NATIONAL CERTIFICATE (VOCATIONAL)

SUBJECT GUIDELINES

CONSTRUCTION CARPENTRY AND ROOF WORK
NQF Level 3

September 2007
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INTRODUCTION

A. What is Construction Carpentry and Roof Work?
Construction Carpentry and Roof Work educates students about the design and construction of timber products using various tools, equipment and machines suitable for such activities. It trains students in the operation of various types of machinery and hand tools to produce carpentry work for finishing, such as ceilings, doors and skirtings and other wooden products. The subject also informs students about the health and safety regulations for various machines.

B. Why is Construction Carpentry and Roof Work important in the Civil Engineering and Building Construction programme?
Most of building and civil construction structures require many different kinds of wood components for different reasons such as decoration, doors, roof structures, etc. Therefore, Construction Carpentry and Roof Work is ideal to equip students with the necessary woodworking skills.

C. The link between Construction Carpentry and Roof Work Learning Outcomes and the Critical and Developmental Outcomes
Students will be able to identify different types of tools, equipment and machines to perform various construction carpentry activities. They will work effectively in teams to interpret health and safety programmes, interpret drawings and sketches and use technology appropriately.

D. Factors that contribute to achieving the Construction Carpentry and Roof Work Learning Outcomes
- Thorough preparation for teaching and learning activities
- An environment conducive to teaching and learning through effective learner support, motivation, commitment and a positive attitude
- An interest in Construction Carpentry and Roof Work
1 DURATION AND TUITION TIME
This is a one-year instructional programme comprising 200 teaching and learning hours (20 credits). The subject may be offered on a part-time basis provided all of the assessment requirements set hereunder are adhered to.

Learners with special education needs (LSEN) must be catered for in a way that eliminates any barriers to learning activities.

2 SUBJECT LEVEL FOCUS
- Perform carpentry and roof-work and civil construction activities in relation to different construction disciplines
- Identify and use machines and tools, methods and processes to perform carpentry and roof work activities
- Explain and apply health and safety procedures and practices applicable

3 ASSESSMENT REQUIREMENTS
3.1 Internal assessment (50 percent)
All internal assessments must be finalised by an assessor with at least a certificate of competence.

3.1.1 Theoretical Component
The theoretical component will constitute a minimum of 40 percent of the internal assessment based on the fact that the subject requires a broad base of theoretical knowledge. Evidence of theoretical assessment must be reflected in the PoE.

3.1.2 Practical Component
The practical component will constitute a minimum of 60 percent of internal assessment.

All practical components must be indicated in a Portfolio of Evidence (PoE).

Some examples of practical assessments include, but are not limited to:
- Presentations (lectures, demonstrations, group discussions and activities, practical work, observation, role play, self activity, judging and evaluation)
- Use of aids
- Exhibitions
- Visits
- Guest speaker presentations
- Research
- Structured environment

Definition of the term “Structured Environment”
For the purposes of assessment “structured environment” refers to an actual or simulated workplace, or a workshop environment.

Evidence of this practical component must be provided in the form of a logbook with a clear listing of the competencies to be assessed. The following information must be contained in the logbook:
- Date
- Task
- Summary of task
- Supervisor’s signature
- Learner’s signature
- Date of completion of task

For the Logbook to be regarded as valid evidence it must be reflected in the learner’s Portfolio of Evidence.
• Evidence in practical assessments

All evidence pertaining to evaluation of practical work must be reflected in the student’s Portfolio of Evidence (PoE). The assessment instruments used for the purpose of conducting such assessments must be part of the evidence contained in the portfolio of evidence.

3.1.3 Processing of internal assessment mark for the year

A year mark out of 100 is calculated by adding the marks of the theoretical component and the practical component of the internal assessment.

3.1.4 Moderation of internal assessment mark

Internal assessment is subjected to internal and external moderation procedures as set out in the National Examinations Policy for Further Education and Training College Programmes.

3.2 External assessment (50 percent)

A national examination is conducted annually in October or November by means of a paper set externally and marked and moderated internally.

External assessment details are set out in the Assessment Guidelines: Construction Carpentry and Roof Work Level 3.

4 WEIGHTED VALUES OF THE TOPICS

<table>
<thead>
<tr>
<th>TOPICS</th>
<th>WEIGHTED VALUE</th>
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<tbody>
<tr>
<td>1. Prepare and erect a timber ceiling</td>
<td>15%</td>
</tr>
<tr>
<td>2. Prepare and fit tongue and groove wall panelling</td>
<td>15%</td>
</tr>
<tr>
<td>3. Prepare and install open shelving</td>
<td>10%</td>
</tr>
<tr>
<td>4. Fit and hang a single door to a timber door frame</td>
<td>10%</td>
</tr>
<tr>
<td>5. Erect an L-shaped roof</td>
<td>25%</td>
</tr>
<tr>
<td>6. Apply basic business concepts</td>
<td>25%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100</strong></td>
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</tbody>
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5 CALCULATION OF FINAL MARK

Continuous assessment: Student’s mark/100 x 50/1 = a mark out of 50 (a)  
Examination mark: Student’s mark/100 x 50/1 = a mark out of 50 (b)  
Final mark: (a) + (b) = a mark out of 100

All marks are systematically processed and accurately recorded to be available as hard copy evidence for, amongst others, purposes of moderation and verification.

