

# Perris Union High School District

## Course of Study

A. COURSE INFORMATION		
<b>Course Title:</b> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">CTE Carpentry II</div> <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised	<b>Subject Area:</b> <input type="checkbox"/> Social Science <input type="checkbox"/> English <input type="checkbox"/> Mathematics <input type="checkbox"/> Laboratory Science <input type="checkbox"/> World Languages <input type="checkbox"/> Visual or Performing Arts <input checked="" type="checkbox"/> College Prep Elective <input type="checkbox"/> Other	<b>Grade Level</b> <input type="checkbox"/> MS <input type="checkbox"/> HS <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11 <input checked="" type="checkbox"/> 12
<b>If revised previous course name if changed</b> <div style="border: 1px solid black; height: 20px; width: 100%;"></div>	Is this classified as a Career Technical Education course? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Transcript Course Code/Number:</b> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> (To be assigned by Educational Services)	<b>Required for Graduation:</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Credential Required to teach this course:</b> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;"> <i>Single Subject: Building and Construction Trades</i>  <i>Designated Subjects CTE - Building and Construction Trades</i> </div> <div style="background-color: yellow; padding: 2px; font-weight: bold; font-size: small;"> <i>To be completed by Human Resources only.</i> </div>
<b>Meets UC/CSU Requirements?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Was this course <i>previously approved by UC</i> for PUHSD?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Will be verified by Ed Services)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>Signature</span> <span>Date</span> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> </div> <div style="display: flex; justify-content: space-between; width: 100%;"> <span>Signature</span> <span>Date</span> </div>
<b>Meets "AP" Requirements?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Meets "Honors" Requirements?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>Unit Value/Length of Course:</b> <input type="checkbox"/> 0.5 (half year or semester equivalent) <input checked="" type="checkbox"/> 1.0 (one year equivalent) <input type="checkbox"/> 2.0 (two year equivalent) <input type="checkbox"/> Other:
<b>Submitted by:</b> <b>Site:</b> <b>Date:</b>		
<b>Approvals</b>	<b>Name/Signature</b>	<b>Date</b>
Director of Curriculum & Instruction		3/22/2020
Asst. Superintendent of Educational Services		4/7/2020
Governing Board		

**RCOE CARPENTRY II**

**DATE:**

**INDUSTRY SECTOR:** Building and Construction Trades Sector

**PATHWAY:** Residential and Commercial Construction

**CALPADS TITLE:** Advanced Residential and Commercial Construction (Capstone)

**CALPADS CODE:** 7342

**HOURS:**

Total	Classroom	Laboratory/CC/CVE
180	63	117

JOB TITLE	O*NET CODE	JOB TITLE	O*NET CODE
Construction Carpenters	47-2031.01	Helpers--Carpenters	47-3012.00
First-Line Supervisors of Construction Trades and Extraction Workers	47-1011.00	Construction Managers	11-9021.00

**COURSE DESCRIPTION:**

The RCOE Carpentry II course provide advanced training in carpentry while also preparing high school students for direct-entry to the apprenticeship program. Course content is based on the Career Connections curriculum provided by The Carpenters International Training Fund (CITF) and the United Brotherhood of Carpenters (UBC). Subjects associated with this course and training include industry math, carpentry tools, jobsite safety, and career exploration.

**A-G APPROVAL:** G

**ARTICULATION:** None

**DUAL ENROLLMENT:** None

**PREREQUISITES:**

Prerequisite
RCOE Carpentry I (required)

**METHODS OF INSTRUCTION**

- Direct instruction
- Group and individual applied projects
- Multimedia
- Demonstration
- Field trips
- Guest speakers

**STUDENT EVALUATION:**

- Student projects
- Written work
- Exams
- Observation record of student performance
- Completion of assignment

**INDUSTRY CERTIFICATION:**

- None

**RECOMMENDED TEXTS:**

- Career Connection Math for the Trades (2017), Pub: Carpenters International Training Fund
- Career Connection One Trade, Many Careers (2017), Pub: Carpenters International Training Fund
- Project Book 2 (2017), Pub: Carpenters International Training Fund

