Model Curriculum

QP Name: Draughtsperson-Civil Works

QP Code: CON/Q1301

Version: 4.0

NSQF Level: 4

Model Curriculum Version: 4.0

Construction Skill Development Council of India|| CPB-201 and 202, Tower 4B, DLF Corporate Park, Mehrauli-Gurgaon Rd, DLF Phase 3, Gurugram, Haryana, 122002

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Training Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Draughting
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/3118.0200
Minimum Educational Qualification and Experience	Completed 3rd year of 3-year/ 4-year UG (in Electrical Engineering) OR 12th grade pass OR Completed 2nd year of 3-year diploma after 10th (in Civil Engineering) OR Pursuing 2nd year of 3-year diploma after 10th (in Civil Engineering) OR 10th grade pass and pursuing continuous schooling OR 11th grade pass with 1-year relevant experience OR 10th grade pass with 2-year relevant experience OR 8th grade pass with 4-year relevant experience
Pre-Requisite License or Training	NA
Minimum Job Entry Age	18 Years
Last Reviewed On	30/04/2025
Next Review Date	30/04/2028
NSQC Approval Date	08/05/2025
QP Version	4.0
Model Curriculum Creation Date	30/04/2025
Model Curriculum Valid Up to Date	30/04/2028
Model Curriculum Version	4.0
Minimum Duration of the Course	450 Hours
Maximum Duration of the Course	450 Hours

Program Overview

This section summarises the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills to:

- Demonstrate preparing for the drawing based on its type.
- Explain how to prepare two-dimensional civil drawings using a computer-aided design (CAD) system.
- Demonstrate how to create Scales in CAD, Orthographic Projections and Creating Layouts and Views.
- Demonstrate how to create Scales in CAD, Orthographic Projections and Creating Layouts and Views.
- Show how to use dimensioning tools in the CAD software to annotate lengths, angles, and radius on your orthographic projections.
- Demonstrate how to draw different types of doors and windows on CAD.
- Demonstrate how to prepare various types of stairs with their detailed views and sections.
- Demonstrate how to create various Isometric / Oblique / Perspective views of different solid / hollow / cut sections in CAD.
- Demonstrate how to store and maintain the produced drawings.
- Explain the importance of working effectively in a team to deliver desired results at the workplace.
- Elucidate ways to plan and organise work to meet expected outcomes.
- Elucidate ways to work according to personal health, safety and environment protocols at the construction site.
- Discuss the applicable employability skills.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	Total Duration
CON/N1301: Carry out the initial setup and understand the requirement for preparation of drawings NOS Version No.: 4.0 NSQF Level: 4	**10:00**	**15:00**	**05:00**	**30:00**
Module 1: Introduction to the Role of a Draughtsperson-Civil works	05:00	00:00	0:00	05:00
Module 2: Carrying out preparatory works for drawings	05:00	15:00	05:00	25:00
CON/N1302: Prepare 2-dimensional civil drawings using computer-aided design (CAD) system NOS Version No.: 4.0 NSQF Level: 4	**15:00**	**30:00**	**15:00**	**60:00**
Module 3: Prepare 2 dimensional civil drawings using computer aided design (CAD) system	15:00	30:00	15:00	60:00
CON/N1303: Draw different types of scales and Orthographic projections on CAD NOS Version No.: 1.0 NSQF Level: 4	**10:00**	**40:00**	**10:00**	**60:00**
Module 4: Draw different types of scales and Orthographic projections on CAD	10:00	40:00	10:00	60:00

CON/N1304: Draw different types of doors and windows on CAD NOS Version No.: 1.0 NSQF Level: 4	**15:00**	**35:00**	**10:00**	**60:00**
Module 5: Draw different types of doors and windows on CAD	15:00	35:00	10:00	60:00
CON/N1305: Draw different types of stair structures on CAD NOS Version No.: 1.0 NSQF Level: 4	**15:00**	**35:00**	**10:00**	**60:00**
Module 6: Draw vertical movement structures according to shape, location, materials in stair	15:00	35:00	10:00	60:00
CON/N1306: Draw Isometric / Oblique / Perspective views of different solid / hollow / cut sections and 3D modelling concept NOS Version No.: 1.0 NSQF Level: 4	**10:00**	**40:00**	**10:00**	**60:00**
Module 7: Draw Isometric / Oblique / Perspective views of different solid / hollow / cut sections and 3D modelling concept	10:00	40:00	10:00	60:00
CON/N8001: Work effectively in a team to deliver desired results at the workplace NOS Version No.: 12.0 NSQF Level: 4	**10:00**	**20:00**	**00:00**	**30:00**
Module 8: Work according to personal health, safety and environment protocols at the construction site	10:00	20:00	00:00	30:00
CON/N8002: Plan and organise work to meet expected outcomes NOS Version No.: 9.0 NSQF Level: 4	**10:00**	**20:00**	**00:00**	**30:00**
Module 9: Plan and organise work to meet expected outcomes	10:00	20:00	00:00	30:00
CON/N9004: Follow health and safety practices at work NOS Version No.: 1.0 NSQF Level: 4	**10:00**	**20:00**	**00:00**	**30:00**
Module 10: Health and Safety at Work	10:00	20:00	00:00	30:00
DGT/VSQ/N0101: Employability Skills (30 Hours) NOS Version: 1.0 NSQF Level: 2	**30:00**	**00:00**	**00:00**	**30:00**
Module 11: Employability Skills	30:00	00:00	00:00	30:00
Total Duration	**120:00**	**270:00**	**60:00**	**450:00**

