

Furniture Manufacturer - Level 2

Occupational Profile

The Furniture, Furnishings and Interiors industry is of significant importance to the UK economy, particularly in the supply of end products for residential and commercial living and work places. The industry has an annual turnover well in excess of £12 billion. The ability to work to agreed targets in terms of output and quality standards is essential. Workplaces can be wide ranging from small workshops to large factories. Apprentices must be dexterous and have a good work ethic. Apprentices must be able to demonstrate their ability to work individually and as part of a team.

The programme is designed to give a wide range of skills appropriate to the different occupations in the industry and each apprentice will be able to achieve the company's required standard in each skill obtained. This apprenticeship covers the following occupational areas:

- General Furniture Manufacturer
- Bed Manufacturer
- Modern Upholsterer
- Furniture Finisher
- Fitted Furniture Installer
- Furniture Restorer
- Wood Machinist
- Furniture CNC Specialist

Each apprentice will take the occupational route that is best suited to the business they work in. They will complete all the core requirements set out below and then the set number of the optional requirements for each route.

Each business, depending on size, market position and skills needs, will require a different combination of the optional requirements detailed within each occupational area. This apprenticeship is designed to allow the business and the apprentice to agree which of these options are most valuable to that specific organisation and apprentice. The completion of a minimum number of optional requirements in each occupational area ensure competency for the apprentice.

Core Requirements: Knowledge, Skills and Behaviours

KNOWLEDGE	WHAT IS REQUIRED
Industry	Knowledge and understanding of general background of the furniture industry.
Organisation	Knowledge and understanding of the company you are working in. This includes understanding the manufacturing process and how you contribute and fit into it.
Materials	Knowledge and understanding of industry materials. Properties and characteristics of materials used within your organisation
Customers	Knowledge and understanding of customer expectations. Who are the industry customers and what are their expectations in terms of packaging and delivery?
Quality Standards	Know the quality standards which apply to the products and how to check that these have been met. Read and interpret specifications, drawings, cutting lists and other relevant technical information used within your organisation.
Health, Safety and Environment	Knowledge and understanding of the relevant health, safety and environmental requirements and regulations. Understand sustainability within the industry.
SKILLS	WHAT IS REQUIRED
Maintain Tools & Equipment	Perform regular autonomous maintenance tasks on machinery, tools and equipment used.
Problem Solving	Identify issues quickly, solve problems and apply appropriate solutions.
Achieve quality and output targets	Carry out work to required quality standards and output targets.
Health & Safety	Comply with health, safety and environmental requirements, relevant statutory regulations and industry standards/codes of practice at all times
BEHAVIOURS	WHAT IS REQUIRED
Adaptability	Willing to both listen and learn and to accept changing priorities and working requirements
Collaboration	Work effectively with others in a team whilst maintaining effective professional working relationships.
Time management	Time management and ability to complete work to schedule.
Pride in the workplace	Organise work space for efficiency and effectiveness by identifying and storing items used, maintaining work area and sustaining order.
Positive Attitude	Actively engage in wider business and look to provide information that positively contributes to the business.
Attention to detail	High attention for detail, must monitor and check work meets specifications and follow methodology and processes.

General Furniture Manufacturer:

Furniture Manufacturers are skilled craftsmen/women who make pieces of furniture. They may work in a small, independent shop that produces custom furniture or in a factory that mass-produces pieces of furniture. They will manufacture furniture such as:

- Domestic – kitchens, bedrooms, living room and other items for the home
- Office - desk, seating, tables and other items for the office environment
- Contract - furniture for public areas such as hospitals, schools, hotels and airports
- Manufacture of high quality wooden components

Due to the flexibility of the industry, Furniture Manufacturers will be able to undertake at least 6 of the following requirements. The requirements chosen will be agreed between the employer and the apprentice depending on the specific role undertaken.

