

INTERIOR DESIGN & DECORATION

NSQF LEVEL - 5



SECTOR- CONSTRUCTION

COMPETENCY BASED CURRICULUM

CRAFT INSTRUCTOR TRAINING SCHEME (CITS)



सत्यमेव जयते

GOVERNMENT OF INDIA
Ministry of Skill Development & Entrepreneurship
Directorate General of Training
CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE
EN-81, Sector-V, Salt Lake City, Kolkata – 700091

INTERIOR DESIGN & DECORATION

(Engineering Trade)

SECTOR –CONSTRUCTION

(Revised in 2023)

Version 2.0

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Developed By
Government of India
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Directorate General of Training
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EN-81, Sector-V, Salt Lake City,
Kolkata – 700 091
www.cstaricalcutta.gov.in

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1. COURSE OVERVIEW

The Craft Instructor Training Scheme is operational since inception of the Craftsmen Training Scheme. The first Craft Instructor Training Institute was established in 1948. Subsequently, 6 more institutes namely, Central Training Institute for Instructors (now called as National Skill Training Institute (NSTI)), NSTI at Ludhiana, Kanpur, Howrah, Mumbai, Chennai and Hyderabad were established in 1960 by DGT. Since then, the CITS course is successfully running in all the NSTIs across India as well as in DGT affiliated institutes viz. Institutes for Training of Trainers (IToT). This is a competency-based course for instructors of one year duration. “Interior Design and Decoration” CITS trade is applicable for Instructors of “Interior Design and Decoration” CTS Trade.

The main objective of Craft Instructor training programme is to enable Instructors explore different aspects of the techniques in pedagogy and transferring of hands-on skills so as to develop a pool of skilled manpower for industries, also leading to their career growth & benefiting society at large. Thus, promoting a holistic learning experience where trainee acquires specialized knowledge, skills & develops attitude towards learning & contributing in vocational training ecosystem.

This course also enables the instructors to develop instructional skills for mentoring the trainees, engaging all trainees in learning process and managing effective utilization of resources. It emphasizes on the importance of collaborative learning & innovative ways of doing things. All trainees will be able to understand and interpret the course content in right perspective, so that they are engaged in & empowered by their learning experiences and above all, ensure quality delivery.

2. TRAINING SYSTEM

2.1 GENERAL

CITS courses are delivered in National Skill Training Institutes (NSTIs) & DGT affiliated institutes viz., Institutes for Training of Trainers (IToT). For detailed guidelines regarding admission on CITS, instructions issued by DGT from time to time are to be observed. Further complete admission details are made available on NIMI web portal <http://www.nimionlineadmission.in>. The course is of one-year duration. It consists of Trade Technology (Professional skills and Professional knowledge), Training Methodology and Engineering Technology/ Soft skills. After successful completion of the training programme, the trainees appear in All India Trade Test for Craft Instructor. The successful trainee is awarded NCIC certificate by DGT.

2.2 COURSE STRUCTURE

Table below depicts the distribution of training hours across various course elements during a period of one year:

S No.	Course Element	Notional Training Hours
1.	Trade Technology	
	Professional Skill (Trade Practical)	480
	Professional Knowledge (Trade Theory)	270
2.	Training Methodology	
	TM Practical	270
	TM Theory	180
	Total	1200

Every year 150 hours of mandatory OJT (On the Job Training) at nearby industry, wherever not available then group project is mandatory.

3	On the Job Training (OJT)/ Group Project	150
4	Optional Course	240

Trainees can also opt for optional course of 240 hours duration.

2.3 PROGRESSION PATHWAYS

- Can join as an Instructor in a vocational training Institute/ technical Institute.

- Can join as a supervisor in Industries.

2.4 ASSESSMENT & CERTIFICATION

The CITS trainee will be assessed for his/her Instructional skills, knowledge and attitude towards learning throughout the course span and also at the end of the training program.

a) The Continuous Assessment (Internal) during the period of training will be done by **Formative Assessment Method** to test competency of instructor with respect to assessment criteria set against each learning outcomes. The training institute has to maintain an individual trainee portfolio in line with assessment guidelines. The marks of internal assessment will be as per the formative assessment template provided on www.bharatskills.gov.in

b) The **Final Assessment** will be in the form of **Summative Assessment Method**. The All India Trade Test for awarding National Craft Instructor Certificate will be conducted by NCVT at the end of the year as per the guidelines of DGT. The learning outcome and assessment criteria will be the basis for setting question papers for final assessment. The external examiner during final examination will also check the individual trainee's profile as detailed in assessment guideline before giving marks for practical examination.

2.4.1 PASS CRITERIA

Allotment of Marks among the subjects for Examination:

The minimum pass percent for Trade Practical, TM practical Examinations and Formative assessment is 60% & for all other subjects is 40%. There will be no Grace marks.

2.4.2 ASSESSMENT GUIDELINE

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking the assessment. While assessing, the major factors to be considered are approaches to generate solutions to specific problems by involving standard/non-standard practices.

Due consideration should also be given while assessing for teamwork, avoidance/reduction of scrap/wastage and disposal of scrap/waste as per procedure, behavioral attitude, sensitivity to the environment and regularity in training. The sensitivity towards OSHE and self-learning attitude are to be considered while assessing competency.

