

Carpentry II – 4-6 Credit Hours

All content from NCCER General Carpentry 6th edition modules.

FLOOR SYSTEMS

Learning Objectives

1. Describe specifications and construction drawings that specify floor system requirements.
 - Summarize how specifications and architectural drawings are used in the construction of a floor.
2. Identify the types of floor framing systems.
 - Describe the types of wood-frame flooring systems.
 - List alternative flooring systems.
3. Identify floor system components and required material quantities.
 - Define sill plate and describe its role in floor framing.
 - List and recognize different types of girders and supports.
 - Describe different types of floor joists.
 - Explain the purposes of subfloor and underlayment.
 - Estimate the amount of material needed for a floor assembly.
4. Describe how to construct a platform floor assembly.
 - Summarize how specifications are organized.

Performance Tasks

1. Learning Objective 3 - Estimate the amount of material needed to frame a floor assembly from a set of plans.
2. Learning Objective 4 - Lay out and construct a floor assembly, including a rough opening and subfloor material.

WALL SYSTEMS

Learning Objectives

1. Identify the components of a wall system and describe how to estimate needed framing materials.
 - List wall system components.
 - Explain how to estimate quantities of materials required to frame walls.
2. Summarize the steps for laying out and framing walls.
 - Describe how to lay out wood frame walls.
 - Describe how to lay out steel frame walls.
3. Summarize the procedures for assembling and erecting wall systems.
 - Describe the steps used to assemble a wall.
 - List the four steps used to erect a wall.

Performance Tasks

1. Learning Objective 1 - Estimate materials required to frame walls.
2. Learning Objective 1 - Lay out a wood frame wall, including plates, corner assemblies, door and window openings, partition Ts, bracing, and fireblocking.

3. Learning Objective 3 - Assemble and erect a wood frame wall, including plates, corner assemblies, door and window openings, partition Ts, bracing, and fireblocking.
4. Learning Objective 3 - Correctly install sheathing on a wall.

ROOF FRAMING

Learning Objectives

1. Identify and install ceiling frame components.
 - Describe how to lay out, cut, and install ceiling joists.
 - Explain how to estimate the number of ceiling joists needed for a building.
2. Identify common residential roof types and related components.
 - Describe residential roof types.
 - List the main components of a roof.
3. Describe the methods used to lay out and cut common rafters.
 - Explain how to lay out rafters and cut them to the proper length.
4. Explain how to erect and sheath a gable roof.
 - Describe how to erect a gable roof and frame gable ends.
 - Summarize how to install sheathing on the roof.
 - Explain how to estimate the rafters, ridgeboard, and sheathing needed for a material takeoff.
5. Recognize the use of trusses in basic roof framing.
 - Describe trusses and explain how they are installed.

Performance Tasks

1. Learning Objective 1 - Lay out ceiling joists.
2. Learning Objective 1 - Estimate the number of ceiling joists required for a building.
3. Learning Objective 3 - Lay out common roof rafters.
4. Learning Objective 4 - Cut and install roof rafters for a gable roof.
5. Learning Objective 4 - Frame a gable end wall.
6. Learning Objective 4 - Erect a gable roof using trusses.
7. Learning Objective 4 - Sheath a gable roof with an opening.

BASIC STAIR LAYOUT

Learning Objectives

1. Identify stairway components and related requirements.
 - Define key stairway terms and building require.
 - Describe the types of stairways.
2. Describe how to determine the total rise, number and size of risers, and number and size of treads needed for a stairway.
 - Summarize how to calculate the riser height, tread depth, and total run for a stairway.
 - Describe how to calculate stairwell opening sizes.
3. Restate the procedure for constructing stairs.
 - Explain how to lay out, cut, and build stringers and concentrate forms.

Performance Tasks

1. Learning Objective 2 - Calculate the total rise, number and size of risers, and number and size of treads required for a stairway.
2. Learning Objective 3 - Lay out and cut a stringer.

BUILDING ENVELOPE SYSTEMS

Learning Objectives

1. Describe the purpose and components of a building envelope system.
 - Identify ways to minimize air and moisture infiltration in buildings.
2. Describe window types and installation requirements.
 - Identify window types, applications, and installation steps.
3. Describe door types, applications, and installation requirements.
 - Identify residential and non-residential doors and explain installation steps.

Performance Tasks

1. Learning Objective 2 - Prepare a rough opening for proper window installation.
2. Learning Objective 3 - Prepare a rough opening for proper door installation.