Butler Community College
Business Technology and Workforce
Development Division

Frank Robinson
Revised Spring 2006
Implemented Fall 2006

COURSE OUTLINE
Plastic and Adhesives I

Course Description
AB 115. Plastic and Adhesives I. 2 hours credit. Prerequisite: AB 101 with a C or better. This course will enable the student to repair auto bodies using plastics and adhesives. This course will also enable the student to perform safely mix and handle chemicals. The student will repair plastic parts with a variety of heat source chemicals.

Course Relevance
The principles learned in this course will allow the student to understand and utilize the techniques and methods necessary to repair auto body non-structural (removable) parts with plastics and adhesives. These techniques and methods are essential for those aspiring to work in the auto body repair profession. This course and subsequent courses will be taught according to NATEF (National Automotive Technicians Education Foundation)/ASE (Automotive Service Excellence) standards.

Required Materials
Duffey, J., (2004). *Auto body repair technology* (4th ed.). Albany, NY: Delmar Publishing

Learning Outcomes
The intention is for the student to be able to
1. Identify the types of plastics that need repair and the procedures required to repair them
2. Clean and prepare the surface of plastic parts in accordance with industry standards
3. Repair plastic parts with a variety of heat source and chemicals
4. Safely handle chemicals
5. Apply personal and environmental safety practices

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course
Through the student's involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:
1. Field-Related Technology
   - Through the use of current industry standards and technology, the student will be able to identify the materials, tools, and equipment to properly perform collision repair using plastic and adhesives

Secondary skills (developed but not documented):
Health Management
Reading

Major Summative Assessment Task(s)
These learning outcomes and the primary Learning PACT skills will be demonstrated by
1. Preparing and repairing a plastic part while practicing safety procedures

Course Content
I. Themes – Key recurring concepts that run throughout this course:
   A. Safety
   B. Quality
II. Issues- Key areas of conflict that must be understood in order to achieve the intended outcomes:
   A. Determine the type of plastic with which you are working
   B. Determine if the plastic should be repaired or replaced
III. Concepts – Key concepts that must be understood to address the issues:
   A. Assessing type of plastic
   B. Analyzing whether plastic can be replaced
   C. Proper performance of repair functions
IV. Skills/Competencies – Actions that are essential to achieve the course outcomes:
   A. Identify the types of plastics; determine reparability. High Priority-One (HP-1)
   B. Identify the types of plastics repair procedures; clean and prepare surface of plastic parts (HP-1)
   C. Safely mix and handle chemicals

Learning Units
I. Identify and explain the difference between the three major types of plastic used in automobiles
   A. Thermosetting plastics
   B. Thermo plastics
   C. Sheet Molded Compound (SMC)

II. Demonstrate proper repair procedures for damaged plastic components
   A. Using safety techniques and repair plastics with adhesives
   B. Repair plastics with adhesives

Learning Activities
Learning activities will include lectures, demonstration, and performance. Classroom lecture is designed to enable the student to understand the key principles in auto body repair.

Grade Determination
The student will be graded on completion of assessment tasks (learning activities), and written assignment and examinations.