SYLLABUS

FOR THE TRADE OF

INTERIOR DECORATION & DESIGNING

UNDER

CRAFTSMEN TRAINING SCHEME

YEAR – 2002

Designed by

Government of India
Ministry of Labour (D.G.E.&T.)
CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE
EN-Block, Sector-V, Salt Lake
Kolkata-700 091

List of the Trade Committee Members approved the syllabus for the trade of "Interior Decoration & Designing" under CTS

1.	Shri H.Somasundram, Director	CSTARI, Kolkata	Chairman
2.	Mrs. Uma Ghosh, Executive Architect-I	W.B. Housing Board Kolkata	Member
3.	Shri Susanta Kumar Nan, Interior Designer	Sathi Shilpikar Kolkata	Member
4.	Mrs. Rani Sud,Proprieter	Posh Interior Decorators Kolkata	Member
5.	Shri Ajay Kumar Sharma,Manager	- Do -	Member
6.	Shri Nabarun Biswas, Director & Architect	A B consultants pvt. ltd Salt Lake, Kolkata	Member
7.	Shri Pinaki Bhattacharya, Interior Designer	Sculpsit, Kolkata	Member
8.	Mrs.Sanghasri Bhattacharya, Architect	- Do -	Member
9.	Shri Kallol Baroi, Sr.Manager	Exterior & Interior (P) Ltd.	Member
10.	Mrs. Shantoshree Mondal, Branch Manager	- Do -	Member
11.	Shri Swapan Kumar De,TO	ATI, Dasnagar, Howrah	Member
12.	Shri S. Kant, DDT	CSTARI, Kolkata	Member
13.	Shri P.N.Yadav,DDT	- Do -	Member
14.	Shri S.Kumar,DDT	- Do -	Member
15.	Shri M.S. Ekambaram,ADT	- Do -	Member
16.	Shri P.K.Kolay,TO	- Do -	Member
17.	Shri M.Barui,TO	- Do -	Member

GENERAL INFORMATION

1.	Name of the Trade	:	Interior Decoration & Designing
2.	N.C.O. Code No.	:	030.20, 171.20
3.	Duration of Craftsmen Training	:	1 Year
4.	Entry Qualification	:	Passed in 10^{th} class examination under 10 + 2 system of education or its equivalent.
5.	Unit Size	:	16 Trainees
6.	Space required	:	4.00 Sq. mtr./trainee & one separate room is required for computer lab. (4 mtr. X 4 mtr)

Syllabus for the Trade of "Interior Decoration & Designing" under CTS.

Week No.	Trade Practical	Trade Theory	Workshop Science & Calculation
1	**INTRODUCTION OF TRAINING** Familiarisation with the Institute. Importance of trade training. Instruments used in the trade. Types of work done by the trainees in the Institute. Types of job made by the trainees in the trade.	Importance of safety and general precautions observed in the trade by the Institution. Importance of the trade in the development of industrial economy of the country. What is related instruction-subjects to be taught, achievement to be made. Recreational, medical facilities and other extra curricular activities of the Institute. (All necessary guidance to be provided to the new comers to become familiar, with the working of Industrial Training)	Multiplication & division-- common fraction, subtraction, multiplication & division.
2.	Free hand sketching of geometrical models. Lettering and numbering, vertical and inclined Construction of ordinary scales, plain, comparative, diagonal, vernier and scale of chords. —as per ISI 696—1972.	Importance of lettering, printing of letters and figures sizes, proportion etc. as per I.S.I. Code. Principles, representation and construction of different types of scales, graphic scales, recommended scales for drawing with reference to I.S.I. Codes.	- Do -

