

**Module Learner Expectations**

*The student will:*

- identify and describe concrete forming, placing and finishing techniques
- create a profile of a trade or occupation within the field of concrete work

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. *Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.*
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. *Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.*
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. *Quality and productivity are reasonably consistent. Works cooperatively. Provides a limited range of customer/client services.*
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**TASK PERFORMANCE CRITERIA**

*The student:*

**Preparation and Planning**

- sets goals and establishes steps to achieve them
- creates and adheres to useful timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- accesses a range of relevant information sources and recognizes when additional information is required
- demonstrates resourcefulness in collecting data
- interprets, organizes and combines information in creative and thoughtful ways
- records information accurately with appropriate supporting detail and using correct technical terms

**Content**

- investigates common forming and reinforcing techniques
- examines the effects of the pressure of concrete on form work
- explains the effect aggregate cement and water ratios have on the quality and strength of concrete

**Content** (continued)

- lists and describes common tools and procedures used in placing, consolidating and finishing a concrete structure
- identifies working conditions associated with concrete work
- determines employment opportunities
- identifies post-secondary training institutions and entry requirements
- investigates opportunities for a career advancement and self-employment

**Collaboration and Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity

**Information Sharing**

- demonstrates effective use of two or more communication media:  
*e.g., written, oral, audio-visual*
- communicates thoughts/feelings/ideas clearly to justify or challenge a position
- maintains acceptable grammatical and technical standards
- cites two or more relevant information sources

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING	STANDARD	COMMENTS
Preparation and Planning	4 3 2 1 0	3	
Information Gathering and Processing	4 3 2 1 0	3	
Content	4 3 2 1 0	2	
Collaboration and Teamwork	4 3 2 1 0	3	
Information Sharing	4 3 2 1 0	3	

**Module Learner Expectations**

*The student will:*

- identify and describe common types of masonry materials and finishes
- create a profile of a trade or occupation within the field of masonry work

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
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- demonstrates resourcefulness in collecting data
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**Content**

- describes and gives examples of masonry materials that are used in structural and facing applications
- explains how one or more masonry material is manufactured, applied/installed and finished

**Content (continued)**

- determines employment opportunities related to masonry work
- identifies working conditions
- identifies post-secondary training institutions and training requirements
- investigates opportunities for career advancement and self-employment

**Collaboration and Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity

**Information Sharing**

- demonstrates effective use of two or more communication media:  
*e.g., written, oral, audio-visual*
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**Module Learner Expectations**

*The student will:*

- describe the procedures related to the installation of insulation and vapour barrier to an exterior wall and ceiling
- identify and describe the health hazards and safety precautions associated with the use of insulating, drywalling and finishing materials

**Standard**

Response rating of 3

**Rating Scale**

*The student:*

- 4 independently makes explanations and critical judgements based on a superior knowledge base and understanding of content and related issues.
- 3 makes explanation and comparisons of content using precise terminology. Requires little or no prompting.
- 2 applies knowledge of content to different situations using accurate terminology. May require some prompting.
- 1 uses simple recall to demonstrate basic knowledge and understanding of content. May require frequent prompting.
- 0 is unable to provide a suitable response at this time.

Sample Item(s)	Sample Response(s)
1. What is the preferred thickness for polyethylene used as a vapour barrier?	6 mil is preferred although 4 mil is allowed. 6 mil is less likely to suffer damage during construction.
2. Which side of the insulation should be vapour barrier be installed.	On the warm side so that moisture will not build up inside the wall
3. Besides resistance to heat transfer, what other qualities should a good insulation have?	A good insulating material should be vermin proof, fire proof, moisture proof and resistant to physical change.
4. When rafters are used, what special care must be taken when insulating the ceiling at the wall line?	The insulation must be carried over the wall plate but not allowed to obstruct the throat opening.
5. Identify and provide an application for each of the three types of gypsum wall board materials.	<p><u>Moisture Resistant</u> used for shower walls and other wet areas</p> <p><u>Fire Guard</u> used wherever a fire hazard exists such as behind a stove or furnace or above heat vent pipes.</p> <p><u>Standard</u> For ordinary partitions where no special circumstances exist.</p>
6. What are the health hazards associated with drywall and insulating materials?	Steps should be taken to protect one's self from breathing dust from drywall materials and fine insulation particles.