**PROGRAM OF STUDY:**

- None identified

I.	UNIT 1: LAYOUT (MATH FOR TRADES)	CR	Lab/ CC	Standards
	<p>In this unit, students will learn to calculate perimeter for rectangles, squares, triangles, and circumference for circles. Additionally, students will utilize the Pythagorean theorem.</p> <p><b>Key Assignment:</b></p> <p>Students will draw a sketch of the classroom which will include the measurement of each wall to the nearest 1/16th of an inch. Next, students will add the measurements to determine the perimeter of the classroom.</p>	7	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
II.	UNIT 2: AREA MEASURE (MATH FOR TRADES)	CR	Lab/ CC	Standards
	<p>This unit will present how to use and convert square units of measure as well as calculate the area of rectangles, squares, triangles, circles, and irregular shapes. Furthermore, students will calculate the surface area of three dimensional shapes.</p> <p><b>Key Assignment:</b></p> <p>Students will use the sketch from the previous chapter and draw a sketch of the construction lab with measurements to the nearest 1/16th of an inch. Next, student will total the combined area of the classroom and lab area to the nearest 1/10th of a square foot.</p>	7	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
III.	UNIT 3: VOLUME MEASURE (MATH FOR TRADES)	CR	Lab/ CC	Standards
	<p>This unit will center on converting cubic units of measure from one unit of measure to another. Students will also calculate the volume of rectangular, triangle, spheres cylinders, and cones. Another ability will be to calculate the weight of a given volume of material or liquid.</p> <p><b>Key Assignment:</b></p> <p>Students will find the volume of a Gang Box (tool storage unit) to the nearest 1/10th of a cubic foot. As a result, students will need to measure all sides including the top and bottom of the gang box. Evaluations will include using the correct formula to calculate volume.</p>	6	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
IV.	UNIT 4: CHOOSING A CAREER THAT IS RIGHT FOR YOU (ONE TRADE, MANY CAREERS)	CR	Lab/ CC	Standards
	<p>This exploratory unit will focus on the difference between a career and a job while also evaluating career options by gathering information. Students will also select a career option by matching personal characteristics with career characteristics, identify educational opportunities and requirements for career options. These topics and activities will assist the student in establishing a career plan by setting a timeline of career goals.</p> <p><b>Key Assignment:</b></p> <p>Students will interview two individuals: one with a “job” and another with a “career.” As part of the interview, students will ask: What does each person derive from their work? What are your thoughts or feelings the hours, benefits, and working conditions? What is their individual levels of skill, education, and overall job satisfaction? Additionally, students will compare and contrast the two individuals interviewed. What are the similarities and differences? How might their work choices influence your own? Students will finalize their findings as a 1-2 page, MLA formatted analysis.</p>	5	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
V.	UNIT 5: CONSTRUCTION TRADES PART ONE (ONE TRADE, MANY CAREERS)	CR	Lab/ CC	Standards
	<p>This unit will focus on researching the basic educational and training requirements for the construction trades as well as identifying the types of skilled occupations classified as carpenters. Students will be able to describe the work of residential carpenters, commercial carpenters, interior systems carpenters, and mill cabinetmakers.</p> <p><b>Key Assignment:</b></p> <p>Students will categorize building projects for residential, commercial, interior systems, and mill cabinetmaker carpenters. For each category, students will identify the specific projects, materials, and time needed. With each project, students will also discuss their likes and dislikes associated with each project and should include discussing any reservations or concerns with each project as well as which project would be their favorite project.</p>	5	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
VI.	UNIT 6: CONSTRUCTION TRADES PART TWO (ONE TRADE, MANY CAREERS)	CR	Lab/ CC	Standards

	<p>This unit will present the different tools and the types of work associated with floor layers, lathers, millwrights, pile drivers, boiler makers, bricklayers, electricians, glaziers, iron workers, painters, sheet metal workers, and other construction workers.</p> <p><b>Key Assignment:</b></p> <p>Students will prepare a research paper analyzing: the definition of infrastructure, types of construction projects needed for developing and improving infrastructure, and the types of workers needed for each project. The final paper will be a 2-3 page, MLA formatted essay.</p>	5	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>VII.</b>	<b>UNIT 7: WHAT HAPPENS ON A CONSTRUCTION SITE (ONE TRADE, MANY CAREERS)</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>This unit will discuss the basic stages of work on a construction site, identify the types of workers on a construction site, and their functions. This will also include a description of the range of skills needed on a construction site and explain the role of safety on a worksite.</p> <p><b>Key Assignment:</b></p> <p>Students will research typical safety issues for three construction jobs. The construction jobs sites should reflect fields that the student is interested in pursuing. The safety issues should be accompanied by an explanation of the impact of each safety issue, safety practices to avoid issues, and types of personal protective equipment (PPE) that a worker should use to minimize harm. The research will culminate in a 1-2 page, MLA formatted summary of their findings.</p>	5	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>VIII.</b>	<b>UNIT 8: IS A CAREER IN CONSTRUCTION RIGHT FOR YOU? (ONE TRADE, MANY CAREERS)</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>This unit will further the career exploration of students by assessing whether construction is the right career choice and evaluate occupations within construction in order to determine best career path.</p> <p><b>Key Assignment:</b></p> <p>Students will identify apprenticeships, community colleges, and career centers related to the specific field of interest. Students will then select three potential programs and locate the following information for each program: What are the admissions process and requirements? What are the applications dates and deadlines? What are the strengths and weaknesses of each program? Lastly, identify which program would be the best fit for the student's interests.</p>	5	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>IX.</b>	<b>UNIT 9: SAFETY ON THE JOB-SITE (PROJECT BOOK 2)</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>This unit emphasizes the importance of safety, distinguishing between types of hazards, accidents, and injuries. Students will also analyze typical mistakes that lead to accidents, injuries, and property damage. Additionally, students will analyze the methods for preventing accident and support the training procedures required to promote safety.</p> <p><b>Key Assignment:</b></p> <p>In small groups, students will create a presentation (i.e. PowerPoint, Prezi, or poster) regarding job site safety procedures. Students will need to identify a specific job site, its environment, the types of tools used, and personal protective gear needed for safe practices. The final version will be presented to the class (5-10 minutes).</p>	5	5	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>X.</b>	<b>UNIT 10: REVIEW OF TOOLS, MATERIALS, AND FASTENERS (PROJECT BOOK 2)</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>
	<p>This unit centers on the importance of hand tools and power tools as well as the rules for handling and maintaining each tool. A variety of materials are compared in order to identify the use of each type of wood and fasteners. In addition, students will demonstrate how to use measuring, marking, and layout tools.</p> <p><b>Key Assignment:</b></p> <p>Students will demonstrate the proper usage of each power tool along with the appropriate personal protective equipment (PPE). In this, students will need to drill, cut, screw, and install a variety of fasteners.</p>	2	0	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>XI.</b>	<b>UNIT 11: SAWHORSE (PROJECT BOOK 2)</b>	<b>CR</b>	<b>Lab/CC</b>	<b>Standards</b>

	<p>Students will build a sawhorse for use by carpenters at a work site. As a result, students will receive valuable experience in standard carpentry processes such as print reading, measuring, layout, cutting and assembly. Students will also practice safe handling of hand tools, power tools materials, and fasteners. New skills developed through this project include the use of stair gauge clamps and techniques of compound angle cuts.</p> <p><b>Key Assignment:</b></p> <p>Students will construct a sawhorse project in three stages: lay out and cutting of the legs using compound angles; lay out, measure and cut the top and attach the legs, gussets and side spreaders. To complete the project, students must gather tools and materials, set up a work area, follow the procedures in the instructions, assemble the prepared parts, and clean up the work area.</p>	1	6	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>XII.</b>	<b>UNIT 12: ADIRONDACK CHAIR (PROJECT BOOK 2)</b>	<b>CR</b>	<b>Lab/ CC</b>	<b>Standards</b>
	<p>Students will expand their knowledge of carpentry tools and materials including the addition of a caulking gun, combination pilot hole and countersink bit, exterior wood glue, panel adhesive, piano hinge, and poplar wood. New carpentry techniques include making and using templates, using a router for edges, laying out and cutting angles, and doing complex multi-staged assembly work.</p> <p><b>Key Assignment:</b></p> <p>Students will build an Adirondack Chair. Preparation steps for this project include gathering proper materials and tools; laying out and cutting approximately 30 wooden parts. Completion of the project requires a student to follow procedures in the instructions, review the prints and assemble the parts, and finish the piece for assessment.</p>	2	20	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>XIII.</b>	<b>UNIT 13: GARDEN TOOL SHED (PROJECT BOOK 2)</b>	<b>CR</b>	<b>Lab/ CC</b>	<b>Standards</b>
	<p>Using more advanced carpentry techniques and skills, students will build stand-alone structures. Each structure will need framing members (floors, walls, rafters and ceilings) and sheathing.</p> <p><b>Key Assignment:</b></p> <p>Students will build a garden tool shed. Students will follow detailed drawings for locations of framing members for laying out materials and building a garden tool shed. Skills applied include print reading, measurement, layout, cutting, and assembly using hand and power tools. Students will utilize additional tools, new types of carpentry material, and advanced techniques on this project. The following new items will include aviation snips, a cane bolt, a dovetail saw, galvanized flat strapping, galvanized nails, hasp, on center layout, joist clip angles, paling, sheathing, sinker, and a tie. Completion of the project requires a student to follow procedures in the instructions; review the prints and assemble the parts; and finish the piece for assessment.</p>	2	26	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>
<b>XIV.</b>	<b>UNIT 14: PLAYHOUSE (PROJECT BOOK 2)</b>	<b>CR</b>	<b>Lab/ CC</b>	<b>Standards</b>
	<p>This culminating playhouse project requires students to practice the carpentry skills required for the profession. New skills include the use of building paper, drip edge, shingles, post base, and cap fasteners. The construction requires seven procedures to complete the project.</p> <p><b>Key Assignment:</b></p> <p>Students will build a Playhouse structure. Students must gather materials and tools, follow the procedures to build the floor frame and the walls, install a porch post and beam, and frame the roof. Students will also build the gable overhangs, install the sheathing and fascia, and apply roofing materials. Completion of the project requires a student to follow procedures in the instructions, review the prints and assemble the parts, and finish the piece for assessment.</p>	6	60	<p><b>Academic:</b> LS: 11-12.6</p> <p><b>CTE Anchor:</b> Communications: 2.1</p> <p><b>CTE Pathway:</b> D1.1</p>

**Entered by:**

District: Riverside County Office of Education  
Contact: Abel Gonzalez, CTE TOSA  
Phone: 951-826-6801  
Email: rcoecte@rcoe.us