

**SYLLABUS FOR NCVT TRAINING COURSES CONDUCTED BY
DIRECTORATE OF INDUSTRIES**

Name	:	Basic Wood Work
Sector	:	Wooden Furniture
Code	:	W00101
Entry Qualification & Age	:	Vth Standard, 14 years & Above
During	:	270 hours
Terminal Competency	:	The participant will be able to:-

- **Identity, select, use and store tools, equipments and materials used in Carpentry in a safe manner**
- **Carry out Sawing and planning**
- **Make joints and simple products**

Course Contents:-

Practical Competencies	Underpinning Knowledge (Theory)
<ul style="list-style-type: none"> ➤ Identification of tools and equipments used in carpentry & shuttering ➤ Use of protective clothing, boots, goggles and equipment as applicable to a task. ➤ Good house keeping practices, proper handling of materials and waste disposal. ➤ Safety precautions and safety belts while working at site. ➤ Store/ lay materials at work in safe manner. ➤ Use and store of tools and equipments in a safe manner. ➤ Measurement length, width & depth in MKS & FPS system. 	<ul style="list-style-type: none"> ➤ Role of Carpenter ➤ Description of trade. ➤ Different types of tools and equipments used in Carpentry. ➤ Safety precautions. <ul style="list-style-type: none"> ▪ While using different hand tools. ▪ While using raw materials. ▪ With co-workers. ➤ Knowledge of measurement and its conversion to other system.

<ul style="list-style-type: none"> ➤ Size a raw timber using proper tools to measure. ➤ Mark, cut and drill holes within required tolerances and standards. ➤ Preparation of play piece out of plywood sheet using proper tools to measure, mark, cut and drill holes within required tolerance and standards. ➤ Preparation of half lap, dove tail, tenon & mortise joints with shaped timbers using proper tools to measure, mark, cut and fit within required tolerances and standards. ➤ Produce simple products e.g. stool and box. 	<ul style="list-style-type: none"> ➤ Identification of timber as per quality and classification, care and safe uses of tools. ➤ Understanding tolerances & house keeping. ➤ Identification of plywood as per quality, use and classification, care and safe uses of tools. Understanding tolerances. Storage & maintenance of plywood. ➤ Identification, care and safe uses of timber jointing tools, knowledge of various joints and appropriate applications, their relative merits and demerits.
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Wooden Furniture Making

Name	:	Wooden Furniture Making
Sector	:	Wooden Furniture
Code	:	W00202
Entry Qualification & Age	:	Vth Standard, 14 years and above MES module on ' Basic Wood Work '
Duration	:	270 hours

Terminal Competency

- Identity, select, use and store tools, equipments and materials use in wooden furniture making in a safe manner.
- Make stool, Divan, Dining table, Chair, Single and double beds, Dressing table.

CONTENTS:

Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none">➤ Use of protective clothing and boots➤ Identity, tool, equipments and materials Used in wooden furniture making.➤ Apply good house keeping practices, proper handling of materials and disposal of waste, follow statutory regulations.	<ul style="list-style-type: none">➤ Safety precautions, use of protective clothing and elementary first aid.➤ Functions and uses of various tools tools and equipment.➤ Reasons for carrying out good housekeeping practices.➤ Care and use of tool, equipment and materials used in fitting.

Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none"> ➤ Carry out basic first aid treatment/ notifying accident. ➤ Store/lay materials at work in safe manner. ➤ Select proper tools and equipments in a safe manner. ➤ Select proper tools for a particular Task. ➤ Take measurements using appropriate measuring tools. <p>(Measuring tools: measuring taps, Steel rule)</p> <ul style="list-style-type: none"> ➤ Read and interpret simple blue prints and drawings. ➤ Draw freehand sketches of furniture to explain to the customers. <p>(Furniture: Stools, Divan, Dinning tables, Chairs, Single and double beds, Dressing table)</p> <ul style="list-style-type: none"> ➤ Estimate the type and quantity of materials required for each job. <p>(Job: Stools, Divan, Dinning tables, Chairs, Single and double beds, Dressing table)</p> <ul style="list-style-type: none"> ➤ Estimate the types and quantity of materials required for each job. <p>(Job: Stools, Divan, Dinning tables, Chairs, Single and double beds, Dressing tables)</p> <ul style="list-style-type: none"> ➤ Select the correct type of timber/ ply etc. for a given job. ➤ Measure, mark and cut the timber according to the required dimensions. 	<ul style="list-style-type: none"> ➤ Selection and correct use of tools ➤ Criteria for selection of tool for different operations. ➤ Proper handling and correct use of hand tools. ➤ Types of measuring tools. ➤ Least count and errors. ➤ Measurements procedures. ➤ Safety precautions related to measuring tools. ➤ Introduction of marking tools. Application of marking tools. Safety, proper handling and use of marking tools. . ➤ Introduction to sheet metal hand tools and machine tools and safety precautions to be observed while using them. ➤ Types of sheet metal and their Applications. Different sizes of Sheet metal commercially available.

Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none"> ➤ Make templates for different operations. ➤ Plane the work pieces to accuracy. ➤ Make appropriate joints for stability and strength. ➤ Select the adhesives to fix ply, Sunmica etc., apply adhesive and fix sunmica etc. ➤ Fix molding beats, wherever required. (Molding beats: Wooden beats, Aluminum beats, P.V.C. beats) ➤ Fix general accessories, if required. (Accessories: Rubber shoes, Wheels Handles, Decorative pieces, Handles) ➤ Fix glasses and mirrors according to Customer requirements. ➤ List out the materials required for the given product. ➤ Estimate cost of materials required. ➤ Estimate man power and time required for completing the work. ➤ Estimate labour cost, overheads and cost of utilities (Power, water). ➤ Estimate the total cost involved in production of a product. 	<ul style="list-style-type: none"> ➤ Metal joining method. ➤ Types of seams and allowances. ➤ Types of rivets and their applications. ➤ Types of rivet joints. ➤ Defects of riveted joint. ➤ Safety precautions. ➤ Knowledge of limits, fits, tolerance ➤ Systematic steps of different operations. Safety consideration in each operation.

Module-2

- 1. Name of the Module : **BASIC WELDING (Arc)**
- 2. Sector : **FEBRICATION**
- 3. Code : **FAB102**
- 4. Entry Qualification : Minimum 8th Std. and 14 years above
- 5. Terminal Competency : After completion of this training, the participants would be able to
 - a). join metals by arc welding process
 - b). repair components/parts used in household & industrial appliances.
- 6. Duration : 120 Hrs.
- 7. Contents.

Practical Competencies	Underpinning Knowledge (Theory)
<ul style="list-style-type: none"> ➤ Use of protective safety devices on Shop floor. ➤ Safe working practice to be Observed during welding. ➤ Identification of tools and accessories used for Gas welding. ➤ Setting up Arc Welding plant ➤ Striking an arc and depositing Straight and wearing beads on MS in Flat position. ➤ Preparation of joints, edge operation. <ul style="list-style-type: none"> a). Fillet Lap & T joints b). Inside corner joint c). Square butt joint d). Single ‘V’ but joint ➤ Identification of defects by Visual inspection & correction of defects. 	<ul style="list-style-type: none"> ➤ Reading of fabrication drawing. ➤ Introduction to welding. ➤ Safety precautions. ➤ Types of welding processes and application. ➤ Nomenclature of Fillet and groove Welds. ➤ Welding terms and definitions. ➤ Principles of Manual Metal Arc Welding (MMAW). ➤ Advantages and limitations. ➤ Basic Electricity applicable to welding. ➤ Arc welding power source, AC Transformer, DC welding rectifier, DC generators. ➤ Types of welding joints and edge preparation. ➤ Welding electrodes and selection. ➤ Coding of MMAW electrodes. ➤ Arc welding procedure and technique. ➤ Welding defects causes and remedy. ➤ Distortion and methods of control. ➤ Welding symbols.

