

**MISSION TRAILS REGIONAL OCCUPATIONAL PROGRAM****COURSE OUTLINE**

- I. COURSE TITLE: Auto Body & Fender
- II. CBEDS TITLE: Automotive Body Repair and Refinishing, Combination
- III. CBEDS NUMBER: 5654
- IV. JOB TITLES:
- |                                |             |
|--------------------------------|-------------|
| Automobile – Body Repair       | 807-381-010 |
| Automobile – Body Customizer   | 807-361-010 |
| Auto Body Repair, Fiberglass   | 807-381-030 |
| Frame Repair                   | 807-381-484 |
| Service Mechanic               | 807-381-022 |
| Automobile Bumper Straightener | 807-684-010 |
| Glass Installer                | 865-568-010 |
| Squeak, Rattle & Leak          | 620-364-010 |
| Used Car Renovator             | 620-684-010 |
| Shop Estimator                 | 807-267-010 |

V. COURSE DESCRIPTION:

## FIRST SEMESTER:

Setting student performance standards. Each student is required to do two “controlled projects”. One, constructing a plastic model of a car or truck, thus learning the names of the parts and the basic construction of the automobile. The second being a metal panel. The project “panel” covers the basic skills and procedures in Auto Body Repair and Refinishing. In conjunction with each skill; welding, bumping and dinging, applying plastic fillers, primers and paints, students are presented with lectures/demos, filmstrips, videos, worksheets and written test.

## SECOND SEMESTER:

Working environment with “live projects” to accustom students to the business of Auto Body and Repair. Students apply skills and knowledge from first semester to profitably and economically repair typical collisions work. Students who have shown competence in their knowledge and skills; developed appropriate attitudes and work habits will be recommended for placement in a community classroom, a part time job or a full time position in a local body shop.

VI. HOURS: 180 hours/semester 525 total hours

VII. PREREQUISITES: 16 Years of age or older

VIII. REVISION DATE: 6/99

IX. COURSE OUTLINE:

a. CONTENT AREA SKILLS

- i. EXPECTED STUDENT OUTCOMES
- ii. HOURS OF INSTRUCTION

COURSE OUTLINE

CONTENT AREA SKILLS	EXPECTED STUDENT OUTCOME	HOURS		
		<u>CL = Classroom</u> CC= Comm. Class CP = Co-op Ed.		
Instruction will include:	Students will be able to:	CL	CC	CP
<b>I. Shop Safety/ Orientation</b>	<ol style="list-style-type: none"> <li>1. Pass a written safety test</li> <li>2. Explain the following:               <ol style="list-style-type: none"> <li>a. health and safety environment set ups</li> <li>b. performance competencies</li> <li>c. advancements</li> <li>d. pay scale and fringe benefits</li> <li>e. union relationships</li> </ol> </li> <li>3. Research various auto body repair and related occupations</li> </ol>	20		
<b>II. Body and Frame Construction</b>	<ol style="list-style-type: none"> <li>1. Explain the history, production and make up or the product worked on</li> <li>2. Explain how sheet metal is formed into body panels and how strength is formed into the metal</li> <li>3. Explain the difference between conventional bodies and cabs and unit body construction</li> <li>4. Identify and explain different types of frames and body types used in cars today</li> <li>5. Name and identify the major body parts, sections and panels that make up the automobile</li> <li>6. Identify and name the different glass types and glass attachments and methods used for attaching and adjusting glass</li> </ol>	50		
<b>III. Metal Bumping and Dinging</b>	<ol style="list-style-type: none"> <li>1 Identify body hammers, dolly blocks, body files, spoons and other hand tools</li> <li>2. Explain and demonstrate the proper use of body hammers for roughing and finish work</li> <li>3. Explain and demonstrate methods of hammer and dolly work and pick file</li> </ol>	65		
<b>IV. How to Approach a Collision Job</b>	<ol style="list-style-type: none"> <li>1. Explain methods used to determine direction of damage, pressure forces acting on it and describe the difference between direct and indirect damage</li> <li>2. Fill out an estimate sheet, figuring the cost and tax, total labor hours and cost of materials</li> </ol>	50		

<b>V. Welding</b>	1. Properly set up the oxy-acetylene welder 2. Demonstrate the operations in welding of, brazing, soldering, cutting and shrinking of metal 3. Make at least one weld with the arc welder	75		
<b>VI. Adhesives, Coating and Sealers</b>	1. Prepare and apply plastic fillers and primer and putty 2. Finish filler to shop standards, sand and feather-edge and apply primer	85		
<b>VII. Refinishing Practices</b>	1. Clean and sand in preparation for painting 2. Mix apply both lacquer and enamel paints 3. Explain and do masking and detailing practices	160		