Module Details

Module 1: Introduction to the Role of a Draughtsperson-Civil Works

Mapped to CON/N1301, v4.0

Terminal Outcomes:

- Discuss the job role of a Draughtsperson-Civil Works.

Duration: **05:00**	**Duration**: **00:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the size and scope of the Construction industry and its sub-sectors. • Discuss the role and responsibilities of a Draughtsperson-Civil Works. • Identify various employment opportunities for a Draughtsperson-Civil Works.	
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop with any installed antivirus, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Carrying out Preparatory Works for Drawings

Mapped to CON/N1301, v4.0

Terminal Outcomes:

- Explain how to carry out the appropriate preparatory work for drawings.

Duration: 05:00	**Duration: 15:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List different types of drawings- civil/architectural/structural/mechanical/ plumbing/ electrical. • Explain procedure of basic set-up and operation of the computer system, and the peripheral devices that are used e.g. printer, projector etc. • Describe details and specifications, rough sketches, drawing brief, RFD etc. required for preparation of the drawings.	• Demonstrate basic set-up of the computer system, and the peripheral devices that are used e.g. printer, projector etc. • Show how to identify the provided drawing based on its type (Civil/ architectural/ structural/ mechanical/ plumbing/ electrical). • Demonstrate how to interpret drawing specifications (kind of projection, views), data, and information for drawing preparation/modification. • Show how to create rough sketches from drawing requirements using Indian Standard Codes for technical information. • Demonstrate how to customise drawing software and set page size, measurement unit/system, scale, and plot area before commencing work. • Show how to prepare the drawing title block with client or IS code specifications.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop with any installed antivirus.	
Tools, Equipment and Other Requirements	
Computer with following specifications • Operating System: 64-bit Microsoft® Windows® 11 and Windows 10 version 1809 or above • Processor: Basic - 2.5–2.9 GHz processor (base) ARM Processors are not supported, Recommended - 3+ GHz processor (base), 4+ GHz (turbo) • Memory: Basic: 8 GB, Recommended - 32 GB • Display Resolution: Conventional Displays - 1920 x 1080 with True Color, High Resolution & 4K Displays - Resolutions up to 3840 x 2160 (with "Recommended" display card) • Display Card: Basic: 2 GB GPU with 29 GB/s Bandwidth and DirectX 11 compliant Recommended: 8 GB GPU with 106 GB/s Bandwidth and DirectX 12 compliant DirectX 12 with Feature Level 12 • Disk Space: 10.0 GB (suggested SSD) • Network: See Autodesk Network License Manager for Windows • Pointing Device: MS-Mouse compliant AutoCAD Software (Version 2021 and above), MS Office, PDF Reader, Printer or Plotter (For A4 / A3 / A2 / A1 Size Print), UPS/Power Backup, Scientific Calculator, First Aid Kit, Dust Masks, Fire Extinguisher, Fire Prevention Kit, Stationary Kit	

Module 3: Prepare 2 Dimensional Civil Drawings using Computer Aided Design (CAD) System

Mapped to CON/N1302, v4.0

Terminal Outcomes:

- Demonstrate how to prepare various 2D drawings used in different types of construction projects.
- Show how to store and maintain the produced drawings.