Module - 1

1. Name of the Module : **BASIC WELDING (GAS)**
2. Sector : **FABRICATION**
3. Code : **FAB101**
4. Entry Qualification : Minimum 8th std. and 14 years above.
5. Terminal Competency : After completion of this training, the participants would be able to
 - a) join metals by oxy-fuel gas welding, brazing process.
 - b). repair components/parts used in household & industrial appliances.
6. Duration : 120 Hrs.
7. Contents

Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none"> ➤ Use of protective safety devices on shop floor. ➤ Safe working practice to be observed welding. ➤ Identification of tools and accessories used for Gas welding. ➤ Setting up of Gas Welding Plant. ➤ Lighting and adjustment of Oxy-Acetylene flame & operation. ➤ Beading practice on MS sheet with and without filler rod. ➤ Produce oxy-acetylene gas welded joints in mild steel sheets. <ol style="list-style-type: none"> a). Edge joint b). Square butt joint c). Filler joint ➤ Practice brazing with Oxy-Acetylene flame on MS Sheets. ➤ Practice Tube joint by Oxy-Acetylene welding/Brazing. ➤ Identification of defects by Visual inspection & correction of defects. 	<ul style="list-style-type: none"> ➤ Reading of fabrication drawing. ➤ Introduction to welding. ➤ Safety precautions. ➤ Types of welding processes and Application. ➤ Nomenclature of Fillet and groove welds. ➤ Description and safe operating procedures of oxy-acetylene regulators. ➤ Description & maintenance of oxy Acetylene welding blow pipes. ➤ Types of Oxy-Acetylene flames and their uses. ➤ Filler rods and fluxes for brazing. ➤ Welding & Brazing Procedure and technique. ➤ Welding defects causes and remedy. ➤ Distortion and methods of control. ➤ Inspection & testing of weldments.

MODULE – IV (Certificate Level –I)

Tailor (Basic Sewing Operator)

NAME : **Tailor (Basic Sewing Operator)**

SECTOR : **Garments**

CODE : **GAR105**

ENTRY QUALIFICATION : **5TH STANDARD 14 years and above**

TERMINAL COMPETENCY : **The candidate would be able to cut and sew garments at basic level.**

DURATION : **270 Hrs.**

CONTENT : **Basic cutting and sewing operation.**

Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none">➤ Practice Health & safety-select, use, maintain & store- tools, equipments & clothing safely.➤ Operation if treadle sewing machine.➤ Practice of different types of seams like French seam, flat seam, felling seam, plain seam, pressed seam, necklines, plackets & collars.➤ Practice of various upper & lower Body garments making patterns. Drafting Basic Blocks pattern making of various patterns as per specification.➤ Practice of cutting various garments, Cutting technique. Cutting of fabrics using patterns. To Sew various Garments like Baby Suit, Bloomers, Baby Frocks. Suits skirts, Tops, Salwar Khameez, nightgowns, housecoats.➤ Shirts, Trousers, Phyjamas & Kurtras.	<ul style="list-style-type: none">➤ Knowledge of sewing machine.➤ Maintenance of sewing machine. Definition & knowledge of different seams and stitches. Importance of pattern making, cutting techniques.➤ Difference between inches, cms, Yards & meter. How to take measurements.➤ Safety precautions while Pattern making & Stitching.

MODULE –XII (Certificate Level –II)

Tailor Children’s

Name	:	Tailor Children’s
Sector	:	Garments
Code	:	GAR212
Entry Qualification	:	Minimum 8th Standard, 14 years of age, MES Module on Tailor (Basic Sewing Operator)
Terminal Competency	:	After completion of the course the trained person can design various children garments. Cut, sew and finishes as per specification.
Duration	:	120 Hrs.
Content	:	Drafting, cutting & sewing of children’s garments.

Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none">➤ Practice Health, Safety- select, use, Maintain & store-tools, equipments clothing safely.➤ Designing, Drafting, pattern making, pattern cutting, cutting, stitching & finished of the following garments.➤ Zabla set, Babu suit, ‘A’ linefrock, Yoke frock, Plain frock, Umbrella frock, Party frock, jumpsuit, dungarees, shirt & shorts.	<ul style="list-style-type: none">➤ Knowledge about fabric trimmings as per age and use at appropriate garments.➤ Safety precautions. For handling different fabric & trimmings for children.