For additional items and questions refer to:

- *Modern Carpentry*. William H. Wagner et. al., 1996.

**Module Learner Expectation**

*The student will:*

- prepare, apply and finish a wall and ceiling surface

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

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**TASK PERFORMANCE CRITERIA**

*The student:*

**Planning and Management**

- prepares self for task
- organizes and works in an orderly manner
- interprets and carries out instructions accurately
- plans and uses time in a logical sequence
- maintains a clean work area
- displays leadership in adhering to routine procedures
- attempts to solve problems prior to requesting help

**Construction Techniques**

- installs insulation, vapour barrier and drywall according to code
- tapes, fills and sands to the prescribed standard
- seals, paints and/or applies a wall covering

**Use of Equipment and Materials**

- selects and uses appropriate equipment/materials in a safe and efficient manner
- models the correct use of personal protective equipment (PPE)
- makes accurate calculations and measurements
- observes proper lifting and handling techniques
- fulfills expected clean-up and tool maintenance responsibilities
- identifies and corrects potential health and safety hazards

**Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity
- displays effective communication skills

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Planning and Management	4	3	2	1	0	3	
Construction Techniques	4	3	2	1	0	2	
Use of Equipment and Materials	4	3	2	1	0	3	
Teamwork	4	3	2	1	0	3	

**Module Learner Expectations**

*The student will:*

- identify and describe different stair types, component parts and construction techniques
- interpret building code regulations pertaining to residential stair design

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

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**TASK PERFORMANCE CRITERIA**

*The student:*

**Preparation and Planning**

- sets goals and establishes steps to achieve them
- creates and adheres to useful timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- accesses a range of relevant information sources and recognizes when additional information is required
- demonstrates resourcefulness in collecting data
- interprets, organizes and combines information in creative and thoughtful ways
- records information accurately with appropriate supporting detail and using correct technical terms

**Content**

- investigates and describes four stair types; e.g.,
  - straight run
  - “L” shaped
  - “U” shaped
  - circular stair

**Content** (continued)

- identifies and describes four common stringer types and application of each; e.g.,
  - housed
  - semi-housed
  - cut out
  - stringer and cleat
- determines the specific code regulations for the minimum headroom, rise, run and railing specifications for a given stair
- identify five different stair components

**Collaboration and Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity

**Information Sharing**

- demonstrates effective use of two or more communication media  
*e.g., written, oral, audio-visual*
- communicates thoughts/feelings/ideas clearly to justify or challenge a position
- maintains acceptable grammatical and technical standards
- cites two or more relevant information sources

**PERFORMANCE ASSESSMENT**

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Preparation and Planning	4 3 2 1 0	3	
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Collaboration and Teamwork	4 3 2 1 0	3	
Information Sharing	4 3 2 1 0	2	

**Module Learner Expectation**

*The student will:*

- design, lay out and construct a straight flight of stairs

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

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**TASK PERFORMANCE CRITERIA**

*The student:*

**Planning and Management**

- prepares self for task
- organizes and works in an orderly manner
- interprets and carries out instructions accurately
- plans and uses time in a logical sequence
- maintains a clean work area
- displays leadership in adhering to routine procedures
- attempts to solve problems prior to requesting help

**Construction Techniques**

- builds or prefabricates an actual or model set of stairs according to the prescribed standard
- prepares a stair plan by determining:
  - type of stair
  - specifications; e.g., unit rise and run
  - finish details