3 to 6	Geometrical Drawing, curves, projection and its different types, sectioning, development etc.– construction of different plane geometrical figures & curves. Familiarisation of drawing instruments and materials. Lay out of drawing sheets. Drawing conventional lines according to I.S.I. code. Folding of sheets. Construction of plane geometrical figures (types of lines, angles, triangles, rhombus, quadrilaterals, polygons etc.). General principles representation, i.e. Orthographic projections in 1st and 3rd angle. Sectional views-different types of Sections. Isometric projection, Axonometric projection, Oblique projection & Perspective projection of geometrical solids. Simple Plan : room with furniture lay out.	Drawing is the language of technicians. Drawing office organisation. Drawing instruments, equipments and materials their use , care & maintenance, safety precautions. Introduction to Indian Standard Institution. Code of practice for general and architectural drawings. Geometrical drawing. Definitions, construction of plain geometrical figures. Orthographic projection, dihedral angles and Recommended methods of projection according to I.S.I. Codes. Theory of projection as specified in SP : 46-1938. Importance of sectional views. Types of sectional views and their uses. Parts not shown in section. Principle of Isometric projection, difference between isometric drawing and isometric projection. Isometric scale. Dimensioning an isometric drawing.	Units – different system and conversion. Ratio and proportion in the trade problem.
7	Inking and tracing. Use of Leroy set, printing of letters. Preparing Blue Prints and Ammonia Prints.	Inking and tracing operating of Leroy set and care of its accessories. Method of preparing Blue prints or ammonia prints. Folding of prints.	-Do-
8 to 12	Drawing details of brick stone wooden and steel stairs. Preparing drawings of details of parts of wooden stair. Preparing drawings of straight, open newel, dog legged geometrical and bifurcated stairs and spiral stairs.	Stairs: terms, forms, materials, planning and designing of stairs. Details of construction. Types of perspective projection. Fundamental concept, definition, location of station point. Perspective	Algebra – Simple equation & transposition. Problem involving trade problem, quadratic equation. Unit of force, weight,

	Drawing different types of Lintel and Arches. Drawing perspective views of building including colouring and shading. Introduction to one point perspective and two point perspective.	view- types. Method of construction technique of colouring and shading. **Introduction to basic interiors:** History of basic interior and different furniture. Elements of principle of design	equation of motion, laws of motion – problems.

Achievement from 1st to 12 th week :
The trainees should be able to :

1. Use of Drg. Instrument, their care & maintenance.
2. Drawing all types of lettering & using stencils.
3. Construct, read & use of plain, comparative, diagonal & vernier scale
4. Construct plain geometrical figures.
5. Draw sketches from models (plan, section & elevation)
6. Draw & design types of stair cases.
7. Draw simple perspective view.
8. Planning, designing & measuring of drawing

13 to 16	How to start design-flow chart, bubble diagram, programming, planning and designing of spaces, functional aspect of design.	Space planning and related by laws. Typical floor plan, basement plan, parking plan, roof plan etc. Drawing— symbol, steps, 2nd floor plan, common building terms used. Rules for dimensioning architectural drawing, projection of elevation, roof types and detailed sectional dimension of the drawing.	Area of triangles, rectangles, square, circle, regular polygons etc. - problems.
17to19	Measured drawing of a classroom / Living room.	Layout of space selection, furniture styles, selection of furniture, use of furniture templates, measurement of drawing as per designed.	Calculation of volume and weight of simple solid bodies – such as cubes, square – and its problems.

20	**Hotel suite site visit; case study and measurement of drawing.**		
21to24	Drawing details of single room stored single stored residential house (both pitched and flat roof). Drawing plan, elevation, section with aid of line diagrams. Layout and detailing of a residential building. Draw perspective view of the House and layout of furniture. **Colour scheme of the designing:** Preparation of the colour drawing/perspective of schemes. a) Types and characteristics of line (b) Types of forms and its application (c) Kinds of design (d) Principle of Making design (e) Colour – its colour and characteristics (f) Kinds of colour scheme (g) Colour and colour theory.	Residential building. Principles of planning. Local building by laws, types of building, types of services, types of utilities. Introduction to building materials – Physical and Mechanical properties of materials. Types of ceramic materials, glass and plywood and their utilisation in interior designing. Method of fastening parts – nail, wood screw, screw thread, stud in nuts and bolts. **Fabrics:** their classification, characteristics and identification. Different fabric, weave, texture, colour, taint ness and durability, shrinking treatment for different fabrics (cotton, wooden, silk and blended. Method to find out quantities of material and their cost for a single storied residential building. Finalisation of specification and the estimated cost.	Trigonometrically ratio, Function applied. Problems on height and distance. Reading and plotting of simple graph. Properties of metal which are used in the interior designing.