YOU WILL KNOW HOW TO AND BE ABLE TO

Pre-assembly	Machinery, Tools and Equipment	Set up and operate machinery, tools and equipment used to produce furniture. Understand tools and equipment used
	Measure and mark out	Measure and mark out materials to specification
	Components	Make components of furniture to specification within acceptable tolerances. Understand how and where components are used
	Cutting	Use appropriate equipment to cut materials within acceptable tolerances
	Sanding	Sand materials for preparation prior to assembly, post-assembly and de-nibbing. Understand grit sizes and the process of sanding
	Joints	Understand the principles of joints used in making hand-crafted furniture
	Veneers and Laminates	Select, prepare and apply veneers to items of furniture
Assembly	Cramping	Position components and apply cramps to ensure products are positioned securely to specification
	Fittings	Prepare and assemble components to specification, finishing and checking the assembly conforms to specifications
	Gluing	Apply adhesives to components. Understand types, methods and processes involved in gluing
	Jigs and Templates	Use and maintain jigs and templates for furniture production. <i>Jigs are used to ensure repeatability and accuracy in the production of furniture. These can be hand held or mounted on workbenches.</i>
	Assembly	Assemble components of furniture. Understand the sequence of assembly and why this is important
	Edge Banding	Carry out edge-banding process following standard operating procedures. <i>Edge banding is the process of applying a trim or edge to the piece of furniture to make it neat and aesthetically pleasing.</i>
Finishing	Finishing	Apply stains, sealers, basecoats and finishes to production furniture
	Electrical/ Mechanical Fittings	Fit mechanical or electrical components to furniture
	Rectification/ Rework	Carry out rectification or rework. This includes assessing and repairing items
	Safe andling and Storage	Pack and store products and components following standard operating procedures. Understand and follow procedures for safe handling of products

Bed Manufacturer

Bed Manufacturers work in factory environments where the ability to work to agreed targets in terms of output and quality standards is essential. Manufacturers often work shift systems and the seasonality of the industry, plus peaks and troughs in orders often demands overtime working.

Due to the flexibility of the industry, Bed Manufacturers will be able to undertake a minimum of 4 of the following requirements. These could be mattress making skills, divan and headboard making or a mixture of both. The requirements chosen will be agreed between the employer and the apprentice depending on the specific role undertaken.

Mattress Making

YOU WILL KNOW HOW TO AND BE ABLE TO

Pre-assembly	Spring Making	Prepare work area, set up machine for appropriate spring type and size and produce springs to the required specification
	Quilting	Prepare for and carry out mattress quilting operations. Understand and operate quilting machines
	Panel Cutting	Prepare and cut fabric and components used for panels. Understand and use any machinery used in this process
	Sewing Borders/Labels	Identify and sort components. Sew materials to specification
Assembly	Mattress Assembly	Assemble mattresses using appropriate components such as spring units and fillings to agreed standards. This will involve the use of equipment such as a glue spray and staple guns.
Finishing	Tape Edging	Prepare work area, set up machinery, select materials and carry out tape edging. <i>Tape edging is usually the final process in mattress making. It involves closing the mattress up by the application of a tape using a sewing machine</i>
	Tufting	Tuft mattresses to appropriate pattern and standard
	Hand Side Stitching	Identify and sort components and sew materials to specification

Divan and Headboard Making

YOU WILL KNOW HOW AND BE ABLE TO

Pre-assembly	CNC Routing	Prepare, set up, operate and maintain computer numerically controlled (CNC) machinery to produce shaped headboards
	Wood Machining	Prepare, set up, operate and maintain machinery to produce wood components
	Laying and Cutting Fabrics	Prepare and cut fabric and components
	Sewing	Produce sewn / seamed components by hand and through the use of machinery
Assembly	Frame Making	Prepare and assemble frames using jigs
	Drawer Making	Upholster drawer fronts, prepare and assemble drawers
	Ottoman / Adjustable Bed Frames	Produce ottoman or adjustable beds ensuring the mechanisms are correctly attached and in working order
Finishing	Headboard Upholstery	Upholster headboards including pleats, deep buttoning, ruching and fluting
	Upholstery	Prepare, cut and apply upholstery materials, trim and finish divans

Modern Upholsterer:

A Modern Upholsterer is a skilled and methodical individual capable of creating ergonomic and comfortable furniture using both traditional and modern techniques, materials and fabrics to produce aesthetically pleasing and fit for purpose consumer products.

