

BUILDING CONSTRUCTION TECHNOLOGY

Rock Creek Campus
Building 7, Room 202
971-722-7255—General Information
971-722-7405—Design/Build Remodeling
971-722-7403 or 971-722-7328—Building Construction
971-722-7475—Construction Management

www.pcc.edu/bct

CAREER AND PROGRAM DESCRIPTION

Career possibilities exist for those going into business for themselves or seeking employment in the construction industry. PCC offers associate degrees and a certificate in several construction industry specialties. This program is designed to help students develop the technical qualifications and life skills needed to enter the construction industry, as well as to help those currently in the construction trades upgrade and learn new skills.

Building Construction Technology AAS Degree: This degree is designed to help students learn the skills a carpenter needs to build a house. Coursework includes hands-on instruction in the BCT shop, or at the BCT worksite, in Tool Safety, Residential Concrete, Floor/Wall/Roof Framing, Exterior/Interior Finish, Cabinetmaking, and Remodeling. Classroom instruction consists of lectures and exercises that will teach skills in Residential Print-reading, Materials and Methods, Building Codes, Estimating, Construction Math, Drafting, and Sustainable Building.

Graduates might work in the construction field as framers, carpenters, remodelers, site supervisors, concrete workers, siding installers, roofers, trim carpenters, etc. After gaining jobsite experience, graduates might even start their own construction companies. For specific courses required to complete this degree, see the term by term list under "Building Construction Technology." For students who plan to complete the degree in two years, fall term is the best time to begin, since most courses are only offered once each year. However, many students enter the program in winter, spring, or summer terms. Students who enter the program during these terms should see a BCT advisor during their first term for help in sequencing courses.

Design/Build Remodeling AAS Degree: This degree offers coursework in building construction and interior design with a focus on kitchen and bath remodeling and design. This degree is accredited by the National Kitchen and Bath Association (NKBA) and follows NKBA kitchen and planning guidelines. Upon graduation, students can take the Associate Kitchen and Bath Designer (AKBD) exam and after gaining additional experience take the Certified Kitchen and/or Bath exam to become a certified designer. A graduate might work as a kitchen and/or bath designer, remodeler, cabinet installer, project superintendent, project manager, estimator, or showroom and sales associate. College level reading and writing skills, basic math skills are required. Individual courses may have prerequisites which are included in the course description. A "C" or better grade is required in all course work in this program option. Pass/No Pass grades are not accepted. Students must complete the coursework requirements outlined in the PCC catalog under Associates of Applied Science Degree. Students desiring to use this degree as their NKBA education re-

quirement for the AKBD exam must complete a 160 hour internship with a company engaged in the kitchen and bath industry, in addition to the classes listed below.

Construction Management AAS Degree: Our Construction Management (CM) program provides students with the technical and management skills and qualifications necessary to secure employment in a management capacity within the construction industry. Our curriculum prepares students for entry level management and supervisory positions in the residential and commercial fields of construction, offering classes in estimating, scheduling, construction law, safety, building systems, materials and methods of construction, blueprint reading, project management and more. CM graduates seek employment as project engineers, estimators, schedulers, project managers and field supervisors. Others become owner's representatives, developers, and general and specialty contractors. Students completing the BCT CM AAS option can transfer their credits to the Oregon Institute of Technology (OIT) and apply their credits toward a Bachelor's degree in Operations Management at the OIT Southeast Portland campus. See program advisor for details.

PREREQUISITES AND REQUIREMENTS

Prerequisites and requirements for this program are degree and certificate specific. See individual degree and certificate for prerequisite and requirement details.

Students new to the Building Construction Technology Program must take the college's placement tests for math and writing administered through the assessment centers prior to program advising and registration. Students must be enrolled in or have completed MTH 20 or have placed into MTH 60 or above on the Numerical Test and have enrolled in or completed WR 90 or placed into WR 115 or above. Students must complete BCT 106 Hand and Power Tool Use and Safety with a C or better or acquire department approval before enrolling in classes requiring the use of hand or power tools. Students must have completed CAS 133, or a similar course, or have basic computer skills. Keyboarding skills are also recommended.

