

DESKTOP PUBLISHING OPERATOR

NSQF LEVEL- 6



SECTOR- IT & ITeS

COMPETENCY BASED CURRICULUM
CRAFT INSTRUCTOR TRAINING SCHEME (CITS)



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

DESKTOP PUBLISHING OPERATOR

(Non-Engineering Trade)

SECTOR – IT & ITes

(Revised in 2019)

Version 1.1

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Developed By
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1. COURSE OVERVIEW

The Craft Instructors' Training Scheme is operational since inception of the Craftsmen Training Scheme. The first Craft Instructors' 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's 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 of one year duration. "Desktop Publishing Operator" CITS trade is applicable for Instructors of "Desk Top Publishing Operator" Trade under CTS.

The main objective of Crafts 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 industry, 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)	640
	Professional Knowledge (Trade Theory)	240
2.	Soft Skills	
	Practical	100
	Theory	100
3.	Training Methodology	
	TM Practical	320
	TM Theory	200
	Total	1600

2.3 PROGRESSION PATHWAYS

- Can join as an Instructor in 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 DGT 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

S No.	Subject		Marks	Internal Assessment	Full Marks	Pass Marks	
						Exam	Internal Assessment
1.	Trade Technology	Trade Theory	100	40	140	40	24
		Trade Practical	200	60	260	120	36
2.	Soft Skills	Practical	50	25	75	30	15
		Theory	50	25	75	20	15
3.	Training Methodology	TM Practical	200	30	230	120	18
		TM Theory	100	20	120	40	12
Total Marks			700	200	900	370	120

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

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 of internal 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	<ul style="list-style-type: none"> • Demonstration of good skill to establish a rapport with audience, presentation in orderly manner and establish as an

<p>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.</p>	<p>expert in the field.</p> <ul style="list-style-type: none"> • Above average 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.
<p>(c) Weightage in the range of more than 90% to be allotted during assessment</p>	
<p>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 high standard of crafts instructorship with minimal or no support and engage students by demonstrating good attributes of a trainer.</p>	<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 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	DESKTOP PUBLISHING OPERATOR -CITS
Trade Code	DGT/4030
NCO – 2015	2356.0100, 3512.0200, 4131.0600, 4132.0401, 2166.0501, 4132.0402
NSQF Level	Level-6
Duration of Craft Instructor Training	One Year
Unit Strength (No. Of Student)	25
Entry Qualification	<p>Degree in Computer Science/Computer Application/ Information Technology/ Printing Technology from recognized Board/ University.</p> <p style="text-align: center;">OR</p> <p>Diploma in Computer Science/Computer Application/ Information Technology/ Printing Technology from recognized Board/ University.</p> <p style="text-align: center;">OR</p> <p>National Trade Certificate in Desktop Publishing Operator or related trades.</p> <p style="text-align: center;">OR</p> <p>National Apprenticeship Certificate in Desktop Publishing Operator or related trades.</p>
Minimum Age	18 years as on first day of academic session.
Space Norms	84 Sq. m
Power Norms	8 KW
Instructors Qualification for	
1. Desktop Publishing Operator -CITS Trade	<p>B.Voc/ Degree in Computer Science/Computer Application/ Information Technology/ Printing Technology from AICTE/ UGC recognized university / board with two years experience in relevant field.</p> <p style="text-align: center;">OR</p> <p>Diploma (Minimum 2 Years) in Computer Science/ Computer Application/ Information Technology/ Printing Technology from recognized University/Board 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 passed in the Desktop Publishing Operator trade with seven years experience in relevant field.</p>

	<p><u>Essential Qualification:</u> Relevant National Craft Instructor Certificate (NCIC) in Desktop Publishing Operator trade in any of the variants under DGT.</p>
2. Soft Skills	<p>MBA/ BBA / Any Graduate/ Diploma in any discipline from AICTE/ UGC recognized College/ university with Three years' experience and short term ToT Course in Soft Skills from DGT institutes. (Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above).</p>
3. Training Methodology	<p>B.Voc/ Degree in any 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 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 any trade with seven years experience in training/ teaching field.</p> <p><u>Essential Qualification:</u> National Craft Instructor Certificate (NCIC) in any of the variants under DGT / B.Ed /ToT from NITTTTR or equivalent.</p>
4. Minimum Age for Instructor	21 Years

Distribution of training on Hourly basis: (Indicative only)						
Total Hrs /week	Trade Practical	Trade Theory	Soft Skills		Training Methodology	
			Practical	Theory	Practical	Theory
40 Hours	16 Hours	6 Hours	2.5 Hours	2.5 Hours	8 Hours	5 Hours

4. JOB ROLE

Brief description of job roles:

Manual Training Teacher/Craft Instructor: Manual Training Teacher; Craft Instructor gives instructions to students in schools and training institutions in manual crafts such as carpentry, tailoring, weaving, book binding, blacksmith etc. Imparts Theoretical instructions for the use of tools, mechanical drawings, blueprint reading and related subjects. Gives demonstrations of process and operations in the workshop; supervises and guides students in their practical work. Looks after stores, equipment and tools.

