

-SQA-SCOTTISH QUALIFICATIONS AUTHORITY

**Hanover House
24 Douglas Street
GLASGOW G2 7NQ**

NATIONAL CERTIFICATE MODULE DESCRIPTOR

-Module Number-	0095307	-Session-1989-90
-Superclass-	TG	

-Title-	POWER TOOLS (x¹/₂)
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-DESCRIPTION-

Purpose	This module is designed to introduce the student, possessing skills in a range of hand tools, to a range of power tools and to develop skills in their use. It will be of interest to potential craftsmen and will integrate effectively into programmes involving craft skills.
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Preferred Entry Level	Predevelopment of skills in the use of a range of hand tools
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Learning Outcomes	The student should: 1. outline the safe use of a range of power tools and accessories; 2. use a range of power tools for specified tasks.
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Content/ Context	Safety regulations and safe working practices and procedures should be observed at all times.
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Corresponding to Learning Outcomes 1-2:

1. Electric and pneumatic tools. Step down transformers. Cordless tools, cables, extension leads, hoses, couplings, compressors, generators, tooling, guides, fences and guards. Eye and ear protection, dust extraction.

Safety checks to be taken prior to operation. Operating speeds. Entry to and removal from workpiece. Use of holders, clamps, vices and jigs. Protection of surrounding materials whenever appropriate. Safety clothing and footwear.

Drills, screwdriver, orbital sander, angle grinder, biscuit jointer/groover, jig saw, planer, stapler, soldering iron, engraver, hot air stripper, wallpaper stripper, pneumatic hammer, needle gun, spray gun, power file, glue gun.

2. Control of the tool by positioning of hands, stance and posture. Use of holders, clamps, vices and jigs should be exercised whenever appropriate. Isolation of the tool during interchange of tooling. Correct handling and transportation of tools and equipment. Cleanliness of workspace.

Suggested Learning and Teaching Approaches

This module should be mainly undertaken in a workshop or project area. The student should be fully and carefully instructed on the dangers arising from each power tool and to the precautions to be observed in its use.

Physical demonstration by the lecturer on proper practices prior to the student's initial operation of each and every tool and on each and every operation is to be recommended.

Firm demands on procedures and practices must be made on the student and continuous formative assessment throughout the module should be exercised by both the lecturer and fellow students alike.

The student could be encouraged to adopt a safety officer role if they witness possible dangers.

The classroom could be used to supplement the practical learning experience by the use of AV materials, notes and access to relevant published materials.

The student should not use any portable power tool or equipment 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 OUTLINE THE SAFE USE OF A RANGE OF POWER TOOLS AND ACCESSORIES

PC The student:

- (a) describes safety characteristics relating to the design of power tools and accessories;
- (b) states safe working practices in the general use of power tools;
- (c) states safety procedures to be observed for specific operations.

IA Short Answer

The student will be presented with an exercise consisting of short answer questions to test the recall of knowledge on the safe use of power tools and accessories.

The exercise will consist of 15 questions allocated as follows:

- (a) safety characteristics relating to the design of power tools and accessories - 5
- (b) safe working practices - 5
- (c) observation of safety procedures - 5

Satisfactory achievement of the Learning Outcome will be based on all performance criteria being met. This will be demonstrated by the student producing 4 correct responses for each of (a), (b) and (c).

LO2 USE A RANGE OF POWER TOOLS FOR SPECIFIED TASKS

PC The student:

- (a) selects correct tools and tooling for specific tasks;
- (b) operates a range of power tools for given tasks;
- (c) follows safe working practices relevant to each task.

IA Practical Exercise

The student will be set a practical exercise consisting of a series of tasks to test the application of knowledge and skills required to use a range of power tools for specified tasks.

The exercise will consist of 5 tasks. For each task the student will be provided with a written instruction. Each task will involve the use of a different type of power tool.

Satisfactory achievement of the Learning Outcome will be demonstrated by the student meeting all performance criteria for each of the given tasks.

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