DEGREES AND CERTIFICATES OFFERED:

Associate of Applied Science Degree

Building Construction Technology
Building Construction Technology:
Design/Build Remodeling Option
Building Construction Technology:
Construction Management Option

Less than One-Year Certificate

Building Construction Technology

BUILDING CONSTRUCTION TECHNOLOGY AAS DEGREE

Minimum 93 credits. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of sixteen credits of General Education. Some courses specified within the program may be used as General Education. Students should consult with program advisors for course planning.

Building Construction Technology Degree Credit Summary

BCT	66	
Remaining General Education	12	
BCT Degree Electives	3	
ARCH	4	
SP	4	
WR	4	
		Credit Total 93

COURSE OF STUDY

The coursework listed below is required. The following is an example of a term-by-term breakdown.

First Term

BCT 102	Residential Printreading	3
BCT 103	Residential Materials and Methods	3
BCT 104	Construction Mathematics	3
BCT 106	Hand Tool/Power Tool Use & Safety	3
General Education		4

Second Term

ARCH 110	Introduction to Architectural Drawing	2
ARCH 132	Residential Building Codes	2
BCT 101	Principles of Construction Surveying	3
BCT 127	Residential Concrete	6
General Education		4

Third Term

BCT 120	Floor Framing	3
BCT 121	Wall Framing	3
BCT 122	Roof Framing I	3
BCT 123	Roof Framing II	3

Fourth Term

BCT 128	Exterior Finish	6
BCT Degree	Electives	3
BCT 223	Finished Stair Construction	3
SP 215	Small Group Communication: Process and Theory*	4

Fifth Term

BCT 203	Interior Finish	6
BCT 219	Cabinetmaking I	6
General Education		4

Sixth Term

BCT 204B	Construction Estimating-Residential	3
BCT 206	Sustainable Construction Practices	3
BCT 211	Remodeling	6
WR 227	Technical and Professional Writing I	4

*Could be used as General Education

Building Construction Technology Degree Electives

BCT 100	Overview to the Construction Industry	3
BCT 105	Vectorworks for Constructors	3
BCT 108	Introduction to Building Science	3
BCT 115	Introduction to Residential Greenroofing	1
BCT 116	Alternative Building Design	3
BCT 129	Mechanical Systems for Kitchens and Baths	4
BCT 130	Construction Safety	3
BCT 132	Computer Applications for Construction	3
BCT 133	Commercial Materials and Methods	3
BCT 134	Construction Scheduling	3
BCT 150	Mechanical, Electrical and Plumbing	4
BCT 202	Business Principles for Construction	3
BCT 204C	Construction Estimating-Commercial	3
BCT 206	Sustainable Construction Practices	3
BCT 213	Commercial Printreading	3
BCT 214	Advanced Construction Estimating	3
BCT 216	Cabinetry I	2

BCT 217	Cabinetry II	2
BCT 218	Woodworking Projects	2
BCT 220	Cabinetmaking II	6
BCT 221	Construction Law for the Contractor	3
BCT 222	Engineering for Constructors	3
BCT 223	Finished Stair Construction	3
BCT 225	Construction Project Management	3
BCT 226	Finish Carpentry	2
BCT 229	Introduction to Kitchens and Baths	2
BCT 244	Kitchen and Bath Cabinet Installation	2
BCT 280A	CE: Building Construction	varied
BCT 280C	CE: BCT Design/Build Remodeling	varied

DESIGN/BUILD REMODELING AAS DEGREE

Minimum 107 credits. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of sixteen credits of General Education. Some courses specified within the program may be used as General Education. Students should consult with program advisors for course planning.