Assessment will be evidence based comprising of the following:

- Demonstration of Instructional Skills (Lesson Plan, Demonstration Plan)
- Record book/daily diary
- Assessment Sheet

- Progress chart
- Video Recording
- Attendance and punctuality
- Viva-voce
- Practical work done/Models
- Assignments
- Project work

Evidences and records of internal (Formative) assessments are to be preserved until forthcoming yearly examination for audit and verification by examining body. The following marking pattern to be adopted while assessing:

Performance Level	Evidence
(a) Weightage in the range of 60%-75% to be allotted during assessment	
For performance in this grade, the candidate should be well versed with instructional design, implement learning programme and assess learners which demonstrates attainment of an acceptable standard of crafts instructorship with occasional guidance and engage students by demonstrating good attributes of a trainer.	<ul style="list-style-type: none"> • Demonstration of fairly good skill to establish a rapport with audience, presentation in orderly manner and establish as an expert in the field. • Average engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A fairly good level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Occasional support in imparting effective training.
(b) Weightage in the range of 75%-90% to be allotted during assessment	
For performance in this grade, the candidate should be well versed with instructional design, implement learning programme and assess learners which demonstrates attainment of a reasonable standard of crafts instructorship with little guidance and engage students by demonstrating good attributes of a trainer.	<ul style="list-style-type: none"> • Demonstration of good skill to establish a rapport with audience, presentation in orderly manner and establish as an expert in the field. • Above average in engagement of students for learning and achievement of goals while undertaking the training on specific topic. • A good level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson. • Little support in imparting effective training.
(c) Weightage in the range of more than 90% to be allotted during assessment	
For performance in this grade, the candidate should be well versed with instructional design, implement learning	<ul style="list-style-type: none"> • Demonstration of high skill level to establish a rapport with audience, presentation in orderly manner and establish as an expert in

programme and assess learners which demonstrates attainment of a **high standard** of crafts instructorship with **minimal or no support** and engage students by demonstrating good attributes of a trainer.

- the field.
- Good engagement of students for learning and achievement of goals while undertaking the training on specific topic.
 - A high level of competency in expressing each concept in terms the student can relate, draw analogy and summarize the entire lesson.
 - Minimal or no support in imparting effective training.

3. GENERAL INFORMATION

Name of the Trade	Interior Design & Decoration -CITS
Trade code	DGT/4031
Reference NCO 2015	2356.0100, 3432.0100, 3432.0200, 2163.0400, 3432.0501
NOS Covered	IES/N9403, CON/N9465, CON/N9466, CON/N9482, CON/N9467, CON/N9468, CON/N9469, CON/N9470, CON/N9483, CON/N9471, CON/N9472, CON/N9473, CON/N9474, CON/N9484, ASC/N9411
NSQF Level	Level-5
Duration of Craft Instructor Training	One Year
Unit Strength (No. Of Student)	25
Entry Qualification	<p>Degree in Interior Design & Decoration/ Architecture / Civil Engineering from recognized University.</p> <p style="text-align: center;">OR</p> <p>03 yrs. Diploma in Interior Design & Decoration/ Architecture / Civil Engineering after class 10th from recognized Board/University*.</p> <p style="text-align: center;">OR</p> <p>Ex-serviceman from Indian Armed forces with 15 years of service in related field as per equivalency through DGR</p> <p style="text-align: center;">OR</p> <p>10th class with 1year NTC/NAC passed in the trade of “Interior Design & Decoration” + 02 year of experience</p> <p>*Wherever diploma is of 2 yr. duration, 1 yr. experience will be required.</p>
Minimum Age	18 years as on first day of academic session.
Space Norms	Practical room - 80 sq. m, Theory room - 40 sq. m Computer lab = 36 sq.m
Power Norms	10 KW
Instructors Qualification for	
1. Interior Design & Decoration -CITS Trade	<p>B.Voc/Degree in Interior Design & Decoration/ Architecture / Civil Engineering from AICTE/UGC recognized University with two years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>03 years Diploma in Interior Design & Decoration/ Architecture / Civil Engineering from AICTE/ recognized Board/ University or relevant Advanced Diploma (Vocational) from DGT with five years’ experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>Ex-serviceman from Indian Armed forces with 15 years of service in</p>

	<p>related field as per equivalency through DGR. Candidate should have undergone methods of instruction course or minimum 02 years of experience in technical training institute of Indian Armed forces.</p> <p style="text-align: center;">OR</p> <p>NTC/ NAC passed in Interior Design & Decoration trade with seven years experience in relevant field.</p> <p>Essential Qualification: Relevant National Craft Instructor Certificate (NCIC) in Interior Design & Decoration, in any of the variants under DGT.</p>
<p>2. Workshop Calculation & Workshop Science</p>	<p>B.Voc/Degree in any Engineering discipline from AICTE/ UGC recognized Engineering College/ university with two years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>03 years Diploma in any Engineering discipline from AICTE /recognized board of technical education or relevant Advanced Diploma (Vocational) from DGT with five years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>NTC/ NAC in any Engineering trade with seven years experience in relevant field.</p> <p>Essential Qualification: National Craft Instructor Certificate (NCIC) in relevant trade</p> <p style="text-align: center;">OR</p> <p>NCIC in RoDA or any of its variants under DGT</p>
<p>3. Training Methodology</p>	<p>B.Voc/Degree in any relevant discipline from AICTE/ UGC recognized College/ university with two years experience in training/teaching field.</p> <p style="text-align: center;">OR</p> <p>Diploma in any relevant discipline from recognized board / University with five years experience in training/teaching field.</p> <p style="text-align: center;">OR</p> <p>NTC/ NAC passed in relevant trade with seven years experience in training/teaching field.</p> <p>Essential Qualification: Relevant National Craft Instructor Certificate (NCIC) in any of the variants under DGT/ B.Ed /ToT from NITTTR or equivalent.</p>

4. JOB ROLE

Brief description of job roles:

Manual Training Teacher/Craft Instructor; Instructs students in ITIs/Vocational Training Institutes in respective trades. Imparts theoretical instructions for the use of tools, mechanical drawings, blueprint reading and related subjects. Demonstrates processes and operations in the workshop; supervises, assesses and evaluates students in their practical work. Ensures availability & proper functioning of equipment & tools in stores.