IX. COURSE OUTLINE:

- b) CAREER PERFORMANCE STANDARDS  
 i) EXPECTED STUDENT OUTCOMES  
 ii) HOURS OF INSTRUCTION

COURSE OUTLINE

<b>CAREER PERFORMANCE STANDARDS</b>	<b>EXPECTED STUDENT OUTCOMES</b>	<b>HOURS</b>
<b>Instruction will include:</b>	<b>Student will be able to:</b>	
<b>1. Personal Skills</b> <ul style="list-style-type: none"> <li>▪ Classroom policies &amp; procedures</li> <li>▪ Ethics           <ul style="list-style-type: none"> <li>➢ Work</li> <li>➢ Business</li> </ul> </li> <li>▪ Sexual harassment laws</li> <li>▪ Personal skills, including positive attitude, self-confidence, honesty, perseverance &amp; self-discipline</li> <li>▪ Professional appearance</li> <li>▪ Time management</li> <li>▪ Lifelong learning</li> </ul>	<b>1. Understand how personal skill development, including positive attitude, honesty, self-confidence, time management, &amp; other positive traits affect employability.</b> <ul style="list-style-type: none"> <li>▪ Demonstrate and understand classroom policies &amp; procedures</li> <li>▪ Define work and business ethics &amp; demonstrate the importance of ethical standards &amp; social responsibilities in the business environment.</li> <li>▪ Discuss the laws applicable to sexual harassment &amp; discuss tactics for handling harassment situations.</li> <li>▪ Demonstrate personal skills in class and/or business environment:           <ul style="list-style-type: none"> <li>➢ Positive attitude</li> <li>➢ Self-confidence</li> <li>➢ Honesty</li> <li>➢ Perseverance</li> <li>➢ Self-discipline</li> </ul> </li> <li>▪ Demonstrate and model personal hygiene and acceptable professional attire</li> <li>▪ Prioritize tasks and meet deadlines</li> <li>▪ Explain the importance of lifelong learning</li> </ul>	<b>Integrated in content area skills</b>

CAREER PERFORMANCE STANDARDS	EXPECTED STUDENT OUTCOMES	HOURS
<b>Instruction will include:</b>	<b>Student will be able to:</b>	
<p><b>2. Interpersonal Skills</b></p> <ul style="list-style-type: none"> <li>▪ Group dynamics</li> <li>▪ Conflict resolution and negotiations</li> <li>▪ Team Work</li> <li>▪ Etiquette across gender and cultural groups</li> </ul>	<p><b>2. Understand principles of effective interpersonal skills, including group dynamics, conflict resolution, and negotiation.</b></p> <ul style="list-style-type: none"> <li>▪ Identify and explain the key concepts of group dynamics</li> <li>▪ Discuss and demonstrate the dynamics of conflict resolution and negotiation, and their importance within the business environment</li> <li>▪ Demonstrate effective teamwork, share responsibilities, accept supervision and assume leadership roles</li> <li>▪ Demonstrate cooperative working relationships and proper etiquette across gender and cultural groups</li> </ul>	<p><b>Integrated in content area skills</b></p>
<p><b>3. Thinking and Problem-Solving Skills</b></p> <ul style="list-style-type: none"> <li>▪ Critical and creative thinking skills</li> <li>▪ Logical reasoning and problem-solving skills</li> <li>▪ Numerical estimation, measurement, and calculation</li> <li>▪ Identify, locate, and organize needed information and propose, evaluate, and select alternative solutions</li> </ul>	<p><b>3. Understand the importance of critical thinking and problem-solving skill in the workplace.</b></p> <ul style="list-style-type: none"> <li>▪ Apply critical and creative thinking skills in a work environment and implement a plan of improvement as needed</li> <li>▪ Demonstrate logical reasoning and problem solving skills in a work environment</li> <li>▪ Apply numerical estimation, measurement and calculation skills to business applications including the following: <ul style="list-style-type: none"> <li>➢ Whole number math</li> <li>➢ Decimals &amp; fractions</li> <li>➢ Counting &amp; monetary functions</li> <li>➢ Use of tables &amp; graphs</li> </ul> </li> <li>▪ Recognize problem situations; identify, locate and organize needed information, and propose, evaluate and select from alternate solutions</li> </ul>	<p><b>Integrated in content area skills</b></p>