Design/Build Remodeling Degree Credit Summary

BCT	71
Remaining General Education	12
ID	10
ARCH	7
SP	4
BA	3
Credit Total 107	

COURSE OF STUDY

The coursework listed below is required. The following is an example of a term-by-term breakdown.

First Term

ARCH 100	Graphic Communication for Designers	3
BCT 102	Residential Printreading	3
BCT 103	Residential Materials & Methods	3
BCT 104	Construction Mathematics	3
BCT 106	Hand Tool/Power Tool Use & Safety	3

Second Term

ARCH 110	Introduction to Architectural Drawing	2
ARCH 126	Introduction to AutoCAD	3
ARCH 132	Residential Building Codes	2
ARCH 136	Intermediate AutoCAD	3
ID 131	Introduction to Interiors	3
SP 215	Small Group Communication: Process and Theory*	4

Third Term

BCT 120	Floor Framing	3
BCT 121	Wall Framing	3
BCT 122	Roof Framing I	3
BCT 123	Roof Framing II	3
ID 132	Planning Interiors	3
General Education		4

Fourth Term

BCT 128	Exterior Finish	6
BCT 129	Mechanical Systems for Kitchens and Baths	4
BCT 202	Business Principles for Construction	3
BCT 229	Introduction to Kitchens and Baths	2
General Education		4

Fifth Term

BCT 203	Interior Finish	6
BCT 206	Sustainable Construction Practices	3
BCT 219	Cabinetmaking I	6
General Education		4

Sixth Term

BA 238	Sales	3
BCT 204B	Construction Estimating-Residential	3
BCT 211	Remodeling	6
BCT 244	Kitchen & Bath Cabinet Installation	2
ID 225	CAD for Kitchen & Bath Design	1
ID 238	Advanced Kitchen & Bath Planning	3

*Could be used as General Education

CONSTRUCTION MANAGEMENT AAS DEGREE

Minimum 94 credits. Students must also meet Associate Degree Comprehensive Requirements and Associate of Applied Science Requirements. Students must complete a total of sixteen credits of General Education. Some courses specified within the program may be used as General Education. Students should consult with program advisors for course planning.

Construction Management Degree Credit Summary

BCT	58
Remaining General Education	12
ARCH	12
SP	4
WR	4
CAS	3
CG	1
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Credit Total	94

COURSE OF STUDY

The coursework listed below is required. The following is an example of a term-by-term breakdown.

First Term

BCT 100	Overview of the Construction Industry	3
BCT 102	Residential Printreading ¹	3
BCT 103	Residential Materials & Methods ¹	3
BCT 104	Construction Mathematics ¹	3
General Education		4

Second Term

ARCH 110	Introduction to Architectural Drawing	2
ARCH 126	Introduction to AutoCAD	3
ARCH 132	Residential Building Codes	2
BCT 134	Construction Scheduling ¹	3
BCT 202	Business Principles for Construction	3

Third Term

ARCH 133	Commercial Building Codes	2
ARCH 136	Intermediate AutoCAD	3
BCT 133	Commercial Materials and Methods	3
BCT 221	Construction Law	3
SP 215	Small Group Communication: Process and Theory*	4

Fourth Term

BCT 150	Mechanical, Electrical and Plumbing	4
BCT 213	Commercial Printreading ²	3
CAS 170	Beginning Excel ³	3
CG 209	Job Finding Skills	1
WR 227	Technical and Professional Writing I	4

Fifth Term

BCT 101	Principals of Construction Surveying	3
BCT 204C	Construction Estimating Commercial	3
BCT 206	Sustainable Construction Practices	3
BCT 207	Construction Job Costing	3
General Education		4

Sixth Term

BCT 130	Construction Safety	3
BCT 214	Advanced Construction Estimating	3
BCT 222	Engineering for Constructors ⁴	3
BCT 225	Construction Project Management	3
General Education		4

Seventh Term

BCT 280A	CE: Building Construction ⁵	3
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*Could be used as General Education

¹Class may be challenged by petitioning for course by examination.

