GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP
DIRECTORATE GENERAL OF TRAINING

COMPETENCY BASED CURRICULUM

VIDEO CAMERAMAN

(Duration: One Year)

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL- 3.5

SECTOR – MEDIA AND ENTERTAINMENT

Directorate General of Training

VIDEO CAMERAMAN

(Non-Engineering Trade)

(Revised in March 2023)

Version: 2.0

CRAFTSMEN TRAINING SCHEME (CTS)

NSQF LEVEL – 3.5

Developed By

Ministry of Skill Development and Entrepreneurship

Directorate General of Training
CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE
EN-81, Sector-V, Salt Lake City,
Kolkata – 700 091
www.cstaricalcutta.gov.in

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1. COURSE INFORMATION

During one-year duration of "Video Cameraman" trade, a candidate is trained on Professional Skill, Professional Knowledge and Employability Skill related to job role. In addition to this, a candidate is entrusted to undertake project work, extracurricular activities and on-the-job training to build up confidence. The broad components covered under Professional Skill subject are as below:

During one-year duration, the trainee learns about elementary first-aid, firefighting, environment regulation and housekeeping, etc. The trainee identifies trade tools, digital cameras, compact and SLR. The trainee will be able to do the practical by the use of natural light, tungsten light, fluorescent light, single and multiple electronic flash reflectors, exposure meters, studio flash and its accessories. They will also be able to do the practical on various lighting techniques for different lenses and will do practice on special areas of photography in outdoor and indoor conditions. They will be able to do practical on computer system by digital editing software, printing the photographs taken by digital cameras and will be able to do the image transportation to the storage media, sending photographs through E-mail and to Scan photographs, capture frames and analysis of images. There will be a visit to studio where they will be able to handle the digital Video cameras, Tape, DVD, HDD, accessories and exposure to take different common shots, dimension of images and movements as per requirement. The trainee will be able to do lighting of different areas of video shooting, practice on three point lighting indoor and outdoor. Taking photographs using different types of lenses using different aperture, shutter speed setting for still, Video camera, CCTV and spy camera. Taking photographs of portrait, studio photography, commercial/Advertisement photography, sports photography, fashion photography, slow and fast moving objects, functions, machines and Videos, landscape, architecture, night photography children, animal, birds, shooting spot etc. by digital camera. They will have the concept of audio video recording , mixing, editing, dubbing of sound , using different types of microphones .Shooting of different areas and topics such as sports , wildlife, modeling, drama ,documentary, serial, story board making ,news, interview, seminar/ workshop, industrial, live broadcasting, musical event ,Advertisement etc .The trainee also undergoes four weeks on-the- job training in various studios/labs at the end of the year which gives them more practical exposure to the professional working environment.

2.1 GENERAL

The Directorate General of Training (DGT) under Ministry of Skill Development & Entrepreneurship offers a range of vocational training courses catering to the need of different sectors of economy/Labour market. The vocational training programmes are delivered under the aegis of Directorate General of Training (DGT). Craftsman Training Scheme (CTS) with variants and Apprenticeship Training Scheme (ATS) are two pioneer schemes of DGT for strengthening vocational training.

'Video Cameraman' trade under CTS is one of the professional courses delivered nationwide through a network of ITIs. The course is of one-year duration. It mainly consists of Domain area and Core area. The Domain area (Trade Theory & Practical) imparts professional skills and knowledge, while the core area (Employability Skill) imparts requisite core skills, knowledge, and life skills. After passing out the training program, the trainee is awarded National Trade Certificate (NTC) by DGT which is recognized worldwide.

Candidates broadly need to demonstrate that they are able to:

- Read and interpret technical parameters/documents, plan and organize work videos, identify necessary materials and tools;
- Perform tasks with due consideration to safety rules, accident prevention regulations and environmental protection stipulations;
- Apply professional skill, knowledge & employability skills while performing jobs.
- Document the technical parameters related to the task undertaken.

2.2 PROGRESSION PATHWAYS

- Can join industry as Video Cameraman and will progress further as Senior Video Cameraman, Supervisor and can rise up to the level of Manager.
- Can become Entrepreneur in the related field.
- Can join Apprenticeship programs in different types of industries leading to a National Apprenticeship certificate (NAC).
- Can join Crafts Instructor Training Scheme (CITS) in the trade for becoming an instructor in ITIs.
- Can join Advanced Diploma (Vocational) courses under DGT as applicable.