Achievement from 13th week to 24th week :
The trainees should be able to :

1. Case study & measuring of hotel suite.
2. Draw plan, section & elevation of the residential building with the help of sketches & line diagram.
3. Draw perspective view of the design.
4. Layout of room & furniture.
5. Knowledge of different types of material.
6. Knowledge of different types of colour for wall & designing for the ceiling.

25to28	Preparing of surfaces on wood by cleaning, rubbing down, knotting, stopping, filling, artificial wood staining and graining. Preparing of surfaces on wood for varnishing, finishing polishing of doors, windows, panels, partitions of rooms, wooden boxes etc. Painting of walls, ceiling with colour, painting of doors and windows, fittings, electrical fittings, water supply pipe lines house drainage, sanitary fittings etc. Painting with synthetic enamel paints of inside and outside fittings including sanitary drainage water supply gas pipes etc. of a building/offices. Drawing details – types of floors, concrete, brick on edge, tiled, timber, patent, stone, mosaic and glass etc. Making detailed drawing of different types of door including panelled glazed and flush door. Method of fixing doors or windows frame to wall and details of opening. **Note**:-Necessary Practical Training will be carried out on site.	Painter hand tools, brushes of various sizes, diamond glazier, stopping knife, scrapers, palate Knife, chisel knife, shave hook, pump line, lining tool, rule file, etc. their description, use, care and maintenance. Use of roller. Varnishes – method of preparation- Different types – classification and their application on woods. Painter's equipments classification, function and their uses – principles of spray gun painting. Method of application and precautions analysis of rates for simple items of work. Schedule of specification. Painting by spray gun, brushes and roller - different specific application and their defects and remedies. Different colour used, selection of paints for different types of fitting, electrical fittings, water supply, sanitary and drainage line etc. Types of floor finishing - methods of constructing granolithic, mosaic, brick tiled etc. used in floors. Doors, windows and ventilations - parts, location, sizes and types. Details of different bending wall and section according to ISI..	Lever – types and problems. Heat and temperature – different thermometric scale. Linear expansion of solid. Unit of heat, problem on work, power and energy. Horse power, watt – simple problems. Friction – Laws of friction , co- efficient of friction & angle of friction.
29to32	Plumbing – Planning of plumbing, plumbing layout plan and elevation, section, details etc. Preparation of drawings showing	Common hand tools used for plumbing and their description and uses. Description of Plumbing operations.	Sound, characteristics of sound. Light : Laws of reflection, refraction - simple problems.

	various pipe joints for underground drainage, method of sanitary fittings in multi-stored building, manholes, septic tank etc. Lighting systems in different spaces. Fixing and connecting appliances for domestic/commercial area. Electrical layout. Lighting circuits and study of planning material. **Note**:-Necessary Practical Training will be carried out on site.	Introduction – terms used in public health engineering. System of sanitation – house plumbing, sanitary fittings etc. Types and system of lighting. Safety precautions. Elementary first aid. Artificial respiration and treatment of electrical shock. Elementary electricity. General idea of supply system. Wireman's tool kits. Wiring materials, electrical fittings. System of wiring, Wiring installation for domestic lighting. AC – Purpose, types, ducting and drainage. Role of different plants and their layout in the interior designing.	
33to35	Introduction of office design project – detail layout plan, sectional elevations, perspective, plumbing system, falls ceiling, wall treatments for temperature control and aquatic, electrical planning and other furnishing details.	Office building - planning of office interior designing as per I.S. Code. Types of offices, service utilities etc. Rules and regulation of State Urban Development authorities /Board , Improvement Trust etc.	Finding surface area and volume using pyramidal transpesoidal formula and also Simpson's rule.

Achievement from week no 25th to 35th :
The trainees should be able to :

1. Have knowledge of paints & varnishes.
2. Draw different types of floors.
3. Draw different types of doors & windows including knowledge of carpentry joints.
4. Have general idea on plumbing, carpentry & electrical wiring.
5. Have knowledge of paint & painting technology.
6. Have knowledge of AC, lighting & electrical fitting.
7. Familiarisation of different types of furniture.
8. Calculation of materials used in furniture, estimate and cost economics.

