

Passaic County Technical Institute

CARPENTRY III

JANUARY 2004

CARPENTRY II

I. DESCRIPTION

Carpentry three is a full year course will further develop skills established in the 9th and 10th grades. Emphasis will be on advanced roof framing techniques, lip and intersecting roofs will be introduced. Additional cabinet making skills will be developed such as laminated plastics, finishing and door making.

II. OBJECTIVES

1. Safety (9.1; 9.2F)
 - a. Follow proper and safe use of both power and hand tools
 - b. Proper use of personal safety equipment, clothing, shoes, eye protection and hearing protections
 - c. Understand the importance of shop cleaning for safety
 - d. Proper and safe use and storage of finishing materials and equipment
2. Roof framing (9.1; 9.2)
 - a. Use of the framing square and math to calculate rafter length
 - b. Estimating materials for roof framing
 - c. Layout and construct a model lip roof
 - d. Calculate length of a ridge for a lip roof
 - e. Calculate the length of lip and valley packs
3. Blue print reading and drawing (9.1; 9.2)
 - a. Know and apply the alphabet of lines
 - b. Proper use of drafting tools
 - c. Use of scale for drawings
 - d. Material ordering from prints
4. Wall coverings and trim (9.1; 9.2)
 - a. Install dry wall and joint compound
 - b. Order dry wall and related components
 - c. Order and install interior and exterior trim
5. Exterior siding (9.1; 9.2)
 - a. Order siding from prints
 - b. Install aluminum and vinyl siding and trim
6. Insulation (9.1; 9.2)
 - a. Order and know the proper type of insulation for a job
 - b. Install insulation

7. Finish carpentry (9.1; 9.2)
 - a. Install windows and doors
 - b. Trim windows and doors
 - c. Order material for door and window trim
 - d. Install locks and door hardware
 - e. Install cove and base moldings

8. Stair building (9.1; 9.2)
 - a. Saw tooth stringer
 - b. Tread rise
 - c. Tread Run
 - d. Total rise and run
 - e. Material for stairs

III. TEXTBOOKS AND INSTRUCTIONAL MATERIALS

“Modern Carpentry” by Willis H. Wagner/Howard Smith G.W. Publishing
copyright 2000 Goodhart-Wilcox Co.

Workbook for Modern Carpentry

Tauton Press Construction Trades video

IV. TEACHING STRATEGIES

Various teaching methods, lecture, demonstration, teacher made worksheets will be employed in order to meet the needs of the learner. Hands on learning of skills will be provided with safety reinforced.

V. OUTLINE OF COURSE

- a. Safety
 1. list safety rules for shop and job site
 2. identify safety organizations
 3. demonstrate proper safety when using hand and power tools
 4. Work area cleanliness as a safety practice

- b. Roof framing
 1. use framing square and speed square

- c. Footings and foundation
 1. demonstrate a knowledge of layout and construction of footings
 2. identify different types of foundations
 3. use mathematics to calculate materials for footings and foundations
 4. use the 3, 4, 5 method for layout

- d. Construction materials
 1. demonstrate the ability to identify different types of wood

2. demonstrate a knowledge of non wood materials used in construction
3. know the different types of fasteners used in construction
4. demonstrate a knowledge of door and window types
5. demonstrate a knowledge of interior and exterior wall and roof coverings
6. be able to identify trim components of residential construction

e. Blueprint reading and drafting

1. demonstrate the use of drafting tools and techniques
2. demonstrate the proper use of scale in drawings
3. draw a foundation plan to scale
4. draw a floor plan and elevation to scale
5. draw section views as needed

f. Residential construction

1. build a scale model house from plans
2. build footing and foundation for model
3. draw section views as needed

IV. EVALUATION

Students are evaluated using the following criteria:

1. Class and shop participation
2. Project and test grades
3. Quizzes and assignments
4. Notebook work
5. Special projects

V. PROFICIENCIES

Upon successful completion of the requirements of this course, the student will be able to:

1. Maintain a neat and accurate notebook
2. Maintain an assigned book
3. Maintain proper writing utensils
4. Work cooperatively and effectively with others.
5. Further develop an awareness of job opportunities
6. Identify and follow all shop safety procedures
7. Understand and apply carpentry math
8. Identify and demonstrate proper use of nail fasteners and adhesives
9. Identify and select various building materials
10. Demonstrate a safe and skillful use of various hand tools

11. Demonstrate a safe and skillful use of various portable tools and stationary machines
12. Demonstrate basic blueprint drawing and reading skills, project layout, elevations and site layouts
13. Identify various residential foundation methods and designs
14. Identify basic floor systems
15. Identify basic wall systems
16. Demonstrate proper framing techniques
17. Demonstrate the basics of cabinet making

STUDENT PROFICIENCIES

CARPENTRY LEVEL II

COURSE OVERVIEW

This course introduces the beginning students to all phases and equipment needed to draw, understand and build a model frame house. In the process, he/she will lay out and construct floor and wall framing and prepare all openings for the finished project.

PROFICIENCIES

Upon successful completion of the requirements of this course, the student will be able to:

18. Maintain a neat and accurate notebook
19. Maintain an assigned book
20. Maintain proper writing utensils
21. Work cooperatively and effectively with others.
22. Further develop an awareness of job opportunities
23. Identify and follow all shop safety procedures
24. Understand and apply carpentry math
25. Identify and demonstrate proper use of nail fasteners and adhesives
26. Identify and select various building materials
27. Demonstrate a safe and skillful use of various hand tools
28. Demonstrate a safe and skillful use of various portable tools and stationary machines
29. Demonstrate basic blueprint drawing and reading skills, project layout, elevations and site layouts
30. Identify various residential foundation methods and designs
31. Identify basic floor systems
32. Identify basic wall systems
33. Demonstrate proper framing techniques
34. Demonstrate the basics of cabinet making

Key I = Introduced
 D = Developed in Depth
 R = Reinforced

CARPENTRY II
SCOPE AND SEQUENCE CHART

Suggested Grade Levels

SKILL TO BE LEARNED	9	10	11	12
Understand and follow all safety rules	I	D	R	R
Identify carriers in carpentry	I	D	R	R
Hand tool safety	I	D	R	R
Power tool safety	I	D	R	R
Shop Math	I	D	D	R
Good work habits	I	D	R	R
Measuring skills		I	D	R
Blueprint reading and drawing		I	D	R
Wall and floor framing		I	D	R
Roof framing		I	D	R
Wall and floor coverings		I	D	R
Interior and exterior trim		I	D	R
Cabinet making skills		I	D	R
Construction codes		I	D	R
Estimating materials		I	D	R