Desk Top Publishing Operator: Desk Top Publishing Operator lays out pages, selects size and style of type, and enters text and graphics into computer to produce printed materials, such as advertisements, brochures, newsletters, and forms, applying knowledge of graphic arts techniques and typesetting and using computer: Reviews layout and customer order. Enters text into computer, using input device such as mouse, keyboard, scanner, or modem. Scans artwork, using optical scanner which changes image into computer-readable form. Enters commands to position text and illustrations on page grid of computer monitor. Creates spaces between letters, columns, and lines, applying knowledge of type-setting, and enters commands, using input device. Arranges page according to aesthetic standards, layout specifications of Graphic Designer, and applying knowledge of layout and computer software. Prints paper or film copies of completed material. May alter illustration to enlarge, reduce, or clarify image. May operate automatic film developer to process photographs. May assemble artwork into paste-up and perform key lining manually.

Computer Operator: Computer Operator operates computer and peripheral equipment to process business, scientific, engineering, or other data, according to operating instructions. Enters commands, using keyboard of computer terminal, and presses buttons and flips switches on computer and peripheral equipment, such as tape drive, printer, data communications equipment, and plotter, to integrate and operate equipment, following operating instructions and schedule. An operator Loads peripheral equipment with selected materials, such as tapes and printer paper for operating runs, or oversees loading of peripheral equipment by Peripheral Equipment Operators. Enters commands to clear computer system and start operation, using keyboard of computer terminal. Observes peripheral equipment and error messages displayed on monitor of terminal to detect faulty output or machine stoppage. Enters commands to correct error or stoppage and resume operations. Notifies supervisor of errors or equipment stoppage. Clears equipment at end of operating run and reviews schedule to determine next assignment. Records problems which occurred, such as down time, and actions taken. May answer telephone calls to assist computer users encountering problem. May assist workers in classifying, cataloguing, and maintaining tapes.

Data Entry Machine Operator: Data Entry Operator operates keyboard or other data entry device to enter data into computer or onto magnetic tape or disk for subsequent entry: Enters alphabetic, numeric, or symbolic data from source documents into computer, using data entry device, such as keyboard or optical scanner, and following format displayed on screen. Compares data entered with source documents, or re-enters data in verification format on screen to detect errors. Deletes incorrectly entered data, and re-enters correct data. May compile, sort, and verify accuracy of data to be entered. May keep record of work completed.

Graphic Designer: Graphic Designer designs or creates graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects. Create designs, concepts, and sample layouts based on knowledge of layout principles and aesthetic design concepts. Determines size and arrangement of illustrative material and copy, and select style and size of type.

Domestic Data Entry Operator: Domestic Data Entry Operator is responsible to provide daily work reports and work on daily hour bases. The individual is responsible for electronic entry of data from the client side to the office site or vice-versa. Individual tasks vary depending on the size and structure of the organization.

Reference NCO-2015: -

- a) 2356.0100 – Manual Training Teacher/ Craft Instructor
- b) 3512.0200 – Desk Top Publishing Operator
- c) 4131.0600 – Computer operator
- d) 4132.0401 – Data Entry Machine Operator
- e) 2166.0501 – Graphic Designer
- f) 4132.0402 – Domestic Data Entry Operator

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. Demonstrate safe working practices and utility of computer hardware components, installation of Operating System and other system software.
2. Demonstrate downloading, installation, use of Open source software such as Open Office, Scribus etc. and adhering to IT ACT 2000.
3. Explain the application, Installation and utility of Cloud based Applications viz. Adobe Creative Cloud, Google Drive etc.
4. Demonstrate installation and operating method of Regional Language Software.
5. Plan, install and maintain Internet Security software.
6. Setup LAN and configure/ share various network resources such as printers, files, folders etc.
7. Download, install and operate Portable Document Format (PDFs) files.
8. Evaluate downloading, installation and maintenance of various image management tools.
9. Design and develop using Multimedia programs/ software.
10. Design and develop online publishing of documents in various formats using various e-Publishing tools.