MOUDLE – XIII (Certificate Level –II)

Tailor Ladies

Name	:	Tailor Ladies
Sector	:	Garments
Code	:	GAR213
Entry Qualification	:	Minimum 8th Standard, 14 years of age, MES Module on Tailor (Basic Sewing Operator)
Duration:	:	420 Hrs.
Content	:	Drafting, cutting & stitching of ladies Garments with different designs, styles & as per market Trend.

<ul style="list-style-type: none">➤ Practice Health & Safety – select, use Maintain & Store- tools, equipments & clothing safely.➤ Pattern making of various ladies garments with different necklines, sleeves, collar cutting stitching & finishing of the following garments.➤ Skrit, top's and maxis➤ Kameez with dart, princess line, with Kali, six piece, umbrella with yoke, overlap style.➤ Salwar with waist band.➤ Surwar, patiyalla, dothi, Punjab, Parallels & bell bottom style.➤ Plain blouse with waist belt.➤ Semi katori blouse.➤ Katori blouse.➤ Raglan blouse.➤ High neck blouse.➤ Kimono style, Halter neck.	<ul style="list-style-type: none">➤ Knowledge of Fabric, trimmings accessories marking & laying of fabric cutting of fabric, trial of garments & alternation defects & remedies.➤ Safety precautions.
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MODULE – XIV (Certificate Level –II

Tailor Gen's

Name	:	Tailor Gen's
Sector	:	Garments
Code	:	GAR214
Entry Qualification	:	Minimum 8th Standard, 14 years of age, MES Module on Tailor (Basic Sewing Operator)
Terminal Competency	:	The Candidates would be able to cut and Sew Gen's Garments, expect suits.
Duration	:	210 Hrs.
Content	:	Basic cutting and sewing operation.

Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none">➤ Practice Health & Safety – select, Use, maintain & store- tools Equipments & clothing safely.➤ Drafting, cutting & stitching finishing, pressing of various Garments like Shrits, Trousers, Pyjamas & Kurtas, shorts & 'T' shirts.➤ Safety precaution to be followed while operating various machinery.	<ul style="list-style-type: none">➤ Knowledge of various style men's Wears, trimmings accessories marking & laying on fabric cutting of fabric, trial of garments & alteration defects & remedies.➤ Safety precaution.

Basic Food Preservation

Nam : **Basic Food Preservation**

Sector : **Food Processing and Preservation**

Code : FOO101

Entry Qualification & Age : Vth standard, 14 years & above

Duration : 240 hours

Terminal Competency :

- Identity, select, use and store tools, equipments and materials used in Food Preservation in a safe manner.
- Preserve seasonal fruits and Vegetables using drying process.
- Produce pickles, Jam, Jelly, Murbbas, Syrups, Squash, Sauces, Chutneys and vinegar.

CONTENTS:

<ul style="list-style-type: none"> ➤ Use of protective clothing and boots. ➤ Maintain personal cleanliness & Hygiene. ➤ Carry out basic first aid treatment/ notifying accident. ➤ Practice fire safety measures. ➤ Simple Disaster Management & Preventive measures for staff/ guests/ Machines in the event of Earthquakes, Tsunami, etc. ➤ Identity, tools, equipments and Materials used in bakery. ➤ Apply good house keeping practices, proper handling of materials and disposal of waste, follow statutory regulations. ➤ Store/ lay and use materials at work In a safe manner. ➤ Select proper tool, equipment and Material for a particular task. 	<ul style="list-style-type: none"> ➤ Safety precautions, use of protective clothing and elementary first aid. ➤ Importance of personal cleanliness & Hygiene. ➤ Reasons for carrying out good house keeping practices. ➤ Function and uses of various tools, equipment and materials. ➤ Care and use of tools, equipment and materials used in bakery. ➤ Selection and cored use of tools and equipment. ➤ Proper handling and correct use of hand tools.
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<ul style="list-style-type: none"> ➤ Check quality of raw materials as per Per standards. (Materials: fruits, vegetables, sugar, Salt, vinegar) ➤ Prepare the stuff for preservation process according to weight and proportions. (Prepare refers to: cleaning, peeling, Cutting, pruning, blanching, ratio of Ingredients, mixing) ➤ Preserve seasonal fruits and vegetables using drying process. ➤ Pack and label according to regulations. ➤ Prepare the stuff for pickles According to weight and proportions. (Prepare refers to: cleaning, cutting, Ratio of ingredients, mixing) ➤ Prepare pickles of fruits and vegetables using oil. Vinegar, salt as preservatives as well as without using oil. ➤ Pack, bottle and label according to regulations. ➤ Prepare the stuff for Jam, Jelly, Murbbas and Syrups according to weight and proportions. [Jam- cleaning, peeling, boiling Jelly-cleaning, boiling, pectin, extraction. Murabba- cleaning, soaking, pricking, Syrups- mixing(rose and khus) 	<ul style="list-style-type: none"> ➤ Criteria for selection of fruits and vegetables for drying. Estimate of weight, measures, ratio and proportion. Different methods of drying used for domestic and industrial purposes; Advantages and limitations of each method. Equipment and tools used, safety Precautions to be taken. Dos and Don'ts during preservation. Quality Checks to be carried out. Packing and Labeling procedures. ➤ Seasonal fruits and vegetables Suitable for making pickles. Criteria Of selection of fruits and vegetables for making pickles. Quantity and proportion of raw material for different pickles. Equipment and tools used. Methods of preparation of pickles. Dos and Don'ts. Quality checks to be carried out. Packing, bottling and labeling procedures. ➤ Criteria for selection of fruits, Vegetables, chemicals and raw Materials for producing Jam, Jelly, Murabbas and Syrups. Proportion of Chemical and raw materials required. Equipment and tools used. Methods of of preparation of jam , jelly,murabba and syrups in right sequence. Reasons for spoilage, remedies quality checks. Dos and Don'ts. Quality checks to be carried out. Packing, bottling and labeling procedures.
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Practical Competencies	Underpinning Knowledge(Theory)
<ul style="list-style-type: none"> ➤ Produce Jam, Jelly, Murabbas and Syrups using sugar preservatives. ➤ Pack, bottle and label according to Regulations. ➤ Prepare stuff for Squash, Sauces, Chutneys according to weight and Proportions. [Squash- cleaning, boiling, chutneys- Cleaning, peeling, cutting.] ➤ Produce – Squash, Sauces, Chutneys Using chemical preservatives. ➤ Pack, bottle and label according to regulations. ➤ Prepare vinegars ➤ (Vinegars: synthetic, fermented Vinegar, fruit vinegar) ➤ Prepare products from wastes e.g. Vinegar from pineapple waste, pectin From citrus fruits wastes, vinegar and Protein isolate mango kernel, starches. ➤ Test quality of products made ➤ Maintenance and care of requirement. ➤ List out the materials required to Produce a given product. ➤ Estimate cost of materials required. ➤ Estimate man power and time required for completing the work. ➤ Estimate labour cost, overheads and Cost of utilities(Power, water) ➤ Estimate the total cost involved in Production of a product. 	<ul style="list-style-type: none"> ➤ Criteria for selection of fruits, vegetables, chemicals and raw materials for producing Squash, Sauces, Chutneys. Proportion of chemical and raw materials required. Equipment and tools used. Methods of preparation of squash, Sauces, Chutneys in right sequence. Reasons for spoilage, remedies and quality check. Dos and Don'ts. Quality checks to be carried out. Packing, bottling and labeling procedures. ➤ Different types of vinegars and Methods of vinegar production. Factors involved in production Good quality vinegar. ➤ Processing techniques for proper utilization of wastes from fruits and vegetables.

Practical Competencies	Underpinning knowledge(Theory)
➤ Identity the possible agencies and other customers, who can purchase. Make a comparative study of the rates of other suppliers. Prepare a label According to requirements.	