²ARCH 162 Blueprint Reading Part 2 may be substituted for BCT 213

³CAS 171 Intermediate Excel may be substituted for CAS 170

⁴ARCH 122 Structural Systems 2 may be substituted for BCT 222

⁵Credits for this class may vary from one to six depending on the nature and duration of the cooperative experience. This class may be taken one or more times until the required number of credits is fulfilled. See advisor for details.

BUILDING CONSTRUCTION TECHNOLOGY ONE-YEAR CERTIFICATE

Minimum 37 credits. Students must meet all certificate requirements. The Building Construction Technology Certificate is a related certificate. All courses are contained in the Building Construction Technology AAS Degree.

Building Construction Technology Certificate Credit Summary

BCT	33
ARCH	4
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Credit Total	37

COURSE OF STUDY

The coursework listed below is required. The following is an example of a term-by-term breakdown.

First Term

BCT 102	Residential Printreading	3
BCT 103	Residential Materials and Methods	3
BCT 104	Construction Mathematics	3
BCT 106	Hand Tool/Power Tool Use & Safety	3

Second Term

ARCH 110	Introduction to Architectural Drawing	2
ARCH 132	Residential Building Codes	2
BCT 101	Principles of Construction Surveying	3
BCT 127	Residential Concrete	6

Third Term

BCT 120	Floor Framing	3
BCT 121	Wall Framing	3
BCT 122	Roof Framing I	3
BCT 123	Roof Framing II	3

COURSE DESCRIPTIONS

BCT 100 Overview of Construction 3.00 Study of management functions in the construction industry. Planning and scheduling, project organization and communications, cost control, project and contract administration, and project close out. Basic construction industry operation knowledge, or instructor's permission required. Audit available.

BCT 101 Principles of Construction Surveying 3.00 Provides a collaborative learning framework in which learners practice the basic concepts of construction surveying. Includes set up and use of auto level, total station, leveling rod and steel tape. Also included are field note assembly and interpretation, and elevation and distance measuring techniques. Vertical and horizontal angle calculations are also covered. Includes grid method for generating contour maps. Prerequisite: Prior completion of BCT 104 or instructor permission. Audit available.

BCT 102 Residential Printreading 3.00 Provides a collaborative learning framework from the development of printreading skills relevant to residential building construction. Students will demonstrate an understanding of print reading by analyzing, interpreting, and measuring plans for relevant construction information, and by sketching scaled plans for peer and instructor evaluation. Work will be limited to residential prints. Audit available.

BCT 103 Residential Materials and Methods 3.00 Introduces function and performance characteristics of basic building materials, components, methods, and sequences in the construction process. Emphasizes residential construction. Audit available.

BCT 104 Construction Math 3.00 Provides a framework for learners to apply mathematical concepts and principles to building construction situations problems through collaborative learning. Learners will also develop, articulate and document their own problem solving strategies. Exploration of construction problems will be limited to light framing, concrete, finish carpentry and cabinetmaking. Prerequisite: Placement into MTH 20A or department approval. Audit available.

BCT 105 Vectorworks for Constructors 3.00 Learn to create 2D architectural working drawing using VectorWorks CAD based software. A building blocks approach will be used to help learners develop the skills and vocabulary necessary to generate their own working drawings. Suitable for both MAC and Windows operating systems. Recommended: Blueprint reading and basic computer skills. Audit available.

BCT 106 Hand Tool/Power Tool Use and Safety 3.00 Develops understanding of the hand tools and power tools used in the construction trades. Identifies commonly used hand/power tools, selecting the correct tool to complete assigned projects and working in a safe and competent manner. Emphasizes safety and care of tools. Audit available.

BCT 108 Introduction to Building Science - Energy Efficient Housing 3.00 Introduces students to the basic principles of building science in residential construction and the dynamic relationship between construction practices, material choices, physics and building operation. Critical topics include: energy and moisture transport in buildings, understanding building enclosures, comfort, building tightness and ventilation. Audit available.