2.3 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	Professional Skill (Trade Practical)	840
2	Professional Knowledge (Trade Theory)	240
3	Employability Skills	120
	Total	**1200**

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

On the Job Training (OJT)/ Group Project	150
Optional Courses (10th/ 12th class certificate along with ITI certification or add on short term courses)	240

Trainees of one-year or two-year trade can also opt for optional courses of up to 240 hours in each year for 10th class /12th class certificate along with ITI certificate. or. add on short term courses.

2.4 ASSESSMENT & CERTIFICATION

The trainee will be tested for his skill, knowledge and attitude during the period of course through formative assessment and at the end of the training programme through summative assessment as notified by the DGT from time to time.

a) The **Continuous Assessment** (Internal) during the period of training will be done by **Formative Assessment Method** by testing for assessment criteria listed against learning outcomes. The training institute has to maintain an individual trainee portfolio as detailed in assessment guideline. 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 NTC will be conducted by **Controller of examinations, DGT** as per the

guidelines. The pattern and marking structure is being notified by DGT from time to time. **The learning outcome and assessment criteria will be the basis for setting question papers for final assessment. The 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 REGULATION

For the purposes of determining the overall result, weightage of 100% is applied for six months and one-year duration courses and 50% weightage is applied to each examination for two years courses. The minimum pass percent for Trade Practical and Formative assessment is 60% & for all other subjects is 33%.

2.4.2 ASSESSMENT GUIDELINE

Appropriate arrangements should be made to ensure that there will be no artificial barriers to assessment. The nature of special needs should be taken into account while undertaking the assessment. Due consideration should 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 some of the following:

- Job carried out in labs/workshop
- Record book/ daily diary
- Answer sheet of assessment
- Viva-voce
- Progress chart
- Attendance and punctuality
- Assignment
- Project work
- Computer based multiple choice question examination
- Practical Examination
-

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

Performance Level	Evidence
(a) Marks in the range of 60%-75% to be allotted during assessment	
For performance in this grade, the candidate should produce work which demonstrates attainment of an acceptable standard of craftsmanship with occasional guidance, and due regard for safety procedures and practices	• Demonstration of good skills and accuracy in the field of work/ assignments. • A fairly good level of neatness and consistency to accomplish job activities. • Occasional support in completing the task/ job.
(b Marks in the range of 75%-90% to be allotted during assessment	
For this grade, a candidate should produce work which demonstrates attainment of a reasonable standard of craftsmanship, with little guidance, and regard for safety procedures and practices	• Good skill levels and accuracy in the field of work/ assignments. • A good level of neatness and consistency to accomplish job activities. • Little support in completing the task/ job.
(c) Marks in the range of more than 90% to be allotted during assessment	
For performance in this grade, the candidate, with minimal or no support in organization and execution and with due regard for safety procedures and practices, has produced work which demonstrates attainment of a high standard of craftsmanship.	• High skill levels and accuracy in the field of work/ assignments. • A high level of neatness and consistency to accomplish job activities. • Minimal or no support in completing the task/ job.

Cinematographer; Cameraman, Motion Picture, photographs persons, scenes and places with motion picture camera for production of feature films. Receives instructions from Producer, Motion Picture as to type and photographic effect desired on scenes to be filmed. Directs loading of camera with reel of film. Positions or supervises setting up of camera by assistant; focuses and sets camera on scene or object to he shot; controls lighting for desired general detail of scene to be photographed; hooks up motor on camera at starting signal of process films. May enlarge prints. May attend to minor repair to cine cameras. May be designated as Television Cameraman if engaged in television studio.

Movie Cameraman; Cine Cameraman photographs persons, places and events with movie camera (cine) for purposes other than production of feature films. Loads cine camera with film either coloured or black and white as required. Visits place of interest, event or assembly. Holds or places camera at desired angle and distance from subject to be photographed; adjusts lens, aperture, depending on type of subject and lighting condition or arranges artificial light for better effect; focuses camera lens or lenses to subject holding his eye close to view finder or looking through film with eye-piece and exposes certain length of film by pressing lever to run motor inside camera. Alters angle or distance of shot as required. Unloads camera when film is exposed and sends film for developing. Views processed film against light and cuts and trims films to make desired strip of subject. Projects or exhibits film on screen using projector to explain events function, for audience. May develop and Sound Recording Equipment Operator operates electronic equipment which records sound in pulses on composition discs or on reels of tape, wire or film for such uses as film and gramophone record production and radio broadcasting. Places microphones in position and connects them to recording equipment. Places blank discs or reels of tape, wire or film in machine. Sets volume and tone controls and makes other adjustments as necessary. Starts machine, watches its operation closely and listens, by means of headphones or loudspeaker, to sound being recorded. Manipulates controls during operation as required. May perform minor repairs.