Due to the flexibility of the industry, Modern Upholsterers will be able to undertake at least 5 of the following requirements. The requirements chosen will be agreed between the employer and the apprentice depending on the specific role undertaken.

YOU WILL KNOW HOW TO AND BE ABLE TO

Pre-assembly	Cut Fabrics and Components	Prepare and cut fabric and components used in upholstery.
	Frame Construction	Construct upholstery frames to specification. Understanding the methods used to construct frames
	Jigs and Templates	Use and maintain jigs and templates. <i>Jigs are used to ensure repeatability and accuracy in the production of furniture. These can be hand held or mounted on workbenches.</i>
	Produce Templates	Determine details of templates from specifications, mark out, measure dimensions and cut templates using appropriate tools and equipment.
	Resolve Faults in Leather	Deal with scuffs, scratches, stains, burn marks, water marks and discolouration in leather.
Assembly	Filling Materials	Select and fix filling materials. Understand different types and fixing methods
	Fit Mechanical or Electrical Components	Assemble, fit and quality assure components.
	Cushions and Padded Items	Measure and cut fabric; sew components to produce scatter, box and bolster cushions.
	Sewn / Seamed Components	Produce sewn / seamed components by hand and through the use of machinery.
	Suspensions and Foundations	Select materials for suspensions including springs, pocket springs, sprung units and webbing. Apply these to frames using appropriate modern or traditional methods, tools and equipment.
	Upholstering	Measure and cut fabric, fit, apply and finish top covers including fluting, pleating and buttoning.
Finishing	Frame Finishes	Finish and polish show-wood frames, apply stains, sealers basecoats and finishes.
	Loose Covers	Cut, sew and fit loose covers to specification.
	Trimmings and Finishings	Position and fix trimmings and finishings. This includes castors, valances, borders, skirts, dust covers and feet and legs.
Repair/Re-upholstery	Strip Down Furniture	Strip back existing upholstery to frames. Understand when and how to retain original foundation work
	Repair	Repair joints and frame ready for re-upholstery and revive and polish show-wood frame.

Furniture Finisher

A Furniture Finisher will prepare and treat a wide range of timbers and man-made boards, using range of techniques. They may work on new furniture or restore old pieces of furniture. Finished items could range from tables, chairs, lounge suites, cabinets, chests of drawers, kitchen units and shop fittings. They may also work on fitted items such as staircases, wall panels and doors, and on musical instruments like pianos. If you love working with wood this highly skilled job could be perfect for you. Most furniture finishing is done by pressure spray application, but hand polishing & other machine applications can be used. This is a highly skilled occupation where you need to be creative, organised, have a good eye for colour and show attention to detail. Apprentices who master this skill see the finished furniture items come to life.

Furniture Finishers will be able to undertake all of the following requirements.

YOU WILL KNOW HOW TO AND BE ABLE TO

Preparation	Requirements	Analyse and agree finishing requirements following organisational procedures
	Prepare furniture for finishing	Prepare hand crafted or production furniture for finishing this will include sanding, grain brushing , repair, stripping and general surface preparation.
	Commercial Awareness	Commercial awareness of piece to be finished
Finishing	Stains, Sealers & Top Coat	Apply stains, sealers, primers and finishing coats to furniture
	Colour Match	Be able to identify and carry out basic colour matching to organisational standards
	Polishing	Apply oils, polishes, varnishes, waxes and lacquers
	Decorative & Specialist Effects	Create decorative effects or specialist finishes on furniture
	Spraying	Finish furniture by spraying
	Storage	Store finished work following standard operating procedures

Fitted Furniture Installer

A Fitted Furniture Installer is responsible for preparing and installing furniture as part of a team including kitchens, bedrooms, bathrooms and offices, shops, exhibitions and boat interiors. This is onsite at the customer's commercial or domestic premises. Apprentices taking this route will experience a wide variety of projects and interface closely with customers.

