

BUILDING CONSTRUCTION & CABINETMAKING (CR)

CR 114 Technical Fundamentals of Building Construction

5 Class Hours, 5 Quarter Credit Hours

The basic procedures involved in estimating materials, costs, and critical measurements are studied. Basic construction math and its applications are introduced.

CR 116 Tool and Site Work Lab

8 Lab Hours, 2 Quarter Credit Hours

Selected projects are built in the lab with emphasis on safety and proper tool usage. Transit work is performed and its use in the building trade is demonstrated.

CR 117 Introduction to Blueprint Reading

2 Class Hours, 2 Quarter Credit Hours

Corequisites: CR 116

This course is designed to introduce students to architectural blueprints. Types of prints, symbols, dimensions, and lines will be discussed.

CR 118 SketchUp 1

3 Class Hours, 2 Lab Hours, 4 Quarter Credit Hours

This course introduces students to a computer-based system to create and modify drawings. Drawing Tools in SketchUp will be used to create presentation and working drawings for use in cabinetmaking and furniture design.

CR 120 SketchUp 2

2 Class Hours, 2 Lab Hours, 3 Quarter Credit Hours

Prerequisites: CR 118

This course is a continuation of SketchUp 1. Students will use the drawing tools in SketchUp to create presentation and working drawings for use in cabinetmaking and furniture design as well as material lists and plan of procedures for capstone projects.

CR 121 House Framing I Lab

6 Lab Hours, 2 Quarter Credit Hours

Prerequisites: CR 114 and CR 116

Full-size interior treatments are covered. Exercises include drywall work, molding installation and window casing. Stair and rafter layouts are practiced for various construction applications.

CR 122 House Framing I

5 Class Hours, 5 Quarter Credit Hours

Prerequisites: CR 114 and CR 116

Standard framing procedures, wall construction, headers, center beams, floor and ceiling joists, stairs, and common rafters are studied. Blueprint reading and takeoffs resulting in accurate material estimates are emphasized. Sustainable construction methods and materials are emphasized.

CR 126 Introduction to Building Codes

2 Class Hours, 2 Quarter Credit Hours

This course is designed to introduce students to the One- and Two-Family Dwelling Code. Comparisons between Rhode Island, Massachusetts and other states will be discussed.

CR 131 House Framing II

4 Class Hours, 4 Quarter Credit Hours

Prerequisites: CR 121 and CR 122

Varied structural problems involved in custom houses are presented. Structural designs and layouts are done from basic prints for a house. Particular attention is paid to proper sizing of structural members and beams for support. Cost estimates of alternate methods are done for comparison. Insulation, exterior and interior treatments are also presented. Sustainable construction methods and materials are emphasized.

CR 132 House Framing II Lab

6 Lab Hours, 2 Quarter Credit Hours

Prerequisites: CR 121 and CR 122

A structure, approximately 8'x10', is built. The building includes roofing, siding, and trim work. Work on a job site may be substituted if appropriate. Sustainable construction methods and materials are emphasized.

CR 136 Introduction to Computer Estimating

3 Class Hours, 3 Quarter Credit Hours

Prerequisites: CR 121 and CR 122 and CR 208

Students will study basic computer estimating techniques and develop detailed construction cost estimates from blueprints and/or specifications using the designated software.

CR 208 Introduction to Computer-Aided Design (CAD) for Construction

5 Class Hours, 5 Quarter Credit Hours

This is an entry-level theory and lab course introducing students to the basics of computer-aided design. Sustainable construction methods and materials are emphasized.

CR 210 Lead-Safe Remodeler/Renovator Training

2 Class Hours, 2 Quarter Credit Hours

This 20-hour course will train students to comply with the RRP requirements for both the EPA and the State of Rhode Island. The course covers all of the lead safe work practices required for both interior and exterior renovations on pre-1978 buildings that have not been certified as lead free.

CR 211 Cabinetmaking I Lab

6 Lab Hours, 2 Quarter Credit Hours

Operations are performed, and a project built that involves numerous cabinetmaking joints and assembly procedures. Emphasis is placed on the safe operation and set-up of basic cabinetmaking equipment. Scale drawings are made of selected projects.

