Select the correct abrasive and sanding techniques for specific final sanding operations.

Requisite Justification

Requisite Type
Prerequisite

Requisite
AB R005A

Requisite Description
Course in a sequence

Level of Scrutiny/Justification
Content review

Student Learning Outcomes (CSLOs)

	Upon satisfactory completion of the course, students will be able to:
1	Perform a positive and negative test with a cartridge respirator.
2	Use the paint mixing system to mix primer and paint.
3	Students will know masking techniques for a spot repair, panel repair and complete painting repair.
4	Students will know hand sanding, machine sanding, and block sanding techniques.

Course Objectives

	Upon satisfactory completion of the course, students will be able to:
1	Demonstrate safety precautions that should be taken when using, storing, or disposing of refinishing products.
2	Explain how using HVLP spray equipment has an environmental impact.
3	Demonstrate how to perform a positive and negative test of a cartridge respirator.
4	Explain the operation of spray booths.
5	Determine when and how to make spot repairs.
6	Prepare existing paint films and bare metal substrates for refinishing.
7	Determine when to apply a primer, a primer-sealer, and a primer-surfacer.
8	Prepare plastic parts for refinishing.
9	Properly complete spot repairs, panel repairs, and an overall paint job.
10	Describe color theory and how it relates to matching paint colors.

Course Content

Lecture/Course Content

1. Environmental Safety
   a. Controlling VOC's and HAP's
   b. Chemical storage
   c. Safe handling and disposing of the material
   d. Spill control
   e. Fire extinguishers
   f. Fire and explosion protection
   g. Ventilation
2. Choosing the Proper Spray Gun System
   a. Equipment and material preparation
   b. Spray gun troubleshooting
   c. Air-Supplied respirators
   d. Drying room
   e. Other paint shop equipment and tools
3. Masking II

   a. Planning and preparation for blend-masking
   b. Blend-masking materials
   c. Blend-masking
   d. Plastic-wrap masking techniques
   e. Spray masking techniques
4. Spray Gun Cleaning
   a. Safety equipment needed
   b. Back flush cleaning method
   c. Spray gun washing machine
   d. Spray gun weekly cleaning
   e. Reassembling a spray gun
5. The Application Stroke Techniques
   a. Distance
   b. Perpendicularity
   c. Movement and triggering
   d. Speed
   e. Spraying corners
   f. Spraying narrow surfaces
   g. Spraying upright surfaces
   h. Overlapping
   i. Double coating
6. Methods of Refinishing
   a. Spot repairs
   b. Panel repairs
   c. Overall repairs
   d. Basecoat/Clear coat repairs
   e. Spraying tri-coat finishes
7. Undercoat Selection
   a. Surface cleaning
   b. Self-Etching primer
   c. Epoxy primers
   d. Primer-Surfacers
   e. Primer Sealers
8. Different Sanding Procedures
   a. Very coarse grit
   b. Coarse grit
   c. Medium grit
   d. Fine grit
   e. Very fine grit
   f. Ultra fine grit
9. Different Types of Finishes
   a. OEM finishes
   b. Enamels single stage
   c. Lacquer
   d. BC/CC
   e. Multi stage finishes
   f. Metallics finishes
   g. Pearl finishes
10. Color Matching
   a. Color theory
   b. Using paint color directory
   c. Matching basic paint colors
   d. Matching basecoat/clear coat finishes
   e. Matching three-stage paints
   f. Tinting finishes
   g. Custom painting
11. Painting Plastics

   a. Preparing plastic parts
   b. Removing mold-release agents from plastic parts
   c. Preparing new plastic parts
   d. Preparing repaired plastic parts
12. Application of Basecoat/Clearcoat Paint
   a. Basecoat/Clearcoat
   b. Mixing basecoats
   c. Applying basecoats
   d. Applying clearcoats
   e. Blending

Laboratory or Activity Content

1. Environmental Safety
   a. Controlling VOC's and HAP's
   b. Chemical storage
   c. Safe handling and disposing of the material
   d. Spill control
   e. Fire extinguishers
   f. Fire and explosion protection
   g. Ventilation
2. Choosing the Proper Spray Gun System
   a. Equipment and material preparation
   b. Spray gun troubleshooting
   c. Air-Supplied respirators
   d. Drying room
   e. Other paint shop equipment and tools
3. Masking II
   a. Planning and preparation for blend-masking
   b. Blend-masking materials
   c. Blend-masking
   d. Plastic-wrap masking techniques
   e. Spray masking techniques
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   a. Safety equipment needed
   b. Back flush cleaning method
   c. Spray gun washing machine
   d. Spray gun weekly cleaning
   e. Reassembling a spray gun
5. The Application Stroke Techniques
   a. Distance
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   d. Speed
   e. Spraying corners
   f. Spraying narrow surfaces
   g. Spraying upright surfaces
   h. Overlapping
   i. Double coating
6. Methods of Refinishing
   a. Spot repairs
   b. Panel repairs
   c. Overall repairs
   d. Basecoat/Clear coat repairs
   e. Spraying tri-coat finishes
7. Undercoat Selection
   a. Surface cleaning
   b. Self-Etching primer
   c. Epoxy primers

   d. Primer-Surfacers
   e. Primer Sealers
8. Different Sanding Procedures
   a. Very coarse grit
   b. Coarse grit
   c. Medium grit
   d. Fine grit
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9. Different Types of Finishes
   a. OEM finishes
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11. Painting Plastics
   a. Preparing plastic parts
   b. Removing mold-release agents from plastic parts
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   a. Basecoat/Clearcoat
   b. Mixing basecoats
   c. Applying basecoats
   d. Applying clearcoats
   e. Blending

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):

Essay exams
Laboratory activities
Other (specify)
Projects
Problem-Solving Assignments
Quizzes
Skills demonstrations
Skill tests

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.

Critical Thinking Assignments

1. Students will demonstrate safety precautions that should be taken when using, storing, or disposing of refinishing products.
2. Students will explain how using (HVLP) high velum low pressure spray equipment has an environmental impact.
3. Students will demonstrate how to perform a positive and negative test of a cartridge respirator.

Reading Assignments

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

Skills Demonstrations

1. The students will demonstrate the skills to Prepare existing paint films and bare metal substrates for refinishing.
2. The students will demonstrate skills when to apply a primer, a primer-sealer, and a primer-surfacer.
3. The students will know the skill to Prepare plastic parts for refinishing.

Other assignments (if applicable)

1. Student will be working on their own projects repairing their own cars or trucks.

Outside Assignments

Representative Outside Assignments

1. Student will be working on their own projects repairing their own cars or trucks.
2. In addition to the textbook assignments, students will be required to do outside classroom readings in professional journals.
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

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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Textbook

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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.

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
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.
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.
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.
Video Conferencing	Recordings of proper techniques and processes will be available. Real time video available scheduled and unscheduled.
Synchronous Dialog (e.g., online chat)	Students may be notified of special instances of synchronous contact through online means.

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
CCC000217050

DOE/accreditation approval date
MM/DD/YYYY