6. COURSE CONTENT

SYLLABUS FOR DESKTOP PUBLISHING OPERATOR – CITS TRADE			
TRADE TECHNOLOGY			
Duration	Reference Learning Outcome	Professional Skill (Trade Practical)	Professional Knowledge (Trade Theory)
Practical 80 Hrs Theory 30 Hrs	Demonstrate safe working practices and utility of computer hardware components, installation of Operating System and other system software.	<ol style="list-style-type: none"> 1. Visit to the computer lab, follow and maintain safe working environment in line with occupational health and safety regulations. 2. Explain Physical components of computers. 3. Explain various parts of computer system. 4. Demonstrate the options with advanced (various modes of) booting and shutting down of computers. 5. Hard disk partitions, installation of Internet security software, device drivers, screen sharing applications. 	Fundamentals of Computers <ul style="list-style-type: none"> • Maintaining Safe regulations • Early computing devices • Mechanical computing devices • Electro-mechanical computing devices • Electronic computers • Modern computers • Functions and characteristics of computers, Hardware, Software • System software • Application software • Introduction to free software • Benefit and use of computers • Application of computer • Concept of Drive, folder and file • Operating System and it's functions • Classification of Operating system • Introduction to Windows 8/10 Operating System • Interface, Accessories, File and Folder management, Control Panel, system settings -System tools, Maintenance tools etc. Types of files, file naming concept, folder naming concept
		Familiarization Linux &	Operating System :Windows 8 -

		<p>Windows Operating System</p> <p>6. The Interface and practice on popular Linux commands.</p> <p>7. File / folder creation and its management.</p> <p>8. Edit Control panel components.</p> <p>9. Demonstrate various Windows Accessories.</p> <p>10. Apply methods of handling dead locks.</p> <p>11. Illustrate application of system files- Kernel and shell.</p> <p>12. Activate Command – file.</p> <p>13. Assign assignment of file permission.</p> <p>14. Create user directory.</p> <p>15. Installation, configuration and customization of Windows Operating System.</p>	<p>Linux</p> <p>Advanced knowledge on both O/s from Installation to Customization</p> <ul style="list-style-type: none"> • Methods of handling dead • locks • System file- Kernel and shell, • Command - file • file permission • user directory • Memory organization • Classification of memory • Semiconductor memory • Static and Dynamic memory • Data transmission, frequency • Introduction to dead locks • band width, analog and digital transmission • Virtual memory
		<p>16. Installation of following devices with suitable device drivers:</p> <ul style="list-style-type: none"> - Scanner - Digital camera - Web Cam - Printer - Perform OCR from typewritten, hand written, printed documents - Perform cartridge changing of Printer 	<p>Input - Output Devices</p> <ul style="list-style-type: none"> • Keyboard, mouse, track ball, touch pad, joy stick, steering wheel, game pad, OCR, OMR, MICR, BCR, smart card reader, micro phone, voice recognition system, scanner, digital camera, web cam, video camera. • Introduction to output devices Soft copy devices. • Monitor, speakers, Hard copy Printers, plotters, micro films • Types of printers- impact / non- impact
<p>Practical 80 Hrs</p> <p>Theory 30 Hrs</p>	<p>Demonstrate downloading, installation, use of Open source software such as</p>	<p>Familiarization Open Office Software</p> <p>17. Download the software.</p> <p>18. Install the software.</p> <p>19. Customize the software by</p>	<p>Open Source Application software</p> <ul style="list-style-type: none"> • Open office and its explanation, compliance to

	Open Office, Scribus etc. adhering to IT ACT 2000.	<p>changing default values.</p> <p>20. Create a document in Open Office.</p> <p>21. Save the file in different formats.</p>	<p>various Operating systems.</p> <ul style="list-style-type: none"> • Menus, commands, shortcuts advanced topics on Open Office from Download, Installation, Customization to Familiarization.
		<p>Scribus</p> <p>22. Download Scribus or Any free page layout packages popular in the region.</p> <p>23. Illustrate the process of Interface.</p> <p>24. Demonstrate the properties on Tools.</p> <p>25. Demonstrate on Menus.</p> <p>26. Demonstrate on Palettes.</p> <p>27. Create professional looking documents in Scribus.</p> <p>28. Create Professional looking two fold Brochures of the Institute.</p> <p>29. Print selected documents using Laser Printer.</p>	<p>Introduction to Open source page layout packages</p> <p>Introduction to Scribus or any - Open source Page Layout packages -Screen elements, tools and menu bar.</p> <p>Advantages of non-proprietary software over proprietary software. -Arrangements of pages in a book</p>
		<p>Illustrate on Scribus page layout Package</p> <p>30. Create twofold Brochures in Scribus.</p> <p>31. Create a threefold Brochure in Scirbus.</p> <p>32. Create a news letter Scribus</p> <p>33. Create invitation cards.</p>	<p>Information Technology Act, 2000</p> <ul style="list-style-type: none"> • Legal recognition of electronic documents • Legal Recognition of digital signatures • Offenses and contraventions • Justice dispensation systems for cyber crimes
<p>Practical 80 Hrs</p> <p>Theory 30 Hrs</p>	<p>Explain the application, Installation and utility of Cloud based Applications viz. Adobe Creative Cloud, Google Drive etc.</p>	<p>Adobe Creative Cloud</p> <p>34. Install Adobe Creative Cloud Desktop application.</p> <p>35. Install Adobe Illustrator on it.</p> <p>36. Illustrate the process of interface.</p> <p>37. Demonstrate all the properties of Tools.</p> <p>38. Activate Pull down Menus.</p>	<p>Vector based software</p> <ul style="list-style-type: none"> • Introduction to Adobe Illustrator • Tools and its Applications • Menus, commands and short cuts • Introduction to Cloud • Cloud space • Familiarization of Adobe Creative Cloud Interface and