<b>CAREER PERFORMANCE STANDARDS</b>	<b>EXPECTED STUDENT OUTCOMES</b>	<b>HOURS</b>
<b>Instruction will include:</b>	<b>Student will be able to:</b>	
<p><b>4. Communication Skills</b></p> <ul style="list-style-type: none"> <li>▪ Written communication</li> <li>▪ Verbal and Nonverbal communication</li> <li>▪ Active and effective listening</li> <li>▪ Proper etiquette in business communications</li> <li>▪ Writing and editing skills</li> <li>▪ Use of reference material and handbooks</li> <li>▪ Oral presentations</li> </ul>	<p><b>4. Understand principles of effective communication.</b></p> <ul style="list-style-type: none"> <li>▪ Read and implement written instructions, technical manuals, written communication, and reference books</li> <li>▪ Present a positive image of verbal and nonverbal communication through use of appropriate methods</li> <li>▪ Demonstrate active and effective listening skills through verbal, nonverbal and written feedback</li> <li>▪ Demonstrate proper etiquette in business communications, including an awareness of and a requisite for international communications (languages, customs, and time zones)</li> <li>▪ Demonstrate the following writing and editing skills: <ul style="list-style-type: none"> <li>➢ Use correct grammar, punctuation, capitalization, vocabulary and spelling</li> <li>➢ Write, proofread and edit</li> <li>➢ Select and use appropriate forms of communication</li> </ul> </li> <li>▪ Exhibit a proficiency in the use of reference materials such as dictionary, thesaurus, telephone directory, almanac, zip code directory, and office handbooks</li> </ul>	<p><b>Integrated in content areas skills</b></p>
<p><b>5. Occupational Safety</b></p> <ul style="list-style-type: none"> <li>▪ Good safety practice</li> </ul>	<p><b>5. Understand occupational safety issues, including avoidance of physical hazards</b></p> <ul style="list-style-type: none"> <li>▪ Model and implement good safety practices including: <ul style="list-style-type: none"> <li>➢ Avoidance and reporting of physical hazards in the work environment</li> <li>➢ Safe operation of equipment</li> <li>➢ Proper handling of hazardous materials</li> </ul> </li> </ul>	<p><b>Integrated in content area skills</b></p>

<b>CAREER PERFORMANCE STANDARDS</b>	<b>EXPECTED STUDENT OUTCOMES</b>	<b>HOURS</b>
<b>Instruction will include:</b>	<b>Student will be able to:</b>	
<b>6. Employment Literacy</b> <ul style="list-style-type: none"> <li>▪ Expand awareness of career opportunities</li> <li>▪ Set employment goals and objectives</li> <li>▪ Aptitudes, personal characteristics and interests</li> <li>▪ Develop portfolio</li> <li>▪ Develop interviewing techniques</li> </ul>	<b>6. Understand career paths and strategies for obtaining employment</b> <ul style="list-style-type: none"> <li>▪ Explore career opportunities and develop a career plan</li> <li>▪ Identify steps for setting goals and writing personal goals and objectives</li> <li>▪ Examine aptitudes related to career options; relate personal characteristics and interest to educational and occupational opportunities</li> <li>▪ Develop a portfolio to include the following: <ul style="list-style-type: none"> <li>➤ Letter of Introduction</li> <li>➤ Cover letter</li> <li>➤ Resume</li> <li>➤ Thank you letter</li> <li>➤ Job application</li> <li>➤ Licenses, Certificates and Awards</li> <li>➤ Transcripts</li> <li>➤ Letters on Recommendation</li> <li>➤ Work Samples</li> </ul> </li> </ul>	<b>Integrated in content area skills</b>
<b>7. Technology Literacy</b> <ul style="list-style-type: none"> <li>▪ Apply Industry specific technology</li> <li>▪ Use Industry specific software</li> <li>▪ Demonstrate Keyboarding</li> <li>▪ Accessing information</li> <li>▪ Lifelong enhancement of technology skills</li> </ul>	<b>7. Understand and adapt to changing technology.</b> <ul style="list-style-type: none"> <li>▪ Identify and demonstrate use of appropriate technology</li> <li>▪ Identify and use industry specific software</li> <li>▪ Demonstrate proficiency in alphanumeric keyboarding</li> <li>▪ Input and retrieve information</li> <li>▪ Understand the importance of lifelong learning in adapting to changing technology</li> </ul>	<b>Integrated in content area skills</b>

**X ADDITIONAL RECOMMENDED/OPTIONAL ITEMS:**

a. **ARTICULATION:** An articulation agreement with Hartnell College is being developed.

b. **VOCATIONAL CREDIT:** 20 Credits/Year (variable)

c. **ACADEMIC CREDITS:** None

d. **INSTRUCTIONAL STRATEGIES:**

1. Assign appropriate text reading
2. Lecture on course material
3. Encourage class participation
4. Select appropriate instruction material

5. Evaluate student's performance
6. Demonstrate correct use of tools (machine, portable, hand)
7. Invite guest speakers
8. Appropriate field trips
9. Assign career cent projects

e. INSTRUCTIONAL MATERIAL:

1. Trade Resources: Instructors, business owners
2. Material Resources: Film strips, videos, print-outs, textbook

f. CERTIFICATES:

Certificate of Completion for Auto Body

XI **IDENTIFICATION DATE:**

Board Approval Date: 6/2/99  
Prepared by: Richard E. Brown  
Date: 1/27/99  
New Course: \_\_\_\_\_ Revision: x