**Use of Equipment and Materials**

- selects and uses appropriate equipment/materials in a safe and efficient manner
- models the correct use of personal protective equipment (PPE)
- makes accurate calculations and measurements
- observes proper lifting and handling techniques
- fulfills clean-up and tool maintenance responsibilities
- identifies and corrects potential health and safety hazards

**Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity
- displays effective communication skills

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Planning and Management	4	3	2	1	0	3	
Construction Techniques	4	3	2	1	0	2	
Use of Equipment and Materials	4	3	2	1	0	3	
Teamwork	4	3	2	1	0	3	

**Module Learner Expectations**

*The student will:*

- identify and describe the design features of intersecting sloped roofs
- calculate the length of rafters, using ratio and proportion techniques

**Standard**

Performance rating of 3 for each applicable task

**Rating Scale**

*The student:*

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**TASK PERFORMANCE CRITERIA**

**The student:**

**Preparation and Planning**

- sets goals and establishes steps to achieve them
- creates and adheres to useful timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- accesses a range of relevant information sources and recognizes when additional information is required
- demonstrates resourcefulness in collecting data
- interprets, organizes and combines information in creative and thoughtful ways
- records information accurately with appropriate supporting detail and using correct technical terms

**Content**

- investigates and describes the principal design features of an intersecting roof

**Content** (continued)

- describes the features and cuts required to make a:
  - common rafter
  - hip and valley rafter
  - hip and valley jack rafter
- from a set of drawings, determines
  - roof slope
  - amount of overhang
  - length of a hip, valley and related jack rafter

**Collaboration and Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity

**Information Sharing**

- demonstrates effective use of two or more communication media: *e.g., written, oral, audio-visual*
- communicates thoughts/feelings/ideas clearly to justify or challenge a position
- maintains acceptable grammatical and technical standards
- cites two or more relevant information sources

**PERFORMANCE ASSESSMENT**

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Preparation and Planning	4 3 2 1 0	3	
Information Gathering and Processing	4 3 2 1 0	3	
Content	4 3 2 1 0	3	
Collaboration and Teamwork	4 3 2 1 0	3	
Information Sharing	4 3 2 1 0	3	

**Module Learner Expectation**

*The student will:*

- lay out, cut and assemble a set of rafters for a roof assembly

**Standard**

Performance rating of 3 for each applicable task

**Rating Scale**

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- organizes and works in an orderly manner
- interprets and carries out instructions accurately
- plans and uses time in a logical sequence
- maintains a clean work area
- displays leadership in adhering to routine procedures
- attempts to solve problems prior to requesting help

**Use of Equipment and Materials**

- selects and uses appropriate equipment/materials in a safe and efficient manner
- models the correct use of personal protective equipment (PPE)
- makes accurate calculations and measurements
- observes proper lifting and handling techniques
- fulfills clean-up and tool maintenance responsibilities
- identifies and corrects potential health and safety hazards

**Construction Techniques**

- prepares a pattern from a given set of drawings
- cuts the appropriate number of rafters according to the prescribed pattern
- assemble rafters according to plan

**Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity
- displays effective communication skills

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Planning and Management	4	3	2	1	0	3	
Construction Techniques	4	3	2	1	0	3	
Use of Equipment and Materials	4	3	2	1	0	3	
Project Presentation	4	3	2	1	0	3	

**Module Learner Expectations**

*The student will:*

- identify common types of doors, hardware and trim products
- create a profile of a trade or occupation within the finish carpentry field

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
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**Content**

- lists and describes the common interior doors found in residential construction
- explains how one determines whether a door has a right hand or left hand swing
- investigates and describes the principal types of trim used in residential construction

**Content (continued)**

- identifies the common wood joints used when installing trim products
- provides a diagram of a passage door lock and labels its parts
- describes a trade or related occupation
- investigates the career opportunities and training requirements for a finish carpenter

