CENTRAL CAROLINA COMMUNITY COLLEGE

Applied Technologies

Program Planning Guide

Collision Repair and Refinishing Technology Diploma (D60130)

Program Length: 3 semesters
Program Sites: West Harnett Center
Career Pathway Options: Diploma in Collision Repair and Refinishing Technology

Suggested Course Schedule		Class	Lab	Work	Credits	Notes:
1st Semester (fall)						
AUB 131	Structural Damage I	2	4	0	4	
TRN 110	Intro to Transport Tech	1	2	0	2	
TRN 120	Basic Transp Electricity	4	3	0	5	
TRN 180	Basic Welding for Transp	1	4	0	3	
	Total Semester Hours	8	13	0	14	
2nd Semester (spring)						
AUB 111	Painting & Refinishing I	2	6	0	4	
AUB 112	Painting & Refinishing II	2	6	0	4	
AUB 121	Non-Structural Damage I	1	4	0	3	
AUB 162	Autobody Estimating	1	2	0	2	
ENG 102	Applied Communications II	3	0	0	3	
	Total Semester Hours	9	18	0	16	
3rd Semester (summer)						
TRN 140	Transp Climate Control	1	2	0	2	
TRN 140A	Transp Climate Cont Lab	1	2	0	2	
AUB 114	Special Finishes	1	2	0	2	
PHY 110	Conceptual Physics	3	0	0	3	
PHY 110A	Conceptual Physics Lab	0	2	0	1	
	Total Semester Hours	6	8	0	10	
Total Semester Hours Credit Required for Graduation: 40						

Effective Term: 2023FA

Course Descriptions

AUB 111 Painting & Refinishing I
This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing following accepted industry standards.

AUB 112 Painting & Refinishing II
Prerequisite: Take AUB 111
This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.

AUB 114 Special Finishes
Prerequisite: Take AUB 111
This course introduces multistage finishes, custom painting, and protective coatings. Topics include base coats, advanced intermediate coats, clear coats, and other related topics. Upon completion, students should be able to identify and apply specialized finishes based on accepted industry standards.

AUB 121 Non-Structural Damage I
This course introduces safety, tools, and the basic fundamentals of body repair. Topics include shop safety, damage analysis, tools and equipment, repair techniques, materials selection, materials usage, and other related topics. Upon completion, students should be able to identify and repair minor direct and indirect damage including removal/repairing/replacing of body panels to accepted standards.

AUB 131 Structural Damage I
This course introduces safety, equipment, structural damage analysis, and damage repairs. Topics include shop safety, design and construction, structural analysis and measurement, equipment, structural glass, repair techniques, and other related topics. Upon completion, students should be able to analyze and perform repairs to a vehicle which has received light/moderate structural damage.

AUB 162 Autobody Estimating
This course provides a comprehensive study of autobody estimating. Topics include collision damage analysis, industry regulations, flat-rate and estimated time, and collision estimating manuals. Upon completion, students should be able to prepare and interpret a damage report.

ENG 102 Applied Communications II
Prerequisites: Take RED 080 and ENG 090 (minimum grade C)
This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications.

PHY 110 Conceptual Physics
Corequisite: PHY 110A
This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied. This course has been approved for transfer under the CAA and ICAA as a universal general education transfer component (UGETC) course in Natural Sciences.

PHY 110A Conceptual Physics Laboratory
Corequisite: PHY 110
This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. This course has been approved for transfer under the CAA and ICAA as a universal general education transfer component (UGETC) course in Natural Sciences.

TRN 120 Basic Transp Electricity
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.

TRN 140 Transp Climate Control
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems.

TRN 140A Transp Climate Cont Lab
Corequisite: TRN 140
This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.

TRN 180 Basic Welding for Transp
This course covers the terms and procedures for welding various metals used in the transportation industry with an emphasis on personal safety and environmental health. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, cutting processes and other related issues. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standard.