

## **COURSE OUTLINE**

### **Painting and Refinishing: Problem Solving**

#### **Course Description**

AB247. Painting and Refinishing: Problem Solving. 3 hours credit. Prerequisites: AB 246 with a C or better or instructor's consent. This course will enable the student to work with painting and refinishing techniques and methods of correcting problems encountered during the painting process. The student will study the causes and cures of finish defects and learn procedures established to correct them.

#### **Course Relevance**

The principles learned in this course will strengthen the student's knowledge in automotive refinishing materials and problems occurring in refinishing operations. The student will perform the essential tasks of analyzing, preparing, repairing and refinishing the vehicle. These tasks are essential to those aspiring to work in the auto body refinish profession.

#### **Required Materials**

Duffey, J., (2001). *I-CAR, professional automotive collision repair (2<sup>nd</sup> ed)*. Albany, NY: Delmar Publishing

#### **Learning Outcomes**

The intention is for the student to be able to:

1. Examine the finish for imperfections
2. Correct the imperfections
3. Finesse finish
4. Perform final detail work

#### **Primary Learning PACT skills that will be DEVELOPED and/or documented in this course**

Through the student involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Critical Thinking
  - Through the analysis of proper analysis and damage repair fundamentals, the student will recognize and understand the role these fundamentals play in performing a quality analysis and repair
2. Problem Solving
  - Through the analysis of the damage repair processes, the student will be able to identify the strengths and/or limitations of each individual process and make decisions based on that knowledge.
3. Field-Related Technology

- Through in-shop exercises, the student will be able to demonstrate their understanding of analyzing, preparing, and refinishing all body panels

Secondary skills (developed but not documented):

Health Management  
Reading  
Math

### **Major Summative Assessment Task(s)**

These learning outcomes and primary Learning PACT skills will be demonstrated by:

1. Completing a hands-on project, performing auto refinishing
2. Completing projects that demonstrate the ability to recognize and utilize the correct techniques and equipment to perform auto refinishing
3. Completing projects that demonstrate the ability to identify problems and correct them using accepted collision repair principles.

### **Course Content**

- I. Themes - Key recurring concepts that run throughout this course:
  - A. Safety in the auto body shop
  - B. Quality in auto refinishing
- II. Issues - Key issues that will be addressed in this course: areas of conflict that must be understood in order to achieve the intended outcome:
  - A. Planning as part of process
  - B. Preparation for refinishing quality
  - C. Performance of refinishing products
- III. Concepts – Key concepts that must be understood to address the issues:
  - A. Proper planning techniques for repair
  - B. Proper preparation of material and equipment and selection
  - C. Proper performance for repair functions.
- IV. Skills / Competencies - Actions that are essential to achieve the course outcomes:
  - A. Identifying the proper use of fire protection equipment
  - B. Using chemicals Safely
  - C. Identifying environmental effects of chemicals
  - D. Identifying proper chemical disposal techniques
  - E. Identifying information on and importance of MSD sheets.

### **Learning Units**

- I. Common paint/refinish problems
- II. Repair common refinish problems
- III. Hand and machine compound a finish
- IV. Properly “Final detail” a vehicle.

### **Learning Activities**

Learning activities will be geared towards lecture, demonstration, and performance. Classroom lecture is designed to enable the students to understand the key principles of non-structural analysis and damage repair.

**Grade Determination:**

The student will be graded on satisfactory completion of the major summative assessment tasks, learning activities, attendance, and written examination.