Cameraman (Animation); operates special camera to make animated cartoon motion picture film. Discusses with Director and Producer, (Film) and renders advise about can era movements and feasibility of variety of shot; envisages in script and chart and suggests alternatives wherever necessary. Receives animation charts and drawings. Sets and adjusts camera and lighting exposure appropriate to type of film used and mood and effect to be emphasized. Installs frame on camera table for exposure and positions overhead camera suspended securely over frame. Shoots frame by frame in a predetermined sequence and regulates exposure and aperture to obtain special effect such as fade out or fade in. Instructs Laboratory Technicians about method

of processing of films, which need special treatment for effective development of striking feature of certain shots.

Cinematograph Operator; Cinema Projectionist; Cinema Operator, Cine Projectionist sets and operates motion-picture projector with sound-reproducing projector with sound-reproducing equipment on screen and attends to their equipment. May operate tape recorder or record player. May repair sound-amplifying equipment.

Reference NCO-2015:

a) 3521.0100 – Cinematographer
b) 3521.0200 – Movie Cameraman
c) 3521.0300 –Cameraman, Animation
d) 3521.0900 – Cinematograph operator

Reference NOS:

a) MES/N0909
b) MES/N0507
c) MES/N0907
d) MES/N0913
e) MES/N0905
f) MES/N9401
g) MES/N0901
h) MES/N9402
i) MES/N0916
j) MES/N3412
k) MES/N9403
l) MES/N9404
m) MES/N9405

Name of the Trade	VIDEO CAMERAMAN
Trade Code	DGT/1122
NCO – 2015	3521.0100, 3521.0200, 3521.0300, 3521.0900
NOS Covered	MES/N0909, MES/N0507, MES/N0907, MES/N0913, MES/N0905, MES/N9401, MES/N0901, MES/N9402, MES/N0916, MES/N3412, MES/N9403, MES/N9404, MES/N9405
NSQF Level	Level-3.5
Duration of Craftsmen Training	One Year (1200 Hours+150 hours OJT/Group Project)
Entry Qualification	Passed 10th class examination or its equivalent.
Minimum Age	14 years as on first day of academic session.
Eligibility for PwD	LD, CP, LC, DW, AA, DEAF, HH, AUTISM
Unit Strength (No. of Student)	24 (There is no separate provision of supernumerary seats)
Space Norms	96 sq. m
Power Norms	12 KW
Instructors Qualification for:	
(i) Video Cameraman Trade	Diploma (Minimum 2 years) in Cinematography/ Videography from recognized board of education/ Institution or relevant Advanced Diploma (Vocational) from DGT with two years' experience in the relevant field. **OR** NAC/NTC passed in the trade of Video Cameraman with three years' experience in the relevant field. <u>Essential Qualification:</u> Relevant Regular/RPL variants of National Craft Instructor Certificate (NCIC) under DGT. *NOTE: Out of two Instructors required for the unit of 2(1+1), one must have Degree/Diploma and other must have NTC/NAC qualifications. However, both of them must possess NCIC in any of its variants.*
(ii) Employability Skill	MBA/ BBA / Any Graduate/ Diploma in any discipline with Two years'

	experience with short term ToT Course in Employability Skills. (Must have studied English/ Communication Skills and Basic Computer at 12th / Diploma level and above) OR Existing Social Studies Instructors in ITIs with short term ToT Course in Employability Skills.
(iii) Minimum Age for Instructor	21 Years
List of Tools and Equipment	As per Annexure – I

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

5.1   LEARNING OUTCOMES:

1. Apply the uses of Lenses following safety precautions. MES/N0909
2. Work with the application of various types of lights. Apply different Lighting techniques, taking indoor and outdoor photographs and use of special areas of photography. Work with different Types of object lighting: Daylight, Artificial light and their combination. MES/N0507
3. Apply Introduction to Computer Fundamentals Monitor Calibration, Interfaces. MES/N0909
4. Apply the process of motion pictures. MES/N0907
5. Work with the basic theory concepts, principles and techniques of motion camera/video camera. MES/N0913
6. Work with the fundamentals of camera shots taking techniques and mise-en-scene. MES/N0905
7. Apply basic visual aesthetics. MES/N9401
8. Apply shooting in different lighting situations. MES/N0901
9. Demonstrate Videography Lighting in different lighting conditions. MES/N0507
10. Work with visual aesthetics and art appreciation. MES/N9402
11. Work with different kinds of colors in cinematography. MES/N0909
12. Work with editing and video post-processing softwares, colour correction, grading. MES/N0916
13. Work with different shooting techniques with a DSLR camera. MES/N0913
14. Demonstrate Shooting of video with audio by using different micro phones & use of editing & mixing of sound. MS/N0901, MES/N0907, MES/N3412
15. Work with Multi-camera setup. MES/N9403
16. Demonstrate the Shooting an interior event on Multi-camera setup in a studio. MES/N9404
17. Demonstrate the Shooting of an uncontrolled event on Multi-camera setup. MES/N9405
18. Apply and work with the production and planning of a documentary film. MES/N0907

