-SQA-SCOTTISH QUALIFICATIONS AUTHORITY

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NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number- **0085298** **-Session-1988-89**

-Superclass- **TG**

-Title- **CARPENTRY AND JOINERY : TEMPORARY WORKS ($x^1/_2$)**

-DESCRIPTION-

Purpose

This module is designed to introduce a student, following a career in carpentry and joinery and receiving complementary industrial training, to the principles involved for a range of temporary works and to develop tool skills and techniques for the construction and erection of an arch centre.

The following modules may be integrated with this module:

85302 Carpentry and Joinery : Woodworking Machines
85308 Carpentry and Joinery : Woodworking Power Tools

Preferred Entry Level

85301 Carpentry and Joinery : Workshop Practice 1
65601 Construction Drawing 1

Learning Outcomes

The student should:

1. know the terminology and functions of components for a range of temporary works;

2. produce constructional details for a range of temporary works;

3. make and erect a temporary arch centre.

Content/ Context

Safety regulations and safe working practices and procedures should be observed at all times.

The following should be read in conjunction with objectives set out in the New Training Initiative recommendations for Carpenters and Joiners.

Corresponding to Learning Outcomes 1-3:

1. Temporary arch centring

   Terminology : span; rise; springing line; closed lagging; open lagging; built up centre; easing.

   Functions of components : turning piece; ribs; struts; ties; bearers; laggings; plywood; folding wedges; props

   Dead and raking shoring

   Terminology : dead shores; single raking shore; double raking shores; easing

   Function of components : vertical shores; rakers; needles in dead shoring; sole plates; bracing; steel dogs; folding wedges; grillage; needles in raking shoring; cleats; wallplate; wall hooks; struts.

   Site hoardings

   Terminology : viewing platform; viewing panel; temporary footpath

   Function of components: posts, rails, sheet material; second hand doors; chain link fencing; boarding; bracing; stakes; sleepers or fenders; warning light.

2. Temporary arch centres : outlines of segmental, semi-circular, equilateral, semi-elliptical, turning piece, built up centre; method of support, bracing and easing.

   Dead shoring system : front elevation and section through shoring system showing arrangement of support and all components.

   Single raking shoring system : front elevation and section through shoring system and part of building showing arrangement of all components. Accurate positioning of rakers in relation to first floor joists.

   Perimeter site enclosures : Hoardings and fences, open and closed; gates; temporary footpaths; fenders.

3. Set out arch centre: segmental; semi-circular; equilateral; semi-elliptical.

   Construction: open and closed laggings; jointing ribs; width to suit wall; use of band saw or jigsaw.

   Erection; provision for easing; bracing; setting to height from datum.

Suggested Learning and Teaching Approaches

This module should be partly undertaken in a classroom where the student, directed by the lecturer, could produce a folio of information.
The learning experience could be enhanced by the use of text books and AV materials.
The use of working simulated models for the shoring elements of the module could prove highly beneficial.

Practical activities should be carried out in a workshop and project area where a range of centres could be made by the group of students to provide both direct and passive learning.

Students must not use any woodworking machine or power tool before adequate instruction has been provided.

Assessment Procedures

Acceptable performance in the module will be satisfactory achievement of all the Performance Criteria specified for each Learning Outcome.

The following abbreviations are used below:

LO Learning Outcome
IA Instrument of Assessment
PC Performance Criteria

LO1 KNOW THE TERMINOLOGY AND FUNCTIONS OF COMPONENTS FOR A RANGE OF TEMPORARY WORKS.

PC The student:

(a) describes terminology applied to temporary arch centring, dead shoring, raking shoring and site enclosures;
(b) names components of temporary arch centring, dead shoring, raking shoring and site enclosures;
(c) states the functions of components of temporary arch centring, dead shoring, raking shoring and site enclosures.

IA Completion Item

The student will be presented with questions which seek to test the knowledge of terminology, components and the function of components of temporary arch centring, dead shoring, single raking shoring and site enclosures.

The exercise will consist of 30 questions allocated as follows:

(a)	temporary arch centring	10
(b)	dead shoring	8
(c)	raking shoring	8
(d)	site enclosures	4

Satisfactory achievement of the Learning Outcome will be demonstrated by the student gaining 8 correct responses to (a), plus 6 correct responses to each of (b) and (c), plus 3 correct responses to (d).

LO2 PRODUCE CONSTRUCTIONAL DETAILS FOR A RANGE OF TEMPORARY WORKS.

PC The student:

(a) produces to scale outlines of three arch centres showing the geometric setting out;

(b) sketches constructional details for a system of temporary arch centring;

(c) sketches constructional details for a system of dead shoring;

(d) sketches constructional details for a system of single raking shores;

(e) sketches constructional details of a site hoarding.

IA Assignment

The student will be set a graphical assignment to test the application of knowledge of constructional details applied to temporary arch centres, dead shoring, raking shoring and site enclosures.

The assignment:

1. will be set on A3 or A4 paper;

2. will be completed using drawing instruments;

3. will be approximately to scale except for outlines of arch centres which will be set to a prescribed scale;

4. will have sketches of elevations and sections in first angle orthographic projection;

5. will have details of joints clearly illustrated in isometric projection and/or two dimensional plane drawing.

Satisfactory achievement of the Learning Outcome will be demonstrated by the student producing all 11 Essential Items (E) plus at least 9 Desirable Items (D) from the following checklist:

CHECKLIST:

Section A

Draws outlines of 3 types of arch centres to the prescribed scale E

Section B

Elevation and section through an arch centring system showing:

Arrangement of members for a semi-circular arch centre up to a span of 1m E

Arch centre narrower than wall D

Means of easing D

Section C

Elevation and section through a system of dead shoring showing:

strutting to window openings D

position of new beam D

longitudinal and lateral bracing D

folding wedges under vertical shores D

use of steel dogs D

upper floor supported to solum D

sole plates E

Section D

Elevation and section through a system of single raking shores showing:

wallplate E

longitudinal and lateral bracing E

soleplate and grillage E

method of tightening rakers D

angle between raker and grillage D

detail at head of raker E

alternative centre line positions of raker in relation to direction of upper joints E

Section E

Elevation and section through a site hoarding showing:

connections to ground E

method of bracing E

temporary footpath E

fender D

warning light D

LO3 MAKE AND ERECT A TEMPORARY ARCH CENTRE

PC The student:

(a) sets out a temporary arch centre;
(b) constructs a temporary arch centre;
(c) erects a temporary arch centre;
(d) observes local and statutory safety requirements.

IA Practical Exercise

The student will be set a task of constructing and erecting a temporary arch centre to test the comprehension of construction principles and the application of tool skills.

The exercise will be set in a workshop and project area where the student will work individually.

The temporary arch centre will conform to the following specification:

Centre to be built up using full size sawn softwood components and be semi-circular semi-elliptical or equilateral in form.

Minimum span 0.750m

Satisfactory achievement of the Learning Outcome will be demonstrated by the student gaining all 8 Essential Items (E) plus at least 2 Desirable Items (D) from the following checklist.

CHECKLIST:

Sets out arch centre to span and rise 0 to -3mm E

Constructs arch centre to span and rise 0 to -6mm E

Nails components securely D

Joints ribs with no gaps greater than 1mm D

Makes centre symmetrical to the eye E

Fixes bearers to underside D

Fixes laggings with projection D

Erects centre to height from datum $\pm$ 3mm E

Provides means of easing E

Ensures method of support is rigid E

Observes local safety requirements E

Observes statutory safety regulations E

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