



***Department of Teaching & Learning***  
***Parent/Student Course Information***

***Auto Body and Paint Technology II***  
***(VO8677)***

***Three Credits, One Year***  
***Grades 11 or 12***

*Counselors are available to assist parents and students with course selections and career planning. Parents may arrange to meet with the counselor by calling the school's guidance department.*

**COURSE DESCRIPTION**

This two-year program covers all aspects of auto body repair from estimating to a complete paint job. Students learn to analyze different types of body damage and to restore vehicles to their original appearance. Students will be taught to weld, straighten a frame, repair fiberglass, use plastic filler, complete hand and power sanding, spray paint and replace damaged glass. Students also are trained to custom mix paint.

**CERTIFICATION**

National Occupational Competency Testing Institute: Collision Repair/Refinishing Technology  
Automotive Service Excellence: Non-Structural Analysis/Damage Repair Certification  
Environmental Protection Agency (EPA): Safety and Pollution Prevention Certification

**STUDENT ORGANIZATION**

SkillsUSA is a co-curricular organization for all students enrolled in trade and industrial education programs. SkillsUSA is a partnership of students, teachers and industry working together to ensure America has a skilled workforce. SkillsUSA helps students excel by providing educational programs, events and competitions that support career and technical education (CTE) in the nation's classrooms. Students are highly encouraged to participate.

**PREREQUISITE**

Auto Body and Paint Technology I

**OPTIONS FOR NEXT COURSE**

None

**REQUIRED STUDENT TEXTBOOK**

None

## COMPETENCIES FOR AUTO BODY AND PAINT TECHNOLOGY II

### Demonstrating Personal Qualities and Abilities

- 1 Demonstrate creativity and innovation.
- 2 Demonstrate critical thinking and problem solving.
- 3 Demonstrate initiative and self-direction.
- 4 Demonstrate integrity.
- 5 Demonstrate work ethic.

### Demonstrating Interpersonal Skills

- 6 Demonstrate conflict-resolution skills.
- 7 Demonstrate listening and speaking skills.
- 8 Demonstrate respect for diversity.
- 9 Demonstrate customer service skills.
- 10 Collaborate with team members.

### Demonstrating Professional Competencies

- 11 Demonstrate big-picture thinking.
- 12 Demonstrate career- and life-management skills.
- 13 Demonstrate continuous learning and adaptability.
- 14 Manage time and resources.
- 15 Demonstrate information-literacy skills.
- 16 Demonstrate an understanding of information security.
- 17 Maintain working knowledge of current information-technology (IT) systems.
- 18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation.
- 19 Apply mathematical skills to job-specific tasks.
- 20 Demonstrate professionalism.
- 21 Demonstrate reading and writing skills.
- 22 Demonstrate workplace safety.

### Examining All Aspects of an Industry

- 23 Examine aspects of planning within an industry/organization.
- 24 Examine aspects of management within an industry/organization.
- 25 Examine aspects of financial responsibility within an industry/organization.
- 26 Examine technical and production skills required of workers within an industry/organization.
- 27 Examine principles of technology that underlie an industry/organization.
- 28 Examine labor issues related to an industry/organization.
- 29 Examine community issues related to an industry/organization.
- 30 Examine health, safety, and environmental issues related to an industry/organization.

### Addressing Elements of Student Life

- 31 Identify the purposes and goals of the student organization.
- 32 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.
- 33 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.
- 34 Identify Internet safety issues and procedures for complying with acceptable use standards.

### Exploring Work-Based Learning

- 35 Identify the types of work-based learning (WBL) opportunities.

- 36 Reflect on lessons learned during the WBL experience.
- 37 Explore career opportunities related to the WBL experience.
- 38 Participate in a WBL experience, when appropriate.

### **Practicing Safety**

- 39 Select and use personal protective equipment (PPE); take necessary precautions with hazardous operations, and materials according to federal, state, and local regulations.
- 40 Identify safety and personal health hazards according to Occupational Safety and Health Administration (OSHA) guidelines and the right to know law.
- 41 Inspect the spray environment and equipment to ensure compliance with federal, state, and local regulations, and for safety and cleanliness hazards.
- 42 Select and use a NIOSH-approved purifying respirator. Inspect its condition, and ensure the fit and operation. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulations.
- 43 Select and use a NIOSH-approved supplied air (e.g., Make-up Air, Fresh Air Systems) respirator system. Perform proper maintenance in accordance with OSHA Regulation 1910.134 and applicable state and local regulation.
- 44 Select and use PPE for surface preparation, spray gun and related equipment operation, paint mixing, matching and application, paint defects, and detailing (i.e., gloves, suits, hoods, eye and ear protection, etc.).