Interior Designer; planning designs, and furnishes interiors of residential, commercial, or industrial buildings. Interior designer to understand civil requirement & serve offer to do clean & functional environment Interior designer can design and estimate various types of residential & commercial interiors with color scheme. Interior designer can read and draw interior drawings using appropriate measuring instruments and know the sequence of operations, Selects suitable materials as per design for formal and informal interiors with an aesthetic value. Creates own designs to satisfy clients requirements and taste etc. showing style, shape, size and other characteristics or products. Makes sketches and diagrams or design keeping into consideration purpose, cost and preferences of client. Estimates material requirements and costs, and presents design to client for approval. Confers with client to determine factors affecting planning interior environments, such as budget, architectural preferences, and purpose and function. Advises client on interior design factors, such as space planning, layout and utilization of furnishings and equipment, and colour co-ordination. Selects or designs and purchases furnishings, art works, and accessories. Subcontract fabrication, installation, and arrangement of carpeting, fixtures, accessories, draperies, paint and wall coverings, art work, furniture, and related items. Render design ideas in form of paste-ups or drawings. Plans and designs interior environments also for boats, planes, buses, trains, and other enclosed spaces. Designers can used different interior software's for making plan & designs.

Decorator; coordinate the architect & civil engineer. Decorator is executing the concept of designing of interior designer. They have to know management, time line part, material part, consult the designer regarding the fabrication, design the aesthetic part. They recommend the types of paints, polishes, suitable air conditioners, approved by ISI for interior and exterior applicability. They are recommending the types of indoor plants and suggest ways to take care & maintenance Arranges decorative material, furniture, wares, products etc. in artistic manner. May specialize in setting and decorating stages and may be known as Set Decorator. May be known as Interior Decorator, Decorative Designer, Window Display Designer, Display Artist, etc., according to field of specialization.

Furniture Designer; designs furniture line or individual pieces for manufacture according to knowledge of design trends. Studies market trends and customer needs and discusses design suggestions with production management and trade channels. Design & execute suitable furniture as per anthropometrics in different materials. Recognize and select the types of natural & man made wood products used for interior designing taking into account of economical & environmental conditions Evaluates proposals and prepares freehand sketches of promising designs. Obtains approval from customer, design committee or company.

Furniture design containing manufacturing specifications, such as dimensions, kind of wood and upholstery fabrics to be used in manufacturing furniture line or article. May plan modifications for completed furniture to conform to changes in design trends and increase customer acceptance.

Bathroom and Kitchen Designer; is responsible for design of bathrooms and kitchens in a housing setups.

NCO Code-2015:

2356.0100 - Manual Training Teacher/Craft Instructor

3432.0100 - Interior Designer

3432.0200 - Decorator

2163.0400 - Furniture Designer

3432.0501 - Bathroom and Kitchen Designer

Reference NOS:

- i. IES/N9403
- ii. CON/N9465
- iii. CON/N9466
- iv. CON/N9482
- v. CON/N9467
- vi. CON/N9468
- vii. CON/N9469
- viii. CON/N9470
- ix. CON/N9483
- x. CON/N9471
- xi. CON/N9472
- xii. CON/N9473
- xiii. CON/N9474
- xiv. CON/N9484
- xv. ASC/N9411

5. LEARNING OUTCOMES

Learning outcomes are a reflection of total competencies of a trainee and assessment will be carried out as per the assessment criteria.

5.1 TRADE TECHNOLOGY

1. Analyse measurement plan of site with existing architectural components. (NOS: IES/N9403)
2. Demonstrate collection of anthropometric & ergonomic data for residence, retail and commercial buildings. (NOS: CON/N9465)
3. Explain the process of drawing various kitchen & toilet design, layout and materials to be used. (NOS: CON/N9466)
4. Appraise the concept of sliding folding partition viz. aluminium frame with glass and construct the drawing. (NOS: CON/N9482)
5. Demonstrate the concept of acoustic partition and materials used for flooring and ceiling. (NOS: CON/N9467)
6. Construct drawing of different types of flooring with concrete panel. (NOS: CON/N9468)
7. Demonstrate drawing of a jewellery showroom including layout of furniture, fire fighting measures, Air Conditioning system and other interior services. (NOS: CON/N9469)
8. Demonstrate layout planning and drawing of different types of outlets viz. Departmental store, Supermarket, Specialty store and E-Market. (NOS: CON/N9470)
9. Explain the basic principles in designing a retail store. (NOS: CON/N9483)
10. Demonstrate the overall designing concept of Apparel store outlet/Super Market/ Cosmetic store and evaluate the layout. (NOS: CON/N9471)
11. Explain preparation of detailed drawing of different commercial areas viz. Bank, Restaurant, Hotel Lobbies, Poly Clinic etc. (NOS: CON/N9472)
12. Compare the price of materials used in decoration of residential and commercial complex. (NOS: CON/N9473)
13. Demonstrate calculation of a specific area required for interior decoration and designing. (NOS: CON/N9474)
14. Assess the rate of items and quantity required during preparation of bill of quantity (BOQ) for a project. (NOS: CON/N9484)
15. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: ASC/N9411)