**Collaboration and Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity

**Information Sharing**

- demonstrates effective use of two or more communication media  
*e.g., written, oral, audio-visual*
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**PERFORMANCE ASSESSMENT**

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Preparation and Planning	4 3 2 1 0	3	
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Content	4 3 2 1 0	2	
Collaboration and Teamwork	4 3 2 1 0	3	
Information Sharing	4 3 2 1 0	3	

**Module Learner Expectations**

*The student will:*

- identify and describe common types of residential, institutional and commercial floor coverings
- create a profile of a trade or occupation within the floor covering field

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
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**Content**

- investigates and describes four common floor covering materials
- outlines the factors to consider when choosing a floor covering

**Content** (continued)

- explains how the sub-floor is prepared and techniques used to install one or more flooring product
- determines employment opportunities related to marketing and installing flooring products
- lists day-to-day activities and working conditions of one or more jobs
- investigates training opportunities

**Collaboration and Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity

**Information Sharing**

- demonstrates effective use of two or more communication media:  
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**Module Learner Expectation**

*The student will:*

- complete a feasibility study and cost estimate of a renovation/restoration project

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

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**TASK PERFORMANCE CRITERIA**

<p><i>The student</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> sets goals and describes steps to achieve them</li> <li><input type="checkbox"/> uses personal initiative to formulate questions and find answers</li> <li><input type="checkbox"/> accesses a range of relevant information sources and recognizes when additional information is required</li> <li><input type="checkbox"/> interprets, organizes and combines information in creative and thoughtful ways</li> <li><input type="checkbox"/> records information accurately with appropriate technical terms and supporting detail</li> <li><input type="checkbox"/> plans and uses time effectively, prioritizing tasks on a consistent basis</li> </ul> <p><b>Content</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> determines and states the needs of the client</li> <li><input type="checkbox"/> investigates and describes the condition and age of the original structure</li> <li><input type="checkbox"/> identifies sources of information regarding construction techniques and materials used in older buildings</li> </ul>	<p><b>Content</b> (continued)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identifies local regulations and code requirements related to renovation/restorations projects</li> <li><input type="checkbox"/> completes a plan and cost estimate</li> </ul> <p><b>Presenting/Reporting</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> demonstrates effective use of one or more communication media: <i>e.g., <u>Written</u>: spelling, punctuation, grammar basic format</i> <i><u>Oral</u>: voice projection, body language</i> <i><u>Audio-visual</u>: techniques, tools, clarity, speed and pacing</i></li> <li><input type="checkbox"/> maintains acceptable grammatical and technical standards through proofreading and editing</li> <li><input type="checkbox"/> provides an introduction that describes the purpose and scope of the project</li> <li><input type="checkbox"/> communicates thoughts/feelings/ideas clearly to justify or challenge a position</li> <li><input type="checkbox"/> gives evidence of adequate research through a reference list</li> </ul>
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**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Preparation and Planning	4	3	2	1	0	3	
Content	4	3	2	1	0	2	
Presenting/ Reporting	4	3	2	1	0	3	

**Module Learner Expectation**

*The student will:*

- identify and describe the key elements of project management related to commercial and residential construction
- outline the roles and responsibilities of the principal players on a construction project
- apply site management theories and practices to create a management plan for a construction project

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. *Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.*
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. *Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.*
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. *Quality and productivity are reasonably consistent. Works cooperatively. Provides a limited range of customer/client services.*
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**TASK PERFORMANCE APPRAISAL**

*The student:*

**Preparation and Planning**

- sets clear goals and establishes steps to achieve them
- creates and adheres to detailed timelines
- uses personal initiative to formulate questions and find answers
- plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- accesses a range of relevant information sources and recognizes when additional information is required
- demonstrates resourcefulness in collecting data
- interprets, organizes and combines information in creative and thoughtful ways
- records information accurately with appropriate supporting detail and using correct technical terms

**Content**

- identifies and describes principal tasks related to the following management phases:
  - planning
  - scheduling
  - implementing
  - controlling