Due to the flexibility of the industry, Installers will be able to undertake all mandatory and a minimum of 2 of the optional requirements. The requirements chosen will be agreed between the employer and the apprentice depending on the specific role undertaken.

Mandatory

YOU WILL KNOW HOW TO AND BE ABLE TO

Preparation	Transporting & Handling of Materials	Ensure the safe transportation and handling of installation equipment and materials. The correct type and quantity of installation equipment and materials have to be located and then transported so that they arrive at the location of the installation in good order.
Installation	Prepare Location	Prepare location for assembly and placement of furniture. This involves making the assembly and placement area ready for work and preparing the furniture components for assembly.
	Measure and Mark Out	Measure and mark out materials to specification.
	Power Tools & Hand Tools	Set up and operate tools used to assemble furniture. Understand the tools used within working area and which specific job they are used in.
	Assembly	Assemble components of fitted furniture and understand the sequence of assembly and why this is important
	Installation	Install furniture on location to specification. This includes scribing, fixing and securing of furniture using correct fixings relating to foundation secured to etc, adaptations to non-standard situations to specification (ie, pipe box, sockets, gas meter)
	Finishing	Finish solid surface work tops to specification following manufacturers instructions.
Post Installation	Re-instate Location	Re-instate a location after assembly and placement of furniture. This involves confirming the end of placement, ensuring all resources are cleared and maintaining customer liaison.
	Customer Service	Develop customer relationships. This includes building customer confidence in the level of service provided, meeting the ongoing needs and expectations of customers and developing relationships between customers and your organisation
	Rectification/ rework	Carry out rectification or rework. This includes changing hinges and handles. Be able to identify snags and awareness of where to seek help and guidance.

Optional

YOU WILL KNOW HOW TO AND BE ABLE TO

Installation	Gluing	Apply adhesives to components and understand types, methods and processes involved in gluing.
	Cut Outs	Complete standard cut-outs in work surfaces for general appliances such as taps, hobs and sinks. This covers using a template, cutting out and finishing the area.
	Cramping	Position components and apply cramps to ensure products are positioned securely to specification.
	Sanding	Sanding wooden work tops, trims, cornices and laminate edgings. Understanding grit sizes and the process for sanding.
	Veneers & Laminates	Apply edging tape to laminate worktops to specification.
	Jigs & Templates	Use and maintain jigs and templates for furniture installation. Jigs for example hinges and templates for example sinks and work tops.
	Joints	Cut and join components on site. This could include work top jointing, up-stand, cornices and trims.
	Fittings	Prepare and assemble components to specification, finishing and checking the assembly conforms to specifications
	Electrical / Mechanical Fittings	First fit mechanical or electrical components to furniture.

Furniture Restorer

Furniture restorers are involved in the conservation and restoration of antique and modern furniture by using practical and scientific restoration techniques. To be a furniture restorer, you should have an interest in furniture history, a desire to fix things, practical skills, an eye for detail and good observational and co-ordination skills. You should have a patient and organised approach.

The programme is designed to give a wide range of skills appropriate to restoration and repair and each apprentice will be able to achieve the company's required standard in each skill obtained.

Due to the flexibility of the industry, Restorers will be able to undertake all mandatory and a minimum of one of the optional requirements. The requirements chosen will be agreed between the employer and the apprentice depending on the specific role undertaken and the specialisms required.