LEARNING OUTCOMES	ASSESSMENT CRITERIA
1. Apply the uses of Lenses following safety precautions. MES/N0909	Identify different types of lenses for different types of cameras.
	Use the lenses with wide angle, Normal, telephoto and zoom range and practice taking pictures at different focal lengths and group discussion on them.
2. Work with the application of various types of lights. Apply different Lighting techniques, taking indoor and outdoor photographs and use of special areas of photography. Work with different Types of object lighting: Daylight, Artificial light and their combination. MES/N0507	Demonstrate different types of composition using various lighting techniques.
	Take photographs by varying aperture, shutter speed and use of different types of lenses.
	Take photographs in outdoor and Indoor conditions by the use of Digital camera.
	Take photographs on different locations/ lighting situations.
3. Apply Introduction to Computer Fundamentals Monitor Calibration, Interfaces. MES/N0909	Work with multimedia platform for internet and its functions.
	Work on operating software with accessories and configuration of multimedia PC with other application software, Monitor Calibration.
4. Apply the process of motion pictures. MES/N0907	Work with digital video cameras on tripod, tape, VTR, Camcorder, Monitor.
	Set up a single camera unit: Black balance and White balance, Adjustment of viewfinder and monitor, Familiarization of in-camera filters and other in-camera controls, Day-for-night Videography.
	Demonstrate operations of various camera movements.
5. Work with the basic theory concepts, principles and techniques of motion camera/video camera. MES/N0913	Handle video camera and other professional updated video camera.
	Working on technical function of various cameras.
6. Work with the fundamentals of camera shots taking techniques and mise-en-	Explain basic shot terminology : Close up, Mid shot, Long shot, Big close up, Mid-long shot, Extreme long shot, Point of view (POV) shot, Over-the Shoulder(OSS) shot, high angle and low

scene. MES/N0905	angle shot, top angle shot.
	Work on Action Axis (180 degree rule); matching of action, Static and Dynamic Continuity, Reverse angle.
	Perform operations of Camera movements Pan, tilt, dolly, crane, steady – cam and usage of other camera support.
7. Apply basic visual aesthetics. MES/N9401	Explain various kinds of lights, natural, artificial, observation of various lighting situations and practicing taking shots in different lighting conditions.
8. Apply shooting in different lighting situations. MES/N0901	Pre-visualization of exposure based on zone system.
	Shooting with different lights in studio by creating different exposure zones.
	Explain zone system and exposure in natural light.
	Shooting different scenes at various times of day.
9. Demonstrate Videography Lighting in different lighting conditions. MES/N0507	Explain basic principle of light. (i) Electromagnetic spectrum, visible spectrum. (ii) Behaviour of light (Direct and Indirect) (iii) Inverse square law. (iv) Basic principles of colour, Colour temperature.
	Explain quality of light: Specular, diffused and bounced. (ii) Types of light : Natural day light, Incandescent, (tungsten-halogen, LED and PAR etc.
	Work on Low key and High key technique of lighting, use of back light, kicker and background light. Practice to light up 2-point and 3-point lighting in an indoor situation. Light source filters and gels for mixed lighting situation.
	Use the reflectors, mirrors, skimmers as fill light in an outdoor situation.
10. Work with visual aesthetics and art appreciation. MES/N9402	Working on studio lighting, portrait, 3 point lighting and creation of mood.
11. Work with different kinds of colours in cinematography. MES/N0909	Shooting a scene with the importance of colour.
	Explain use of colours for creating different moods, feelings etc.
	Explain the color of natural light at various times of a day.
	Use color filters on studio lights and camera lenses.
12. Work with editing and video post-processing softwares, colour correction, grading.	Work on editing software and image post processing software.
	Use basic editing techniques.
	Demonstrate import and ingest video clips into the computer.

