

Revised Syllabus
For the trade of
“Digital Photographer”
Under Craftsman Training Scheme (CTS)
And
Newly Designed Syllabus
For the same trade
Under Apprenticeship Training Scheme (ATS)

2009

Designed by

Government of India
Ministry of Labour and Employment (DGE&T)
CENTRAL STAFF TRAINING AND RESEARCH INSTITUTE
EN- Block, Sector-V, Salt Lake,
Kolkata- 700091

List of members attended the Trade Committee Meeting held on 11.02.2009 in CSTARI
Kolkata for revising & designing the course curriculum on
DIGITAL PHOTOGRAPHER under CTS & ATS scheme respectively.

| SL NO. | NAME & DESIGNATION S/Shri | REPRESENTING INDUSTRIES/INSTITUTE | REMARKS |
|--------|--|---|----------|
| 1 | S. D. Lahiri, Director | C.S.T.A.R.I, Kolkata | Chairman |
| 2 | Aditya Prasad Mitra, Dean, Department of Applied Art. | Rabindra Bharati University, Kolkata | Member |
| 3 | Krishnendu Sinha, Lecturer, Visual Art | Rabindra Bharati University, Kolkata | Member |
| 4 | Ranjan Kr Bose, Sr. Lecturer, Department of Photography | Regional Institute of Printing Technology, Kolkata | Member |
| 5 | Binayak Pal, Faculty, Department of Photography | Indian Institute of Chemical Biology(CSIR),Kolkata | Member |
| 6 | Biraja Prasanna Kar, Faculty, Department of M.P.P | Roopkala Kendra, Kolkata | Member |
| 7 | S. Louis, Sr. Cameraman | Doordarshan Kendra, Kolkata | Member |
| 8 | Keshab Ch. Manna, Faculty, Department of Photography | Satyajit Ray Film & Television Institute, Kolkata | Member |
| 9 | Srimati Mukherjee, Faculty | Webel DQE Animation Academy | Member |
| 10 | Shoubhik Bhattacharya, Faculty | Webel DQE Animation Academy | Member |
| 11 | Pratip Ranjan Mukherjee, Sr. Teacher, Photography | Naktala, High School | Member |
| 12 | A. Jayaraman, Trg. Officer | C.T.I, Chennai | Member |
| 13 | Anil Kumar, Joint Director | C.S.T.A.R.I, Kolkata | Member |
| 14 | Is war Singh, Joint Director | R.D.A.T (ER) Kolkata | Member |
| 15 | M. C. Sharma, Joint Director | C.S.T.A.R.I, Kolkata | Member |
| 16 | L.K. Mukherjee, Dy. Director | C.S.T.A.R.I, Kolkata | Member |
| 17 | A. Nandi, Dy. Director | C.S.T.A.R.I, Kolkata | Member |
| 18 | P.K. Dutta, Trg Officer | C.S.T.A.R.I, Kolkata | Member |
| 19 | S.B. Sarder, Trg Officer | C.S.T.A.R.I, Kolkata | Member |
| 20 | M.K. Batabayal, JTA | C.S.T.A.R.I, Kolkata | Member |

GENERAL INFORMATION

1. Name of the Trade : Digital Photographer
2. N C O Code No :
3. Entry Qualification : 10th Passed Under 10 + 2 system
4. Age : Minimum 18 Years
5. Duration of Training : One year (52 Weeks)
Under CTS
6. Space required : 3.5 sq mt. per Trainee.
7. Duration of Apprenticeship : 18 months including
Training Craftsman Training of one
Year.
8. Rebate for Ex-ITI trainees : One year
9. Ratio of Apprentices to Worker : 1:5

Syllabus for the trade of "Digital Photographer"
Under Craftsman Training Scheme (CTS)
 (Duration of Training – One Year)

| Week No. | Trade Practical | Trade Theory |
|----------|---|--|
| 1 | Introduction to training familiarization with the Institute. Importance of trade training. Instruments used in the trade. Handling of Digital cameras, compact and SLR. | Importance of safety and general precautions observed in the trade by the Institution. Care & maintenance of equipments & material. Introduction to photography and its applications. Introduction to Cameras. |
| 2 | Use of natural light, tungsten light, fluorescent light, single & multiple electronic flash, reflectors, exposure meters, studio flash & accessories and guide number. | Understanding visual communication and aesthetic in Photography. Theory of light and sources. Colour temperature & colour balance. |
| 3-7 | Practice on different types of composition using various lighting techniques and use of lenses. Taking photographs out door & indoor. Hands on special areas of photography. | Exposure, Conception of aperture, shutter speed, depth of field. Lens and its accessories. Knowledge of different types of lenses & their uses. Covering power/ angle, aberrations of lens, perspective. Use of lens hood, tripod, self timer. |
| 8-9 | Introduction to Computer Fundamentals | |
| 10-14 | Digital editing by using bit map and vector based image editing software. Ability of taking printouts of photographs taken by a digital camera from computer printer. Concept of image transportation to storage media. Practice of sending photographs through internet, sending photographs through E-mail and printing and analysis of images. | Knowledge of image editing software. Knowledge of different types of printing media. For hard copy. Knowledge of different types of printer in respect of their resolution |
| 15-16 | Ability to scan photographs and capture frames | Knowledge of other different types through scanner & capture card, editing of capturing methods through scanners frame grabber with digital camera. Knowledge of photo editing through different types of updated photo editing softwares. |

