

COCONINO COMMUNITY COLLEGE

COURSE OUTLINE

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Status: Permanent

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A. Identification:

1. Subject Area: Construction Technology Management
2. Course Number: CTM 124
3. Course Title: BUILDING CONSTRUCTION METHODS II
4. Credit Hrs: 3
5. Catalog Description:
Construction methods, materials, and safe working practices as they relate to carpentry framing with wood. Floor, interior and exterior walls, ceilings, and roof and stair framing are described. Window, door, insulation, drywall, flooring, roofing and cabinetry systems are described for residential construction. Prerequisite: CTM 123. Two lecture. Two lab.

B. Course Goals:

To provide the students with the knowledge and necessary skills to understand and experience residential framing systems.

C. Course Outcomes:

Students will:

1. Identify all basic instruments and tools used in wood framing construction and safety practices pertaining to the use of the instruments and tools.
2. Demonstrate the ability to translate blueprint readings related to wood frame structures for field layout, fabrication, assembly, and erection using platform, balloon, and post and beam methods.
3. Demonstrate an understanding of floor framing systems including blocking and openings.
4. Demonstrate an understanding of interior and exterior wall systems including blocking, bracing, and erection for platform framing.
5. Demonstrate an understanding of ceiling construction as it is related to wood framing systems.
6. Develop a basic understanding of estimating the quantity of materials for platform framing systems.
7. Demonstrate the ability to layout members on 12", 16", 19.2 and 24" centers.

D. Course Content:

Will include:

1. Part 1: Design examples: Introduction to architectural representations of frame structures, understanding and interpretation of detailed blue prints of complex framing assemblies.
2. Part 2: Floor systems: Connection of stems, preparation of floor joists, layout of floor members, construction practices for floor construction and provisions for openings and blocking, required materials, fastening or joining of materials, estimation of materials needed.
3. Part 3: Interior and Exterior walls: Layout of frame members. Describe and understand plate location layout on platform, plate layout for on center spacing, intersecting wall layout, door and window location, beam pockets, headers and special loads.
4. Part 4: Ceiling construction: Layout of ceiling joists on wall plates, material joining or fastening attic access openings.
5. Part 5: Roof systems – Describe and understand the various styles of roofs,
 - a) Use of framing square to layout a common, hip & hip jack rafter.
 - b) Cut in a ridge & birds mouth cuts on rafters – square and compound miters.
 - c) Assemble a cut roof – set ridge, common, hip & jack rafters.
 - d) Install fascia and soffett details at roof overhangs and corners.
 - e) Learn a variety of roof sheathing, flashing and roofing details.
6. Part 6: Stairs: Describe and understand a variety of stair types and styles
 - a) Use a framing square to layout a stair stringer.
 - b) Assemble a simple stair system.
7. Part 6: Siding: Describe and select between a variety of siding options for several determining factors
8. Part 8: Windows: Describe and select between a variety of window options for several determining factors.
9. Part 9: Doors: Describe and select between a variety of doors options for several determine factors.
10. Part 10: Insulation: Describe and select between a variety of insulation options in order to meet Energy Star and Model Energy code standards.
11. Part 11: Drywall & Interior Finishes: Describe and select between a variety of interior finish and drywall options.
12. Part 12: Kitchen Cabinetry: Describe and select between a variety of kitchen cabinet options for style and economy.