Mandatory

YOU WILL KNOW HOW TO AND BE ABLE TO

Preparation	Assessment	Assess items of furniture for repair
	Customer Service	Agree the requirements, scope of the work and the budget with the customer. Set expectations with the customer.
	Requirements	Evaluate and specify restoration requirements. Develop a plan for the restoration work.
	Research	Carry out research to understand the history of pieces of furniture you are working on. Understand your own competence levels and contract with suitable persons to carry out specialist techniques.
Restoration	Dismantle	Dismantle the piece if appropriate.
	Repair & Restore	Repair structural components. Replicate and restore components.
	Polishing	Prepare existing and newly restored surfaces and finish furniture by appropriate modern and traditional polishing methods
Finishing	Reporting	Write a report on the work that has been carried out to include sketches and photographs of the process.
	Recommendations	Provide the customer with relevant aftercare and instructions and recommendations for future use and handling.

Optional

YOU WILL KNOW HOW TO AND BE ABLE TO

Specialist	Decorative Effects	Re- create decorative effects on furniture
	Re-upholstery	Reupholster structural and decorative elements of furniture. Ensure you use appropriate fabrics.
	Finishing	Finish furniture using traditional methods.

Wood Machinist

A furniture wood machinist produces components for furniture using a wide range of wood working machinery. This includes setting up, operating and maintaining wood working machines such as saws, planers, moulders, lathes, routers and CNC/NC machines. Apprentices will take virgin timber and produce components to a given specification to be used in the manufacture of furniture. They will often be working individually so being able to motivate themselves and work on their own initiative is essential. Having a keen eye for detail, apprentices will work in environments from small workshops to large scale factories. Following this route will allow an apprentice to develop a wide range of skills across different types of wood working machines.

Each apprentice will be able to achieve the company's required standard in each skill obtained. Due to the flexibility of the industry, Woodmachinists will be able to undertake all the mandatory requirements and a minimum of 4 of the optional requirements. The requirements chosen will be agreed between the employer and the apprentice depending on the specific role undertaken.

Mandatory

YOU WILL KNOW HOW TO AND BE ABLE TO

Essential	Measure and Mark Out	Measure and mark out materials to specification within the acceptable tolerances following standard operating procedures.
	Tooling	Select, prepare and maintain woodmachining tooling.
	Cutting	Prepare, set up and operate cutting wood machinery.
	Planing	Prepare, set up and operate planes. This includes surface planer and thicknesser (can be a combined machine) and four sided planer and moulder (for planed all round).

Optional

YOU WILL KNOW HOW TO AND BE ABLE TO

Pre-Machining	Calibrating	Calibrating measuring equipment, keeping tools and equipment clear of debris and dirt and ensuring tools are kept sharp.
	Jigs and Templates	Use and maintain jigs and templates for furniture production. <i>Jigs are used to ensure repeatability and accuracy in the production of furniture. These can be hand held or mounted on workbenches.</i>
Machining	Profiling	Prepare, set up and operate profiling wood machinery. This includes vertical spindle moulder (straight work), four sided planer and moulder, high-speed router, double-end tenoner, wood turning lathe, copying lathe, linear shaper, rotary shaper machines
	Boring	Prepare, set up and operate boring wood machinery. This includes single-head machine and multi-head machine.
	Sanding	Sand materials for preparation prior to assembly, post-assembly and de-nibbing. Understand grit sizes and the process of sanding. This includes the use of wide belt sander, overhead narrow belt sander, disc sander, bobbin sander, finisher and profile sander.
	Edge Banding	Carry out the edge-banding process following standard operating procedures. This includes, edge-banding by hand, colour matching, timber and PVC lippings, calibration and finishing techniques.
	Operate Machinery and Equipment	Operate woodworking machinery and equipment to meet company requirements. Be able to prepare tools and equipment including tooling technology and calibration of measuring equipment.
Finishing	Joints	Prepare, set up and operate wood machinery to produce jointed wood and wood-based products. This includes chisel morticer, chain morticer, slot morticer, dovetailer, vertical spindle moulder, stair router, single-end tenoner, double-end tenoner, round-end tenoner, dowler and router.
	Assembly	Assemble components of furniture following standard operating procedures. Understand the sequence of assembly and why this is important.