BCT 115 Introduction to Residential Greenroofing 1.00 Provides a basic understanding of local residential greenroof design and installation. Covers greenroof benefits, best practices, material selections, and appropriate plantings; includes hands-on installation. Audit available.

BCT 116 Alternative Building Design 3.00 This course introduces students to natural green building principles used in the design and construction of alternative buildings such as straw bale, cobb and rammed earth. Student team will develop designs by constructing scaled models, and will then prepare and deliver presentations that defend and promote their designs. Audit available.

BCT 120 Floor Framing 3.00 Covers the basic floor framing systems and principles used in residential construction. Floor systems will be installed on foundations using current building construction methods. Learning will include floor leveling, sill plate installation, floor framing material identification, joist and beam lay-out, quantity take offs, estimating and related codes. Prerequisites: BCT 106 or instructor permission. Audit available.

BCT 121 Wall Framing 3.00 Covers basic residential wood wall framing methods and principles used in current residential construction. Content will include wall lay-out and assembly of studs, corners, partitions and openings. Includes material quantity take offs, estimating and related codes. Structural sheathing, interior wall bracing, bay framing, window box, framing arched openings and stair construction will also be covered. Prerequisite: BCT 106 or instructor permission. Audit available.

BCT 122 Roof Framing I 3.00 Course covers basic residential roof rafter framing. Content covers rafter math calculations for various roof slopes, lay-out, part nomenclature, assembly procedures, related codes and material take-off. Ceiling joist, collar ties, gable roof, gambrel roof and hip roof types will be covered. Prerequisites: BCT 104 and 106, or instructor permission. Audit available.

BCT 123 Roof Framing II 3.00 Layout, cutting and assembly of hip, intersecting and unequal pitch roofs, and dormers. Discussions include truss roof assemblies. Prerequisite or concurrent enrollment: BCT 122. Audit available.

BCT 127 Residential Concrete 6.00 Covers residential concrete construction, including layout, footings, foundation walls, slabs, stairs, and the handling and curing of concrete. Explore and use different forming methods and materials to erect a concrete foundation. Prerequisite: BCT 106 or instructor permission. Audit available.

BCT 128 Exterior Finish 6.00 Course covers the installation, estimation of materials and labor of various exterior siding products. Includes construction of various horizontal lap, wood shingles and vertical sidings. Covers ceiling soffits, door, window and corner trim. Roofing covers composition, shake and shingle roofing. Prerequisites: BCT 106 or instructor permission. Audit available.

BCT 129 Mechanical Planning for Kitchens and Baths 4.00 Covers electrical, plumbing, HVAC systems used in residential kitchens and baths. Students will become familiar with the code requirements and restrictions through the examination of remodeling case studies. Students will design general and task lighting systems for kitchens and baths. Audit available.

BCT 130 Construction Safety 3.00 Requirements for safety on the job site, Occupational Safety and Health Act and other related regulations and legislation, accident prevention and hazard identification and procedures. Audit available.

BCT 132 Computer Applications for Construction 3.00 Covers information generation, processing, distribution and utilization for the management of construction projects and construction companies. Emphasizes the design of the information process, the role of information technology in construction, software selection and the ongoing evaluation of the efficiency and effectiveness of the information process. Audit available.

BCT 133 Commercial Materials and Methods 3.00 Materials and Methods used in commercial construction. Techniques and methods including building systems and assemblies. Audit available.

BCT 134 Construction Scheduling 3.00 Methods of planning and scheduling construction projects. Emphasis on building and efficient use of construction schedules, including critical path method and resource and cost loading. Use of computer scheduling software to build and monitor schedules. Recommended: Basic knowledge of Microsoft Windows. Prerequisite: BCT 104 or instructor permission. Audit available.