6 PASS REQUIREMENTS

The student must obtain at least fifty (50) percent in ICASS and fifty (50) percent in the examination.
7 SUBJECT AND LEARNING OUTCOMES

On completion of Construction Carpentry and Roof Work Level 3 the student should have covered the following topics:

Topic 1: Prepare and erect a timber ceiling
Topic 2: Prepare and fit tongue and groove wall panelling
Topic 3: Prepare and install open shelving
Topic 4: Fit and hang a single door to a timber door frame
Topic 5: Erect an L-shaped roof
Topic 6: Apply basic business concepts

7.1 Topic 1: Prepare and erect a timber ceiling

7.1.1 Subject Outcome 1: Set out and erect V-jointed tongue and groove timber ceiling in accordance with drawing

Learning Outcome
- Secure brandering to the underside of the tie beams according to the drawing.
- Fix SA pine tongue groove V-strips at right angles to the brandering.
- Fit 30mm SA pine cove cornice to the ceiling with oval nails.
- Mitre all corners of the SA pine cove cornice

7.1.2 Subject Outcome 2: Apply health and safety rules to a work area

Learning Outcome
- Identify, remove, reduce and report potential hazards in the working area
- Describe procedures for reporting and recording of injuries.
- Write a brief incident report

7.2 Topic 2: Prepare and fit tongue and groove wall panelling

7.2.1 Subject Outcome 1: Prepare and fit tongue and groove wall panelling in accordance with the drawing.

Learning Outcome
- Fix horizontal grounds to the wall with plugs and screws
- Use 12mm x 102mm V-jointed SA pine tongue and groove boarding for the panelling. Fix to cleats to complete the panelling
- Fit a 19mm x 68mm SA pine skirting to the panelling.
- Fix rebated coping to the top of the panelling with corners neatly mitred and gap free
7.3  Topic 3: Prepare and install open shelving

7.3.1 Subject Outcome 1: Set out, prepare and install open shelving according to attached drawings

Learning Outcome
- Set out open shelving according to attached drawing
- Fix cleats 25mm x 50mm to the wall with plugs and screws
- Fix shelving 19mm x 300mm wide pressed board to the cleats with panel pins
- Join the timber support away from the wall by a half housing joint

7.4  Topic 4: Fit and hang a single door to a timber door frame

7.4.1 Subject Outcome 1: Fit and hang a single door complete with lock to a timber door frame.

Learning Outcome
- Fit the door into the frame with a clearance of 2mm along the sides
- Mark the hinges and fit it in the specified position
- Fit the lock in such a way that the lock and the door handles operate freely without binding
- Fit the striking plate and ensure that the door closes freely and firmly

7.5  Topic 5: Erect an L-shaped roof

7.5.1 Subject Outcome 1: Erect an L-shape roof.

Learning Outcome
- Fit wall plate according to specifications
- Erect and space gable roof trusses equally.
- Fit all trusses to be plumb and aligned.
- Secure tie trusses to wall plate with roof ties.
- Install bracing to equally space trusses.
- Construct and fit the hips and valleys to the specifications given in the drawing
- Construct a half truss and position it in accordance with the drawing

7.6  Topic 6: Apply basic business concepts

7.6.1 Subject Outcome 1: Explain how to start up a small business and apply basic business principles.

Learning Outcome
- Describe how to set up and conduct a small business offering masonry and tiling services in accordance with healthy business standards
- Draw up an elementary business plan to start up a small business
  
  Range: Name and logo for business, contact details, services rendered, start-up capital, equipment and tools, price structures, advertising, staff and staff remuneration, competitors, profit and loss

7.6.2 Subject Outcome 2: Explain record keeping of business activities.

Learning Outcome
- Describe different methods of payments by customers and relevant documents to record business transactions
- Explain correct handling of cash flow
  
  Range: Purchases of materials, payment of wages, unforeseen payments and expenses, shortage and surplus of funds
7.6.3 Subject Outcome 3: Explain procedures of dealing with customers or clients.

Learning Outcome

- Explain professional dealing with customers and delivering of good customer services
  
  Range: contact and communication with customers, planning of work activities, overlap of contracts and services offered, deadlines

- Describe how to deal with customer complaints

8 RESOURCE NEEDS FOR THE TEACHING OF CONSTRUCTION CARPENTRY AND ROOF WORK - LEVEL 3

8.1 Human Resources

Minimum educator qualifications in Construction Carpentry and Roof Work, registered assessor and ongoing top-up training and up-skilling requirements.

8.2 Physical Resources

Construction Carpentry and Roof Work workshop, tools, and machines, teaching aids and pre-designed models, work tables, chairs, chalkboards.

8.3 Learning and Teaching Resources

Overhead projector, chalkboard, pre-designed models tools and equipment requirements, teaching and learning materials and resources.

8.4 Other Resources

Budget according to Construction Carpentry and Roof Work requirements