**Content (continued)**

- provides accurate descriptions of the role and responsibilities of a project manager in relation to other key players
- outlines and compares two different scheduling techniques used on construction projects
- creates a work schedule

**Collaboration and Teamwork**

- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity
- displays effective communication and leadership skills

**Information Sharing**

- demonstrates effective use of a variety of communication media: *e.g., written, oral, audio-visual*
- communicates thoughts/feelings/ideas clearly to justify or challenge a position
- maintains acceptable grammatical and technical standards
- gives evidence of adequate information gathering by citing relevant information sources

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING	STANDARD	COMMENTS
Preparation and Planning	4 3 2 1 0	3	
Information Gathering and Processing	4 3 2 1 0	3	
Content	4 3 2 1 0	2	
Collaboration and Teamwork	4 3 2 1 0	3	
Information Sharing	4 3 2 1 0	3	

**Module Learner Expectations**

*The student will:*

- identify and describe the design and joinery features of a typical leg-and-rail piece of furniture
- apply drawing and estimating skills to prepare a shop drawing, a detailed material list and cost estimate
- plan and build a piece of furniture using leg-and-rail construction techniques

**Standard**

Performance rating of 3 for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
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- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**TASK PERFORMANCE CRITERIA**

*The student:*

**Planning and Management**

- analyzes an existing leg-and-rail product or drawing to:
  - determine materials used in structural components
  - identify and describe structural features
  - predict points of weakness
  - identify and describe hardware requirements
  - suggest possible design improvements
- produces or modifies an appropriate set of drawings for a leg-and-rail product based on research and client need
- prepares a detailed list of materials and cost estimate

**Construction Techniques**

- identifies preferred tool requirements
- calculates and measures accurately to minimize costs
- constructs the product according to the design specifications
- is sensitive to a variety of feedback mechanisms and alters plans accordingly

**Construction Techniques** (continued)

- meets stated standards for:
  - dimensioning
  - squaring
  - assembling
  - finishing

**Work Skills**

- accurately follows instructions
- creates and adheres to detailed timeline; makes efficient use of time
- works cooperatively with others, shares work appropriately among group members and negotiates with sensitivity, solutions to problem
- fulfills clean-up and tool maintenance responsibilities
- establishes and follows personal and environmental health and safety procedures
- determines recommended health and safety practices to store and/or dispose of materials

**Project Presentation**

- describes the purpose and scope of the project
- summarizes and reports on major events
- assesses design processes and construction techniques
- makes recommendations to improve product quality and productivity

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Planning and Management	4	3	2	1	0	3	
Construction Techniques	4	3	2	1	0	3	
Work Skills	4	3	2	1	0	3	
Project Presentation	4	3	2	1	0	3	

**Module Learner Expectations**

*The student will:*

- identify and describe common methods of matching wood veneer
- differentiate between inlay, marquetry and carving techniques

**Standard**

Response rating of 3

**Rating Scale**

*The student:*

- 4 independently makes explanations and critical judgements based on a superior knowledge base and understanding of content and related issues.
- 3 makes explanation and comparisons of content using precise terminology. Requires little or no prompting.
- 2 applies knowledge of content to different situations using accurate terminology. May require some prompting.
- 1 uses simple recall to demonstrate basic knowledge and understanding of content. May require frequent prompting.
- 0 is unable to provide a suitable response at this time.

