



Experiential Learning Portfolio for 10614170 Architectural Materials and Methods 1

Student Contact Information:

Name: _____ Student ID#: _____

Email: _____ Phone: _____

*It is **required** that you speak with the Academic Dean or instructor who teaches this course prior to completing a portfolio.*

Directions

Consider your prior work, military, volunteer, education, training and/or other life experiences as they relate to each competency and its learning objectives. Courses with competencies that include speeches, oral presentations, or skill demonstrations may require scheduling face-to-face sessions. You can complete all of your work within this document using the same font, following the template format.

1. Complete the Student Contact Information at the top of this page.
2. Write an Introduction to the portfolio. Briefly introduce yourself to the reviewer summarizing your experiences related to this course and your future goals.
3. Complete each “Describe your learning and experience with this competency” section in the space below each competency and its criteria and learning objectives. Focus on the following:
 - What did you learn?
 - How did you learn through your experience?
 - How has that learning impacted your work and/or life?
4. Compile all required and any suggested artifacts (documents and other products that demonstrate learning).
 - Label artifacts as noted in the competency
 - Scan paper artifacts
 - Provide links to video artifacts
 - Attach all artifacts to the end of the portfolio
5. Write a conclusion for your portfolio. Briefly summarize how you have met the competencies.
6. Proofread. Overall appearance, organization, spelling, and grammar will be considered in the review of the portfolio.
7. Complete the Learning Source Table. Provide additional information on the business and industry, military, and/or volunteer experiences, training, and/or education or other prior learning you mentioned in your narrative for each competency on the Learning Source Table at the end of the portfolio. Complete this table as completely and accurately as possible.

The portfolio review process will begin when your completed portfolio and Credit for Prior Learning Form are submitted and nonrefundable processing fees are paid to your local Credit for Prior Learning contact. Contact Student Services for additional information.

Your portfolio will usually be evaluated within two weeks during the academic year; summer months may be an exception. You will receive an e-mail notification regarding the outcome of the portfolio review from the Credit for Prior Learning contact. NOTE: Submission of a portfolio does not guarantee that credit will be awarded.

You have 6 weeks to appeal any academic decision. See your student handbook for the complete process to appeal.

To receive credit for this course, you must receive “Met” on 7 of the 8 competencies.

10614170 Architectural Materials and Methods 1, 3 Associate Degree Credits

Course Description: This course introduces the student to the materials and methods used in wood frame construction. It familiarizes students with components of modern construction for the purpose of selecting materials best suited to various construction jobs.

If you receive credit for prior learning for this portfolio, you will also receive a “Met” score for the following **Technical Skills Attainment Program Outcomes** that are assessed in this specific course:

Introduction: Briefly introduce yourself to the reviewer summarizing your experiences related to this course and your future goals.

Competency 1: Identify the properties of wood

Criteria: Performance will be satisfactory when:

- you identify the properties of wood which make it a desirable construction material
- you identify wood species and their uses in wood frame construction
- you explain the use of wood as a structural material
- you explain the use of wood as a finish material
- you describe lumber grading techniques and classifications
- you identify wood defects
- you explain guidelines for lumber grading of softwoods
- you explain guidelines for lumber grading of hardwoods
- you identify code requirements for lumber grades of structural building wood frame floors and decks
- you identify code requirements for lumber grades of structural building wood frame walls
- you identify code requirements for lumber grades of structural building wood frame roofs and ceilings

Learning Objectives:

- a. Examine wood properties which make it a successful building material
- b. Explore grading classifications for hardwoods and softwoods
- c. Identify grading building code requirements for structural framing components in residential wood frame construction

Required Artifacts: Pdf of construction or schematic drawings showing use of and knowledge of differences between wood species and composite lumber

Suggested Artifacts: None

Describe your learning and experience with this competency:

Met/ Not Met Evaluator Feedback:

Competency 2: Compare foundation systems

Criteria: Performance will be satisfactory when:

- you identify characteristics of shallow and deep foundation systems
- you explain the characteristics of concrete foundations
- you explain the characteristics of concrete masonry foundations
- you identify foundation waterproofing techniques and requirements
- you identify column footings design characteristics
- you explain concrete slab on grade characteristics
- you explain erosion control and sediment control requirements for foundation excavation
- you explain excavation requirements for footings
- you describe requirements for footing and foundation frost protection
- you describe requirements for foundation drain tiles
- you explain code requirements for concrete foundations
- you explain code requirements for concrete masonry foundations
- you identify code requirements for foundation waterproofing
- you identify code requirements for concrete slab on grade construction

Learning Objectives:

- a. Explore characteristics of building foundation systems
- b. Examine UDC requirements for building excavation and footing and foundation design

Required Artifacts: Scaled Hand sketch or pdf of cad detail of both a concrete foundation and concrete masonry foundation. This detail should notate the required components of these systems

Suggested Artifacts: None

Describe your learning and experience with this competency:

(Please define some of the differences of these two foundation types)

Met/ Not Met Evaluator Feedback:

Competency 3: Examine wood frame floor systems

Criteria: Performance will be satisfactory when:

- you describe dimensional lumber joist floor systems
- you explain engineered lumber floor systems
- you explain wood truss floor systems
- you identify components of plank-and-beam systems
- you describe code requirements for residential floor system live loads
- you identify sources for determining floor system dead loads
- you identify UDC requirements for wood frame floor design
- you employ UDC span charts to specify size and spacing of residential floor joists
- you design a basic wood floor system using dimensional lumber framing
- you design a basic wood floor system using engineered lumber framing
- you design a basic wood floor system using wood truss framing

Learning Objectives:

- a. Review common wood floor framing systems
- b. Distinguish wood frame flooring systems and design criteria for the different systems

Required Artifacts: Scaled Hand sketch or pdf of cad detail of a wall sill detail, floor framing plan, and a stair section.

