



Autumn Term

The first term gives students a sound understanding of the possibilities and practicalities of working with wood. Students will make a traditional or contemporary piece of furniture out of solid wood which will form part of their course portfolio.

The core elements of this term are:

TIMBER IDENTIFICATION

Continues throughout the course.

HAND TOOLS

Identification, maintenance, handling and care.

SHARPENING

- Chisels
- Small hand
- Planes
- Cabinet scrapers

PROFESSIONAL DEVELOPMENT

- Setting up in business: where? when? and how?
- How to estimate and control cashflow
- How to cope with the "down time"
- The importance of diversification
- How to assess your market and promote your business
- The balance between the conservation (i.e. restoration) and the making of furniture
- Procedure from estimate to settlement
- Pricing work
- Customer relations and service
- Organisation of transport
- Motivation of employees/self to hit targets
- Invoicing/credit control



MACHINE TOOLS

Identification and safe handling. Safety is paramount at the school, so from week two there is a phased programme to assess and train each student for safe use of the following machine tools.

No student may use a machine tool until passed as competent for its safe use.

- Disc and drum sanders
- Electric bench sanders
- Routers – small and large
- Circular saws
- Cross cut circular saws
- Electric fretsaws
- Planers – bench-mounted
- Planers – floor-standing
- Commercial pad sander
- Various air tools and cordless tools
- Electric grindstones and waterwheels
- Automatic chisel-sharpening machine
- Drill presses – floor-standing
- Vacuum veneer presses
- Lathes
- Bandsaws
- Jigsaws
- Biscuit Joiners
- Arbotech
- Morticers
- Power files

SETTING OUT, SAWING AND MARKING

TIMBER TECHNOLOGY

Students visit a local sawmill, view a mobile planing machine and are introduced to air seasoning and conditioning as well as an affordable technique of kiln drying as demonstrated by a local craftsman. Students are also instructed in wet seasoning using P.E.G. solution and how to use a moisture meter.

To further understanding of the techniques used in preventing the movement of wood in furniture making, there are visits to an organ builder and a violin maker. This section also covers the following areas:

- Tree growth
- Felling and Conversion
- Selection for purchase
- Seasoning

Autumn Term continued

WOOD BENDING

This is an important subject, particular in the design of contemporary furniture.

- Laminating: serpentine drawer front
- Curved rails cut from solid wood
- Brick building
- Coopering
- Using bendy ply
- Steam bending
- Correcting warps in wood (restoration)
 - Leaving warp to right itself and using water to correct warp
 - Kerfing
 - Battens
 - Complete removal of interior wood (in extreme cases only)

BENCH APPLIANCES

This section incorporates the making of jigs to assist with work at the bench – the student will learn and appreciate how to think in a different and imaginative way.

- Bench hook
- Dovetail template
- Stringing board
- Oilstone boxes incorporating strop
- Scratch stock

WOODSCREWS, TAPS AND DYES

CROSS-GRAIN PLUGS

- Removal of rusty nails and screws
- Blind nailing, screws, nails

INTRODUCTION TO VENEERING

As an introduction to veneering, students will make an apprentice's box. It will contain a selection of panels, each demonstrating a different decorative technique learnt on the course. This will be used as a marketing tool to demonstrate to future customers/employers the student's range of skills.

JOINTS

- Rubbed
- Biscuit
- "Domino"
- Dowel
- Tongue and groove/loose tongue and groove
- Mortice and tenon:
 - Two shouldered through
 - Four shouldered stopped
 - Four shouldered through wedged
 - Use of morticing machine
- Lap – half check
- Dovetail
 - Through
 - Lapped
 - Use of woodrat dovetailing machine
- Rule
- Knuckle joint
- Strengthening keys (restoration)
 - Router key (cross-grain key)
- Butterfly key
 - Tapered cleat
 - Battened reinforcing joint
- Scarfed (restoration)
- Mitre
 - True & faked
 - Veneer keyed mitre
 - Cross-grain keyed mitre (restoration)

BASIC WOODTURNING AND CARVING

The purpose of this part of the course is to introduce students to the use of turning and carving tools, to demonstrate the correct angle at which to hold them and how to sharpen them. Students will make a handle for a veneer hammer, a small patera carved to a traditional design, and a hand-carved barley twist.