Duration: 15:00	**Duration: 30:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain how to make necessary calculations to compute dimensions of various components/ parts of the drawings. • List the commands used in draughting of a drawing in AutoCAD software. • List the relevant Indian and International code of practice applicable to drawing relevant to construction work. • List types of drawings, their requirements for execution and details they should cover for various types of projects. • List different symbols and terms used in civil drawings, fabrication drawings, landscaping, layout drawings & survey maps • Describe dimensions and positions, their representation in drawings. • Discuss various checks for ensuring accuracy of drawings. • Describe the procedure of storing the produced drawing in hardcopy and soft copy format.	• Demonstrate preparation of various drawings used in different type of construction project. • Show how to produce 2D CAD (Computer-Aided Design) drawings. • Demonstrate how to produce topographical maps, contours, civil and structural drawings, architectural drawings as per requirement. • Demonstrate using the proper commands how to draw the necessary drawings in accordance with standard practices. • Show how to create tables/ legend to denote the name, dimensions, perimeter, and area of various parts or components of drawings. • Show how to add specifications/ grid system to the drawings as per the requirements of the designer or architect • Demonstrate preparing documentation for completion of work. • Demonstrate producing hard copies of the finished drawings. • Demonstrate the storing of drawings in appropriate storage medium.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop with any installed antivirus.	
Tools, Equipment and Other Requirements	
Computer with specifications as mentioned in the Previous Module, AutoCAD Software (Version 2021 and above), MS Office, PDF Reader, Printer or Plotter (For A4 / A3 / A2 / A1 Size Print), UPS/Power Backup, Scientific Calculator, First Aid Kit, Dust Masks, Fire Extinguisher, Fire Prevention Kit, Stationary Kit	

Module 4: Draw different types of scales and orthographic projections on CAD

Mapped to CON/N1303, v1.0

Terminal Outcomes:

- Demonstrate how to create Scales in CAD, Orthographic Projections and Creating Layouts and Views.
- Show how to use dimensioning tools in the CAD software to annotate lengths, angles, and radius on your orthographic projections.

Duration: 10:00	**Duration: 40:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Read and interpret the drawing requirements. • Identify R.F of the scale and calculate the length of scale on drawing • check the drawings to confirm their correctness • read and interpret the drawing requirements • write name of the drawing on heading at centre alignment • Write individual title for every projection drawing • check the drawings to confirm their compliance with the supplied design / object	• Draw different types of scales (Scale Up, Scale Down, Full Size Scale etc.) • Construct plain scales, comparative scales, diagonal scales and vernier scales, mark the distance on the scale • Carry out necessary calculations to compute dimensions of Various components/ parts of drawings • Develop view in orthographic projection by placing object between horizontal and vertical plane of axes • create side view of blocks in different inclination on VP and HP by auxiliary vertical plane • construct drawing views, construction lines and dimension lines as per standard
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop with any installed antivirus.	
Tools, Equipment and Other Requirements	
Computer with specifications as mentioned in the Previous Module, AutoCAD Software (Version 2021 and above), MS Office, PDF Reader, Printer or Plotter (For A4 / A3 / A2 / A1 Size Print), UPS/Power Backup, Scientific Calculator, First Aid Kit, Dust Masks, Fire Extinguisher, Fire Prevention Kit, Stationary Kit	

Module 5: Draw different types of doors and windows on CAD

Mapped to CON/N1304, v1.0

Terminal Outcomes:

- Demonstrate how to draw different types of doors and windows on CAD.
- Show how to produce detailed Views of doors and windows with dimensioning and annotation of Doors and Windows.

Duration: 15:00	Duration: 35:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
● Read and interpret the drawing requirements such as rough sketches, specifications, drawing brief, RFD etc. ● Carry out necessary calculations to compute dimensions of various components/ parts of drawings. ● Provide specifications and use codes and other references as per the drawing requirements ● Check drawings to confirm their compliance with the required design	● Draw ledged and battened door, ledged, battened and braced door And ledged, battened, braced and framed door ● Draw panelled door and panelled and glazed door ● Draw different types of fixtures and fastenings ● draw various types of doors such as flush doors, collapsible door, sliding door ● draw various types of windows such as panelled windows, metal windows, corner window, gable window, ventilators
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop with any installed antivirus.	
Tools, Equipment and Other Requirements	
Computer with specifications as mentioned in the Previous Module, AutoCAD Software (Version 2021 and above), MS Office, PDF Reader, Printer or Plotter (For A4 / A3 / A2 / A1 Size Print), UPS/Power Backup, Scientific Calculator, First Aid Kit, Dust Masks, Fire Extinguisher, Fire Prevention Kit, Stationary Kit	

Module 6: Draw different types of stair structures on CAD

Mapped to CON/N1305, v1.0

Terminal Outcomes:

- Demonstrate how to prepare various types of stairs with their detailed views and sections.
- Show how to give dimension, annotate, and organize stair designs in CAD, ensuring compliance with building codes and accessibility standards.