		<p>39. Perform on Palettes.</p> <p>40. Perform Short cuts.</p> <p>41. Illustrate complicated drawings such as logos emphasis on design and composition.</p> <p>42. Demonstrate use of various selection Tools.</p> <p>43. Demonstrate various objects attributes.</p> <p>44. Demonstrate making of Groups, ungroups and Multiple Layers.</p>	<p>all its components such as Illustrator, Photoshop and In-Design</p>
		<p>Adobe Illustrator - contd.</p> <p>45. Illustrate advanced Drawing and Editing of Path.</p> <p>46. Adding and mixing Colors.</p> <p>47. Transformation and Positioning of graphics.</p> <p>48. Applying Masks.</p> <p>49. Applying Filters and Live Effects</p> <p>50. Applying graphic styles</p> <p>51. Exporting files to other programs.</p> <p>52. Print the designs/works generated in Illustrator.</p>	<ul style="list-style-type: none"> • Difference between Vector Graphics and Raster graphics, its merits and demerits.
<p>Practical 32 Hrs</p> <p>Theory 12 Hrs</p>	<p>Demonstrate installation and operating method of Regional Language Software.</p>	<p>Regional Language Software practice</p> <p>53. Install a language pack in Windows settings.</p> <p>54. Put Unicode in windows for entry of regional language texts.</p> <p>55. Install ISM Publisher/ or any other regional language software.</p> <p>56. Use ISM Publisher / any other regional language software.</p> <p>57. Google handwriting tools in regional languages.</p>	<p>Introduction to Regional Language Software</p> <ul style="list-style-type: none"> • Unicode • Language packs in Unicode • ISM Publisher • Google Handwriting tool • Other Freeware

		58. Other Freeware practice (on screen keyboard in regional language, voice typing in regional language, Phonetic keyboards).	
Practical 48 Hrs Theory 18 Hrs	Plan, install and maintain Internet Security software.	<p>Internet Security Software</p> <p>59. Download any free Internet Security software.</p> <p>60. Install and customize the Internet Security Software.</p> <p>61. Scan Drives, Folders and Files with Internet Security software.</p> <p>62. Download any free Anti-Virus software.</p> <p>63. Install and Customize the Anti Virus software.</p> <p>64. Install and update Internet Security Software suitable to local desktop computer system.</p> <p>65. Customize Internet Security by enabling and disabling of private browsing, firewall, automatic software updater, anti-banner, anti-spyware, network attack blocker, anti-virus, anti-spam, idle scan, anti-malware, automatic disinfections etc.</p>	<p>Threats faced by Computers</p> <ul style="list-style-type: none"> • Computer Virus • Spyware • Trojans • Spam • Hacking • Phishing <p>Remedial measures</p> <ul style="list-style-type: none"> • Firewall • Internet Security • Anti Virus • Anti Spyware
Practical 80 Hrs Theory 30 Hrs	Setup LAN and configure/ share various network resources such as printers, files, folders etc.	<p>Networking & Internet</p> <p>66. Perform the following actions</p> <ul style="list-style-type: none"> - Sharing of folders - Sharing of Printers - Sharing of Scanner - Basic connections for LAN - IP Number configuring - Assigning Work group 	<p>Networking of Computers</p> <ul style="list-style-type: none"> • Various classification • Client/Server network • Peer to Peer network • Hybrid network • Servers/Clients • Networking devices • Various network media such as coaxial cable, twisted pair cable etc.