MES/N0916	Perform basic color correction and post processing of the images.
13. Work with different shooting techniques with a DSLR camera. MES/N0913	Handle DSLR camera and their accessories, camera movement – Pan – tilt- zoom. Dimension of image.
	Explain basic camera do's and "don'ts before and after the shoot.
	Work on DSLR and video camera. Assignment must be given at the end of every week and monitor the same.
14. Demonstrate Shooting of video with audio by using different micro phones & use of editing & mixing of sound. MS/N0901, MES/N0907, MES/N3412	Explain the concept of audio video recording using External Microphone, boom, lapel, on camera microphone and Line recording.
	Shooting a sequence with sound recording.
	Work on mixing editing of sound.
15. Work with Multi-camera setup. MES/N9403	Place three cameras in a studio and understanding the basic multicam set up.
16. Demonstrate the Shooting an interior event on Multi-camera setup in a studio. MES/N9404	Perform Studio lighting for multi camera set-up scenarios. Interviews, Panel discussions, debates etc.
	Perform shooting an interior event with multi cameras e.g. fashion shoot, musical show.
17. Demonstrate the Shooting of an uncontrolled events on Multi-camera setup. MES/N9405	Demonstrate multi camera shooting in uncontrolled real life situations. Going outdoors in a group and shooting an event with different cameras.
18. Apply and work with the production and planning of a documentary film. MES/0907	Make a film of your idea with planning, writing, location recce, story boarding, budgeting, scheduling, etc.

Video Cameraman

	SYLLABUS FOR VIDEO CAMERAMAN TRADE		
	DURATION: ONE YEAR		
Duration	**Reference Learning Outcome**	**Professional Skills (Trade Practical)**	**Professional Knowledge (Trade Theory)**
Professional Skill 42Hrs; Professional Knowledge 12Hrs.	Apply the uses of Lenses following safety precautions.	1. Identification of basic first aid devices and use them in different circumstances. 2. Identification of different fire Extinguishers and its use as per requirement and also the use of safety alarms. 3. To identify, handle and disposed of dangerous goods according to policy and procedures and also know how to report to supervisor /competent authority in case of any incident. 4. To identify and observe evacuation procedure according to site policy. 5. To identify different types of Analog and digital cameras and its different parts.	Importance of safety and general precautions. Observed in the trade by the Institution. Care &maintenance of equipment& material. Introduction to photography and its applications. Introduction to Cameras & it's History. Understanding the aspect of video cameraman.
		6. To identify different types of lenses for different types of cameras. 7. To use the lenses with wide angle, Normal, telephoto and zoom range and practice taking pictures at different focal lengths and group discussion on them.	Types of Lenses Four basic types of lenses, they are: •Normal •Wide angle •Telephoto •Zoom Introduction to Focal length. Depth-of-field. Depth of focus. Perspective, aberrations of Lens.

Professional Skill 21Hrs; Professional Knowledge 06Hrs	Work with the application of various types of lights. Apply different Lighting techniques, taking indoor and outdoor photographs and use of special areas of photography. Work with different Types of object lighting: Daylight, Artificial light and their combination.	8. Practice on different types of composition using various lighting techniques. 9. To do practice on taking photographs by varying aperture, shutter speed and use of different types of lenses. 10. To do practice of taking photographs in outdoor and Indoor conditions by the use of Digital camera. 11. To do practice of taking photographs on different locations/ lighting situations.	Exposure, Colour temperature & colour balance. Conception of aperture, shutter speed, ISO. Knowledge of Pixels & their uses. Use of lens hood, tripod and modes.
Professional Skill 42Hrs; Professional Knowledge 12Hrs	Apply Introduction to Computer Fundamentals Monitor Calibration, Interfaces.	12. Practice on multimedia platform for internet and its functions. 13. Practice on operating software with accessories and configuration of multimedia PC with other application software, Monitor Calibration.	Basics of Computers, OS, RAM, ROM and Graphic cards, Concept of operating software, functions and its uses. Basics of Internet, different image editing software & its application. Multimedia platform, accessories and configuration of multimedia PC.
Professional Skill 21Hrs; Professional Knowledge 06 Hrs	Apply the process of motion pictures.	14. Practice with digital video cameras on tripod, tape, VTR, Camcorder, Monitor. 15. To set up a single camera unit: Black balance and White balance, Adjustment of viewfinder and monitor, Familiarization of in- camera filters and other in-camera controls, Day-for-night Videography. 16. Operational practice of various camera movements.	Persistence of Vision, Understanding how motion picture cameras work. History of cinematography
Professional Skill 21Hrs; Professional	Work with the basic theory concepts, principles and techniques of	17. Handling of video camera and other professional updated video camera. 18. Working on technical	Basic theory of image formation in a video camera. Understanding 3CCD