Duration: 15:00	**Duration: 35:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Read and interpret the drawing requirements such as rough sketches, specifications, drawing brief, RFD etc. • Add Symbols and specifications and use codes and other references as per the drawing requirements • Check drawings to confirm their compliance with the required design	• Carry out necessary calculations to compute dimensions of various components/ parts of drawings. • Draw straight stair • Draw quarter turn newel stair • Draw bifurcated stair • Draw quarter turn and geometrical stair • Draw half turn and R.C.C dog legged stair • Draw the R.C.C open well stair • Draw three quarter turn stairs • Draw spiral stairs
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop with any installed antivirus.	
Tools, Equipment and Other Requirements	
Computer with specifications as mentioned in the Previous Module, AutoCAD Software (Version 2021 and above), MS Office, PDF Reader, Printer or Plotter (For A4 / A3 / A2 / A1 Size Print), UPS/Power Backup, Scientific Calculator, First Aid Kit, Dust Masks, Fire Extinguisher, Fire Prevention Kit, Stationary Kit	

Module 7: Draw Isometric / Oblique / Perspective views of different solid / hollow / cut sections and 3D modelling concept

Mapped to CON/N1306, v1.0

Terminal Outcomes:

- Demonstrate how to create various Isometric / Oblique / Perspective views of different solid / hollow / cut sections in CAD.
- Show how to generate and rendered images of 3D models, with appropriate materials, textures, and lighting using 3D modelling concept.

Duration: 10:00	**Duration: 40:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Read and interpret the drawing requirements. • Create tables/ legend to denote the name, dimensions, perimeter, and area of various parts or components of drawings as per client requirement • Check the drawings to confirm their compliance with the supplied design / object. • Define 3D modeling concept in CAD. • Plot the drawing with required scale. • Check drawings to confirm their compliance with the required design.	• Carry out necessary calculations to compute dimensions of various components/ parts of drawings. • Construct an Isometric scale to a given length. Draw the isometric projection of regular solids. • Draw the isometric views for the given solids with hollow and cut sections • Draw the given objects/component in perspective view by Vanishing point method i. Single point perspective ii. Two-point perspective/Angular perspective visual ray method/multi-view method • Start up the software and adjust the page size, measurement unit, scale and plot area before staring the work. • Demonstrate 3D coordinate systems to aid in the construction of 3D objects. • Create and use model space viewports. • Create a standard engineering layout. • Create and edit wireframe model. • Create and edit solid mesh and surface modeling. • create and edit simple 2D regions and 3D solid models. • Generate 3D text and dimensions using a variety of 3D display techniques • Render a 3D model with a variety of lights and materials.
Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop with any installed antivirus.	
Tools, Equipment and Other Requirements	
Computer with specifications as mentioned in the Previous Module, AutoCAD Software (Version 2021 and above), MS Office, PDF Reader, Printer or Plotter (For A4 / A3 / A2 / A1 Size Print), UPS/Power Backup, Scientific Calculator, First Aid Kit, Dust Masks, Fire Extinguisher, Fire Prevention Kit, Stationary Kit	

Module 8: Work according to personal health, safety and environment protocols at the construction site

Mapped to CON/N8001, v 12.0

Terminal Outcomes:

- Explain the importance of interacting and communicating in an effective manner.
- Elucidate ways to support co-workers to execute the project requirements.
- Elucidate ways to practice inclusion at the workplace.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Elucidate own roles and responsibilities. • Explain the importance of effective communication. • Elucidate the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc. • Explain different modes of communication used at the workplace. • Explain the importance of creating a healthy and cooperative work environment among the gangs of workers. • Elucidate applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement. • Explain the importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site. • Explain the importance and need of supporting co-workers facing problems for the smooth functioning of work. • Discuss the fundamental concept of gender equality. • Explain how to recognise and be sensitive to issues of disability, culture and gender. • Discuss legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation.	• Demonstrate how to pass on work-related information/requirements clearly to the team members. • Show how to report any unresolved problem to the supervisor immediately. • Demonstrate ways to hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams. • Demonstrate ways to work together with co-workers in a synchronized manner. • Demonstrate effective implementation of gender-neutral practices at the workplace. • Demonstrate ways to address discriminatory and offensive behaviour in a professional manner as per organizational policy.
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop with any installed antivirus, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 9: Plan and Organize Work to meet Expected Outcomes

Mapped to CON/N8002, v 9.0

Terminal Outcomes:

- Elucidate ways to plan and prepare for work.
- Explain the importance of organising required resources as per the work plan.
- Explain the importance of completing work as per the plan.