Sample Item(s)	Sample Response(s)
<ol style="list-style-type: none"> <li>1. From pictures or drawings of veneer matching techniques, identify and describe the following:                             <ul style="list-style-type: none"> <li>• book</li> <li>• slip</li> <li>• diamond</li> <li>• checker board.</li> </ul> </li> <li>2. Explain how a diamond match is prepared.</li> <li>3. List and describe three different furniture enhancement techniques.</li> </ol>	<p>If a diamond match is required, the four pieces of veneer are cut on an angle from the same piece stripped grain veneer.</p> <p><u>Inlay</u> An inlay pattern is achieved when a thin strip of a rare wood is set into the surface of solid wood or other veneer.</p> <p><u>Marquetry</u> Marquetry is the technique that is used to produce a design or picture from a variety of different veneers.</p> <p><u>Carving</u> Ornamental designs on wood products are cut into the wood surface using special hand tools and/or power tools.</p>

For additional sample items and responses refer to:

- *Cabinetmaking and Millwork.* John L. Feirer, 1988.

**Module Learner Expectations**

*The student will:*

- assess the condition of a piece of furniture to determine whether it can be economically repaired or restored
- prepare a repair/restoration plan and cost estimate
- repair/restore a piece of furniture

**Standard**

Performance rating of 3 for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
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**TASK PERFORMANCE CRITERIA**

*The student:*

**Planning and Management**

- analyzes an existing piece of furniture to:
  - determine materials and finishes
  - identify structural features
  - predict areas of weakness and/or disrepair
- estimates the cost of repair from the analysis
- develops a repair/restoration plan that:
  - identifies materials and tools required
  - specialized skills required
  - sequence of events to be followed

**Repair Processes**

- identifies preferred tool requirements
- disassembles and removes old glue and finish
- repairs surfaces or joints
- reassembles using appropriate fasteners and adhesives
- finishes to meet or exceed the original standard

**Work Skills**

- accurately follows instructions
- creates and adheres to detailed timeline; makes efficient use of time
- works cooperatively with others, shares work appropriately among group members and negotiates with sensitivity, solutions to problem
- fulfills clean-up and tool maintenance responsibilities
- establishes and follows personal and environmental health and safety procedures
- determines recommended health and safety practices to store and/or dispose of materials

**Project Presentation**

- describes the purpose and scope of the project
- summarizes and reports on major events
- assesses design processes and construction techniques
- makes recommendations to improve product quality and productivity

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Planning and Management	4	3	2	1	0	3	
Construction Techniques	4	3	2	1	0	3	
Work Skills	4	3	2	1	0	3	
Project Presentation	4	3	2	1	0	3	

**Module Learner Expectations**

*The student will:*

- identify and describe common types of cabinet/countertops and installation procedures.
- identify and describe a suitable edge treatment for a given application

**Standard**

Performance rating of 3 for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
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**TASK PERFORMANCE CRITERIA**

<p><i>The student</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> sets goals and describes steps to achieve them</li> <li><input type="checkbox"/> uses personal initiative to formulate questions and find answers</li> <li><input type="checkbox"/> accesses a range of relevant information sources and recognizes when additional information is required</li> <li><input type="checkbox"/> interprets, organizes and combines information in creative and thoughtful ways</li> <li><input type="checkbox"/> records information accurately with appropriate technical terms and supporting detail</li> <li><input type="checkbox"/> plans and uses time effectively, prioritizing tasks on a consistent basis</li> </ul> <p><b>Content</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> describes current cabinet/counter top materials used in cabinet making and residential construction</li> <li><input type="checkbox"/> illustrates methods used to achieve an appropriate edge treatment</li> <li><input type="checkbox"/> identifies various adhesives and safe methods of handling and storage</li> </ul>	<p><b>Content</b> (continued)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identifies and describes common techniques used to attach counter tops with an emphasis on fastener concealment</li> <li><input type="checkbox"/> produces two sample counter top surfaces and edge treatment</li> </ul> <p><b>Presenting/Reporting</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> demonstrates effective use of one or more communication media: <i>e.g., <u>Written</u>: spelling, punctuation, grammar basic format</i> <i><u>Oral</u> voice projection, body language</i> <i><u>Audio-visual</u> techniques, tools, clarity, speed and pacing</i></li> <li><input type="checkbox"/> maintains acceptable grammatical and technical standards through proofreading and editing</li> <li><input type="checkbox"/> provides an introduction that describes the purpose and scope of the project</li> <li><input type="checkbox"/> communicates thoughts/feelings/ideas clearly to justify or challenge a position</li> <li><input type="checkbox"/> gives evidence of adequate research through a reference list</li> </ul>
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**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Preparation and Planning	4	3	2	1	0	3	
Content	4	3	2	1	0	3	
Presenting/ Reporting	4	3	2	1	0	3	