CHAIR BLOCKS

- Wood blocks expansion blocks

MOULDINGS AND CHAMFERS

Knowledge of this topic is essential for the restoration of antique furniture and the design of reproduction furniture

MOULDINGS

- Chronology, descriptions and design
- Moulding planes
- Cross grain
- Box panel incorporating walnut cross-grain moulding
- Reeded/fluted
- Dentil
- Astragal
- Making new mouldings look old

CHAMFERS

- Usage



Spring Term



In the second term students make a veneered piece of furniture, contemporary or traditional. Students develop their piece starting with their initial idea through to full size technical drawings. They select and cost the materials, prepare a professional presented quotation and are in charge of all stage of production to the finished piece.

VENEERING

Use of veneers, stringing and banding.

VENEERS

- Descriptions (curl, burr, etc.)
- Preparation of groundwork (flattening dry, buckled veneer)
- Laying
- Jointing
- Oysterwork

BANDINGS

- Laying
- Steaming feather-banding to produce a curve

BRASS LINE

- Laying

RESTORATION

- Gluing down blisters
- Lifting veneer from old surface
- Use of veneer thickening board
- Cutting double-knife-cut from the solid with circular-saw
- Planing down repair without affecting surrounding surface
- Concealing joints using graining, finger jointing as well as expanding and contracting the veneer
- Relaying lifted brass line (expansion joint)

BOX PANELS INCORPORATING:

- Veneer and inlays
- Oval fan
- Oyster work

MARQUETRY, PARQUETRY, IVORY INLAY AND BOULLE WORK (BRASS AND TORTOISESHELL)

(For conservation reasons, only simulated tortoiseshell and ivory are used)

- Design, preparation and cutting
- Use of marquetry cutting board
- Restoration
- Fret, open and blind
- Box lid incorporating marquetry and boule work

TABLE LINERS

- Back of box panel incorporating the laying of baize

WINDSOR CHAIR

- Specialist course in Windsor chair making



Summer Term

By the start of the final term students will have almost finished two bespoke items of furniture. These pieces will form the basis of a student's portfolio of work, which will also include a minimum of three restoration projects – genuine antique furniture provided by the school. And each student will have the option to make a carved and gilded mirror.

The final elements of the course include:

FINISHING AND POLISHING

Students will polish their box and pieces of furniture made during the first two terms.

- Planing, scraping and sanding
- Filling, staining and bleaching
- Fading, graining and distressing
- Polishing and filling grain

DECORATED FURNITURE

Students will make a box panel incorporating simulated rosewood, learn graining techniques and the restoration of small areas that have been chipped or are missing.



ADVANCED WOOD CARVING

This section of the course is designed to show students how to carve in three dimensions.

- Carving tool identification and maintenance
- Restoration
- Copy carving
- Students will make an egg and dart moulding
- Relief carving
- Students will make an oak leaf and lion's paw foot and have the option to carve a cabriole leg

ADVANCED WOOD TURNING

- Cylinder
- Finial (in 2 parts)
- Beading
- Split work
- Restoration (fitting new turning to original shrunk turning)
- Support of structurally weak turning
- Copy turning using vernier caliper plus shape tracer
- When to turn new leg rather than restore original

GILDING

- Description and identification
- Preparation of wood
- Laying of gesso and Armenian bole
- Water and loose leaf
- Box panel incorporating gilding and silvering.
- Transfer leaf
- Restoration

GESSO MOULDINGS

- Casting mouldings and fitting to frames
- Strengthening delicate areas with wire implant
- Colouring and toning
- Gilding and highlight gilding
- Students will restore a gilded picture frame

UPHOLSTERY REPAIRS

- New webbing
- Replacing original horsehair and original cover
- Nails and staplegun, including close nailing
- Covers, including centering a pattern and estimating quantity of material required
- Gimp
- Subcontracting cane, rush and sea grass work and then ageing it

METAL WORK

- Cleaning, burnishing, polishing and distressing
- Repairing locks and keys
- Lacquering
- Ageing with nitric acid, mahogany sawdust and ammonia/tormaline
- Making and designing hinge cover plates and escutcheons
- Lining up of hinges
- Rivets old-fashioned and new (pop)
- Brass line expansion joint and laying of brass line
- Relaying lifted brass line

WARPING

- Leaving warp to right itself and using water to correct warp
- Kerfing
- Battens
- Complete removal of interior wood (e.g. card table) in extreme cases only

GLASS

- Selection and cutting (including shaped glass)
- Glazing
- Puttying in
- Fixing with wooden bead
- Box panel incorporating stained-glass and lead work

WORKSHOP ORGANISATION

- Ordering and storing supplies
- Health and Safety legislation
- Control of Substances Hazardous to Health (COSHH)