Duration: 10:00	**Duration: 20:00**
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of proper housekeeping including safe waste disposal. • Discuss policies, procedures and work targets set by superiors. • Explain how to identify work activities that need to be planned and organized. • Explain how to determine the task requirements. • Explain how to determine the quality requirements related to the task. • Elucidate how to undertake all aspects of planning and organizing the task, including interpretation of task, reading drawings/schedules, arranging resources, reporting problems etc. • Explain how to implement the planned activities.	• Demonstrate ways to determine the work requirements corresponding to the task (drawings/schedules/instructions/methodology), safety, tools and equipment prior to the commencement of the task. • Show how to prepare the work areas in coordination with team members. • Demonstrate the procedures for organizing the required materials, tools and tackles required for the task. • Demonstrate how to use resources in an optimum manner to avoid any unnecessary wastage. • Demonstrate the practices to use tools, tackles and equipment carefully to avoid damage. • Show how to clean and organise the workplace after completion of tasks.
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop with any installed antivirus, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 10: Follow Health and Safety Practices at Work

Mapped to CON/N9004, v1.0

Terminal Outcomes:

- Explain the applicable practices to maintain health and safety at work.
- Discuss workplace emergency procedures.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the regulations concerning workplace health and safety. • List the appropriate Personal Protective Equipment (PPE) to be used for workplace health and safety. • Discuss the appropriate practices to maintain hygiene at work. • Explain how to identify and mitigate potential hazards at work. • Discuss the importance of participating in safety drills at work. • Elaborate on the appropriate practices to be followed during workplace emergencies. • Explain the documentation requirements concerning workplace emergencies.	• Demonstrate the use of relevant PPE. • Show how to lift heavy items safely to prevent any injuries. • Demonstrate the use of appropriate emergency equipment, e.g. use of fire extinguishers for different types of fire. • Show how to administer first aid to injured or unwell personnel. • Demonstrate the relevant practices for effective waste management.
Classroom Aids:	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop with any installed antivirus, Video Films	
Tools, Equipment and Other Requirements	
Face Mask, Soap/ Hand Sanitizer, Safety goggles, Fire extinguishers, Sand buckets, Fire prevention kit, First Aid box, Safety Tags, Safety Notice Board	

Module 11: Employability Skills (30 Hours)

Mapped to DGT/VSQ/N0101, v1.0

Duration: 30:00

Key Learning Outcomes

Introduction to Employability Skills Duration: 1 Hour

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

Constitutional values - Citizenship Duration: 1 Hour

After completing this programme, participants will be able to:

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen
4. Show how to practice different environmentally sustainable practices.

Becoming a Professional in the 21st Century Duration: 1 Hour

After completing this programme, participants will be able to:

5. Discuss the importance of relevant 21st-century skills.
6. Exhibit 21st-century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

Basic English Skills Duration: 5 Hours

After completing this programme, participants will be able to:

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

Career Development & Goal Setting Duration: 1 Hour

After completing this programme, participants will be able to:

11. Create a career development plan with well-defined short- and long-term goals

Communication Skills Duration: 2.5 Hours

After completing this programme, participants will be able to:

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

Diversity & Inclusion Duration: 1 Hour

After completing this programme, participants will be able to:

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

Financial and Legal Literacy Duration: 2.5 Hours

After completing this programme, participants will be able to:

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.

Essential Digital Skills Duration: 5 Hours

After completing this programme, participants will be able to:

20. Describe the role of digital technology in today's life
21. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
22. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
23. Create sample word documents, excel sheets and presentations using basic features
24. utilize virtual collaboration tools to work effectively

Entrepreneurship Duration: 3.5 Hours

After completing this programme, participants will be able to:

25. Explain the types of entrepreneurship and enterprises
26. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
27. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
28. Create a sample business plan, for the selected business opportunity

Customer Service Duration: 2.5 Hours

After completing this programme, participants will be able to:

29. Describe the significance of analyzing different types and needs of customers
30. Explain the significance of identifying customer needs and responding to them in a professional manner.
31. Discuss the significance of maintaining hygiene and dressing appropriately

Getting Ready for apprenticeship & Jobs Duration: 4 Hours

After completing this programme, participants will be able to:

32. Create a professional Curriculum Vitae (CV)
33. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
34. Discuss the significance of maintaining hygiene and confidence during an interview
35. Perform a mock interview
36. List the steps for searching and registering for apprenticeship opportunities
37. Discuss the legal rights, laws, and aids