Knowledge 06 Hrs.	motion camera/video camera.	function of various cameras.	technology, various type of sensors. Fundamental of celluloid medium, latent image formation, development and processing. Knowledge about different type of film and film speed.
Professional Skill 21Hrs; Professional Knowledge 06 Hrs	Work with the fundamentals of camera shots taking techniques and mise-en-scene.	19. Practice on basic shot terminology: Close up, Mid shot, Long shot, Big close up, Mid-long shot, Extreme long shot, Point of view (POV) shot, Over-the Shoulder(OSS) shot, high angle and low angle shot, top angle shot. 20. Practice on Action Axis (180 degree rule); matching of action, Static and Dynamic Continuity, Reverse angle. 21. Operations of Camera movements Pan, tilt, dolly, crane, steady – cam and usage of other camera support.	Understanding basics of composition, movement, visual balance, continuity, axis matching, mise-en-scene.
Professional Skill 21Hrs; Professional Knowledge 06 Hrs	Apply basic visual aesthetics.	22. Introduction to various kinds of lights, natural, artificial, observation of various lighting situations and practicing taking shots in different lighting conditions.	Understanding visual communication and aesthetics in Photography. ('rule' of photographic composition), Theory of light and sources.
Professional Skill 42Hrs; Professional Knowledge 12Hrs	Apply shooting in different lighting situations.	23. Pre-visualization of exposure based on zone system. 24. Shooting with different lights in studio by creating different exposure zones. 25. Practicing zone system and exposure in natural light. 26. Shooting different scenes at various times of day.	Principles of light, photometry, measurement of light with light meters, fundamental of exposure, F-stop, T-stop, characteristic curve of various sensors. Zone system, 18% grey card.
Professional Skill 84Hrs;	Demonstrate Videography Lighting in different	27. Practice on basic principle of light. (i) Electromagnetic spectrum, visible spectrum.	Basic principle of light. (i) Electromagnetic spectrum, visible spectrum. (ii)

Professional Knowledge 24Hrs	lighting conditions.	(ii) Behaviour of light (Direct and Indirect) (iii) Inverse square law. (iv)Basic principles of color, Color temperature. 28. Practice on quality of light: Specular, diffused and bounced. (ii) Types of light: Natural day light, Incandescent, (tungsten-halogen, LED and PAR etc. 29. Practice on Low key and High key technique of lighting, use of back light, kicker and background light. Practice to light up 2-point and 3-point lighting in an indoor situation. Light source filters and gels for mixed lighting situation. 30. Practice to use the reflectors, mirrors, skimmers as fill light in an outdoor situation.	Behaviour of light falling on an object – absorption, reflection refraction, transmission, diffraction, dispersion, scattering of light, refractive index. (iii) Inverse square law. (iv) Basic principles of color, 2. (i)Quality of light: Specular, diffused and bounced. (ii) Types of light: Natural day light, Incandescent, (tungsten-halogen, [Tenner (10K), Senior (5K), Junior (2K), Baby (1K), Inkie Multi 10, Multi 20 etc.] (photoflood), fluorescent, (Kino Flo), Metal Halide enclosed AC arc (HMI) etc. 3. Basic understanding of lighting ratio (key + fill: fill alone) use of back light, kicker and back ground light. How to lit up an indoor situation. Use of light source filters. 4. Use of reflectors, and soft boxes, mirrors, skimmers as fill light in an outdoor situation. 5. Knowledge of symbols (icon) to identify the various lighting equipments. 6. Use of correction filters.
Professional Skill 63Hrs; Professional Knowledge 18Hrs	Work with visual aesthetics and art appreciation	31. Working on studio lighting, portrait, 3 point lighting, creation of mood.	Art appreciation, visual aesthetics, study of paintings, cinematographers' works, understanding basic principles of composition, lighting, Chiaroscuro, creation of mood etc.

Professional Skill 63Hrs; Professional Knowledge 18Hrs	Work with different kinds of colors in cinematography.	32. Shooting a scene with the importance of color. 33. Understanding use of colors for creating different moods, feelings etc. 34. Studing the color of natural light at various times of a day. 35. Using color filters on studio lights and camera lenses.	Basic principles of color, CIE diagram, trichromatic theory of vision.
Professional Skill 63Hrs; Professional Knowledge 18Hrs	Work with editing and video post-processing softwares, color correction, grading.	36. Learning editing software and image post processing software. 37. Using basic editing techniques. 38. Learning how to import and ingest video clips into the computer. 39. Doing basic color correction and post processing of the images.	Joining the shots and scenes. The cut and types of cuts. The imaginary lines, basic moments and other transitions i.e. fade, mix, etc. Understanding fundamentals of color theory, additive and subtractive color, white balance etc.
Professional Skill 84Hrs; Professional Knowledge 24Hrs	Work with different shooting techniques with a DSLR camera.	40. Handling of DSLR camera and their accessories, camera movement – Pan – tilt- zoom. Dimension of image. (28 Hrs) 41. Practice on some basic camera do's and "dont's before and after the shoot. 42. Practice on DSLR and video camera. Assignment must be given at the end of every week and monitor the same.	Introduction to DSLR cameras technology. Working principle of an image sensor, shutter, aspect ratios, resolution, SD, HD, UHD. Understanding Gamma, contrast and dynamic range. Understanding compression and types of file formats.
Professional Skill 63Hrs; Professional Knowledge 18Hrs	Demonstrate Shooting of video with audio by using different micro phones & use of editing & missing of sound.	43. Practice on the concept of audio video recording using External Microphone, boom, lapel, on camera microphone and Line recording. 44. Shooting a sequence with sound recording. 45. Practice on mixing editing of sound.	**Video and Audio productions.** Knowledge of sound techniques. Use of different microphones, Mono, Stereo and Surround sound techniques. Recording methods, sound mixing, editing.

