

General Certificate of Education
Ordinary Level

Syllabus

WOODWORK 6030

For examination in November 2009

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WOODWORK

GCE Ordinary Level/School Certificate

Subject 6030

This syllabus is available for examination in November only.

INTRODUCTION

The syllabus is concerned with giving the opportunity to develop a range of practical drawing and woodworking skills and understanding of associated materials, tools and techniques.

1 AIMS

The aims set out the purpose of a course in preparation for the ordinary level GCE examination in woodwork. The aims are not listed in order of priority.

The aims are to:

- 1.1 Develop practical skills to manipulate wood and make constructions
- 1.2 Develop graphical skills including free hand sketching and measured drawing
- 1.3 Establish a capacity to read and interpret formal technical drawings and diagrammatic illustrations
- 1.4 Acquire a body of knowledge to inform practical work and give a broad understanding of wood based products
- 1.5 Nurture a safe approach to practical work with materials and tools
- 1.6 Promote a capacity to solve specified technical design problems

2 ASSESSMENT OBJECTIVES

The objectives, which are not listed in order of priority, describe what a candidate should be able to do at the culmination of the course.

Candidates should be able to:

- 2.1 Describe materials, tools and processes associated with the use of a range of common soft woods, hard woods, manufactured boards and laminates
- 2.2 Apply knowledge of materials, tools and processes to explain choice of material, construction, fixings and methods of working
- 2.3 Read and interpret drawings conforming to standard practice
- 2.4 Illustrate concepts, processes and technical detail by free hand sketches and projected measured drawings
- 2.5 Solve specified technical design problems by completing given but incomplete solutions
- 2.6 Provide solutions to simple design problems
- 2.7 Describe and implement appropriate safe working methods
- 2.8 Make an artefact or part artefact in wood to a working drawing using a range of processes including marking out, cutting, shaping, joining, fixing and finishing

3 SCHEME OF ASSESSMENT

3.1 Examination components

Component number	Title	Duration	Weighting
1	Theory, Drawing and Design	2 hours 45 minutes	50%
2	Practical test	3 hours	50%

3.2 Component 1

Theory, Drawing and Design (2hrs 45 mins,100 marks)

The question paper will have two sections.

Section I Theory

This will have two parts - **A** and **B**. Candidates are expected to spend not more than 35 minutes on each part **A** and **B** (ie 1 hour 10 minutes total on Section I).

Part A will have short answer questions, all of which are to be answered on the examination paper.

Part B will have four questions requiring longer answers from which candidates are required to select and answer two.

Questions in Section I will be drawn from across the syllabus. Sketches will be required to be included in response to some questions.

Section II Drawing and Design

An incomplete solution to a design situation will be given for the candidate to complete. There will be two related parts. The first will require the candidate to show design ideas for completing the design by free hand sketches and added notes. The second will require formal measured drawings of the complete solution using their preferred choice of 1st or 3rd angle orthographic projection. Questions will be presented in 1st angle, isometric, or oblique projection or a combination of these.

Candidates will be informed of the general focus of the questions about three weeks before the date of the examination.

3.3 Component 2

Practical test (3hrs,100 marks)

Materials will be prepared before the examination. Candidates will be required to mark out, and make a construction which will normally be based on part of a piece of furniture. The test will normally include one or more jointing methods listed in section 4.4 and will usually involve the solving and provision of an unspecified construction within the test piece.

4 SYLLABUS CONTENT

Students should be able to:

4.1 Drawing and Design

Read and interpret working drawings complying with standard practice*.

Make measured projected drawings using either 1st angle or 3rd angle projection and construct simple scales for making drawings to scale. Use centre lines, hidden detail and make sections parallel to horizontal or vertical planes.

Make freehand sketches to communicate design ideas, construction methods, and help describe processes.

Design components and detail parts to complete a specified but incomplete design. Typically this might be a small cabinet for which a door or drawer must be added.

Show an ability to make decisions regarding general proportions, choice of construction, contour and surface finish and decoration.

4.2 Materials

Describe:

- basic characteristics of soft and hard wood, plywood, laminated boards, hardboard, and plastic faced boards in common use and their suitability for particular purposes.
- the growth, conversion and seasoning of timber and its behaviour during seasoning.
- common defects such as shakes, splits, and those created by pests.
- simple methods for testing:
 - moisture content by comparative and experimental methods but excluding chemical and electrical techniques
 - mechanical strength along and across the grain, resistance to bending of simple supported beams (e.g. shelf)
 - comparative density.

4.3 Preparation and marking.

Prepare timber to size.

Use face side and edge as datums.

4.4 Construction

Describe and cut appropriate joints from the following for box, frame, carcass (including drawer) constructions:

- halvings - simple and dovetail
- mortise and tenon - through, stopped, haunched (with and without groove), long and short shouldered (without mouldings)
- housings - through, stopped and simple dovetail
- bridle - simple, dovetailed
- dovetail - common, lapped

4.5 Fitting, fixing and adhesives

Describe the use of:

- adhesives for wet and dry conditions.
- screws, nails, common furniture hardware and fittings including magnetic and nylon door catches and hinges.

4.6 Surface finish

Describe and use:

- veneer on flat surfaces.
- abrasive paper/cloth for smoothing.
- wood preservative, paint, stains and polish including water repellent and heat resistant finishes.

4.7 Tools

Identify and describe common woodworking tools and explain their use, care and maintenance.

4.8 Supplementary

Show awareness of woodworking in a broader context than cabinet making, e.g. free form and sculpture work, lathe turning, and simple boat building.

4.9 Safety

Use and explain safe working methods and precautions applicable to processes identified in the syllabus.

- * Engineering Drawing Practice for Schools and Colleges. British Standards Institution (PP 7308.)

Notes

- 1 Recent past examination question papers may be used as specimen papers
- 2 Metric units will be used in examination questions
- 3 Reports on the work of candidates are published after each examination
- 4 Instructions about materials and equipment requirements for an examination are issued before each examination