36to39	Use of Carpenter's hand tools involving sawing, plaining and	Safety precautions and elementary first aid.	Centre of Gravity, Moment and moment

	chiselling. Marking out and marking simple joints used in doors and trusses. Construction of a table, chair, sofa, cabinets, beds, dining table etc. **Note**:-Necessary Practical Training will be carried out on site.	Preparation of glue and putty. Carpenter's hand tools, their names, description and use. Common joints. Use of nails, screws, hinges, dowels etc. Grinding and sharpening of tools. Their care and maintenance. Use of different types of joints. Properties and uses of different timbers used in construction work. Design of furniture for different purpose – Bed rooms, dining hall, Library, Office Workshop, Classroom, Kitchen etc.	of inertia for different sections.
40&41	Types of wood, classification and uses. False ceiling – Partition – Low height, full height, partly glazed.	Types of partition – wall, wooden, glass etc. Modes & their finishing.	Load – various types, Bending moment Shear force, cantilever and simple supported beams. Load calculation of different members of a truss (graphical representation)
42	**VISIT TO DIFFERENT SITES WHERE INTERIOPR DECORATION AND DESIGNING WORKS ARE IN PROGRESS**		
43to49	Auto-CAD Training – 1) Elementary DOS (Disc Operating system. 2) Knowledge of Editor 3) How to install auto-CAD 4) Elementary Command of Auto-CAD 5) Knowledge – Window Software 6) Freehand Working practice on Auto-CAD. 7) Practice on 3D drawing & designing	i) What is computer General Term used in Computer. ii) Elementary DOS command iii) Word Processor, commands and their uses. iv) Window Command and their uses v) Auto-CAD commands and use of different menus of Auto CAD. vi) Theory about 3D drawing	Electricity – Ohm's Law. Parallel and series connection – problems. Use and practice with planimeter and pantograph.

50to51	Project work – Isometric view, light tracing, copying, estimating for masonry work, reinforcement, wood works etc.		Revision and test
52	**REVISION AND TEST**		

Achievement from 36^{th} to 52^{nd} week :
The trainees should be able to :

1. Construct different types of partition & ceiling
2. Draw plan, sectional elevation & perspective view of a office including plumbing, electrical, colouring & shading
3. Estimating for masonary work, reinforcement, wood work etc.
4. Knowledge of joineries.
5. Prepare working drawing of different types of designing building by Auto CAD.

Final Achievement :

1. Use & maintenance of : drawing instrument & drafting m/c.
2. Construction & use of different scales.
3. Space planning – Selecting space, programming circulation & design
4. Measured drawing – Case study of hotel suits & corporate house
5. Detailed construction of table, chair, sofa, cabinets, beds & dining tables etc.
6. Construction – Plan, sectional elevation, perspective views, plumbing, electrical, painting & finishing etc. of a corporate office
7. Estimating for masonary work, reinforcement & wood work etc.
8. Designing various types of stair cases, roofs, ceilings, partitions, walls etc.
9. Preparing tracing job of printing of a given drawing (ammonia/blue-print)
10. Setting of plants within the design.
11. Specification of paints, colour, finishing of wall & ceiling

Social Studies

The syllabus has already been approved & is same for all the trades.

LIST OF TOOLS AND EQUIPMENT FOR THE TRADE OF "INTERIOR DECORATION & DESIGNING" UNDER CTS (FOR A BATCH OF 16 TRAINEES)