		<p>name</p> <ul style="list-style-type: none"> - Router connectivity - Establish Wireless connectivity between different computers - Establish connectivity between computer and printer on WiFi network - Do basic trouble shooting 	<ul style="list-style-type: none"> • Connectors and protocols • Sharing of Printer, Scanner • Sharing of files and folders • Wireless networking • Wireless technologies BT, WiFi, WiMax, VSAT
		<p>Networking & Internet</p> <p>67. Explain different components of a typical LAN network and establish connectivity with internet.</p> <p>68. Explain and work on various browsers.</p> <p>69. Change browser modes such as private browsing.</p> <p>70. Use various Search Engines for information retrieval.</p> <p>71. Create E-mail account and send and receive mails with attachments.</p> <p>72. Install Skype/any messenger and conduct audio and video chatting.</p> <p>73. Select a product using E-Commerce site (Amazon, Flipkart, eBay etc.) and add it to the cart.</p> <p>74. Install and conduct Web Conferencing between two or more computers in the Lab using free conferencing sites.</p>	<p>Internet & Intranet</p> <ul style="list-style-type: none"> • Types of internet connections • Requirements for Internet connectivity • E-mail • Search services • Browsers • Chat services • Blog services • Download and upload
<p>Practical 32 Hrs</p> <p>Theory 12 Hrs</p>	<p>Download, install and operate Portable Document Format (PDFs) files.</p>	<p>Adobe Acrobat Professional</p> <p>75. Install Adobe Acrobat Professional.</p> <p>76. Download and install free PDF makers from trusted sites.</p>	<p>Introduction to PDF</p> <ul style="list-style-type: none"> • Introduction to PDF Generators • Permission and rights in PDF • Introduction to Abode Acrobat Professional

		<p>77. Create a PDF using Acrobat or MS-Office.</p> <p>78. Combine multiple PDF files to single PDF.</p> <p>79. Convert pages in a single PDF to Multiple PDF.</p> <p>80. Insert pages and delete pages in a PDF.</p> <p>81. Perform single editing in PDF such as cropping, reducing size of scanned images (compression), adding some more text, adding links.</p> <p>82. Create a PDF with security/ password protection.</p> <p>83. Create a PDF without the right of print and adding digital signature (if available).</p> <p>84. Convert various file format to PDF and vice versa.</p> <p>85. Separate CMYK colours in PDF.</p>	<ul style="list-style-type: none"> • Protecting PDF files with various rights including passwords • Colour separations • Merits and demerits of PDF format files • Other PDF Generators • Downloading free PDF generators • Converting PDF files to other formats and vice versa
<p>Practical 64 Hrs</p> <p>Theory 24 Hrs</p>	<p>Explain the application, Installation and utility of Cloud based Applications viz. Adobe Creative Cloud, Google Drive etc.</p>	<p>Adobe In-Design for Windows & Mac</p> <p>86. Create a file by using document setup.</p> <p>87. Use of rules, guides, snap to guides.</p> <p>88. Format paragraphs, text blocks.</p> <p>89. Place graphics, resizing and text wrap.</p> <p>90. Edit stories and check spelling.</p> <p>91. Set-up of templates and style palettes.</p> <p>92. Group and align objects.</p> <p>93. Use Multiple paste with "step & repeat".</p> <p>94. Apply colour libraries and</p>	<p>On Demand Printing</p> <ul style="list-style-type: none"> • Basic concept, Digital Press:- Electrostatic, Inkjet and thermal printing from digital Master. • PS interpreter & raster image processing (RIP) and its function

		<p>separations.</p> <p>95. Apply styles and custom style palettes.</p> <p>96. Apply drop caps, page numbering and inserting of special symbols.</p> <p>97. Printing solutions and PPD's and PDFs.</p>	
<p>Practical 32 Hrs</p> <p>Theory 12 Hrs</p>	Evaluate downloading, installation and maintenance of various image management tools.	<p>Picasa</p> <p>98. Download Picasa from trusted sites.</p> <p>99. Install Picasa.</p> <p>100. Search photographs on internet and identify whether these are copy protected.</p> <p>101. Edit a photograph in Picasa.</p> <p>102. Store a photograph in Google Drive or any equivalent cloud storage space on internet.</p> <p>103. Burn a CD / DVD/ BD to Store the photographs.</p>	<p>Introduction Digital Management Rights & Introduction to Intellectual property rights.</p> <ul style="list-style-type: none"> • Various agencies dealing with IPR • Classification of rights. • Copyright Act, Cyber Law. • Introduction to online picture store. • Picasa knowledge in detail. • Other online image management tools. • Google Drive and other storage solutions
<p>Practical 80Hrs</p> <p>Theory 30Hrs</p>	Design and develop using Multimedia programs/ software.	<p>Adobe Premiere</p> <p>104. Create a Time lines</p> <p>105. Insert Text</p> <p>106. Insert Graphics</p> <p>107. Insert audio</p> <p>108. Insert video</p> <p>109. Insert titles</p> <p>110. Create computer based tutorial for Illustrator.</p> <p>111. Store above programs in video format in DVD by Adobe Premiere.</p>	<p>Multimedia</p> <ul style="list-style-type: none"> • Interactive Multimedia • Non-interactive Multimedia • Ingredients of multimedia • Graphics • Audio • Video • Presentation software / Adobe Premiere
		<p>Fat paint Open source package</p> <p>112. Download Fat Paint.</p> <p>113. Install and configure the above software.</p> <p>114. Create a log on Fat Paint.</p> <p>115. Edit a graphic design in Fat</p>	<p>Post Script (PS) and Page Description Languages (PDL)</p> <ul style="list-style-type: none"> • PS printer description file, PS Level 1,2,3. • PS resources, imaging text and graphics vector drawing,