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| 17 | Internship (visit to studios and labs etc) | |
| 18-22 | Practice and Project work (Three weeks for practical and two weeks for project work) | |
| 23-24 | Handling of digital video cameras, Tape, DVD, HDD and accessories. Types of common shots and movements. Dimension of images. | Introduction to video, use of video as a communication medium. types of video cameras-their various formats, types of various video tapes, DVD, HDD. Principle of video recording. |
| 25-28 | Lighting of different areas of video shooting. Practice on three point lighting, indoor and outdoor lighting etc. Practice on hard & soft, bounce, silhouette lighting, key lighting. Use of reflectors & skimmers. | Knowledge of different types of lighting. Concept of power distribution depending upon the requirement of the light output. |
| 29-32 | Using of microphones. Audio video recording, mixing, editing, dubbing of sound. | Concept of different types of microphones. Knowledge of sound recording, mixing, editing, dubbing etc. |
| 33 | Idea & planning of production - proposal, scope, script, shot division, visualization according to script. | Planning for production, pre-production, production and post production etc. Introduction to multi camera setup and production. |
| 34-41 | Shooting and editing of short documentary, news items , interviews, music video etc. | Idea of different subject to be selected for shooting. |
| 42 | Storing materials in media. Using software for changing the formats. | Visual digitization, authoring, final output and format change. |
| 43-44 | Internship (visit to production house/studios etc) | |
| 45-50 | Practice and preparation for project work | |
| 51-52 | Revision and test | |

Social Studies : The syllabus is already approved and is common for all the trades

**List of tools and equipments for the trade of Digital
Photographer under CTS
(For a batch of 16 trainees)**

| Sl. No. | Items | Qty. (Nos.) |
|---------|--|-------------|
| 1. | Digital compact Still Camera with standard accessories | 5 |
| 2. | Digital SLR Camera with standard accessories. | 2 |
| 3. | Digital SLR Camera with detachable recorder (Latest model) | 1 |
| 4. | Video capture card | 2 |
| 5. | 14" LMD monitor | 2 |
| 6. | Multi media speaker 2.1 | 2sets |
| 7. | Digital lens (Normal/wide/telephoto) | 2 sets each |
| 8. | Desiccators 15" dia | 5 |
| 9. | Digital handycam with cassette and DVD, hard disc type | 3 |
| 10. | Zoom lens matchable with Digital SLR camera (28-70mm, 70-300mm) | 1 each |
| 11. | Fish eye lens matchable with Digital SLR camera | 1 |
| 12. | Camera stand for still camera | 2 |
| 13. | Camera stand for video (low base) | 1 |
| 14. | Cable release | 2 |
| 15. | Different types of filters, (10 types) matchable with camera (Graduated, Star filter, multi image, ND, Sky light, polarizer, colour filter set, 80B, both for video & still) | 1 each |
| 16. | Extension ring (4 types) | 2 |
| 17. | Electronic flash gun (Manual & auto) Different types with slave unit | 4 |
| 18. | Studio light | 4 |
| 19. | Spot light | 2 |
| 20. | Electronic umbrella light | 4 |
| 21. | Air conditioner for studio (1.5 ton) | 4 |
| 22. | Exposure meter (digital incident) | 6 |
| 23. | Studio room (30ft. x 30ft. x 18ft. height) fitting with cataract system, light grid, sound proof, AC, with cyclorama | 1 room |
| 24. | Studio & class room furniture | |
| | a) Steel chairs folding type with arm rest for trainees | 20 |
| | b) Working table moulded | 20 |
| 25. | Computer with multimedia facility and graphic accelerator card and DVD writer, CD drive, Zip drive, video capture card (Latest configuration) Connected with LAN | 10 |
| 26. | Standalone DVD recorder | 2 |
| 27. | Inkjet printer with colour cartridge (1200 dpi or higher) | 2 |
| 28. | Laser printer with colour cartridge (1200 dpi or higher) | 2 |
| 29. | Scanner (1200 dpi or higher) | 2 |
| 30. | UPS (5 KV A) | 10 |
| 31. | Windows operating system XP or latest version | 1 |
| 32. | Photo editing software like Photoshop CS 3 etc. | as required |
| 33. | MS-Office latest version | 1 |

