

**EL DORADO UNION HIGH SCHOOL DISTRICT
Educational Services**

Course of Study Information Page

Course Title: Shop Fundamentals - Metal (#505)	
Rationale: An essential component of a well rounded Shop Fundamentals program is the basic understanding of how to shape and form metals.	
Course Description: In this course, the student will learn how to form different types of metals using hand and power tools.	
How Does This Course Align With or Meet State and District Content Standards? Each unit is aligned with State and National Standards.	
Length of Course:	1 year (part of a sequence of up to three - 12 week courses)
Grade Level:	Grade 9-10
Credit: 5 units per semester <input type="checkbox"/> Meets graduation requirements <input type="checkbox"/> Request for UC "a-f" requirements <input type="checkbox"/> College Prep <input checked="" type="checkbox"/> Elective <input checked="" type="checkbox"/> Vocational	
Prerequisites:	None
Department(s):	Trades & Industrial Education
District Sites:	EDHS, ORHS, PHS, UMHS
Board of Trustees Adoption Date:	February 13, 2001
Textbook(s)/Instructional Materials:	Miscellaneous supplementary materials
Date Adopted by the Board of Trustees:	May 8, 2001

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UNIT #1: General Shop Safety

“Big Idea” (Theme)

The students will know and understand basic safety practices and procedures used in the metalworking lab.

State/National Standards

Standard 3: Safety Practices

Give examples of student work that demonstrates mastery of this standard

1. Be able to pass a standard district safety test for all tools, machines, procedures and practices.

Identify best practices used to teach standard

1. Demonstration by the instructor on the proper use of each tool and machine.

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UNIT #2: Layout & Drawing Techniques

<p>“Big Idea” (Theme)</p> <p>The student will learn how to draw a stretch out of a pattern that can be transferred to a sheet metal blank. The student will make sure that all corners are at the proper angles and corners are marked properly.</p>
<p>State/National Standards</p> <p>Standard 1: Planning and Layout Processes</p>
<p>Give examples of student work that demonstrates mastery of this standard</p> <ol style="list-style-type: none">1. Draw a sheet metal pattern on a sheet of paper using proper dimensions and notes.2. Be able to identify the layout tools and their use in the sheet metal process.
<p>Identify best practices used to teach standard</p> <ol style="list-style-type: none">1. Demonstration by the instructor.2. Modeling of finished products created by other students.

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UNIT #3: Sheet Metal Forming Practices

<p>“Big Idea” (Theme)</p> <p>The student will demonstrate the understanding of the basic sheet metal forming practices.</p>
<p>State/National Standards</p> <p>Standard 11: Industrial Forming</p>
<p>Give examples of student work that demonstrates mastery of this standard</p> <ol style="list-style-type: none">1. Be able to use the basic tools necessary to develop and construct a sheet metal object.2. Observe the student using the necessary equipment to complete assigned project.3. Completed project to include sanding, sand blasting, primer and finish.
<p>Identify best practices used to teach standard</p> <ol style="list-style-type: none">1. Demonstration of steps to be completed by the instructor.2. Show examples of other students finished work.

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UNIT #4: Tools & Practices Associated with Bench Metal Work

<p>“Big Idea” (Theme)</p> <p>The student will demonstrate an ability to use the tools associated with bench metal work.</p>
<p>State/National Standards</p> <p>Standard 11: Industrial Forming</p> <p>Standard 2: Materials Processing</p> <p>Standard 3: Assembling Processes</p>
<p>Give examples of student work that demonstrates mastery of this standard</p> <p>1. Each student will develop a project that will require the use of a number of hand and power tools. These would include but are not limited to the following:</p> <ul style="list-style-type: none">a. Hack sawb. Hammersc. Filesd. Hand Drill (Power)e. Tap and Die setf. Cold Chiselg. Abrasivesh. Try or framing squarei. Awl
<p>Identify best practices used to teach standard</p>