Sl. No.	Description	Quantity
1	Box Drawing Instrument containing one 15 cm compass with pin point and lengthening bar, one pair spring bows, compass with rotating attachment inter-changeable ink and pencil points, drawing pens with plain point and cross point, screw driver and box of leads.	17
2	Protractor celluloid circular & semi-circular	17
3	Card board metric set of eight A to H in a box 1:1, 1:2, 1:2:5, 1:5, 1:10, 1:20, 1:50, 1:100, 1:200, 1:500, 1:1000, 1:2000, 1:1250, 1:6000, 1:38 1/3, 1:66 2/3	17 sets
4	Metric scale (wooden/steel/Perspex)- 30 cm long	17 sets
5	Scales plotting box wood 6 metric scales 30 cm long with offset scales.	17 sets
6	Set Square transparent 2 mm thick with bevelled edges 45 degrees & 30 degree	17 pairs
7	Drawing board imperial size	17 nos.
8	"T"-Square/Mini drafter	17 nos.
9	Erasing Shield small size	17 nos.
10	Template (Architects and builders).	17 nos.
11	Intel Pentium IV Processor, 2 GHz, 512 MB RAM, 40 GB HDD, 3.5" FDD 52 x CD Drive, Ethernet card 10/100 Mbps, 17" SVGA Colour Monitor with 32 MB Graphic Adapter, 3 button mouse, 105 keys keyboard or higher.	8 Nos
12	CD writer	1 no.
13.	Modem (Internal or External)	1 no
14.	Telephone Line	
15.	UPS 4 KVA	1 no

16.	Inkjet Printer	2 nos
17.	Scanner A4 size latest model	1 no
18.	Air Conditioner 1.5 tonne	2 nos
19.	Fire extinguisher	1 no
20.	Vacuum Cleaner	1 no
21.	Windows (95/98/XP)	1 no
22.	DOS 6.22 or latest	1 no
23.	Floppy disks, CDs	2 doz. Each
24.	Auto CAD 2000i or latest version	1 no.

GENERAL OUTFIT

1	Geometrical Models (wooden) as per given below:	
	a) Cube 8 mm sides	2
	b) Rectangular parallel piped 8 cm x 15 cm	2
	c) Sphere 8 cm dia.	2
	d) Light circular core 8 cm dia. base 15 cm vertical height	2
	e) Square pyramid 8 cm side base and 15 cm vertical height	2
	f) Cylinder 8 cm dia. 15 cm height	2
	g) Prisms triangular 8 cm sides triangle and 15 cm length	2
	h) Prism hexagonal 8 cm sides hexagon and 15 cm length	2
2.	Flexible curves 80 cm long	8
3	Drafting machine – Vertical type complete with drawing board adjustable table and pair of metric scales 30 cm and 40 cm long.	1
4	Brass parallel rulers in a case	4
5	Calculator Scientific latest	4
6	Plain meter sliding bar pattern 70 cm complete in case with magnifier and instructions reading in metric units.	1
7	Pantograph brass complete in wooden case with accessories 60 cm.	1
8	Lerroy printing set.	2
9	Tracing table with plate glass 1250 x 900 cm	1
10	Ammonia box 120 cm x 35 x 35 cm	1
11	Stencils – complete set 6 H	2 sets
12	Table drafting for boards	2 sets
13	Table working blue printing 2 m x 10m	2
14	Almirah Steel (Major)	2
15	Interlock, interchangeable brass stencils with brush in a box.	4
16	Pastle and mortal – porcelain 3 mm, 6 mm, 12 mm, 18 mm.	2
17	Chest of drawers 8 drawers (Standard).	4

18	Draughtsman table	16
19	Draughtsman stool	16
20	Instructor's table(big size, full secretariat)	1
21	Instructor chair	2
22	Hacksaw frame 200 mm. and 300 mm. Adjustable.	4 nos. each.
23	Divider steel 150 mm.	8 nos.
24	Metallic tape 30 metre long in a leather case.	2 nos.
25	Wire brush.	4 nos.
26	Spirit level 30 cms.	4 nos.
27	Chisel 5 cms. Hammer headed	4 nos.
28	Claw hammer	4 nos.
29	Hammer 250 gms.	2 nos.
30	Light tracing board fitted with glass and frame and lamp.	2 nos.

FURNITURE FOR COMPUTER LAB.

1.	Computer tables with chairs/stools (revolving)	8 nos.
2.	Printer tables	2 nos.
3.	Instructor table	1 no
4.	Instructor chair	1 no
5.	Cabinet with drawer	2 nos
6.	Students lockers (steel) unit of 4 lockers	2 nos.
7.	Steel almirah big size	1 no
8.	Steel almirah small size	2 nos.
9.	Class room chairs with writing pad moulded type	16 nos