6. COURSE CONTENT – TRADE TECHNOLOGY

SYLLABUS FOR INTERIOR DESIGN & DECORATION- CITS TRADE			
TRADE TECHNOLOGY			
Duration	Reference Learning Outcome	Professional Skill (Trade Practical)	Professional Knowledge (Trade Theory)
Practical 25 Hrs Theory 10 Hrs	Analyze measurement plan of site with existing architectural components.	CASE STUDY Measurement of theory class room. 1. Draw layout plan with door, window, and beam position. 2. Draw the elevation with door, window, sill, lintel, beam ht. level. 3. Specify the Interior details like electrical, flooring, furniture's.	1. Explain the process of site measurement. 2. Describe the different techniques and units used for measurement. 3. Explain the existing details like electrical, flooring, furniture's.
Practical 48Hrs Theory 18Hrs	Demonstrate collection of anthropometric & ergonomic data for residence, retail and commercial buildings.	4. Collect anthropometry data & ergonomic factor & generate the PPT. 5. Prepare PPT for Residence & Retail /Commercial complex showing different location demarcation. For the following- <ul style="list-style-type: none"> • Residence • Retail - <ol style="list-style-type: none"> a) Jewellery Showroom b) Apparel showroom c) Cosmetic store d) Gift Shop e) Mobile Store • Commercial <ol style="list-style-type: none"> a) Bank b) Restaurant c) Hotel Lobbies d) Clinic e) Small Internet Café 	Describe the Ergonomics factor and anthropometric data of residential space planning. <ul style="list-style-type: none"> • Residence Describe the Ergonomics factor and anthropometric data of retail space planning. • Retail - <ol style="list-style-type: none"> f) Jewellery Showroom g) Apparel showroom h) Cosmetic store i) Gift Shop j) Mobile Store Describe the Ergonomics factor and anthropometric data of Commercial space planning. <ul style="list-style-type: none"> • Commercial- <ol style="list-style-type: none"> f) Bank g) Restaurant h) Hotel Lobbies i) Clinic j) Small Internet Café
Practical 65Hrs Theory 22Hrs	Explain the process of drawing various kitchen & toilet design, layout and materials to be used.	6. Draw the design concept with bubble diagram. Note- Need industrial visit.	Interior designing Design concept of Kitchen & Toilet in house of HIG (high income group), MIG (medium income group), & LIG (lower income

			group).
		<p>7. Draw the types of Modular Kitchen layout</p> <ul style="list-style-type: none"> • L-shaped • U-shaped • Straight • Parallel 	State the types of modular Kitchen.
		<p>Working Details of any one type of kitchen</p> <p>8. Presentation layout with color combination. (any media)</p> <p>9. Layout plan and Sectional elevation with dimension & specifications.</p> <p>10. Generate working drawing of the Reflected Ceiling with lights, Flooring, Electrical, Plumbing, Drainage system.</p> <p>Note- Design portfolio should consist of Presentation drawing, working details & submit final assignment of the same.</p>	Define the material & applied to the Kitchen accordingly to different amenities.
		<p>11. Working details of any one type of toilet.</p> <ul style="list-style-type: none"> a) HIG b) MIG c) LIG <p>12. Presentation layout with color combination. (any media)</p> <p>13. Layout plan and Sectional elevation with dimension & specifications.</p> <p>14. Generate working drawing of the Reflected Ceiling with lights, Flooring, Electrical, Plumbing, Drainage system.</p> <p>Note- Design portfolio should consist of Presentation drawing, working details & submit final assignment of the same.</p>	Define the material & applied to the Toilet accordingly to different amenities.
<p>Practical 12 Hrs</p> <p>Theory 06Hrs</p>	Appraise the concept of sliding folding partition viz. aluminium frame with glass and construct the	<p>15. Draw the following detail of the sliding folding partition with aluminium frame and glass.</p> <ul style="list-style-type: none"> • Sectional plan 	Explain the uses and specification of the sliding folding (aluminium frame with glass) partition.

	drawing.	<ul style="list-style-type: none"> • Sectional elevation • Elevation • Enlarge details • Isometric view 	
Practical 25 Hrs Theory 10Hrs	Demonstrate the concept of acoustic partition and materials used for flooring and ceiling.	<p>16. Make the PPT for the acoustical material used for flooring, ceiling, partition & paneling.</p> <p>17. Prepare PPTs for the following: Acoustical partition with the material given below –</p> <ul style="list-style-type: none"> • Paintable acoustical panel (Gypsum) • Acoustical foam panel • Fabric wrapped panel • Glass wool <p>Resilient/ Acoustical flooring with the material given below –</p> <ul style="list-style-type: none"> • Cork flooring • Linoleum • PVC flooring • Rubber flooring <p>Reflected Ceiling with material given below –</p> <ul style="list-style-type: none"> • Mineral wool board • Perforated gypsum tile/ board • Hanging baffles <p>Wall Paneling with material given below –</p> <ul style="list-style-type: none"> • Fabric wrapped panel • Foam panel • Perforated wood panel 	<p>Acoustic – Distinguish the acoustical materials used for flooring, ceiling, partition & paneling. Explain acoustical partition planning for different locations with proper material.</p>
Practical 25Hrs Theory 10Hrs	Construct drawing of different types of flooring with concrete panel.	<p>Draw the following details of the raised flooring with concrete panel</p> <p>18. Plan 19. Sectional elevation 20. Enlarge details 21. Isometric view</p>	<p>Raised flooring – Explain the concept of raised flooring State the types of material used for the false/ raised flooring –</p> <ol style="list-style-type: none"> a) Bare Concrete panels b) Wood panel c) Hollow steel panel d) Concrete core steel panel e) High strength poly propylene panel <p>Note – Illustrate types of raised flooring by using modern teaching techniques.</p>