### **Preparing the Surface**

- 45 Inspect, remove, store, protect, and replace exterior trim and components necessary for proper surface preparation.
- 46 Soap and water-wash an entire vehicle; use the appropriate cleaner to remove contaminants.
- 47 Inspect and identify the type of finish, surface condition, and film thickness; develop and document a plan for refinishing, using a total product system.
- 48 Remove paint finish.
- 49 Dry- or wet-sand areas to be refinished.
- 50 Featheredge broken areas to be refinished.
- 51 Apply suitable metal treatment or primer in accordance with total product systems.
- 52 Mask and protect other areas that will not be refinished.
- 53 Demonstrate different masking techniques (e.g., recess or back masking, foam door type).
- 54 Mix primer, primer-surfacer, and primer-sealer.
- 55 Identify a complimentary color or shade of undercoat to improve coverage.
- 56 Apply primer onto the surface of repaired area.
- 57 Apply two-component finishing filler to minor surface imperfections.
- 58 Block-sand the area to which primer-surfacer has been applied.
- 59 Dry-sand the area to which two-component finishing filler has been applied.
- 60 Remove dust from the area to be refinished, including cracks or moldings of adjacent areas.
- 61 Clean the area to be refinished, using a final cleaning solution.
- 62 Remove, with a tack rag, any dust or lint particles from the area to be refinished.
- 63 Apply suitable primer sealer to the area being refinished.
- 64 Scuff-sand to remove nibs or imperfections from a sealer.
- 65 Apply stone chip-resistant coating.
- 66 Restore caulking and seam sealers to repaired areas.
- 67 Prepare adjacent panels for blending.
- 68 Identify the types of rigid, semi-rigid, or flexible plastic parts to be refinished; determine the materials needed, preparation, and refinishing procedures.

- 69 Identify metal parts to be refinished; determine the materials needed, preparation, and refinishing procedures.

### **Operating Spray Gun and Related Equipment**

- 70 Inspect, clean, and determine the condition of spray guns and related equipment (e.g., air hoses, regulators, air lines, air source, spray environment).
- 71 Select the spray gun setup (e.g., fluid needle, nozzle, cap) for product being applied.
- 72 Test and adjust a spray gun using fluid, air, and pattern control valves.
- 73 Demonstrate an understanding of the operation of pressure spray equipment.

### **Mixing, Matching, and Applying Paint**

- 74 Identify the color code by the manufacturer's vehicle information label.
- 75 Shake, stir, reduce, catalyze or activate, and strain refinish materials.
- 76 Apply finish using appropriate spray techniques (e.g., gun arc, angle, distance, travel speed, spray pattern overlap) for the finish being applied.
- 77 Apply a selected product on a test or let-down panel; check for color match.
- 78 Apply a single-stage topcoat.
- 79 Apply a basecoat or clearcoat for panel blending and panel refinishing.
- 80 Apply a basecoat or clearcoat for overall refinishing.
- 81 Remove nibs or imperfections from the basecoat.
- 82 Identify product expiration dates as applicable.
- 83 Refinish plastic parts.
- 84 Apply multi-stage (e.g., tri-coat) coats for blending or overall refinishing.
- 85 Identify and mix paint using a formula.
- 86 Identify poor hiding colors; determine the necessary action.
- 87 Tint the color, using a formula, to achieve a blendable match.
- 88 Identify an alternative color formula to achieve a blendable match.
- 89 Identify the materials equipment and preparation differences between solvent and waterborne technologies.

### **Identifying Paint Defects--Causes and Cures**

- 90 Identify paint defects and their causes.
- 91 Identify paint-defect cures and corrections.
- 92 Correct pinholing.
- 93 Correct buffing-related imperfections (i.e., swirl marks and wheel burns).
- 94 Identify pigment flotation (color change through film build); correct the cause(s) and the condition.