Suggested Artifacts: None

Describe your learning and experience with this competency:

(Please describe why you chose this style and why the buildings are defined as that style)

Met/ Not Met Evaluator Feedback:

Competency 4: Review wood frame wall systems

Criteria: Performance will be satisfactory when:

- you differentiate between balloon framing and platform framing systems
- you differentiate between framing technique and joinery for wood framed walls
- you identify components of a wood framed wall system
- you describe brick veneer on wood frame wall systems
- you identify UDC requirements for headers over wall openings
- you identify UDC design requirements for wood frame wall lateral bracing
- you identify UDC design requirements for wood frame wall framing
- you identify lateral bracing materials and methods

Learning Objectives:

- a. Explain wood frame wall systems
- b. Examine code requirements for wood frame wall systems

Required Artifacts: Scaled Hand sketch or pdf of cad detail of a wall sill detail, floor framing plan, and a stair section.

Suggested Artifacts: None

Describe your learning and experience with this competency:

Met/ Not Met Evaluator Feedback:

Competency 5: Explore wood frame roof systems

Criteria: Performance will be satisfactory when:

- you identify common rafter framed wood roof systems and components
- you describe wood plank-and-beam roof framing systems and components
- you describe wood roof truss types and configurations
- you describe code requirements for residential roof system live loads
- you identify sources for determining roof system dead loads
- you employ UDC span charts to specify size and spacing of residential roof rafters and ceiling joists
- you design a basic wood roof system using dimensional lumber framing
- you design a basic wood roof system using engineered lumber framing
- you design a basic wood roof system using wood truss framing

Learning Objectives:

- a. Review wood frame roof systems
- b. Distinguish wood frame roof systems and design criteria

Required Artifacts: Scaled Hand sketch or pdf of cad detail of a wall sill detail, floor framing plan, and a stair section.

Suggested Artifacts: None

Describe your learning and experience with this competency:

Met/ Not Met Evaluator Feedback:

Competency 6: Identify building thermal and moisture protection systems

Criteria: Performance will be satisfactory when:

- you identify thermal resistance characteristics of building materials and assemblies
- you describe moisture control materials and methods
- you describe vapor retarder materials and systems
- you describe ventilation requirements of unheated attic and crawl spaces
- you identify movement joint types and required locations
- you describe thermal resistance requirements for floor, below and above grade wall, and roof/ceiling assemblies
- you distinguish moisture barriers and vapor retarders in floor, below and above grade wall, and roof/ceiling assemblies
- you describe air leakage requirements and techniques of mitigation as prescribed by code
- you explain ventilation requirements of unheated attic and crawl spaces
- you illustrate appropriate wood frame construction assemblies
- you differentiate thermal resistance requirements for floor, wall and roof/ceiling assemblies
- you identify appropriate thermal insulation materials for specific assemblies
- you prescribe proper flashing materials and assembly techniques
- you distinguish locations and materials for moisture barriers and vapor retarders

Learning Objectives:

- a. Review thermal and moisture control concepts and systems in buildings
- b. Review UDC requirements for thermal and moisture control for residential buildings
- c. Draw thermal and moisture control systems for floor, wall and roof/ceiling assemblies for a residential structure

Required Artifacts: Scaled Hand sketch or pdf of cad detail of a wall sill detail, floor framing plan, and a stair section.

Suggested Artifacts: None

Describe your learning and experience with this competency:

Met/ Not Met Evaluator Feedback:

Competency 7: Explore door and window systems and products

Criteria: Performance will be satisfactory when:

- you identify UDC requirements for door sizes, types, and egress requirements in residential construction
- you identify UDC requirements for window sizes and locations for daylight, ventilation and egress in residential construction
- you identify thermal resistance and weather stripping requirements for doors and windows in residential construction
- you explain proper installation and flashing requirements for residential doors and windows
- you identify accessibility clearances and requirements for door operations
- you identify components of doors and door frames
- you identify flush wood doors and stiles and rail wood doors
- you identify wood door frames and assemblies
- you explain sliding glass doors, folding, and pocket sliding doors
- you explain overhead door construction and operation
- you identify door hardware components and types
- you identify components of typical wood windows
- you identify window operation types
- you identify manufactured wood window types, sizes and configurations
- you identify window glass and glazing systems

Learning Objectives:

- a. Review UDC requirements for door and window egress, installation and performance
- b. Review door and frame types, operations and hardware systems
- c. Review window types, operations, configurations and glazing systems

Required Artifacts: Scaled Hand sketch or pdf of cad detail of a Door head, jamb and sill details and Window head, jamb and sill details. These should be 1 ½" scale

Suggested Artifacts: None

Describe your learning and experience with this competency:

Met/ Not Met Evaluator Feedback:

Competency 8: Review interior finishes and millwork

Criteria: Performance will be satisfactory when:

- you describe plaster systems and details
- you describe gypsum board and details
- you distinguish ceramic and stone tile applications and installation details
- you explain wood flooring and installation
- you explain resilient flooring and carpeting installations
- you explain suspended ceiling systems and installation
- you describe wood joinery common to interior trim and millwork
- you identify wood molding styles and shapes and component terms
- you explain wood paneling assemblies
- you explain wood veneer grades and matching patterns
- you describe plastic laminate uses and installations

Learning Objectives:

- a. Review common residential interior finish systems
- b. Review common residential interior trim and millwork systems

Required Artifacts: A pdf or PowerPoint of material boards for a home project showing kitchen, bath and living room finishes. This shall include fixtures, cabinets and hardware, counters, appliances flooring, wall covering, tiles, and light fixtures.

Suggested Artifacts: None

Describe your learning and experience with this competency:

Met/ Not Met Evaluator Feedback:

