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Date:

Year of Relevant Catalog: 2023-2024

Technical Education Courses

First Semester				Second Semester			
Course Title		Status	Credits	Course Title		Status	Credits
ACR 110	Paint & Refinishing 1		3	ACR 120	Paint & Refinishing 3 (Pre-req: ACR 115)		3
ACR 115	Paint & Refinishing 2 (Pre-req: ACR 110)		3	ACR 125	Paint & Refinishing 4 (Pre-req: ACR 120)		4
ACR 130	Non-Structural A&D Repair 1		4	ACR 140	Non-Structural A&D Repair 3 (Pre-req: ACR 135)		4
ACR 135	Non-Structural A&D Repair 2 (Pre-req: ACR 130)		4	ACR 145	Non-Structural A&D Repair 4 (Pre-req: ACR 140)		5
ACR 150	Structural A&D Repair 1		2	ACR 160	Structural A&D Repair 3 (Pre-req: ACR 155)		3
ACR 155	Structural A&D Repair 2 (Pre-req: ACR 150)		2	ACR 165	Structural A&D Repair 4 (Pre-req: ACR 160)		3
Total Credits			18	Total Credits			22
Total Technical Certificate Credits							40

All courses listed with a prerequisite required must be passed with a C or better before moving on to the next course.

Associate of Applied Science Degree

Requirements		Status	Credits
Technical Certificate			
Certificate, Automotive Collision and Refinishing Technology			40
Related Electives (5 credit hours)			
ACR 170	Mechanical & Electrical (Pre-req: Successful completion of all certificate core courses. Required only for AAS degree completion.)		3
	ACR Related Elective		2
General Education Courses			
Written Communications (3 credit hours)			
ENG 100	Technical Writing		3
ENG 101	English Composition I		3
ENG 102	English Composition II (Pre-req: ENG 101)		3
Verbal Communications (3 credit hours)			
COM 102	Interpersonal Communications		3
COM 105	Public Speaking		3
Mathematics (3 credit hours)			
MAT 101	Technical Math		3
MAT 105	Intermediate Algebra		3
MAT 150	College Algebra		3
Computer Science/Science (3 credit hours)			
CSA 105	Intro to Computer Applications & Concepts		3

Social Sciences and/or Humanities and Fine Arts (3 credit hours)			
HIS 105	US History I		3
HUM 101	Ethics in the Workplace		3
PSY 101	General Psychology		3
SOC 103	Marriage and Families		3
Technical Certificate			40
Related Electives			5
General Education			15
Total AAS Credits			60

PROGRAM OUTCOMES

- Analyze automotive structural damage and repair requirements.
- Analyze automotive non-structural damage and repair requirements.
- Diagnose and repair collision damaged mechanical and electrical components.
- Demonstrate automobile painting and refinishing skills.
- Demonstrate safe work habits and procedures within an auto collision repair facility.

GENERAL EDUCATION PROGRAM OUTCOMES

- Compose coherent written communication.
- Deliver coherent oral communication.
- Show proficiency in locating, analyzing, documenting, and ethically using information sources.
- Perform and interpret calculations.
- Develop logical problem-solving skills and/or critical thinking skills.
- Identify appropriate strategies for gathering, analyzing, and displaying data to draw conclusions from scientific data.
- Collaborate effectively, which cultivates a respect for human diversity.
- Demonstrate technology literacy appropriate to area of study.

Student Signature

Advisor

The physical demands described here are representative of those that must be met by a student to successfully perform the essential functions of working in this field. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this program, the student is regularly required to stand, walk, and talk or hear. The student frequently is required to sit and use hands to handle or feel. The student is occasionally required to reach with hands and arms; climb or balance; and stoop, kneel, crouch, or crawl. The student must work in various weather conditions such as excessive heat or cold. The student must frequently lift and/or move up to 10 pounds and occasionally lift and/or move up to 50 pounds. Specific vision abilities required by this field include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

AUTOMOTIVE COLLISION AND REFINISHING TECHNOLOGY

ACR 110 Paint & Refinishing 1

3 credits (1:4)

This course will give the student basic knowledge of the automotive refinishing industry. Students will be introduced to the safety requirements needed for personal protection, as well as an overview of the equipment and materials used in the automotive refinishing industry.

