

CARPENTRY & JOINERY
COURSE
LEADING TO THE
INSTITUTE OF CARPENTERS



Joinery and Shopfitting
Setting-Out Certificate
Suggested Course Manual

C.R. Tooke F.I.O.C, L.C.G, Cert Ed.

Introduction

This evening or day course is designed and structured for persons already employed in the Building Industry. It will give the student practical and theoretical knowledge of setting-out.

Entry requirements

Normal entry requirements are :-

City and Guilds Advance Craft/NVQ L3, Certificate in Carpentry and Joinery, Woodworking Machinery, Shopfitting or at least 6 years relevant experience in the Building Industry.

Duration of the course

11 weeks @ 2.5 Hours

Course content

On completion of the course the student should be able to:-

1. Understand the work of the setter out, including procedures and processes.
2. Show accurate drawing ability.
3. Understand building organisation and regulations.
4. State manufactured boards and timber sizes.
5. Understand and prepare cutting lists.
6. Interpret written and diagrammatic communications.
7. Understand wood machine processes.
8. Describe various forms of geometry used in building components
9. Understand the ordering of standard fitments, materials and ironmongery.

Awards On successfully completing an assignment (set by the Institute) the student will be awarded an **Institute of Carpenters** certificate.

Materials

Materials for the course include 2440 x 1220 x 12 MDF boards cut down the middle, thumb rules/runners that can be locked at 90⁰, pencils, rubbers, set-squares, rulers, compasses, and masking tape. Ordinary lining paper is sufficient for drawing purposes. Once the initial outlay has been covered the cost is fairly minimal.

Certificate

The cost to the student for the assignment is payable to the **Institute of Carpenters**, Central Office, 35 Hayworth Road, Sandiacre, Nottingham NG10 5LL.

Telephone: 0115 949 0641

Fax: 0015 949 1664

If you require any further information regarding the course please contact Central Office

1. The student shall describe the work of the setter-out.

Week

The student shall:-

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|-----------|-----|---|
| 1. | 1.1 | Understand all information given regarding the course content including subjects covered, I.O.C. certificate etc. |
| | 1.2 | Understand the responsibilities of the setter out. |
| | 1.3 | Appreciate types of paper and boards used. |
| | 1.4 | List the tools and equipment used. |
| | 1.5 | Show examples of rods, full-size and broken line. |
| | 1.6 | Show examples of cutting lists. |
| | 1.7 | Describe methods of photo-copying. |
| | 1.8 | Appreciate the need for the safe storage of originals. |
| | 1.9 | Set out a simple rod for a storey frame. |

2. The student shall demonstrate a knowledge of accurate drawing ability.

Week *The student shall:-*

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| 2. | 2.1 | List timber stock sizes. |
| | 2.2 | Understand the need for the production of accurate drawings. |
| | 2.3 | State the importance of checking the completed drawing for any discrepancies that may occur. |
| | 2.4 | Provide a full size rod from information given of a casement window. |

3. The student shall have the ability to understand and produce cutting lists.

Week *The student shall:-*

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| 3. | 3.1 | Understand the need and the use of cutting lists. |
| | 3.2 | Complete a cutting list from a given drawing (previous drawing). |
| | 3.3 | Calculate the metre cube of timber required. |
| | 3.4 | Understand the term metre run from given examples. |
| | 3.5 | List the various types of common windows used in construction. |
| | 3.6 | Produce a full size rod for a vertical sliding casement window. |

4. The student shall have knowledge of timber and manufactured board sizes available from timber merchants.

Week The student shall:-

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| 4. | 4.1 | State the sizes of timbers available from a timber merchant. |
| | 4.2 | State the sizes of manufactured boards available from a timber merchant. |
| | 4.3 | Identify samples of hard and soft woods used in construction. |
| | 4.4 | Produce a broken line rod for a pigeon hole unit incorporating manufactured boards. |

5. The student shall state the purpose of Building Organisation and Building Regulations.

<i>Week</i>	<i>The student shall:-</i>	
5-6	5.1	List the personnel involved in the management of an average sized Building Firm, i.e. Contracts Manager, Site Agent Estimator.
	5.2	Briefly state the duties of each of the above.
	5.3	State the duties of the Architect in relation to the client.
	5.4	State the purpose of the Building regulations.
	5.5	List a simple tool kit to enable measurements to be taken on site.
	5.6	Describe the use of a profile template.
	5.7	From information given, visit a site (in the Building) and record all the necessary information to produce a rod and cutting list for a replacement component.

6. The student shall understand given information using written and diagrammatic instruction.

Week The student shall:-

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| 7. | 6.1 | Appreciate the need to properly understand any orders received at the setting out office. |
| | 6.2 | Appreciate the purpose of filing all orders received. |
| | 6.3 | Understand Architects drawings. |
| | 6.4 | State the purpose of a variation order and it's importance. |
| | 6.5 | Calculate a suitable rise and going for a private staircase from given information and using the Building regulations. |
| | 6.6 | Produce a section through the tread and riser. |
| | 6.7 | Appreciate the purpose of visiting the site to check measurements. |
| | 6.8 | Understand sketches that may be received from the site for the production of either a window or staircase. |

7. The student shall understand machine methods and processes.

Week *The student shall:-*

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| 8. | 7.1 | Describe the layout of a typical machine shop to give maximum efficiency. |
| | 7.2 | Briefly describe the capabilities of common woodworking machinery. |
| | 7.3 | Describe the jigs required for circular work on the spindle moulder. |
| | 7.4 | Describe the jigs required for stair trenching an open or closed tread staircase. |
| | 7.5 | Produce a simple jig for circular work on the spindle moulder. |
| | 7.6 | Describe or demonstrate jigs used for bandsaws, thicknesser, or portable power tools etc. |

8. The student shall describe the geometry used in Building construction.

Week *The student shall:-*

- 9.**
- 8.1 State the importance of a good knowledge of building geometry
 - 8.2 Briefly describe the setting out various arches
 - 8.3 Calculate the compass point for a segmental arch using the formula $a \times b = c \times d$.
 - 8.4 Set out a segmented headed door frame.
 - 8.5 Understand the principles used in handrailing.
 - 8.6 Produce a drawing to enable jigs to be made for a handrail, i.e. level to rake, rake to rake, rake to level.
 - 8.7 Understand the geometry in geometrical stairs
 - 8.8 Produce a rod for the setting out the strings for a geometrical staircase.
 - 8.9 Understand the construction of a staircase with winders.
 - 8.10 Produce a rod for the construction of a staircase with winders, or a rod for the construction of a bay window.

9. The student shall show ability to identify, as well as order standard fitments, materials, and ironmongery.

Week The student shall:-

10. 9.1 Describe standard fitments used in construction.
- 9.2 From architects drawings write out an order for various items of ironmongery used in construction.
- 9.3 Using door schedules write out an order for the delivery of specified doors to site.

Week

11. On the final week an assignment shall be set (by the **Institute of Carpenters, see list of assignments below**), and marked by the Lecturer, to test the students knowledge of setting out.

Assignment	No.
Straight Flight Staircase	001
Free Standing Cupboard Unit	002
Semi-Elliptical Door And Frame	003
Half louvered Door	004
Hotel Reception Desk	005
Panelling To Column	006
Shopfitting Display Case	007

C.R.Tooke FIOC; Cert Ed; LCG July 2004
Chief Examiner