<p>Practical 25 Hrs Theory 10Hrs</p>	<p>Demonstrate drawing of a jewellery showroom including layout of furniture, firefighting measures, Air Conditioning system and other interior services.</p>	<p>22. Draw the basic furniture layout of jewellery showroom and implement the firefighting provision with other interior services and dimension. 23. Demonstrate Selection criteria for Air Conditioning system in jewellery showroom. 24. Demonstrate Ducting placement of air conditioner outlets in central air conditioning system in jewellery showroom. 25. Apply the CCTV and speaker consider with other interior services at ceiling /wall, working dimension for the given jewellery showroom layout.</p>	<p>Firefighting provision a) Smoke detector; uses & application. b) Sprinklers; uses and application. HVAC - Apply the central AC system consider with other interior services at ceiling /wall, working dimension for the given jewelry showroom layout. Explain Ducting principles layout schemes, placement of outlets in central air conditioning system. CCTV and Speaker – Introduction and requirement of CCTV and speakers. Application of CCTV and speakers.</p>
<p>Practical 45 Hrs Theory 18Hrs</p>	<p>Demonstrate layout planning and drawing of different types of outlets viz. Departmental store, Supermarket, Specialty store and E-Market.</p>	<p>26. Plan and construct different types of outlets - Departmental store</p> <ul style="list-style-type: none"> • Electronics Appliances • Apparels • Fancy Jewellery • Cosmetics • Sportswear • Toys • Books • CD/ DVDs etc. <p>Supermarket</p> <ul style="list-style-type: none"> • Bakery Product • Cereals • Meat Product, Fish Product • Medicines • Vegetables and Fruits • Soft drinks • Frozen foods • Canned Juices • Stationary • Toys • Grocery (general store) etc. <p>Specialty store like Branded Food Beverage store, Cosmetic store, jewellery store etc. E-Market Different types of website shopping store etc.</p>	<p>Explain the layout plan and intricacies of various retail store viz. Departmental store, Supermarket, Specialty store and E-Market. Use General principles related to the type of outlet. Collect the interior images of the various retail stores viz. Departmental store, Supermarket, Specialty store and E-Market. Design and make a PPT of it.</p>

<p>Practical 25 Hrs Theory 10Hrs</p>	<p>Explain the basic principles in designing a retail store.</p>	<p>27. Explain the basic principles related to outlet/ retail store design –</p> <ul style="list-style-type: none"> • Define the space with the function and style • Organize the space • Offer a sequential experience <p>28. Provide visual communications.</p>	<p>Make a presentation on basic principles to be followed in retail store design.</p>
<p>Practical 45 Hrs Theory 18 Hrs</p>	<p>Demonstrate the overall designing concept of Apparel store outlet/Super Market/ Cosmetic store and evaluate the layout.</p>	<p>29. Develop the presentation layout by given architectural plan of women apparel outlet.</p> <p>30. Make the furniture layout with specified materials.</p> <p>31. Make a rendered design of front façade design with the material specification.</p> <p>32. Make a bubble diagram of a supermarket based on basic principle of retail outlet.</p>	<ul style="list-style-type: none"> • Relate the eye-catching visual merchandise at the front design of a Apparel outlet for women • Illustrate the sequential arrangement of the product in a supermarket. • Describe the basic principles used in cosmetic store design. • Collect the images and make a PPT of a cosmetics store based on basic principle of retail outlet.
<p>Practical 45 Hrs Theory 18 Hrs</p>	<p>Explain preparation of detailed drawing of different commercial areas viz. Bank, Restaurant, Hotel Lobbies, Poly Clinic etc.</p>	<p>33. Prepare working drawing and details of space designing. Detail of retail and commercial project using various interior services (like Plumbing, Electrical, firefighting, HVAC, CCTV, Speakers, Ceiling, flooring), furniture, concept, theme and finishes.</p> <p>Detail any one –</p> <ul style="list-style-type: none"> • Bank • Restaurant • Hotel Lobbies • Poly Clinic • Jewellery Showroom • Apparel showroom • Cosmetic store • Gift Shop • Mobile Store • Small Internet Café <p>NOTE- At the end of Project design and working drawing each learner is required to submit the</p>	<p>Designing & concept of facilities –</p> <p>Use General principles related to the type of outlet.</p> <p>Application of anthropometry and ergonomics as a tool to understand aesthetic and functional concept of design.</p> <ul style="list-style-type: none"> • Styling and theme based design. • Prepare PPT for client with the help of rendered plans, material chart, other drawing as per required.

