

**Warren County School District**  
**PLANNED INSTRUCTION**

**COURSE DESCRIPTION**

**Course Title:** Building Construction Occupations Technology

**Course Number:** 00903 (AM) & 00953 (PM)

**Course Prerequisites:** A student should have earned at least six (6) credits to be enrolled in Building Construction Occupations Technology

**Course Description:**

**Construction Trades, Other CIP 46.9999**

An instructional program that prepares individuals to apply technical knowledge and skills in the erection and installation of buildings and other structures using assorted materials such as metal, wood, stone, brick, glass, concrete and composition substances. Instruction is provided in the basic skills of carpentry, masonry, plumbing, heating, electrical, painting and decorating and a variety of activities associated with building construction. Some of these activities include but are not limited to blueprint reading, cost estimating and using a variety of hand and power tools; cutting, fitting, fastening and finishing various materials, and applying technical specifications and knowledge concerning the physical properties of materials. The Building Construction Occupations program also provides an opportunity for students to receive a PA Skills Certificate, an SP2 safety certificate and OSHA 10 certification.

**Suggested Grade Level:** Grades 10-12

**Length of Course:**        One Semester   X   Two Semesters        Other (Describe)

**Units of Credit:** Three (3) Elective credits per year [up to nine (9) credits with Optional COOP]

**PDE Certification and Staffing Policies and Guidelines (CSPG) Required Teacher Certification(s):** CSPG #13: Emergency Certification, #66: Vocational Instruction & Vocational Intern Certification, #7: Level II (Permanent Certification), or Code: 2014 Building Construction Trades

**Certification verified by WCSD Human Resources Department:**

  X   Yes        No

**Board Approved Textbooks, Software, Materials:**

**Title:** Residential Construction Academy Series: Delmar Cengage Learning (Masonry)  
**Publisher:** Thompson Delmar Learning  
**ISBN #:** 0:1418052841  
**Copyright Date:** 2008

**Title:** Residential Construction Academy Series: Delmar Cengage Learning (Plumbing)  
**Publisher:** Thompson Delmar Learning  
**ISBN #:** 10:1111307776  
**Copyright Date:** 2012

**Title:** Residential Construction Academy Series: Delmar Cengage Learning (House Wiring)  
**Publisher:** Thompson Delmar Learning  
**ISBN #:** 10:1285852222  
**Copyright Date:** 2016

**Title:** Residential Construction Academy Series: Delmar Cengage Learning (Carpentry)  
**Publisher:** Thompson Delmar Learning  
**ISBN #:** 10:130508618  
**Copyright Date:** 2016

**Software:**

**This software is directly related to the textbooks**

- e.resource™ **Carpentry** ISBN: 1-4018-0185-6
- e.resource™ **House Wiring** ISBN: 1-4018-1100-2
- e.resource™ **Masonry** ISBN: 1-4018-5286-8
- e.resource™ **Plumbing** ISBN: 1-4018-4900-8

**Other Software: SP2's (online safety program related to Building Construction Trades)  
Follows OSHA Standards**

**Date of WCSD Board Approval:** April 10, 2017

**BOARD APPROVAL:**

**Date Written:** February 2011, Revised February 2017

**Date Approved:** April 10, 2017

**Implementation Year:** 2017 - 2018

**SPECIAL EDUCATION AND GIFTED REQUIREMENTS**

The teacher shall make appropriate modifications to instruction and assessment based on a student's Individual Education Plan (IEP) or Gifted Individual Education Plan (GIEP).

**COURSE OUTLINE**

*List the units to be taught throughout the course. Provide a brief description of what will be taught in each unit.*

**For standards, essential questions, content, and skills see Curriculum Map –**

**PA Academic Standards:**

Career Education and Work: 13.1.11 A, B, C, F; 13.2.11 A, C, D, E; 13.3.11 A, G

Science and Technology: 3.1.10 B, D; 3.6.10 C; 3.7.10 A, B; 3.8.10 A, B, C

Math: 2.1.11 A; 2.2.11 A, B, C, D, E; 2.3.11 A, B, C; 2.4.11 A, E; 2.5.11 A, B, C; 2.10.11 B

Reading, Writing, Speaking, and Listening: 1.2.11; 1.4.11; 1.5.11

**Industry or Other Standards:** National Association of Home Builders Standards

The following content sequence is addressed with progressively more advanced skills expected and performed each year. The content is aligned to the industry standards of the National Association of Home Builders.