On-the-Job Training

Mapped to Draughtsperson Civil Works, v 4.0

CON/N01301: Manage Carrying out Preparatory Works for Drawings, v 4.0
Mandatory Duration: 05:00 Hours
Location: On-Site
Terminal Outcomes: • Demonstrate basic set-up of the computer system, and the peripheral devices that are used e.g. printer, projector etc. • Show how to identify the provided drawing based on its type (Civil/ architectural/ structural/ mechanical/ plumbing/ electrical). • Demonstrate how to interpret drawing specifications (kind of projection, views), data, and information for drawing preparation/modification. • Show how to create rough sketches from drawing requirements using Indian Standard Codes for technical information. • Demonstrate how to customise drawing software and set page size, measurement unit/system, scale, and plot area before commencing work. • Show how to prepare the drawing title block with client or IS code specifications.
CON/N01302: Prepare 2 Dimensional Civil Drawings using Computer Aided Design (CAD) System, v 4.0
Mandatory Duration: 15:00 Hours
Location: On-Site
Terminal Outcomes: • Demonstrate preparation of various drawings used in different type of construction project. • Show how to produce 2D CAD (Computer-Aided Design) drawings. • Demonstrate how to produce topographical maps, contours, civil and structural drawings, architectural drawings as per requirement. • Demonstrate using the proper commands how to draw the necessary drawings in accordance with standard practices. • Show how to create tables/ legend to denote the name, dimensions, perimeter, and area of various parts or components of drawings. • Show how to add specifications/ grid system to the drawings as per the requirements of the designer or architect • Demonstrate preparing documentation for completion of work. • Demonstrate producing hard copies of the finished drawings. • Demonstrate the storing of drawings in appropriate storage medium.
CON/N01303: Draw different types of scales and orthographic projections on CAD, v 1.0
Mandatory Duration: 10:00 Hours
Location: On-Site
Terminal Outcomes: • Draw different types of scales (Scale Up, Scale Down, Full Size Scale etc.) • Construct plain scales, comparative scales, diagonal scales and vernier scales, mark the distance on the scale

• Carry out necessary calculations to compute dimensions of Various components/ parts of drawings • Develop view in orthographic projection by placing object between horizontal and vertical plane of axes • Create side view of blocks in different inclination on VP and HP by auxiliary vertical plane • Construct drawing views, construction lines and dimension lines as per standard.
CON/N01304: Draw different types of doors and windows on CAD, v 1.0
Mandatory Duration: 10:00 Hours
Location: On-Site
Terminal Outcomes: • Draw ledged and battened door, ledged, battened and braced door And ledged, battened, braced and framed door • Draw panelled door and panelled and glazed door • Draw different types of fixtures and fastenings • Draw various types of doors such as flush doors, collapsible door, sliding door • Draw various types of windows such as panelled windows, metal windows, corner window, gable window, ventilators
CON/N01305: Draw vertical movement structures according to shape, location, materials in stair, v 1.0
Mandatory Duration: 10:00 Hours
Location: On-Site
Terminal Outcomes: • Carry out necessary calculations to compute dimensions of various components/ parts of drawings. • Draw straight stair • Draw quarter turn newel stair • Draw bifurcated stair • Draw quarter turn and geometrical stair • Draw half turn and R.C.C dog legged stair • Draw the R.C.C open well stair • Draw three quarter turn stairs • Draw spiral stairs
CON/N01306: Draw Isometric / Oblique / Perspective views of different solid / hollow / cut sections and 3D modelling concept, v 1.0
Mandatory Duration: 10:00 Hours
Location: On-Site
Terminal Outcomes: • Carry out necessary calculations to compute dimensions of various components/ parts of drawings. • Construct an Isometric scale to a given length. Draw the isometric projection of regular solids. • Draw the isometric views for the given solids with hollow and cut sections • Draw the given objects/component in perspective view by Vanishing point method (i) Single point perspective (ii)Two point perspective/Angular perspective visual ray method/multi-view method • Start up the software and adjust the page size, measurement unit, scale and plot area before staring the work. • Demonstrate 3D coordinate systems to aid in the construction of 3D objects.

- Create a standard engineering layout.
- Create and edit wireframe model.
- Create and edit solid mesh and surface modeling.
- Create and edit simple 2D regions and 3D solid models.
- Generate 3D text and dimensions using a variety of 3D display techniques
- Render a 3D model with a variety of lights and materials.