		final finished, rendered drawing to suitable scale with related detailed project drawing (20 to 25 pages) all certified by the guide/subject coordinator & principal which may be presented for final examination.	
Practical 25 Hrs Theory 10 Hrs	Compare the price of materials used in decoration of residential and commercial complex.	34. Collect the detailed drawing for preparing the calculation 35. Plan for component estimation 36. Check prices of material related to construction of interior decoration 37. Assess price comparison for different items like AC, Light fixture, fans, sanitary fixes, hinges, brackets etc.	Introduction about the components of estimation, costing and analyzing rates drawing & specifications, units and modes of measurements, material, miscellaneous item like AC, Light fixture, fans etc. and labour cost, contingencies, professional fees, indirect cost.
Practical 35 Hrs Theory 15 Hrs	Demonstrate calculation of a specific area required for interior decoration and designing.	38. Calculate the area and length in sq. ft. and running ft. - Floor surface Wall surface Ceiling surface Window surface Windows side wall surface 39. Calculate the area of false ceiling. 40. Calculate the material used for non-movable or built in furniture, quantity like overhead storage, running storage below platform, running wardrobe etc. 41. Calculate the material used for movable furniture like sofa, executive table, small cabinet etc. 42. Calculate the window treatment like curtains, blinds, curtain rod etc.	Calculation – Summarize the item wise drawing and calculate the exact quantity of item
Practical 35 Hrs Theory 15 Hrs	Assess the rate of items and quantity required during preparation of bill of quantity (BOQ) for a project.	43. Prepare item rate chart from different companies and vendors. 44. Compose the estimation costing table and apply quantity and cost.	Method of estimation – 1. Lump-sum or approximate estimation 2. Detailed estimation Rate analysis – 1. Item rate basis Costing – 1. Percentage basis 2. Item rate basis

WORKSHOP CALCULATION & SCIENCE: 80 Hrs.		
Professional Knowledge WCS- 80 Hrs.	Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study.	<p>WORKSHOP CALCULATION (40 Hrs.)</p> <p>Concept of Fraction, Numbers, Variable, Constant, percentage, ratio proportion.</p> <p>Fundamental Algebraic formulae for multiplication and factorization. Algebraic equations, simple & simultaneous equations, quadratic equations and their applications.</p> <p>Concept on progressions.</p> <p>Mensuration: - Concept on basic geometrical definitions, basic geometrical theorems. Determination of areas, perimeters of triangles, quadrilaterals, polygons, circle, sector etc.</p> <p>Areas of irregular shaped surfaces. Simpson's rule, trapezoidal rule, applications.</p> <p>Determination of volumes, surface areas of cylinders, prisms, pyramids cone spheres, frustums,</p> <p>Volume estimate related to civil work.</p> <p>Calculation related to swept volume, clearance volume.</p> <p>Trigonometry: Ratios, tables, degree, grade and radian. Calculation of height and distance with the help of trigonometric formulae.</p> <p>Application of trigonometry in determining the areas of polygons and solution of triangle.</p> <p>Trigonometric ratios of compound, multiple and sub-multiple angle and their uses.</p> <p>Related problems on stress, strain, factor of safety, torsion strength of different shafts.</p> <p>Determination of CG, MI of different solid sections. Problems on power transmission of shaft.</p> <p>Calculations involving Shear Force and Bending Moments diagrams of simply supported beams, cantilevers with point load and uniformly distributed load.</p> <p>Calculation of machining time for different turning, shaping, drilling, milling, grinding, etc.</p> <p>Graphs: basic concept, importance. Plotting of graphs of simple linear equation.</p> <p>Related problems on ohm's law, series-parallel combination.</p> <p>Statistics: Frequency tables, normal distribution, measure of central tendency – Mean, Median & Mode. Concept of probability. Charts like pie chart, bar chart, line diagram, Histogram and frequency polygon.</p> <p>WORKSHOP SCIENCE (40 Hrs.)</p> <p>Fundamental units, Scalar & Vector quantity. Difference system of units: F.P.S., C.G.S., M.K.S & S.I.</p>

	<p>Multiplication factors such as giga, mega, kilo, milli, micro etc. interrelation, calculation and applications. Dimensioning of physical quantities (MLT).</p> <p>Engineering Materials: – Classification properties and uses of ferrous metals, non-ferrous metals, alloys etc. Properties and uses of non-metals such as wood, plastic, rubber, ceramics industrial adhesives.</p> <p>Heat & Temperature: - Concepts, differences, effects of heat, different units, relation, specific heat, thermal capacity, latent heat, water equivalent, mechanical equivalent of heat. Different Temperature measuring scales and their relation. Transference of heat, conduction, convection and radiation. Thermal Expansion related calculations.</p> <p>Force and Motion: - Newton’s laws of motion, displacement, velocity, acceleration, retardation, rest & motion such as linear, angular. Force – units, different laws for composition and resolution of forces. Concept on centre of gravity and equilibrium of forces in plane. Concept of moment of inertia and torque.</p> <p>Work, power & energy: – Definitions, units, calculation & application. Concept of HP, IHP, BHP and FHP – related calculations with mechanical efficiency. S.I. unit of power and their relations. Vector representation of work.</p> <p>Friction: - Definitions, effects of friction, Laws of static & dynamic friction, types of friction problems on horizontal and inclined applied forces. Angle of repose. Bodies on rough inclined plane: Explanation and related problems. Introduction on corrosion, causes and prevention. Lubrication process: Types of Lubricants, etc.</p> <p>Stress & Strain: - Concepts of stress, strain, modulus of elasticity. Stress- strain curve. Hook’s law, different module of elasticity like Young’s modulus, modulus of rigidity, bulk modulus and their relations. Poisson’s ratio. Principle of super position, stresses in varying cross-sections stress in composite bars.</p> <p>Simple machines: - Concept of Mechanical Advantage, Velocity Ratio, Efficiency and their relations. Working principles of inclined plane, lever, screw jack, wheel and axle, differential wheel and axle, worm and worm wheel, rack and pinion. Gear train.</p> <p>Heat Treatment: - Introduction, different methods of Heat Treatment and their</p>
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		<p>purposes. Iron-carbon diagram and Time-Temperature-Transformation (TTT) diagram.</p> <p>Electricity:- Basic definitions like emf, current, resistance, potential difference, etc. Uses of electricity. Difference between ac and dc. Safety devices. Difference between conductors and semiconductors and resistors, Materials used for conductors, semiconductors and resistors. Ohm's Law. Series, parallel and series-parallel combination of resistances. Concept, definitions and units of electrical work, power and energy with related problems.</p>