Professional Skill 42Hrs; Professional Knowledge 12Hrs	Work with Multi-camera setup.	46. Placing of three cameras in a studio and understanding the basic multicam set up.	Understanding placement of multiple cameras and their shots Basic editing knowledge for different types of shoots e.g. sports, wedding, fashion show.
Professional Skill 42Hrs; Professional Knowledge 12 Hrs	Demonstrate the Shooting an interior event on Multi-camera setup in a studio.	47. Studio lighting for multi camera set-up scenarios. Interviews, Panel discussions, debates, etc. 48. Shooting an interior event with multi cameras e.g. fashion shoot, musical show.	TV studio program shoot. 2/3 ponit discussion. Musical program, dance, drama, live show, events involving VVIPs, Outdoor multi-camera shoot (LIVE recording), Sports. Understanding the importance of matching shots/ comparing shots by seeing the return.
Professional Skill 21Hrs; Professional Knowledge 06 Hrs	Demonstrate the Shooting of an uncontrolled events on Multi-camera setup.	49. Multi camera shooting in uncontrolled real life situations. Going outdoors in a group and shooting an event with different cameras.	News coverage. Ethics of coverage. What are the events covered in News. Disaster coverage, defence coverage, cultural events, elections etc. Types of shots required to establish the event. Green Background video-graphy (Chroma shoot)/ virtual set shooting. Robotic camera/ PTZ cameras.
Professional Skill 84Hrs; Professional Knowledge 24 Hrs	Apply and work with the production and planning of a documentary film	50. Make a film of your idea with planning, writing, location recce, story boarding, budgeting, scheduling, etc.	Understanding documentary films, types of documentary films, ethnographic, observational, experimental, personal. Cinema-verite principle. Viewing of documentary films and discussion.

SYLLABUS FOR CORE SKILLS
1. Employability Skills (Common for all CTS trades) (120 Hrs)

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

	List of Tools & Equipment		
	VIDEO CAMERAMAN (For batch of 24 Candidates)		
S No.	**Name of the Tools and Equipment**	**Specification**	**Quantity**
1.	Colour Scanner Flat Board/ optical scanner.	For insertion of images	1 No.
2.	Video Camera (computerized Control Panel, multi-channel switcher) complete with accessories		1 No.
3.	Colour filters	- set of 4 different shades.	1 set.
4.	Grey scale-Reflection & Transmission type	-set of 4different shades	1 set.
5.	Air conditioner		As required
6.	Fire Extinguisher	Arrange all proper NOCs and equipment from Municipal/Competent authorities.	
7.	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.	12 Nos.
8.	Ink jet printer and laser jet printer with color cartridge	(1200 dpi or higher)	2 Nos. each.
9.	Studio room (30ft X 30ft X 15ft height) fitted with cataract system, light grid, sound proof, AC with cyclorama		1 N0.
10.	Window operating system (latest version)		As required
11.	Free hand latest version		1 No.
12.	Photo editing software		1 No.
13.	M S Office latest version		As per requirement
14.	Flash latest version		1 No.
15.	Sound forge (latest version)		1 No.
16.	Digi mix latest version		1 No.
17.	Table for computer, printer and scanner		12 Nos.
18.	Computer chair		24 Nos.

19.	Digital SLR Camera with camcorder and other accessories (latest version)		2 Nos.
20.	Video camera latest version with essential accessories		2 Nos.

