

CARPENTRY (CPT)

CPT 102 Carpentry Fundamentals

This course is designed for students preparing for a career in carpentry. Students are introduced to foundational concepts and principles of the carpentry trade. Students receive instruction in the use and care of hand and power carpentry tools; layout, measuring and cutting procedures; as well as selection and application of building materials.

Upon successful completion of this course, students should be able to:
Demonstrate knowledge of hand and power tools and their practical applications.

Demonstrate understanding of workplace safety requirements.

Utilize measurement tools correctly and accurately.

Demonstrate basic layout and cutting procedures.

Read and apply basic blueprints for carpentry jobs.

Identify the structural components in construction.

3 Credits 2 Weekly Lecture Hours

2 Weekly Lab Hours

CPT 105 Framing and Roofing

This course provides students with the basic principles of framing and roofing. It includes terminology, print information, design, codes and systems. Students also receive hands on training in rough framing skills as well as the construction of common types of roofs.

Upon successful completion of this course, students should be able to:

Demonstrate knowledge of the components of framing and roof structures.

Estimate materials for framing and roofing.

Frame structures using blueprint information.

Install insulation.

Demonstrate knowledge of the different types of roofing and materials.

Construct simple roof rafters.

Complete different types of roofing jobs.

Prerequisites: CPT 102.

3 Credits 2 Weekly Lecture Hours

2 Weekly Lab Hours

CPT 110 Exterior Finishing

This course is designed to teach students the necessary skills needed to complete exterior finishing in residential construction. Instruction includes insulation, siding, window and door installations.

Upon successful completion of this course, students should be able to:

Estimate materials for exterior finishing.

Demonstrate knowledge of different types of sidings and exterior finishing.

Apply different types of sidings.

Select and install appropriate windows and doors based on rough openings and manufacturers specifications.

Select and install various types of window casings and window glazing.

Construct and set door frames.

Identify and install door and window hardware.

Prerequisites: CPT 102.

3 Credits 2 Weekly Lecture Hours

2 Weekly Lab Hours

CPT 115 Interior Finishing

This course is designed to teach students the necessary skills needed to complete interior finishing in residential construction. Topics covered include dry wall, doors, trim and paneling, as well as the layout, fabrication and installation of staircases.

Upon successful completion of this course, students should be able to:

Safe and proper use of power and hand tools.

Demonstrate knowledge of wall and ceiling covering materials.

Demonstrate proper applications of different types of moldings.

Prepare and install various interior door frames and doors.

Install various types of floors.

Identify the various types of stairs.

Construct basic stairways.

Prerequisites: CPT 102.

3 Credits 2 Weekly Lecture Hours

2 Weekly Lab Hours

CPT 120 Energy Efficiency

This course introduces students to the techniques and materials used in remodeling and new construction of homes. Topics covered in the class include green building and green building standard; energy conservation; weatherization and efficiency techniques.

Upon successful completion of this course, students should be able to:

Demonstrate understanding of industry standards related to green building and energy efficiencies.

Demonstrate knowledge of areas of inefficiency in homes.

Demonstrate understanding of different types of insulation and their uses.

Identify more efficient construction and landscaping designs.

Conduct a general home energy audit.

Prerequisites: CPT 102.

2 Credits 1 Weekly Lecture Hour

2 Weekly Lab Hours

CPT 150 Introduction to Cabinetmaking

This course introduces basic cabinetmaking skills. Topics covered include material selection, layout, design, proper use and application of hand and power tools, and finishing techniques. Course includes the design and construction of various projects. NOTE: Must have department head approval

Upon successful completion of this course, students should be able to:

Describe cabinet design considerations.

Make basic sketches and layouts.

Generate a Bill of Material for a project.

Identify woods by sight.

Discuss applications for woods.

List applications for each wood species.

Apply veneers.

Affix plastic laminates.

Select and apply different fasteners.

Use hand and power tools safely.

Make up various wood joints.

Fabricate fixtures.

Prepare a project for finishing.

Apply finishes to wood.

2 Credits 1 Weekly Lecture Hour

2 Weekly Lab Hours

CPT 151 Furniture Building

This course presents the basic skills necessary to build furniture. Proper use of hand and power tools is covered. Wood joinery is covered along with different finishing techniques. NOTE: Must have department head approval

Upon successful completion of this course, students should be able to:

Select wood for various applications.

Make basic joints including mortise, tenon and dovetails.

Demonstrate proper router applications.

Perform proper clamping techniques.

Apply finishes to achieve desired appearance.

Utilize shop tools safely.

2 Credits 1 Weekly Lecture Hour

2 Weekly Lab Hours

CPT 152 Home Remodeling/Additions

Introduces basic principles of framing structures, insulation, paneling, ceramic tile for floors and walls, and basic carpentry skills. Topics covered include: stairs, roofing, basic plumbing and wiring, finishing work, skylights and windows and kitchens and bathrooms.

Upon successful completion of this course, students should be able to:

Demonstrate proper applications of framing members including headers, beams, roof joist.

Lay out a stairway.

Apply ceramic tile with use of mastic or substrate.

Explain the basic concepts involved of home wiring.

Install a window into a new or existing opening.

Solder 1/2" and 3/4" copper tubing.

Construct a simple drainage branch using plastic pipe.

2 Credits 1 Weekly Lecture Hour

2 Weekly Lab Hours

CPT 153 Advanced Furniture Building

This course is designed for students who are ready to progress beyond The Basics of Furniture Building (CPT 151) course. It presents advanced techniques in wood bending using steam, laminate, freeform and coopering. The process of working with wood veneers and veneer inlays will be covered. Various methods in finishing and finishing materials will be emphasized.

Upon successful completion of this course, students should be able to:

Select various types of wood for numerous application procedures Build,

setup and operate a steaming device for bending wood Construct the

appropriate form for bending procedures Use wood laminates for the purpose

of bending Layout construction for coopering Apply various techniques for

staining and finishing

Prerequisites: CPT 151.

2 Credits 1 Weekly Lecture Hour

2 Weekly Lab Hours

CPT 194 Carpentry Co-Op Internship (2 credits)

This Carpentry Co-op/Internship course provide Carpentry students opportunity to gain practical field experience. During this experiential learning period students apply the skills learned in classroom and labs to develop greater proficiency in real-world situations. Students participating in this 120 hour Carpentry Co-op/Internship will also earn 2 college credits for this experience.

Upon successful completion of this course, students should be able to:

Demonstrate the ability to apply basic carpentry skills.

Demonstrate the ability to perform in a professional setting in a professional manner with regard to attendance, punctuality, teamwork, attitude and ability to meet deadlines.

Demonstrate the ability to journal their work experience including a log of duties performed, skills demonstrated, special project assignments, challenges encountered, supervisor reviews and self-reflections.

Prerequisites: CPT 102 and CPT 105 and CPT 110 and CPT 115 and CPT 120.

2 Credits