		<p>Paint.</p> <p>116. Edit a photograph.</p> <p>117. Integrate contents from two image files to single file in Fat Paint.</p>	<p>character drawing.</p> <ul style="list-style-type: none"> • EPS file, PS colour processing, PS output devices. • Difference between PS and PDF.
<p>Practical 32Hrs</p> <p>Theory 12Hrs</p>	<p>Design and develop online publishing of documents in various formats using various e-Publishing tools.</p>	<p>e- Publishing tools</p> <p>118. Check proprietary software for e-publishing.</p> <p>119. Check Open source software for e-publishing.</p> <p>120. Search and find some e-books.</p> <p>121. Search some e-PUBs.</p> <p>122. Search and download some digital magazines.</p> <p>123. Search and understand the terms and conditions of digital libraries on internet.</p> <p>124. Create e-Catalogues and upload in any sites.</p>	<p>Introduction to e- Publishing</p> <ul style="list-style-type: none"> • Software tools required • Web publishing • Digital distribution platform • Online publishing • Online distribution • Open access (publishing) • Pay-per-view • Print on demand <p>Latest Developments in Printing and Publishing with a theoretical overview on</p> <ul style="list-style-type: none"> • CTP • Digital Printing • Resograph printing • Flexography

SYLLABUS FOR CORE SKILLS

1. Soft Skills (Common for all Non-Engineering CITS trades) (100 Hrs + 100Hrs)
2. Training Methodology (Common for all trades) (320Hrs + 200Hrs)

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 OUTCOMES	ASSESSMENT CRITERIA
TRADE TECHNOLOGY	
1. Demonstrate safe working practices and utility of computer hardware components, installation of Operating System and other system software.	Observe safety procedure as per standard norms and arrange all tools before connecting devices.
	Identify all components including the components connected to Mother board.
	Connect all devices in proper manner to act as a Computer system.
	Identify errors when systems are switched on.
	Create at-least three partitions in Hard Disk Drive.
	Format each partition.
	Install Windows in two different partitions.
	Configure Windows by installing necessary device drivers for peripherals including Printer, Scanner etc.
	Customize (Change wall paper, icon shape and size, screen resolution, themes etc.) Windows suitable to training environment.
2. Demonstrate downloading, installation, use of Open source software such as Open Office, Scribus etc. adhering to IT ACT 2000.	Plan work in compliance with search norms in Browser.
	Check whether the website is secured.
	Download the software to the planned folder.
	Start installation.
	Customize the application by adding short-cuts in Desktop or pinning to the taskbar.
	Check the software by loading it.
	Create a document containing text and graphics.
	Save the file for future references.
3. Explain the application, Installation and utility of Cloud based Applications viz. Adobe Creative Cloud, Google Drive etc.	Verify availability of Cloud account with validity period for Adobe CC.
	Collect information related to use of applications of Adobe Creative Cloud software.
	Install Adobe Creative Cloud Desktop App.
	Check Illustrator, Photoshop, In-Design, Acrobat Pro and Lightroom.
	Demonstrate the use of one of the application and cloud space, if available.
	Store a file in Google Drive.
	Load Google drive from another computer and access it.
	Demonstrate use of Adobe In-design for Windows & Mac.