Annexure

Trainer Requirements

Trainer Prerequisites					
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Preferable Training Experience**	
		Years	***Specialization***	***Years***	***Specialization***
B.E./B. Tech	Civil Engineering	2	Drafting and Designing	1	Drafting and Designing
OR					
Diploma	Civil Engineering	3	Drafting and Designing	1	Drafting and Designing
OR					
ITI	Relevant Trade	6	Drafting and Designing	1	Drafting and Designing
OR					
Ex-Army Graduate	in any Stream	6	Drafting and Designing	1	Drafting and Designing

Trainer Certification	
Domain Certification	**Platform Certification**
Recommended that the Trainer is certified for the Job Role: "Draughtsperson-Civil Works", mapped to the Qualification Pack: "CON/Q1301, v4.0". The minimum accepted score is 80%.	Recommended that the Trainer is certified for the Job Role: "Trainer (VET and skills)", mapped to the Qualification Pack: "MEP/Q2601, v3.0". The minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites			
Minimum Educational Qualification	**Specialisation**	**Relevant Industry Experience**	
		Years	***Specialization***
B.E. / B.Tech	Civil Engineering	2	Drafting and Designing
OR			
Diploma	Civil Engineering	5	Drafting and Designing

Assessor Certification	
Domain Certification	**Platform Certification**
Recommended that the Assessor is certified for the Job Role: "Draughtsperson-Civil Works", mapped to the Qualification Pack: "CON/Q1301, v4.0". The minimum accepted score is 80%.	Recommended that the Assessor is certified for the Job Role: "Assessor (VET and skills)", mapped to the Qualification Pack: "MEP/Q2701, v3.0". The minimum accepted score is 80%.

Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

1. **Assessment system Overview:**

   Assessment is done through CSDCI affiliated Assessment Agencies. Assessors are trained & certified by CSDCI after Training Of Assessor (TOA) program. Assessments is conducted to gauge and assess the trainee's skill and knowledge competency in the specified areas. The assessment will have both theory and practical components in 30:70 ratio for **Draughtsperson Civil Works** job role.

   During the practical task, trainees are assessed on their workmanship, quality of finished product and time management. They will be graded for all their assessments based on the approved assessment strategy which is signed off by CSDCI. The Assessor submits an assessment plan to CSDCI prior to assessments.
   The assessment plan contains the following information:

   - What will be assessed, i.e. the competency based on each NOS based on theory and practical questions
   - How assessment will occur i.e. methods of assessment
   - When the assessment will occur
   - Duration of assessment
   - Where the assessment will take place i.e. context of the assessment (workplace/simulation)
   - The criteria for decision making i.e. those aspects that will guide judgments
   - Where appropriate, any supplementary criteria used to make a judgment on the level of performance.

2. **Testing Environment:**
   - Training partner shares the batch start date and end date, number of trainees and the job role.
   - Assessment will be fixed for a day after the end date of training. It could be next day or later. Assessment will be conducted at the training venue/test center.
   - The knowledge/theory assessments is conducted with proper seating arrangements with enough space between the candidates to prevent mal-practicing.
   - Question set for theory and practical will be distributed to each candidate by the Assessor. Theory testing will include multiple choice questions, pictorial question, etc. which will test the trainee on his theoretical knowledge of the subject. The skill /practical assessments will be conducted in the approved test centers. The training provider will ensure adequate tools and materials are available to conduct the practical test.
   - If number of candidates are more than 30, more assessors will be organized on same day to complete the assessment.
   - The assessment has to comprise of two components, namely:
     - Knowledge assessment (theory/viva assessment)
     - Skill assessment (practical/hands-on skill assessment)

3. **Mode of assessment:**
   - Demonstration/Practical for Performance /Skill Assessment
   - Synoptic multiple-choice question test
   - Viva for Knowledge Assessment

4. **Performance/skill assessment:**
    - The performance/skill assessment will be conducted through demonstration/practical
    - For the practical test trainees are assessed through a given task, which they have to complete correctly for them to be marked as passed.
    - The assessment is conducted in a simulated working environment. Due to this fact, the assessors must note that the naturally occurring evidence of competence is unavailable or infrequent. Simulation must be undertaken in a Realistic Working Environment which provides an environment that replicates the key characteristics of the workplace in which the skill to be assessed is normally employed.
5. **Knowledge Assessment:**
    - The knowledge assessments are conducted through written test/ viva.
    - Synoptic test is used for this. It is an MCQ (Multiple Choice Question) test which are prepared externally and externally marked, meaning by agency having no link with training partners. The test may be conducted by the assessor in the oral mode, if required, considering the lack of reading and comprehending acumen (skills) of trainees. In such cases, the assessor will mention it on top of the MCQ submitted to CSDCI.
    - The assessment strategy, weightage and duration of assessment for **Draughtsperson Civil Works** is summarized below

Assessment Type	Formative or Summative	Strategies	Weightage	Duration (hours)
Knowledge	Summative	MCQ/Viva	30	1.5
skill	Summative	Structured Practical Task	70	5.5