Furniture CNC Specialist

A Furniture CNC Specialist produces components for furniture using CNC machines. This includes setting up, operating and maintaining CNC machines and saws to cut, plane, shape and sand all types of wood and man-made wood components. Apprentices taking this route should have an interest in computers and machines. They need to be able to work using their own initiative and motivate themselves. Furniture CNC Specialists work in environments where an ability to work to targets in terms of output and quality standards is essential. These can be wide ranging from small workshops to large scale factories. This programme is designed to give an excellent grounding for anyone who wants a career working with CNC machines.

Each apprentice will be able to achieve the company's required standard in each skill obtained.

Due to the flexibility of the industry Furniture CNC Specialists will be able to undertake all the mandatory requirements and a minimum of 3 of the optional requirements. The requirements chosen will be agreed between the employer and the apprentice depending on the specific role undertaken.

Mandatory

YOU WILL KNOW HOW TO AND BE ABLE TO

Essential	Measure and Mark Out	Measure and mark out materials to specification within the acceptable tolerances following standard operating procedures.
	Tooling	Select, prepare and maintain CNC/NC tooling.
	Operate Machinery and Equipment	Operate CNC/NC machinery and equipment to meet company requirements. Be able to prepare tools and equipment including tooling technology and calibration of measuring equipment.
	Mechanical Manufacturing Engineering	Understand the principles of mechanical manufacturing engineering. This includes alignment of machine tools, how to differentiate between methods of power transmission in machine tools and how to evaluate the application of CNC/NC to machine tools
	Mechatronics System Principles and Fault Finding	Understand mechatronics systems principles and fault finding. This includes the principles of the 'Total Engineering Approach' to production systems, applying the principles of typical sensors, applying the principles of pneumatic, hydraulic, mechanical and electrical actuation systems, applying the principles of embedded control and carrying out fault finding on pneumatic, hydraulic, mechanical and electrical actuation systems
	Cutting	Prepare, set up and operate CNC/NC cutting machinery.

Optional

YOU WILL KNOW HOW TO AND BE ABLE TO

Preparation	Calibrating	Calibrate CNC/NC machines, measuring equipment and keep tools and equipment clear of debris and dirt and ensuring tools are kept sharp.
	Jigs and Templates	Use and maintain jigs and templates for furniture production. <i>Jigs are used to ensure repeatability and accuracy in the production of furniture. These can be hand held or mounted on workbenches.</i>
Machining	Profiling	Prepare, set up and operate CNC/NC profiling machinery. This includes vertical spindle moulder (straight work), four sided planer and moulder, high-speed router, double-end tenoner, wood turning lathe, copying lathe, linear shaper, rotary shaper CNC/NC machines.
	Boring	Prepare, set up and operate CNC boring machinery. This includes single-head machine and multi-head machine.
	Sanding	Sand materials for preparation prior to assembly, post-assembly and de-nibbing. Understand grit sizes and the process of sanding. This includes the use of wide belt sander, overhead narrow belt sander, disc sander, bobbin sander, finisher and profile sander.
	Edge Banding	Carry out the edge-banding process following standard operating procedures. This includes colour matching, timber and PVC lippings, calibration and finishing techniques.

	Planing	Prepare, set up and operate planes. This includes surface planer and thicknesser (can be a combined machine) and four sided planer and moulder (for planed all round).
	Joints	Prepare, set up and operate CNC/NC machinery to produce jointed wood and wood-based products. This includes chisel morticer, chain morticer, slot morticer, dovetailer, vertical spindle moulder, stair router, single-end tenoner, double-end tenoner, round-end tenoner, dowler and router.
	Assembly	Assemble components of furniture following standard operating procedures. Understand the sequence of assembly and why this is important.

Maths and English Requirements

For apprentices that have not yet achieved level 2 English and maths, as a minimum they must achieve level 1 English and maths and take the test for level 2.

Duration

Typically this apprenticeship will take 24 months to complete.

Review Date

After 3 years.