SYLLABUS FOR CORE SKILLS

1. Training Methodology (TM) (Common for all CITS trades) (270 Hrs + 180 Hrs.)

Learning outcomes, assessment criteria, syllabus and Tool List of above Core Skills subjects which is common for a group of trades, provided separately in www.bharatskills.gov.in

7. ASSESSMENT CRITERIA

LEARNING OUTCOME	ASSESSMENT CRITERIA
TRADE TECHNOLOGY (TT)	
1. Analyse measurement plan of site with existing architectural components. (NOS: IES/N9403)	Measure and calculate the area of a theory classroom. Generate the measurement plan of a site. Produce the architectural plan with existing structural level and position. Implement the existing interior services on measurement plan.
2. Demonstrate collection of anthropometric & ergonomic data for residence, retail and commercial buildings. (NOS: CON/N9465)	Compute the ergonomics factor in residential designing. Apply anthropometric data of furniture in residential planning. Apply the data, factor and make the PPT. Check the given assignment as per instruction. Relate the ergonomic factor with anthropometric data for retail outlet. Calculate & apply the data's, factors in design. Prepare PPT of retail outlet based on data & factor. Check the given assignment as per instruction. Formulate and generate the furniture, partition in commercial area. Calculate & apply the data, factors in design. Prepare PPT of commercial spaces based on data & factor. Check the given assignment as per instruction.
3. Explain the process of drawing various kitchen & toilet design, layout and materials to be used. (NOS: CON/N9466)	Conceptually able to assess for space development. Compare & justify the ideas in different categories of houses. Improve to vision during industrial visit. Check the drawing as per given instruction. Demonstrate different types of modular kitchen. Illustrate various kitchen model layouts with various amenities. Draw the types of kitchen layout based on various amenities. Check the drawing as per given instruction. Demonstrate the conceptual design based on color. Convert the conceptual design in actual working drawing. Produce the working drawing would be required for site completion. Check the drawing as per given instruction. Demonstrate the conceptual design based on color & sanitary fittings. Convert the conceptual design in actual working drawing. Produce the working drawing, legend of fittings & hardware would be required for site completion. Check the drawing as per given instruction.

4. Appraise the concept of sliding folding partition viz. aluminium frame with glass and construct the drawing. (NOS: CON/N9482)	Demonstrate the uses & specification of sliding folding partition.
	Generate the working detail of sliding folding partition.
	Check the drawing as per given instruction.
5. Demonstrate the concept of acoustic partition and materials used for flooring and ceiling. (NOS: CON/N9467)	Illustrate the different acoustic material used for flooring, ceiling, partition & panelling.
	Create various design concepts with different acoustic material in specified area.
	Create a PPT based on acoustic material in various design, pattern & concept.
	Check the given assignment as per instruction.
6. Construct drawing of different types of flooring with concrete panel. (NOS: CON/N9468)	Demonstrate the concept of raised flooring.
	Illustrate the technical detail of various material used for raised flooring.
	Generate the working drawing of concrete panel raised flooring
	Check the drawing as per given instruction.
7. Demonstrate drawing of a jewellery showroom including layout of furniture, firefighting measures, Air Conditioning system and other interior services. (NOS: CON/N9469)	Explain the importance of fire fighting provision for the building.
	Illustrate the smoke detector & sprinkler.
	Compute the fire fighting elements with other interior services & produce the working drawing.
	Check the drawing as per given instruction.
	Selection of AC system according to requirement of place.
	Illustrate the position of AC outlets for central AC system.
	Produce working drawing of AC outlet at ceiling /wall surface with reference of other interior services.
	Illustrate the introduction & requirement of CCTV & speakers.
	Identify the position of CCTV & speaker at ceiling /wall surface.
Apply the position of CCTV & speaker in working drawing with other interior services.	
8. Demonstrate layout planning and drawing of different types of outlets viz. Departmental store, Supermarket, Specialty store and E-Market. (NOS: CON/N9470)	Identify the various types of retail outlets.
	Predict the function & style of any retail outlet.
	Describe the concept & requirement of outlet.
	Make a presentation on retail store designs.
	Improve the vision during the industrial visit.
	Check the given assignment as per instruction.
9. Explain the basic principles in designing a retail store. (NOS: CON/N9483)	Define the space with the function & style.
	Organize the given space of a retail outlet.
	Demonstrate sequential experience of brand products.
	Apply vision communication on given retail outlets.
	Apply basic designing principles on retail store design.
Demonstrate basic principles in retail store with PPT	