CR 212 Cabinetmaking I

4 Class Hours, 4 Quarter Credit Hours

Cabinetmaking I discusses the properties of wood, elements of joinery, gluing and clamping, and machining methods. As theory is presented, operations are performed, and projects are built by students to incorporate classroom work into actual practice.

CR 217 Professional Seminar

1 Class Hours, 1 Quarter Credit Hours

This course will prepare students to participate in the Internship component of the Building Construction Technology Program. It will benefit all students who are seeking employment upon graduation. The course will include resume preparation, interviewing skills research, job research, and (for those entering internships) documentation of contacts to potential employers to procure a position. Students are responsible for securing their own internship sites. This course is mandatory for all students taking internships and is an option for night students who take labs in lieu of internships.

CR 222 Introduction to Computerized Numerical Control (CNC) Programming

3 Class Hours, 3 Quarter Credit Hours

Corequisites: CR 223

This is an entry-level course to familiarize students with Computerized Numerical Control processes and operations. Set up, operation, and principles of CNC techniques, principally routing, will be discussed and demonstrated.

CR 223 Introduction to Computerized Numerical Control (CNC) Lab

2 Lab Hours, 1 Quarter Credit Hours

Corequisites: CR 222

In a laboratory situation, students demonstrate the set-up, operation and principles learned in CR 222.

CR 226 Sustainable Design and Construction Methods

3 Class Hours, 3 Quarter Credit Hours

This course will introduce students to the design, practices and methods of sustainable building. Using the National Green Building Standard, ICC700, students will learn to design to bronze, silver, gold and emerald levels of sustainable design. Various methods of construction choices will be discussed using the 'what if' concept to determine the result of each choice made and how it impacts other design choices.

CR 230 Cabinetmaking II

4 Class Hours, 4 Quarter Credit Hours

Prerequisites: CR 211 and CR 212

Routers and templates, veneering, frame, and panel construction are studied and incorporated in projects. Creating a bill of materials and cut list will also be discussed. Scale drawings are made of selected projects.

CR 231 Cabinetmaking II Lab

8 Lab Hours, 4 Quarter Credit Hours

Prerequisites: CR 211 and CR 212

Projects are built in the lab using prints drawn or prints studied in the classroom. Projects are designed to implement principles, practices, and theory taught in CR 222 and reinforces material from CR 212 and CR 211.

CR 236 Introduction to Finishing and Spraying

2 Class Hours, 3 Lab Hours, 3 Quarter Credit Hours

Students are introduced to the principles and practices of spray finishes. Both HVLP and conventional HP spray techniques will be used. Both lacquer and water-based products will be studied. Mixing proportions and colors will be discussed as well as the variety of clear finishes available. Students will spray projects built throughout the cabinetmaking curriculum.

CR 237 Cabinetmaking III

4 Class Hours, 4 Quarter Credit Hours

Prerequisites: CR 230

Radius work, compound angles, and dovetails are studied and incorporated in projects to be built. Factory built kitchen cabinets are discussed and plans are drawn for different kitchen layouts.

CR 238 Cabinetmaking III Lab

8 Lab Hours, 2 Quarter Credit Hours

Prerequisites: CR 230 and CR 231

Advanced projects are built in the lab using prints drawn or supplied in the classroom. Operations studied in all related courses, including CNC if desired, are incorporated in lab assignments.

CR 242 Kitchen and Bath Design and Installation

2 Class Hours, 2 Quarter Credit Hours

This course will introduce students to accepted kitchen and bath design from a conceptual, practical and building code perspective. Students will use software to design kitchens and baths using the industry's premier software.

CR 243 Kitchen and Bath Design and Installation Lab

3 Lab Hours, 1 Quarter Credit Hours

In the lab course that accompanies CR 242, students will learn various installation techniques whether for new construction or remodeling.

CR 250 Internship I

15 Lab Hours, 3 Quarter Credit Hours

Students will gain hands-on experience working with an employer under an approved Internship agreement.

CR 254 Internship II

15 Lab Hours, 3 Quarter Credit Hours

Students will gain hands-on experience working with an employer under an approved Internship agreement.