## **Content Sequence**

### **I. Safety (3-4 weeks-ongoing)**

- A. General safety rules
- B. Shop safety
- C. Hand tool safety
- D. Portable power tool safety
- E. Power equipment safety
- F. Ladder and scaffolding safety
- G. OSHA and OSHA requirements

### **II. Carpentry (18 weeks)**

- A. General safety
- B. Equipment used by the carpenter
- C. Wood, wood products, and fasteners
- D. Blueprints, codes, and building layout
- E. Concrete for construction
- F. Floor, wall and ceiling, and roof framing
- G. Roofing and siding
- H. Windows and doors
- I. Insulation and drywall
- J. Interior and exterior trim
- K. Stairs
- L. Cabinet making

### **III. Residential Wiring (5 weeks)**

- A. General safety
- B. Tools and equipment for the electrician
- C. Hardware and material
- D. Reading mechanical blueprints
- E. Basic wiring skills and procedures
- F. Service entrance equipment and installation

#### **IV. Residential Plumbing (5 weeks)**

General safety

- A. Tools and equipment for the plumber
- B. Hardware and material
- C. Reading mechanical blueprint
- D. Basic plumbing skills and procedures

#### **V. Residential Masonry (5 weeks)**

A. General safety

- B. Tools and equipment for the mason
- C. Hardware and material
- D. Reading blueprints
- E. Basic masonry skills and procedures

### **Objectives:**

The student completing the Building Construction Occupation program will be able to:

1. State and practice general safety rules for operating the tools and equipment utilized in Building Construction Occupations
2. Identify and avoid safety hazards
3. Describe and explain the role of OSHA in building construction
4. Identify and use the tools used in the carpentry field
5. Identify and use the materials in the carpentry field
6. Read blueprints and identify codes
7. Identify and use the skills essential to rough and finish carpentry
8. Identify and use the tools of the electrician
9. Identify and use the materials of the electrician
10. Rough-in the electrical system of a residence
11. Trim-out the electrical system of a residence
12. Install and connect system to service panel
13. Identify and use the tools of the plumber
14. Identify and use the materials of the plumber
15. Rough-in the plumbing system of a residence
16. Trim-out the plumbing system of a residence
17. Identify and use the tools of the mason
18. Identify and use the materials of the mason
19. Pour footer
20. Lay block for a foundation wall
21. Lay brick

## ASSESSMENT

### Summative Assessments:

NOCTI Written and Performance Test (2<sup>nd</sup> or 3<sup>rd</sup> Year students) developed by the National Occupational Competency Testing Institute. Students who score advanced will receive the PA Skills Certificate in Construction Trades, Other signed by the Governor of Pennsylvania. Students who score advanced and successfully complete the Program of Study Task Grid will earn SOAR PA state-wide articulated credit and any additional approved articulated college credit.

### Formative Assessments:

The teacher will develop & use standards-based assessments throughout the program.

**Portfolio Assessment:**      Yes      No

**District-wide Common Final Examination Required:**      Yes      No

**Course Challenge Assessment (Describe):** N/A

**WRITING TEAM:**             Greg Waterman and James Evers and reviewed by current School Board approved OAC Membership

### WCSD STUDENT DATA SYSTEM INFORMATION

1. Is there a required final examination?              Yes      No  
\*Warren County School District Policy 9741 and 9744 state, "All classes in grades 9-12 shall have a final exam".
2. Does this course issue a mark/grade for the report card?  
       Yes      No
3. Does this course issue a Pass/Fail mark?              Yes      No
4. Is the course mark/grade part of the GPA calculation?  
       Yes      No
5. Is the course eligible for Honor Roll calculation?              Yes      No
6. What is the academic weight of the course?  
       No weight/Non credit      Standard weight  
       Enhanced weight (Describe) AP