	Check the given assignment as per instruction.
10. Demonstrate the overall designing concept of Apparel store outlet/Super Market/ Cosmetic store and evaluate the layout. (NOS: CON/N9471)	<p>Achieve the presentation skill to demonstration.</p> <p>Make the furniture layout plan with material for presentation.</p> <p>Design & make front façade of outlet for customer attraction.</p> <p>Check the drawing as per given instruction.</p> <p>Distinguish the requirement of super market.</p> <p>Organize the super market.</p> <p>Demonstrate sequential arrangements of products.</p> <p>Apply various visual communications.</p> <p>Prepare the bubble diagram for the space planning.</p> <p>Check the drawing as per given instruction.</p> <p>Illustrate the design of cosmetic store.</p> <p>Create a PPT based on principle of retail outlet.</p> <p>Check the given assignment as per instruction.</p>
11. Explain preparation of detailed drawing of different commercial areas viz. Bank, Restaurant, Hotel Lobbies, Poly Clinic etc. (NOS: CON/N9472)	<p>Design & prepare the layout plan of outlet based on basic principle of designing.</p> <p>Apply anthropometric data & ergonomic factor on an outlet design.</p> <p>Execute theme based ideas arithmetically in plan.</p> <p>Produce the detail working drawing like interior services, fire fighting, furniture details.</p> <p>Check the drawing as per given instruction.</p>
12. Compare the price of materials used in decoration of residential and commercial complex. (NOS: CON/N9473)	<p>Interpreted the importance of estimation costing.</p> <p>Compare the price/ cost of decorative materials like LED lights, sockets, wallpaper, Fans, Panels etc. as per their make , brand value and other necessary information.</p> <p>Collect & summarize the drawing detail for the calculation of area & quantity.</p> <p>Check the drawing as per given specification.</p>
13. Demonstrate calculation of a specific area required for interior decoration and designing. (NOS: CON/N9474)	<p>Compute the areas & quantity for estimation of interior work.</p> <p>Summarize the drawing for flawless costing.</p> <p>Calculate the all side walls, ceiling, flooring, and surface area of the room.</p> <p>Calculate the false ceiling surface.</p> <p>Calculate the material quantity of movable & non-movable furniture.</p> <p>Calculate the material quantity of windows treatments.</p> <p>Calculate the material quantity of miscellaneous items.</p>
14. Assess the rate of items and quantity required during preparation of bill of quantity (BOQ) for a project.	<p>Demonstrate the method of estimation & costing.</p> <p>Prepare rate analysis chart of different vendors & companies.</p> <p>Compose the estimation costing table in excel sheet.</p> <p>Analyzing rates according to drawing & specification.</p>

(NOS: CON/N9484)	Prepare the cost of project in the bill of quantity (BOQ) for a project.
<p>15. Demonstrate basic mathematical concept and principles to perform practical operations. Understand and explain basic science in the field of study. (NOS: ASC/N9411)</p>	<p>Solve different mathematical problems</p> <p>Explain concept of basic science related to the field of study</p>

8. INFRASTRUCTURE

LIST OF TOOLS AND EQUIPMENT FOR INTERIOR DESIGN & DECORATION CITS TRADE			
for batch of 25 candidates			
S No.	Name of the Tool & Equipment	Specification	Quantity
A. FURNITURE FOR COMPUTER LAB			
1.	Computer table		25 NOS.
2.	Trainees chair with arm		25 NOS.
3.	Trainees desk for theory class	size 900x600	25 NOS.
4.	Trainees stool for theory class		3 NOS.
5.	Students lockers	with 8 compartments	4 NOS.
6.	Steel book case (with lockable glass shutters)		2 NOS.
7.	Steel Almirah		1 No.
8.	Instructor's table with glass top		1 No.
9.	Instructor's chair		2 NOS.
10.	Visitor's chair		2 NOS.
11.	Magnetic White Board & accessories	(4'x12')	1 No.
12.	Pin-up board (with or without stand)		8 NOS.
13.	Air conditioner		As required
14.	Directional Magnetic Compass		5 NOS.
15.	Metallic tape / Fiber Glass Measuring	Tape (3mt., 30mt., 60mt. long)	As required
16.	Display board covered with glass or acrylic sheet		2 NOS.
17.	Vacuum Cleaner		1 No.
18.	Fire Extinguisher		1 No.
19.	Shoe rack		1 No.
20.	Wall clock		1 No.
B. COMPUTER & SOFTWARE			
21.	Personal Computer with LCD monitor & DVD re-writer along with Latest compatible OS	CPU: 32/64 Bit i3/i5/i7 or latest processor, Speed: 3 GHz or Higher. RAM:-4 GB DDR-III or Higher, Wi-Fi Enabled. Network Card: Integrated Gigabit Ethernet, with USB Mouse, USB Keyboard and Monitor (Min. 17 Inch. Licensed Operating System and Antivirus compatible with trade related software.	25 NOS.
22.	Laptop with latest configuration (vista & above) pre-loaded with operating system (for one instructor)		1 No.

23.	Drafting Software like AutoCAD (EDUCATIONAL VERSION)		26 NOS.
24.	MS Office application software		26 NOS.
25.	Anti Virus Software		26 NOS.
26.	Other software's	CORAL, PHOTOSHOP etc.(optional)	As required
27.	Colored Plotter	A0 size	1 No.
28.	Laser Jet, Duplex, Multifunctional Color Printer with Latest Configuration	(A3 size)	1 No.
29.	Visualizer with accessories(with latest configuration)		1 No.
30.	UPS on line		As required
31.	LED Projector latest model with white screen		1 No.
32.	Interactive Board with complete accessories (optional)		1 No.
C. CONSUMABLE ITEMS FOR ONE BATCH			
33.	Calligraphy pens /Graphic Pens / Ink / Stencil		As per requirement
34.	Roll-n-draw roller scale	30cm long	26 NOS.
35.	Pen Drive		As per requirement
36.	External Hard disk		1 No.
37.	Calculator Scientific		05 NOS.
38.	Electronic Glue gun		05NOS.
39.	Hand drill machine		05 NOS.