6. **Assessment Quality Assurance framework:**
    - CSDCI has developed assessment criteria framework for each Qualification pack as per National Occupational Standards. The criteria framework includes weightages/marks for each criterion under knowledge and skill. The criteria ensure quality assurance as it ensures valid, consistent and fair assessments at all locations. Issued to the affiliated Assessment body. The Assessment body develop questions based on CSDCI issued assessment criteria.
    - Evidences in the form of answer sheets in case of knowledge assessments are collected. For skill assessments videos and photographs are prepared as evidence. These are submitted by the assessor to the assessment agency. CSDCI does random checks of the same with the participant/ trainee's ID and ascertains authenticity and validity of assessments.
    - The training partner will intimate the time of arrival of the assessor and time of leaving the venue. Random spot checks/audit is conducted by CSDCI to monitor assessment.

7. **Methods of Validation:**
    - Unless the trainee is registered, the person cannot undergo assessment. To further ensure that the person registered is the person appearing for assessment, ID verification is carried out. Aadhar card number is part of registering the candidate for training. This forms the basis of further verification during the assessment.
    - Assessor conducts the assessment through theory and practical questions developed in accordance with the assessment criteria and guidelines issued by CSDCI. This too is verified by random audits carried out by CSDCI.
    - Evidences for assessments are to be collected and submitted to CSDCI for verification as per demand.
    - Assessment agency is responsible to put details in SIP. CSDCI will also validate the data and result received from the assessment agency.

8. Method of assessment documentation and access:

- The assessment agency will upload the result of assessment in the portal. The data will not be accessible for change by the assessment agency after the upload. The assessment data will be validated by CSDCI assessment team. After upload, only CSDCI can access this data.
- CSDCI approves the results within five days after which results are uploaded on SIDH by Assessment Agency.

9. On the Job:

- On job training (OJT), candidates undergo training and leaning at actual workplace for a fixed period of time and a certain weightage of assessment is allocated out of total skill weightage of Qualification Pack for undergoing OJT as stipulated by CSDCI. This OJT score and assessors' end point score are combined to arrive at final Marking/grading of trainees' skill test. The OJT score is determined by Supervisor of company under which candidates undergo on job training.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do it upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
MSDE	Ministry of Skill Development and Entrepreneurship
NCVET	National Council for Vocational Education and Training
NSDC	National Skill Development Corporation
SIDH	Skill India Digital Hub
CSDCI	Constriction Skill Development Council of India
AB	Awarding Body
SSC	Sector Skill Council
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
SANKALP	Skill Acquisition and Knowledge Awareness for Livelihood Promotion
STRIVE	Skills Strengthening for Industrial Value Enhancement
JSS	Jan Shikshan Sansthan
STT	Short Term Training
RPL	Recognition of Prior Learning
NAPS	National Apprenticeship Promotion Scheme
AA	Assessment Agency
TP	Training Provider / Training Partner
TC	Training Centre
ITI	Industrial Training Institute
NSQC	National Skill Qualification Committee
NSQF	National Skills Qualification Framework
Q-File	Qualification File
QP	Qualification Pack
MC	Model Curriculum
NOS	National Occupational Standards
PC	Performance Criteria
KU	Knowledge and Understanding
GS	Generic Skills
MCQ	Multiple Choice Question
EHS	Environment Health and Safety
PPE	Personal Protective Equipment
QA/QC	Quality Assurance / Quality Control
CAD	Computer-Aided Design
BIM	Building Information Modeling
BOQ	Bill of Quantities
DPC	Damp Proof Course
FSI	Floor Space Index
FAR	Floor Area Ratio
RL	Reduced Level
TBM	Temporary Benchmark
NGL	Natural Ground Level
LWL	Low Water Level
HFL	High Flood Level

PC*	Point of Curve
TP*	Turning Point
CG	Center of Gravity
RCC	Reinforced Cement Concrete
PCC	Plain Cement Concrete
TMT	Thermo-Mechanically Treated (Steel Bars)
MS	Mild Steel
SS	Stainless Steel
ACS	Asbestos Cement Sheet
BBS	Bar Bending Schedule
GA Drawing	General Arrangement Drawing
RC Drawing	Reinforced Concrete Drawing
ASD	Allowable Stress Design
WSD	Working Stress Design
LOI	Letter of Intent
NOC	No Objection Certificate
RFI	Request for Information
IS Code	Indian Standard Code
OHS	Occupational Health and Safety
ISO	International Organization for Standardization
NBC	National Building Code

Note: * marked Abbreviations are repeated in some cells. Both are different in their Nature