BCT 150 Mechanical, Electrical and Plumbing 4.00 Covers the principles and applications of mechanical and electrical components during the construction process and of constructed facilities; heating, ventilating, air conditioning, plumbing, fire protection, power, lighting, distribution systems, security systems and a review of the related codes. Audit available.

BCT 202 Business Principles for Construction 3.00 Business Principles for Construction To learn fundamental business principles and practices used in managing a construction company. Establish objectives in marketing, operations and finance, and understand the relationship between those business activities. Study planning and management methods for achieving objectives. Learn the general legal requirements, accounting and record keeping practices. Audit available.

BCT 203 Interior Finish 6.00 Covers codes, materials, installation, and estimating methods in residential drywall. Includes drywall, tape, finish, texture and patching. Finish carpentry covers materials types, take-offs and estimation of interior trim. Includes the miter cuts and installation of base molding, casing, crown molding, wainscot panel molding, door installation and various other interior trim treatments. A student may not receive credit for both BCT 203 and BCT 224 or BCT 226. Prerequisite: BCT 106 or instructor approval. Audit available.

BCT 204B Construction Estimating - Residential 3.00 Introductory class in construction estimating concentrating on basic residential estimating techniques. Using plans for a small house, students will learn how to organize and prepare estimates, quantity take-off and pricing, and fundamentals of bid assembly. Prerequisite: BCT 102 and BCT 104; or instructor permission. Audit available.

BCT 204C Construction Estimating - Commercial 3.00 Introductory class in construction estimating concentrating on basic commercial estimating techniques. Using plans for a light commercial building, students will learn: how to organize and prepare estimates, quantity take-off and pricing, and the fundamentals of bid assembly. Prerequisites: BCT 102 and BCT 104; or instructor permission Audit available.

BCT 206 Sustainable Construction Practices 3.00 Introduces the environmental, economical, and human consequences resulting from conventional building practices and the need for sustainable design and construction. Audit available.

BCT 207 Construction Job Costing 3.00 Traces the construction dollar flow from time sheet to balance sheet. Emphasizing microcomputer methods, students are introduced to construction related financial documents: including "schedule of values", labor and operations cost reports, and construction budgets. Concepts such as unit analysis, job costing, and development of historic costs, life cycle costing and change order analysis are explored. Audit available.

BCT 211 Remodeling 6.00 Because of the variety of projects and number of specialty trades engaged in remodeling, this course will focus on business principles and construction strategies most commonly encountered by the remodeler. This course covers the business principles associated with running a successful remodeling company; the steps necessary in acquiring a building permit; communicating effectively with sub contractors and clients; hands-on remodeling projects involving framing, concrete, interior and exterior finish, and basic electrical, plumbing and mechanical ventilation. Prerequisites: BCT 102, BCT 104 and BCT 106 or instructor approval. Audit available.

BCT 213 Commercial Printreading 3.00 Commercial Printreading Covers typical commercial and civil construction plans and practices. Presents skills for print reading and applying knowledge to commercial construction projects. Prerequisite: BCT 102 or instructor permission based on industry experience in print reading. Audit available.

BCT 214 Advanced Construction Estimating 3.00 Advanced estimating for larger scale projects. Discussion of labor rates, specifications, budget estimating, assemble of bids bidding procedures, including use of computer estimating software. Prerequisite: BCT 204C or instructor permission. Audit available.

BCT 216 Cabinetry I 2.00 Focuses on materials, hardware and techniques used to build industry standard cabinetry. Covers productive uses and safe operation of hand and power tools as well as equipment and machinery used for the production of cabinetry. Generate shop drawing and subsequently machine, mill and assemble a cabinet complete with plastic laminate countertop. Audit available.

BCT 217 Cabinetry II 2.00 Covers more advanced forms of cabinet construction and joinery such as doweling, box joints, dovetail joints and lock shoulders. Machining and assembly of the five piece door will be covered. An instructor designed cabinet project will supply the frame work for learning experience. Prerequisite: BCT 216 or BCT 219. Audit available.