**Module Learner Expectations**

*The student will:*

- identify the characteristics of an efficient production system
- analyze a product to determine the necessary production processes and tools
- create a production flow chart and/or facility layout

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.*
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- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**TASK PERFORMANCE CRITERIA**

*The student*

**Preparation and Planning**

- sets goals and describes steps to achieve them
- uses personal initiative to formulate questions and find answers
- accesses a range of relevant information sources and recognizes when additional information is required
- interprets, organizes and combines information in creative and thoughtful ways
- records information accurately with appropriate technical terms and supporting detail
- plans and uses time effectively, prioritizing tasks on a consistent basis

**Content**

- provides examples of efficient production systems
- links production efficiency to time, material and cost savings
- identifies inefficiencies related to:
  - poor inventory control
  - poor quality control
  - line breakdown
  - facility layout
  - working conditions

**Content (continued)**

- lists and describes processes required to produce a given product
- organizes production flow charts
- evaluates it on the basis of:
  - visible bottle necks
  - need to back track
  - material and product flow

**Presenting/Reporting**

- demonstrates effective use of one or more communication media:
  - e.g., Written: spelling, punctuation, grammar basic format*
  - Oral voice projection, body language*
  - Audio-visual techniques, tools, clarity, speed and pacing*
- maintains acceptable grammatical and technical standards through proofreading and editing
- provides an introduction that describes the purpose and scope of the project
- communicates thoughts/feelings/ideas clearly to justify or challenge a position
- gives evidence of adequate research through a reference list

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Preparation and Planning	4	3	2	1	0	3	
Content	4	3	2	1	0	2	
Presenting/Reporting	4	3	2	1	0	3	

**Module Learner Expectations**

*The student will:*

- describe effective production management strategies
- develop a system to manage and schedule work and to control materials and completed products
- use effective management skills to operate an efficient production system

**Standard**

Performance rating of 3 or as stated for each applicable task

**Rating Scale**

*The student:*

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**TASK PERFORMANCE CRITERIA**

*The student*

**Preparation and Planning**

- sets goals and describes steps to achieve them
- uses personal initiative to formulate questions and find answers
- accesses a range of relevant information sources and recognizes when additional information is required
- interprets, organizes and combines information in creative and thoughtful ways
- records information accurately with appropriate technical terms and supporting detail
- plans and uses time effectively, prioritizing tasks on a consistent basis

**Content**

- outlines principles of a quality management system
- describes role of customers, employees and managers in developing a quality system
- discusses the role of collaboration and teamwork to improve quality
- identifies and describes organizational systems such as a “PERT” chart

**Content (continued)**

- designs and implements a plan to:
  - schedule work
  - distribute materials
  - store/distribute products
- keeps records of a production run
- describes methods to improve management skills

**Presenting/Reporting**

- demonstrates effective use of one or more communication media:
  - e.g., Written: spelling, punctuation, grammar basic format*
  - Oral: voice projection, body language*
  - Audio-visual: techniques, tools, clarity, speed and pacing*
- maintains acceptable grammatical and technical standards through proofreading and editing
- provides an introduction that describes the purpose and scope of the project
- communicates thoughts/feelings/ideas clearly to justify or challenge a position
- gives evidence of adequate research through a reference list

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Preparation and Planning	4	3	2	1	0	1	
Content	4	3	2	1	0	1	
Presenting/ Reporting	4	3	2	1	0	1	

