

# *Wallenpaupack Area School District*

## **Building Construction Occupations Statement of Course Philosophy for Secondary Education**

The course in Residential Carpentry will serve the needs of students who plan on entering the construction industry as apprentices or learners and those who can become better citizens in the community with the benefit of knowledge in the Building Trades. This course will offer an opportunity for students to develop skills, knowledge and attitudes most desirable for entering the construction industry.

Special emphasis will be placed on the development of good attitudes in employer-employee as well as fellow worker relationships, safety and a feeling for the dignity of work.

Through course arrangement and scheduling, students will be afforded an opportunity to progress at the rate at which they are most capable.

# *Wallenpaupack Area School District*

## **COURSE:** Residential Carpentry

**GRADE LEVEL:** 10,11,12

**LENGTH OF COURSE:** Residential Carpentry 90 days

**TEXT:** Modern Carpentry

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### **COURSE DESCRIPTION:**

This course is designed for the student who is interested in learning residential carpentry, theory and applications. Working with spruce, pine, and fir, the students will design, layout and construct a wide variety of different building components associated with residential carpentry.

Carpenters need to know how to use and maintain hand and power tools. They need to know the kinds, grades, and characteristics of the materials with which they work-how each can be cut, shaped, and most satisfactorily joined. Carpenters must be familiar with the many different fasteners available and choose the best for each task.

Carpenters must know how to lay-out and frame floors, walls, stairs, and roofs. They must know how to install windows and doors, and how to apply numerous kinds of interior and exterior finish. They must use good judgment to decide on proper procedures to do the job at hand in the most efficient and safest manner.

### **CURRICULUM WRITING TEAM:**

Edward Wargo ; Kevin McCue

### **DATE OF REVISION:**

2007

# Wallenpaupack Area School District

**Course:** Residential Carpentry

**Grade Level:** Grade  
10,11,12

**Unit:** Rough Framing

**PA Standards:** 13.1  
13.2  
13.3  
13.4

| <b>Topics:</b>  | <b>Skills:</b>  |
|---|---|
| <p style="text-align: center;">Orientation</p> <ul style="list-style-type: none"> <li>• Shop Layout</li> <li>• Shop Rules</li> <li>• Shop Requirements</li> <li>• Course Goals</li> <li>• Grading and Attendance</li> <li>• Competency Based Education</li> </ul> | <p style="text-align: center;">Students will perform all of the assigned tasks in the classroom and demonstrate an acceptable skill level in the shop area</p>  |
| <b>Activities:</b>  | <b>Performance Assessments:</b>   |
| <p>Lecture<br/>Demonstrations<br/>Perform specified competencies in Carpentry Shop</p>  | <p>Class Participation<br/>Class Attendance<br/>Shop Assessment           <ul style="list-style-type: none"> <li>• Objective</li> <li>• Subjective</li> </ul>           Written Tests<br/>Skill Demonstration Tests</p> |

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| <b>Topics:</b>   | <b>Skills:</b>  |
|--|---|
| <p>Safety</p> <ul style="list-style-type: none"> <li>• With hand tools</li> <li>• With power tools</li> <li>• With equipment</li> <li>• With clothing</li> <li>• Fire and electricity</li> <li>• As applied to conduct</li> <li>• With flammable liquids</li> <li>• Tool care and maintenance</li> </ul> | <p>Students will perform all of the assigned tasks in the classroom and demonstrate an acceptable skill level in the shop area</p>  |
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| <b>Topics:</b>   | <b>Skills:</b>   |
|--|--|
| Floor Systems <ul style="list-style-type: none"><li>• wood/steel beams</li><li>• sill plates</li><li>• joist headers; banding</li><li>• floor joist</li><li>• Stairwell openings</li><li>• Cantilevers</li><li>• deck bridging</li><li>• plywood decking</li></ul> | Students will perform all of the assigned tasks in the classroom and demonstrate an acceptable skill level in the shop area  |
| <b>Activities:</b>   | <b>Performance Assessments:</b>  |
| Lecture<br>Demonstrations<br>Perform specified competencies in Carpentry Shop  | Class Participation<br>Class Attendance<br>Shop Assessment <ul style="list-style-type: none"><li>• Objective</li><li>• Subjective</li></ul> Written Tests<br>Skill Demonstration Tests |

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|   |  |
|---|--|
| <p><b>Topics:</b></p> <p>Stair systems</p> <ul style="list-style-type: none"> <li>• Measure</li> <li>• Calculate Rise &amp; Run</li> <li>• Determine if a landing is needed</li> <li>• Layout stair stringer / Cut</li> <li>• Build a straight run stairwell</li> <li>• Build a stairway with a landing</li> <li>• Abide by UCC HB1654</li> </ul> | <p><b>Skills:</b></p> <p>Students will perform all of the assigned tasks in the classroom and demonstrate an acceptable skill level in the shop area</p>   |
| <p><b>Activities:</b></p> <p>Lecture<br/>Demonstrations<br/>Perform specified competencies in Carpentry Shop</p>  | <p><b>Performance Assessments:</b></p> <p>Class Participation<br/>Class Attendance<br/>Shop Assessment             <ul style="list-style-type: none"> <li>• Objective</li> <li>• Subjective</li> </ul>             Written Tests<br/>Skill Demonstration Tests</p> |

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| <b>Topics:</b>  | <b>Skills:</b>  |
|---|---|
| <p>Wall Framing</p> <ul style="list-style-type: none"> <li>• Read Blueprints</li> <li>• Layout/ chalk line deck for outside walls</li> <li>• Cut and layout sole and top plates</li> <li>• Fabricate corners</li> <li>• Fabricate partitions</li> <li>• Fabricate headers</li> <li>• Assemble window openings</li> <li>• Assemble door openings</li> <li>• Layout and assemble exterior walls               <ul style="list-style-type: none"> <li>○ Install let-ins</li> <li>○ Erect and brace</li> </ul> </li> <li>• Layout and assemble interior walls               <ul style="list-style-type: none"> <li>○ Erect and brace</li> </ul> </li> </ul> | <p>Students will perform all of the assigned tasks in the classroom and demonstrate an acceptable skill level in the shop area</p>  |
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| <b>Topics:</b>   | <b>Skills:</b>  |
|--|---|
| <p>Roof Systems</p> <ul style="list-style-type: none"> <li>• Layout ceiling joists</li> <li>• Install ceiling joists</li> <li>• Layout rafters               <ul style="list-style-type: none"> <li>○ Cut and install rafters                   <ul style="list-style-type: none"> <li>▪ Common</li> <li>▪ Hip</li> <li>▪ Shed</li> <li>▪ Gambrel</li> </ul> </li> </ul> </li> <li>• Install fascia</li> <li>• Install roof sheathing</li> </ul> | <p>Students will perform all of the assigned tasks in the classroom and demonstrate an acceptable skill level in the shop area</p>  |
| <b>Activities:</b>   | <b>Performance Assessments:</b>   |
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