	<p>Explain the rules, guides, snap to guides, formatting and editing details.</p> <p>Demonstrate application of colour libraries and separation.</p> <p>Print the required documents to evaluate proper functioning of Cloud based Application.</p>
4. Demonstrate installation and operating method of Regional Language Software.	<p>Check Control Panel / settings of Windows O/S.</p> <p>Choose add Language and add scripts to be added.</p> <p>Activate the language from Language preference of the task bar.</p> <p>Demonstrate keying in regional language.</p>
5. Plan, install and maintain Internet Security software.	<p>Plan work in compliance with search norms in Browser for Internet Security / Anti Virus software.</p> <p>Check whether the website is secured.</p> <p>Download the software to the planned folder.</p> <p>Start Installation.</p> <p>Check the software by loading it.</p> <p>Enabling and disabling of private browsing, firewall, automatic software updater, anti-banner, anti-spyware, network attack blocker, anti-virus, anti-spam, idle scan etc.</p> <p>Ensure regular update of Security Software for automatic disinfections.</p>
6. Setup LAN and configure/ share various network resources such as printers, files, folders etc.	<p>Check all network devices and components such as network switches, router (if available), access points, network cables with RJ45 crimped (twisted pair & co-axial), Network Interface card/Mother board etc.</p> <p>Identify patch cords with RJ45.</p> <p>Connect the patch cords to computer system.</p> <p>Configure IP numbers (ip4) and work group of all computers.</p> <p>Setup a peer-to-peer networking.</p> <p>Share printers for printing from various computers.</p> <p>Share drives, folders, files and other network resources.</p> <p>Establish Wireless connectivity between different computers.</p> <p>Establish connectivity between computer and printer onWiFi/Wifi Direct network.</p> <p>Use one browser and install two more internet browsers.</p> <p>Create an e-mail account and send and receive mails.</p> <p>Use Wikipedia/ any other site for information on network devices.</p> <p>Add a product to cart by using Amazon / Flipkart / Ebay.</p> <p>Install Skype/any other messenger software and conduct audio and</p>

	video chatting.
7. Download, install and operate Portable Document Format (PDFs) files.	<p>Download PDF creation software from a trusted and secured site or use Microsoft product to save as PDF.</p> <p>Create a PDF using Acrobat or MS-Office.</p> <p>Combine multiple PDF files to single PDF.</p> <p>Convert pages in a single PDF to Multiple PDF.</p> <p>Insert pages and delete pages in a PDF.</p> <p>Perform single editing in PDF such as cropping, reducing size of scanned images (compression), adding some more text and adding links.</p> <p>Create a PDF with security/ password protection.</p> <p>Create a PDF without the right of print and adding digital signature (if available).</p> <p>Convert various file formats to PDF and vice versa.</p> <p>Separate CMYK colours in PDF.</p>
8. Evaluate downloading, installation and maintenance of various image management tools.	<p>Identify the software to be downloaded and site to be chosen.</p> <p>Check whether the website is secured or not.</p> <p>Start download and install.</p> <p>Configure the software as per the need.</p> <p>Edit and store photographs as per requirement.</p> <p>Check for online image management tools.</p>
9. Design and develop using Multimedia programs/ software.	<p>Explain about interactive and non-interactive multimedia.</p> <p>Access different types of file formats – text files, image files, vector files, documents, audio files, video files, flicks.</p> <p>Integrate audio, video, text and graphics and prepare an interactive presentation.</p> <p>Integrate audio, video, text and graphics and prepare a non-interactive presentation.</p> <p>Insert time line, Text insertions, Graphic insertions, Inserting audio, inserting video and Inserting titles in Adobe Premier.</p> <p>Create computer based tutorial for Illustrator using Adobe Premiere.</p> <p>Store the tutorial in video format in a DVD and YouTube.</p>
10. Design and develop online publishing of documents in various formats using various e-Publishing tools.	<p>Check for various online publishing tools on internet.</p> <p>Demonstrate various e-publishing formats.</p> <p>Design and develop a catalogue for e-publishing format.</p> <p>Design and develop an A3 size news-letter for e-publishing format.</p> <p>Demonstrate Compression and de-compression of portable files.</p>

8. INFRASTRUCTURE

LIST OF TOOLS AND EQUIPMENT FOR DESKTOP PUBLISHING OPERATOR (CITS)			
For batch of 25 candidates			
S No.	Name of the Tools & Equipment	Specification	Quantity
A. General Installation			
1.	Desktop computer	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+1 Nos.
2.	Apple Macintosh Computer system comprising:	<ul style="list-style-type: none"> - i-Mac core i 5 processor with 2.5 GHZ or higher speed, 21.5" LED wide screen TFT Monitor - 8 GB RAM, 1TB HDD, HD camera - High speed Multi-layer DVD Writer - Optical mouse with mouse pad - Built in Speakers and micro phone/Head phone - 1 thunderbolt port, 1 firewall, 4 USB, RJ45, IR - Wireless mouse and keyboard, WiFi, Bluetooth - Operating System with DVD media - Software drivers for OS 	1 No.
3.	Laptop Computer System comprising	<ul style="list-style-type: none"> - Intel Core i7 processor or higher - Multi-Layer DVD/ BD writer - 1 TB or higher HDD, 8 GB RAM - Audio in & out jack, stereo speakers, 15" screen - 5in1 card reader, Built in webcam & microphone - RJ45 for network, 3 to 5 USB ports, 1 HDMI port - 1 Mini USB port, 1 VGA port, touch pad - WiFi mini port adaptor, Wireless LAN, Bluetooth - With Windows 8 OS and DVD media 	1 No. (For Faculty)
4.	Color Laser Printer	1200 DPI Black & 1200 dpi Color, A4 size, 4 MB or higher Memory, Printing speed 12 pages or higher per minute	1 No.