### **Applying Final Detailing**

- 95 Apply decals, transfers, tapes, woodgrains, pinstripes (i.e., painted and taped), etc.
- 96 Sand, buff, and polish the fresh or existing finish to remove defects as required.
- 97 Clean the interior, exterior, and glass.
- 98 Clean body openings (i.e., doorjambs and edges, etc.).
- 99 Remove overspray.
- 100 Perform vehicle clean-up; complete quality control using a checklist.

### **Preparing for a Career in Auto Body Repair**

- 101 Research opportunities in the auto body repair field.
- 102 Prepare/update portfolio of current skills.
- 103 Identify additional ASE (Automotive Service Excellence) and other industry-recognized areas of certification.

104 Create a written estimate of repairs.

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Produced by the Department of Teaching and Learning.  
For further information, please call (757) 263-1070.

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Virginia Beach City Public Schools does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation/gender identity, pregnancy, childbirth or related medical condition, disability, marital status, age, genetic information or veteran status in its programs, activities, employment, or enrollment, and provides equal access to the Boy Scouts and other designated youth groups. School Board policies and regulations (including, but not limited to, Policies 2-33, 4-4, 5-7, 5-19, 5-20, 5-44, 6-33, 6-7, 7-48, 7-49, 7-57 and Regulations 4-4.1, 4-4.2, 5-44.1, 7-11.1, 7-17.1 and 7-57.1) provide equal access to courses, programs, enrollment, counseling services, physical education and athletic, vocational education, instructional materials, extracurricular activities and employment.

Title IX Notice: Complaints or concerns regarding discrimination on the basis of sex or sexual harassment should be addressed to the Title IX Coordinator, at the VBCPS Office of Student Leadership, 641 Carriage Hill Road, Suite 200, Virginia Beach, 23452, (757) 263-2020, [Mary.Dees@vbschools.com](mailto:Mary.Dees@vbschools.com) (student complaints) or the VBCPS Department of School Leadership, 2512 George Mason Drive, Municipal Center, Building 6, Virginia Beach, Virginia, 23456 (757) 263-1088, [Elizabeth.Bryant@vbschools.com](mailto:Elizabeth.Bryant@vbschools.com) (employee complaints). Additional information regarding Virginia Beach City Public Schools' policies regarding discrimination on the basis of sex and sexual harassment, as well as the procedures for filing a formal complaint and related grievance processes, can be found in School Board Policy 5-44 and School Board Regulations 5-44.1 (students), School Board Policy 4-4 and School Board Regulation 4-4.3 (employees), and on the School Division's website at [Diversity, Equity and Inclusion/Title IX](#). Concerns about the application of [Section 504 of the Rehabilitation Act](#) should be addressed to the Section 504 Coordinator/Executive Director of Student Support Services at (757) 263-1980, 2512 George Mason Drive, Virginia Beach, Virginia, 23456 or the Section 504 Coordinator at the student's school. For students who are eligible or suspected of being eligible for special education or related services under IDEA, please contact the Office of Programs for Exceptional Children at (757) 263-2400, Plaza Annex/Family and Community Engagement Center, 641 Carriage Hill Road, Suite 200, Virginia Beach, VA 23452.

The School Division is committed to providing educational environments that are free of discrimination, harassment, and bullying. Students, staff, parents/guardians who have concerns about discrimination, harassment, or bullying should contact the school administration at their school. Promptly reporting concerns will allow the school to take appropriate actions to investigate and resolve issues. School Board Policy 5-7 addresses non-discrimination and anti-harassment, Policy 5-44 addresses sexual harassment and discrimination based on sex or gender. Policy 5-36 and its supporting regulations address other forms of harassment.

Alternative formats of this publication which may include taped, Braille, or large print materials are available upon request for individuals with disabilities. Call or write The Department of Teaching and Learning, Virginia Beach City Public Schools, 2512 George Mason Drive, P.O. Box 6038, Virginia Beach, VA 23456-0038. Telephone 263-1070 (voice); fax 263-1424; 263-1240 (TDD) or email at [Brandon.Martin@vbschools.com](mailto:Brandon.Martin@vbschools.com).

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