

AUTOMOTIVE COLLISION REPAIR II

Automotive Collision Repair Technology II Introduces concepts in auto painting with an emphasis on the handling of materials and equipment in modern automotive technologies. Instruction should also emphasize computerized frame diagnosis, computerized color-mixing, and computerized estimating of repair costs. Additional academic skills taught in this course include precision measurement and mathematical calibrations as well as scientific principles related to adhesive compounds, color-mixing, abrasive materials, metallurgy, and composite materials.

- DOE Code: 5544
- Recommended Grade Level: Grade 12
- Recommended Prerequisites: Automotive Collision Repair Technology I
- Credits: 2-3 credits per semester, maximum of 6 credits
- Counts as a Directed Elective or Elective for the General, Core 40, Core 40 with Academic Honors and Core 40 with Technical Honors diplomas
- This course is aligned with postsecondary courses for Dual Credit:
 - Ivy Tech
 - AUBR 103- Auto Paint Fundamentals
 - Vincennes University
 - BODY 150/L-Body Repair II and Body Repair Lab

Dual Credit

This course provides the opportunity for dual credit for students who meet postsecondary requirements for earning dual credit and successfully complete the dual credit requirements of this course.

Application of Content and Multiple Hour Offerings

Intensive laboratory applications are a component of this course and may be either school based or work based or a combination of the two. Work-based learning experiences should be in a closely related industry setting. Instructors shall have a standards-based training plan for students participating in work-based learning experiences. When a course is offered for multiple hours per semester, the amount of laboratory application or work-based learning needs to be increased proportionally.

Career and Technical Student Organizations (CTSOs)

Career and Technical Student Organizations are considered a powerful instructional tool when integrated into Career and Technical Education programs. They enhance the knowledge and skills students learn in a course by allowing a student to participate in a unique program of career and leadership development. Students should be encouraged to participate in SkillsUSA, the CTSO for this area.

Content Standards

Domain – Personal/Soft Skills

Core Standard 1 Students apply and adapt appropriate workplace behaviors needed for career success to prepare for further education and training programs.

Standards

ACRTII-1.1 Identify the appropriate resources for task completion

- ACRTII-1.2 Use effective interpersonal skills to complete group assignments
- ACRTII-1.3 Demonstrate leadership skills
- ACRTII-1.4 Evaluate data for work assignments
- ACRTII-1.5 Apply concepts for effective critical thinking, decision making, and problem-solving techniques
- ACRTII-1.6 Choose appropriate tools and technology for task completion
- ACRTII-1.7 Integrate quality assurance measures and safeguards
- ACRTII-1.8 Incorporate effective listening and speaking skills
- ACRTII-1.9 Perform mathematical calculations correctly
- ACRTII-1.10 Establish a responsible work ethic
- ACRTII-1.11 Establish accepted standards for ethical behavior
- ACRTII-1.12 Develop a personal career goal and develop objectives for achieving the goal
- ACRTII-1.13 Formulate employment and career pathway opportunities related to established career interest(s)
- ACRTII-1.14 Develop a continuing education plan that identifies further education and training options
- ACRTII-1.15 Complete exams leading to certifications recognized by business and industry
- ACRTII-1.16 Develop skills needed to enter the workforce
- ACRTII-1.17 Identify resources that keep workers current in the career field
- ACRTII-1.18 Develop skills and attitudes needed for lifelong learning
- ACRTII-1.19 Devise effective money management strategies

Domain – Safety/Shop Basics

Core Standard 2 Students integrate safety and basic shop procedures into activities as appropriate to comply with professional and governmental safety standards.

Standards

- ACRTII-2.1 Perform various personal and shop safety practices
- ACRTII-2.2 Categorize various types of fasteners and their grades
- ACRTII-2.3 Use appropriate tools and unit conversion techniques to measure vehicle components
- ACRTII-2.4 Use proper shop safety practices while in the lab(s)—this includes wearing safety glasses (goggles) at all times while in the lab(s)
- ACRTII-2.5 Identify specific fasteners and their uses—this includes all of the various fasteners used on the automobile to attach a variety of body panels and pieces to the body and/or frame of the vehicle
- ACRTII-2.6 Identify various hand and power tools and demonstrate their safe and proper use, storage, and maintenance—this also includes proper storing and oiling of air tools

Domain – Refinishing

Core Standard 3 Student analyzes the processes involved to paint and refinish a vehicle.

Standards

- ACRTII-3.1 Identify metal conditioners as they relate to the different metals
- ACRTII-3.2 Use primers and sealers according to their uses (per manufacturer’s specifications) as a base for final finishes—this includes the proper mixing and application of both primers and sealers

- ACRTII-3.3 Distinguish between the different paint finishes including enamel, urethane, and lacquer finishes and their applications
- ACRTII-3.4 Estimate the proper amount of paint needed for a specific job
- ACRTII-3.5 Determine the proper type of thinner or reducer needed for a specific job
- ACRTII-3.6 Show proper spraying techniques using production type equipment for spraying finishes
- ACRTII-3.7 Demonstrate proper spraying techniques using production type equipment for spraying lacquer and enamel finishes
- ACRTII-3.8 Demonstrate proper use and application of base coat/clear coat systems
- ACRTII-3.9 Clean and maintain spray equipment to remove excess materials remaining after spraying
- ACRTII-3.10 Safely handle, store, and remove toxic body shop materials
- ACRTII-3.11 Prepare the jam area of a body part for painting
- ACRTII-3.12 Remove paint defects using proper procedures

Domain – Estimating

Core Standard 4 Students analyze vehicle paint damage to estimate repair costs in terms of man hours and materials needed.

Standards

- ACRTII-4.1 Calculate costs for various refinishing projects to prepare accurate estimates to customers
- ACRTII-4.2 Calculate the flat time for refinishing a project