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| 34. | Macro media Free Hand latest version | 1 |
| 35. | Flash latest version | 1 |
| 36. | Director latest version | 1 |
| 37. | Sound Forge/ cool edit pro latest version | 2 |
| 38. | Digit Mix latest version | 1 |
| 39. | Anti Virus software latest version | 1 |
| 40. | Adobe premier available version | 1 |
| 41. | Table for computer, printer and scanner | 10 |
| 42. | Chairs for computer classes | 20 |
| 43. | DVD writable (latest capacity) | 100 |
| 44. | DVD Re-writable (latest capacity) | 50 |
| 45. | Portable hard disk 320GB- 1 TB | 1 |
| 46. | Pen drive 8 GB, 16 GB | 5 each |
| 47. | Multiple card reader | 5 |
| 48. | Reflectors (Folding Portable) | 10 |
| 49. | Cool light | 8 |
| 50. | Multi 10 & Multi 20 | 10 each |
| 51. | Sun Gun | 6 |
| 52. | Porto pack light | 3 sets |
| 53. | Tape matchable with the camera | as required |
| 54. | Slide & film high resolution scanner with adapter for A3 | 1 |
| 55. | Slide & film high resolution scanner with adapter for A4 | 1 |
| 56. | DV VTR according to digital camera | 1 |
| 57. | DV VTR with play back adapter for camcorder | 1 |
| 58. | Play back adapter for video camera | 1 |
| 59. | Battery charger for still camera | 1 |
| 60. | Battery charger for video camera | 1 |
| 61. | Battery for digital SLR camera | 12 |
| 62. | Battery for digital video camera' | 12 |
| 63. | Microphone (boom) | 1 |
| 64. | Microphone (lapel) | 2 |
| 65. | Trolley set 30 ft. | 1 |
| 66. | Round trolley 30 ft. | 1 |
| 67. | Cable | as required |
| 68. | Extension Board | as required |
| 69. | BNC cable with various connectors (80 ohms) | as required |
| 70. | Steel almirah | 2 |
| 71. | Pigeon hole steel almirah | 1 |
| 72. | Fire extinguisher | 4 |

Optional Tools & Equipments:

| | | |
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| 1) | Over head projector with screen | 1 |
| 2) | LCD Projector | 1 |
| 3) | DLP projector and motorized projection screen | 1 |

Syllabus for the trade of "Digital Photographer" Under Apprenticeship Training Scheme (ATS)

Duration of Training : One and Half Year

First One Year Basic Training : Same as CTS

Next Six Months : On the Job Training / Shop Floor Training

| Week No. | Trade Practical | Trade Theory |
|----------|--|--|
| 1 | Familiarization with the Institute. Handling and maintenance of digital still and video cameras, Hi- definition cameras etc | Definition of photography, introduction to digital photography |
| 2-4 | Camera controls, different mode of operation including auto, manual and using flash. Camera resolution comparison, high-resolution scanner. | Knowledge of shutter, aperture. depth of field control, technique of capturing image. Effect of pixel resolution on photo quality. Scan images from print, slides and negatives. |
| 5-7 | Introduction and uses of different lenses | Understanding focal length, image stabilization, zoom lenses, inside angle, telephoto and fish eye lenses, macro mode and macro lenses. |
| 8-9 | Different shooting techniques using flash, studio lighting and light meter. | Flash sync. and shutter speed, positioning the flash & subjects. Red eye, using fill flash, flash exposure. Controlling available light using portable flash indoor and outdoor, essential filters and their uses in controlling lights. |
| 10-16 | Use of computer, installing driver software of digital camera, uploading of image from digital camera, making folders of different events/ date wise. Installation photo editing software, editing photographs, retouching. Printing of different size photos. | Knowledge of computer operating system, use of driver software and its operation. Knowledge of photo editing software. Photo resolution, colour correction, changing the background. Installation of printer |
| 17-25 | Shooting of different areas, film making process, movie-making software, making movies, graphics and titles for digital video. CD- DVD conversion. Practice on sound editing. | Ideas of different area of shooting. Knowledge of capturing image or video, editing clips, adding video effects, creating background music, burning of CDs or DVDs. Converting digital photos and videos from DV tape to a CD or DVD. Knowledge of sound techniques. |
| 26 | Revision and Test | |