		(Note: Configuration can be changed according to the industry standard and should use popular toner cartridge)	
5.	Document (Color) Scanner	A3 size with a facility to scan transparency / Reflections flatbed type with standard accessories 1200 DPI or higher, with OCR software OR High Quality Drum Scanner	1 No.
6.	Digital Still Camera	- with USB connector cord - software driver for Win 8 / Linux with memory card	1 No.
7.	Networking of computers	- Unmanaged 24 port active switch (1 no.) - 24 port CAT6 patch panel (1 no.) - Wireless router with 4 ports (1 no.) - Cat 6 UTP cable (300 meters) - Patch cord CAT 6 2 meter (24 nos.) - Surface mount box/information outlet (15 nos.) - 48 cm (19") rack with cable manager and - AC distribution box and glass door with lock (1 no.)	As per requirement
8.	Internet Connectivity	- Broadband Modem cum Router with 2 MBPS or higher speed	1 No.
9.	Software (All academic versions)	- Linux Operating system - Open Office (not to purchase - freeware) - Scribus (not to purchase - freeware)) - Adobe Creative Cloud (Academic – with Illustrator, Photoshop, Acrobat Pro, In-Design and Premiere) for Mac & Windows - Internet Security cum Anti-Virus software - ISM Publisher or any other regional language software (Multi script Multi user) - Omni Page/Presto Page Manager or any other OCR software in CD/DVD media - e-Tutor (Computer based tutorial) for Adobe Creative Suit	1 each. for each system (22 Nos.)
10.	Web Cam	- USB connectivity - Device driver for Win 8/ Linux - 1 meter or higher cable length	1 No.
11.	LCD/LED Projector with Screen	- 4000 lumens or higher with VGA connectivity - Remote controlling facility - Zoom, focus adjustment facility	1 No.

12.	Interactive Board		1 No.
13.	White Board		1No.
14.	Split type Air Conditioner		As required
15.	Wall mount Automatic Stabilizer for AC with time delay facility and visual indicators	4 KVA	As required
16.	UPS with One hour backup with Tubular Battery Bank		As required
B. Furniture and Accessories			
17.	Operator chair (PU cushioned) for computers	With back swivel on 5 wheel casters with or without arm rest	26 Nos.
18.	Table for computers (Monitor Desk)	With sliding tray for keyboard	26 Nos.
19.	Single seated Chair with Writing Board/Single Seated Desk/Dual Desk		25 Nos.
20.	Steel Cupboard		2 No.
21.	Steel Shoe Rack pigeon Hole Type	Ten compartments	3No.
22.	Table for Trainer		1 No.
23.	Chair for Trainer		1 No.
24.	CD/DVD/BD storable cabinet		2 Nos.
25.	Table for Printers & Scanner standard dimension		2 Nos.
C. Consumables			
26.	A4 size Photo copier paper of 80 GSM		10 reams
27.	A4 size cover paper		100 Nos.
28.	White Board Marker		2 Dozens
29.	Cartridges for Laser Printers	Colour& black	As per requirement
30.	Matt coated Paper A4 size 150 or Higher GSM	50 sheets in each pkt.	3 pkt.
31.	Pen Drive	16 GB or Higher	5 Nos.
32.	DVDs		20 Nos
33.	Cleaning Liquid for computer & Peripherals		4 Bottles
34.	Cloth Dusters	(24"x 24")	2 Dozens
35.	Glue Stick		20 Nos.
36.	Paper cutter (standard size)		1 No.
37.	Cello Tape Dispenser		1 No.

ANNEXURE – I

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts and all others who contributed in revising the curriculum.

Special acknowledgement is extended by DGT to the following expert members who had contributed immensely in this curriculum.

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8.	Umesh Gupta, CEO	Open Software Technology (India) Ltd., 512, Phase V, UdyogVihar, Gurgaon-122016	Member
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26.	Sanjay Kr. Gupta, VI –COPA	NSTI Vadodara	Member
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