BCT 218 Woodworking Projects 2.00 Designed for independent work on cabinet projects. Students are required to present shop drawings for instructor approval before beginning. Students must supply their own materials. Instructor will evaluate student knowledge of hand and power tool safety at first class meeting to determine whether skill level is appropriate for independent work. Audit available.

BCT 219 Cabinetmaking I 6.00 Learners will become familiar with the skills, materials, hardware and equipment necessary to produce industry standard cabinets. Students will learn and demonstrate the safe use of cabinetmaking hand and power tools. Students will draw shop drawings and estimate materials for cabinetmaking jobs. Learners will develop cabinetmaking skills by constructing instructor designed cabinet projects. Audit available.

BCT 220 Cabinetmaking II 6.00 Expands on the data management, materials, hardware, outsourcing alternatives, equipment and techniques necessary to produce industry standard cabinetry covered in BCT 219. Includes cabinet construction using the 32mm system, and stile and rail door making. Cabinet installation methods for kitchens and baths are covered including room preparation, cabinet layout, cabinet storage, cabinet and countertop installation, appliance installation, and moldings. Kitchen and bath design skills will be developed by hand drafting assigned case studies. Prerequisite: BCT 219. Audit available.

BCT 221 Construction Law for the Contractor 3.00 Introduces basic principles of construction law used in managing construction contracts. Gain working knowledge of construction law principles through examination of case studies. Audit available.

BCT 222 Engineering for Constructors 3.00 Presents the fundamentals of analysis and design of residential construction to students with limited technical training. Investigation of basic contemporary structural systems in masonry, steel and wood framing systems will be used. Concepts such as determination of support forces, bending moments and shear, strengths and properties of materials, loads and dimensional properties are explored. Prerequisites: BCT 104, 102. Audit available.

BCT 223 Finished Stair Construction 3.00 Covers the construction and finish of interior staircases, including balustrades, handrails and guardrails. Emphasizes the materials and techniques used to construct finish stairs, relevant building codes, and methods used to estimate labor and materials associated with stair and rail construction. Prerequisites: BCT 106 or instructor permission. Audit available.

BCT 225 Construction Project Management 3.00 Study of management functions in construction industry. Planning and scheduling, project organization and communications, cost control, project and contract administration, and project close out. The instructional approach is based on the general contractor's point of view, and the intent is to provide a good working knowledge of construction project management procedures. Audit available.

BCT 226 Finish Carpentry 2.00 Covers techniques and methods used to hang and install interior doors, install door hardware; measure, cut and install base trim, casing, crown molding wainscoting and various interior window trim treatments; and in plastic laminate countertop fabrication. Covers estimating techniques used to establish labor and material costs associated with finish carpentry. A student may not receive credit for both the BCT 223, 224 and 226 series and BCT 203. Audit available.

BCT 229 Introduction to Kitchens and Baths 2.00 Explores the history and trends of the kitchen and bath industry. Focuses on basic kitchen and bath layouts and specification of specialized equipment, materials and surfaces required for safe and functional kitchens and baths. Products include cabinet systems, appliances, equipment and surfacing materials. Students will complete basic kitchen and bath designs based on case studies. Prerequisite: ARCH 110 or instructor approval. Audit available.

BCT 244 Kitchen and Bath Cabinet Installation 2.00 Students will learn professional installation methods of kitchen and bath cabinetry. Room preparation, cabinet layout cabinet storage, cabinet and countertop installation, appliance installation, moldings will be covered. Customer relations and job site management techniques will be explored. Audit available.

BCT 280A Cooperative Education: Building Construction On-the-job training at a department-designated worksite, giving students experience in real work conditions and helping determine career choices. Department permission required.

BCT 280C Cooperative Education BCT Design/Build Remodeling On-the-job training at a department-designated worksite, giving students experience in real work conditions and helping determine career choices. Department permission required.