21.	Studio and class room furniture:
	  a) Steel chair folding type with arm rest
	  b) Working table
			
			24 Nos.
			24 Nos.

22.	LUX Meter, Intervalo meter		2 Nos.
23.	Standalone DVD recorder		2 Nos.
24.	Laser printer with colour cartridge (1200 dpi or higher)		1 No.
25.	Scanner (1200 dpi or higher)		2 Nos.
26.	Online UPS or Offline UPS		As required
27.	Windows operating system	latest version	12 Licenses
28.	Photo editing software like Photoshop CS 3 etc.		As required
29.	MS-Office	latest version	12 Licenses
30.	Macro media Free Hand	latest version	12 Licenses
31.	Flash	latest version	12 Licenses
32.	Director	latest version	12 Licenses
33.	Sound Forge/ cool edit pro	latest version	12 Licenses
34.	Anti Virus software	latest version	12 Licenses
35.	Adobe premier	available version	12 Licenses
36.	Table for computer		12 Nos.
37.	Table printer and scanner		3 Nos.
38.	Chairs for computer classes		24 Nos.
39.	Pen drive	8 GB, 16 GB	5 Nos.
40.	Multiple card reader		5 each.
41.	Reflectors (Folding Portable)		8 Nos.
42.	Cool light		8 Nos.
43.	Multi 10 & Multi 20		8 Nos.
44.	Sun Gun		6 Nos.
45.	Porto pack light		3 Sets
46.	Tape match able with the camera		As required
47.	Slide & film high resolution scanner with adapter for A3		1 No.
48.	Slide & film high resolution scanner with adapter for A4		1 No.
49.	DV VTR according to digital camera		1 No.
50.	DV VTR with play back adapter for camcorder		1 No.

51.	Play back adapter for video camera		1 No.
52.	Battery for digital video camera		1 No.
53.	Microphone (boom)		2 Nos.
54.	Microphone (lapel)		1 No.
55.	Trolley set	30 ft.	1 No.
56.	Round trolley	30 ft.	1 No.
57.	Power Cable		As required
58.	Extension Board		As required
59.	BNC cable with various connectors	80 ohms	As required
60.	Steel almirah		2 Nos.
61.	Pigeon hole steel almirah		1 No.
62.	LCD Projector/interactive smart board.		1 No.

Note: -

1. Internet facility is desired to be provided in the class room.

The DGT sincerely acknowledges contributions of the Industries, State Directorates, Trade Experts, Domain Experts, trainers of ITIs, NSTIs, faculties from universities 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.

S No.	Name & Designation Sh/Mr/Ms	Organization	Remarks
1.	B. V. S. Sesha Chari, Director	CSTARI, Kolkata	Chairman
2.	N. R. Arvindan , Director	FTI, Bangalore	Member
3.	V. Sukumaran, Chief Cameraman	Films Division, Govt. of India, Kendriya Sadan, Bangalore	Expert
4.	Mahendar, Director of Photography	Ryan International School, Bangalore	Expert
5.	G. Palani, Cameraman	Doordarshan, Bangalore	Expert
6.	R. K. Narendra Kumar, Chief	Ahobila Photography, Bangalore	Expert
7.	Prakash Y.D. , Cameraman	Photo Care, Bangalore	Expert
8.	Chandra Prabhu, Cameraman/Film Editor	Viedo Came, Bangalore	Expert
9.	Malathi M., J.T.O.	Govt. I.T.I., Tumkur Road, Bangalore-22	Member
10.	Rajendra C., DOP. Film & Media	DOP Freelancer, Bangalore-104	Expert
11.	Vijaya Kumar R., Principal	Govt. Film & TV Institute, Heseraghata, Bangalore	Expert
12.	Prof. Hitesh Liya	SRFTI, Kolkata	Member
13.	Utpal Moitra	Cameraman Grade1, DDK, Golf Green, Kolkata.	Member
14.	Sanjay Khanande	Photographer cum Projectionist, FTI, Bangalore	Expert
15.	V, Babu, DDT	Apex-Hitech, Bangalore	Member
16.	R.C. Mandal, DDT	CSTARI, Kolkata	Member
17.	P.K. Ghosh, Sr, D'man	CSTARI, Kolkata	Member

List of Expert Members contributed/ participated for finalizing the course curriculum of Video Cameraman held on 07.02.2018 at FTI, Bangalore

ABBREVIATIONS

CTS	Craftsmen Training Scheme
ATS	Apprenticeship Training Scheme
CITS	Craft Instructor Training Scheme
DGT	Directorate General of Training
MSDE	Ministry of Skill Development and Entrepreneurship
NTC	National Trade Certificate
NAC	National Apprenticeship Certificate
NCIC	National Craft Instructor Certificate
LD	Locomotor Disability
CP	Cerebral Palsy
MD	Multiple Disabilities
LV	Low Vision
HH	Hard of Hearing
ID	Intellectual Disabilities
LC	Leprosy Cured
SLD	Specific Learning Disabilities
DW	Dwarfism
MI	Mental Illness
AA	Acid Attack
PwD	Person with disabilities