ACR 115 Paint & Refinishing 2

3 credits (1:4)

(Prerequisite: ACR 110)

In this course the student will be able to identify the safety equipment needed to perform spraying operations. They will be able to explain and demonstrate proper spraying operation, as well as selecting the proper materials needed for particular projects. Paint mil thickness, paint removal and surface preparation will be emphasized as well.

ACR 120 Paint & Refinishing 3

3 credits (1:4)

(Prerequisite: ACR 115)

During this course students will learn final surface preparation, as well as correct masking procedures to properly prepare a project for refinishing. Students will then learn the correct ratios and procedures for properly and safely mixing materials needed for projects. Students will also learn and apply the skills necessary for proper spray gun operation, as well as identifying and correcting paint defects.

ACR 125 Paint & Refinishing 4

4 credits (1:6)

(Prerequisite: ACR 120)

Students take the knowledge and skills gained from previous courses and apply them to actual customer projects. Students gain skills in color theory and tinting used for color matching, as well as procedures for and spot and blend repairs. Removing paint defects, final assembly and detailing to prepare project for delivery is also emphasized.

ACR 130 Non-Structural A&D Repair 1

4 credits (2:4)

Students will be instructed in the various career opportunities in the Collision Repair field, as well as the basic vehicle construction in unibody, space frame, and body over frame vehicles. Students will also be instructed in all safety aspects of collision repair. Students will receive entry level instruction in automotive plastics, welding, cutting, metal straightening techniques, body fillers, outer body panel replacements/adjustments, and finally an introduction to interpreting damage reports.

ACR 135 Non-Structural A&D Repair 2

4 credits (1:6)

(Prerequisite: ACR 130)

Students will take the skills and information from ACR 130 to the next level in ACR 135. This will include welding, cutting, metal finish, body filler, panel replacement and adjustment, and plastic repair. Identifying which trim and hardware are to be protected will be critical, as this is the last course in non-structural before students will begin working on live customer work.

ACR 140 Non-Structural A&D Repair 3

4 credits (1:6)

(Prerequisite: ACR 135)

Students will expand on all the knowledge and skills developed in ACR 130 and ACR 135 while working on live projects in the shops area, including welding, cutting, metal finish, body filler, panel replacement and alignment, and plastic parts repair. Door skin replacement will also be covered and performed on a practice door in this course.

ACR 145 Non-Structural A&D Repair 4

5 credits (1:8)

(Prerequisite: ACR 140)

Students will expand on all the knowledge and skills developed in ACR 130, ACR 135, and ACR 140 while working on live projects in the shop area, including welding, cutting, metal finish, body filler, panel replacement and alignment, and plastic parts repair. Extensive plastic parts identification and repair procedures will also be covered and performed in this course.

ACR 150 Structural A&D Repair 1

2 credits (2:0)

Upon the completion of this course the student will be able to identify structural panels of the vehicle and learn special procedures for their replacement or repair, including restoring corrosion protection. The replacement of stationary glass, structural measuring equipment, and applied welding is included in the course.

ACR 155 Structural A&D Repair 2

2 credits (1:2)

(Prerequisite: ACR 150)

In this course students will perform BOF (body over frame) unibody structural measuring, develop a damage repair plan from this inspection, as well as actually performing the repair as needed. Welding and cutting repair procedures will also be performed as needed for a specific application.

ACR 160 Structural A&D Repair 3

3 credits (2:2)

(Prerequisite: ACR 155)

This is an intermediate course where all the knowledge gained in ACR 150 and ACR 155 is used to perform repairs on BOF (body over frame) and unibody practice vehicles. Structural sectioning installation of fixed structural glass and the importance of restoring the vehicle to pre-accident condition will all be covered and performed.

ACR 165 Structural A&D Repair 4

3 credits (2:2)

(Prerequisite: ACR 160)

This is an advanced course where students use skills gained in the previous three structural repair courses and apply them to live customer work in the shop. Analyzing and repairing full frame vehicles, unibody, sectioning, installing structural glass, and welding of structural components are covered.

ACR 170 Mechanical & Electrical

3 credits (3:0)

(Prerequisites: successful completion of all certificate core courses. Required only for AAS degree completion.)

This course involves the basic analysis, repair and replacement of suspension and steering components, along with angles and pivot-point alignment involved in proper steering alignment. This class includes classroom and laboratory instruction on basic electricity, use of test equipment, schematic reading, general automotive electronics and the repair of electrical components commonly damaged during a collision. Minor mechanical analysis will be discussed, as well.