**Module Learner Expectation**

*The student will:*

- compare conventional and engineered framing systems and components

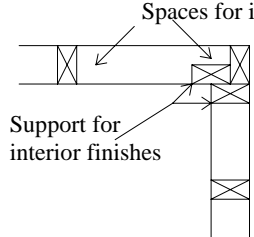
**Standard:**

Response rating of 3

**Rating Scale**

*The student:*

- 4 independently makes explanations and critical judgements based on a superior knowledge base and understanding of content and related issues.
- 3 makes explanation and comparisons of content using precise terminology. Requires little or no prompting.
- 2 applies knowledge of content to different situations using accurate terminology. May require some prompting.
- 1 uses simple recall to demonstrate basic knowledge and understanding of content. May require frequent prompting.
- 0 is unable to provide a suitable response at this time.

<u>Sample Item(s)</u>	<u>Sample Response(s)</u>
1. Most framed structures have some form of bracing to provide restraint from lateral forces. Describe one or more techniques that may be used where non-structural materials are used as sheathing.	Bracing can be achieved by let-in bracing where the outside faces are notched at each corner to receive a 1" x 4" board at a 45° angle set flush with each stud face  <i>or</i> By fitting 2" lumber between each stud at an angle of 45° at each corner  <i>or</i> Applying galvanized steel T-bracing at a 45° angle to the outside faces of the studs at each corner.
2. Compare the advantages of open and solid web trusses over conventional floor and ceiling framing techniques.	Open Web: <ul style="list-style-type: none"> <li>• provides for long, clear spans</li> <li>• lighter and straighter than solid lumber</li> <li>• reduces transmission of sound</li> <li>• no cutting required to install plumbing, heating and electrical system</li> </ul> Solid Web <ul style="list-style-type: none"> <li>• not prone to shrink</li> <li>• lighter and straighter than solid lumber</li> <li>• wider nailing and bearing surfaces</li> <li>• ductwork, pipes and wire can pass through web.</li> </ul>
3. Draw a typical corner configuration in stud framing that provides support for interior finishes and the greatest amount of protection from heat loss.	

For additional items and responses refer to:

- *Modern Carpentry*. William H. Wagner et. al., 1966.

**Module Learner Expectations**

*The student will:*

- apply print-reading and estimating principles to prepare a material list and cost estimate for a structure that incorporates conventional and/or engineered framing components
- demonstrate advanced framing layout and assembly skills

**Standard:**

Performance rating of 3 for each applicable task

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. *Quality, particularly details and finishes, and productivity are consistent and exceed standards.*
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- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

**TASK PERFORMANCE CRITERIA**

*The student:*

**Planning and Management**

- prepares self for task
- organizes and works in an orderly manner
- interprets and carries out instructions accurately
- plans and uses time efficiently
- displays leadership in adhering to routine procedures
- attempts to solve problems prior to requesting help
- interprets floor, wall and ceiling prints
- accurately prepares a material list and cost estimate

**Use of Equipment and Materials**

- selects and uses appropriate equipment/materials in a safe and efficient manner
- models the correct use of PPE
- makes accurate calculations and measurements
- uses materials efficiently
- observes proper lifting and handling techniques
- fulfills clean-up and tool maintenance responsibilities
- identifies and corrects potential health and safety hazards

**Construction Technique**

- cuts and lays out components according to plan
- assembles and fastens components in keeping with accepted framing practice
- accurately measures squares and levels components

**Teamwork**

- demonstrates leadership skills
- cooperates with group members
- shares work appropriately among group members
- negotiates solutions to problems with sensitivity
- displays effective communication skills

**PERFORMANCE ASSESSMENT**

CRITERIA	STUDENT RATING					STANDARD	COMMENTS
Planning and Management	4	3	2	1	0	3	
Construction Techniques	4	3	2	1	0	3	
Use of Equipment and Materials	4	3	2	1	0	3	
Teamwork	4	3	2	1	0	3	