

Professor (Dr.) Vinay Swarup Mehrotra

Prof. Vinay Swarup Mehrotra is working as Head of Curriculum Development and Evaluation Centre (CDEC) and National Skills Qualifications Framework (NSQF) Cell at the PSS Central Institute of Vocational Education, NCERT Bhopal. He has more than 19 years of experience in curriculum development, courseware development and teacher training in agriculture education, vocational education and vocational pedagogy.

For further information, please contact at E-mail: drvs.mehrotra@gmail.com

विद्ययाऽमृतमश्नुते



एन सी ई आर टी
NCERT

PSS Central Institute of Vocational Education

(a constituent unit of NCERT, an autonomous organization
under Ministry of Human Resource Development, Government of India)

Shyamla Hills, Bhopal

Phone : +91-755-2704100, 2660691, Fax : +91-755-2660481

Website : www.psscive.nic.in, www.cive.org

Competency Based Curriculum

(Classes 9 to 12; NSQF Levels 1 to 4)

Course: Media & Entertainment (Job Role: Animator)

QP Ref. Id.: MES/ Q 0701



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Shyamla Hills, Bhopal - 462 013, M.P., India

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Coordinator

Dr. Vinay Swarup Mehrotra
Professor & Head

Curriculum Development and Evaluation Centre (CDEC),
National Skills Qualifications Framework Cell (NSQFC) and Electronic Media
Development Centre (EMDC)

Production Assistant

Shri A.M. Vinod Kumar

Preface

The Ministry of Human Resource Development (MHRD), Government of India introduced vocational courses from Class 9th onwards under the revised Centrally Sponsored Scheme of Vocationalisation of Secondary and Higher Secondary Education. The MHRD also developed a National Vocational Education Qualifications Framework (NVEQF), which was subsumed in National Skills Qualifications Framework (NSQF) in 2013. The NSQF organizes qualifications according to a series of levels of knowledge and skills. These levels are defined in terms of learning outcomes i.e. the competencies (knowledge, skills and attitude) which the learners must possess, regardless of whether they were acquired through formal, non-formal or informal education and training system. Qualifications are made up of occupational standards for specific areas of learning units or unit of competency. Units of competency are the specification of knowledge and skill to the standard of performance expected in the workplace. The unit of competency or National Occupation Standards, comprising generic and technical competencies that an employee should possess, are laid down by the Sector Skill Council of the respective economic or social sector.

Competency is defined in terms of what a person is required to do (performance), under what conditions it is done (conditions) and how well it is to be done (standards). It can be broadly categorized into foundational, practical and reflexive competencies. Generic competencies are considered essential for a person to participate effectively in the workforce, whereas technical competencies are an individual's knowledge and expertise in the specific group task, its processes and its rules and regulations.

The competency based curriculum is broken down into coherent parts known as Units. Each unit is further broken down into knowledge and skills on the basis of which evidence is to be provided by the learner and the evaluation is to be done by the teacher or trainer.

The PSS Central Institute of Vocational Education (PSSCIVE), a constituent unit of National Council of Educational Research & Training (NCERT) is an apex research and development Institute for vocational education. The institute has been mandated by the MHRD to develop curricula and courseware for vocational subjects to be introduced from Classes 9 to 12 under the NSQF.

The curriculum has been developed and reviewed by a group of experts and their contributions are admirably acknowledged. The utility of the curriculum will be adjudged by the qualitative improvement that it brings about in teaching-learning in vocational subjects. The feedback and suggestions on the content will be of immense value to us in bringing about necessary improvement in the curriculum.

Prof. (Dr.) R.B. Shivagunde
Joint Director and Head,
PSS Central Institute of Vocational Education, Bhopal

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1.0 About the Course

The Media and Entertainment Industry in India is one of the fastest growing industries. Media and Entertainment industry has job opportunities for individuals in animation studios, creative design studios, art centers, multimedia development centers, etc. Its various segments, such as film, television, advertising, print media and music have witnessed tremendous growth in the last few years. The industry is armed with digital technologies, state-of-the-art mobile devices, broadband and digital cinema. Even though traditional media, such as television and print are still the preferred medium, other segments such as animation, visual effects, films and music are slowly establishing themselves in the market.

Animator in the Media and Entertainment Industry is also known as Flash Animator or 3D Animator. An Animator is an artist who creates multiple images, which when displayed in rapid sequence, give an illusion of movement called animation. Animators can work in a variety of fields, including film, television, and video games.

An Animator needs to refer to the concept of artwork prepared by animation artists to produce a sequence of 2D/3D images by producing multiple images called frames, which when sequenced together rapidly create an illusion of movement known as animation. The images can be made up of digital or hand-drawn pictures, models or puppets. An Animator has the responsibilities of developing animation as per client requirement, creating storyboards, creating sketches, artwork or illustrations, designing models, backgrounds, sets, characters, objects, and animation environment, building up accurate, detailed frame-by-frame visuals, recording dialogue and working with editors to composite the various layers of animation (backgrounds, special effects, characters and graphics). It requires an individual to learn the fundamentals of life drawing which includes human anatomy, emotions, actions and expressions. The individual must know and keep updated on graphics and animation software and apply principles of design, animation and film-making to create animation sequences.

What Animators do?

- develop animation from the concepts
- create storyboards that depict the script and narrative
- perform drawing in 2D to create sketches, artwork or illustrations
- design models, backgrounds, sets, characters, objects and the animation environment
- use a range of materials, including modelling clay, plaster, oil paints, watercolours and acrylics for animation
- develop the timing and pace of the movements of a character or object during the sequence of images
- use software packages, such as Flash, Maya, Lightwave, Softimage, etc. to build up accurate, detailed frame-by-frame visuals
- record dialogue and work with editors to composite the various layers of animation
- work to production deadlines and meeting clients' requirements
- work in team with copywriters, photographers, designers, website designers and other specialists

2.0 Objectives of the Course

Upon completion of this course, you will be able to:

- Describe the uses and applications of Animation
- Describe the various types of Animation
- Demonstrate the knowledge of principles of Animation
- Demonstrate the knowledge of modern computers and their parts and peripherals
- Demonstrate fundamental skills of video and sound editing
- List the equipment and materials used in Animation
- Perform advanced level of computer usage
- Demonstrate the knowledge of basics compositing
- Demonstrate the various features of 2D Animation
- Demonstrate the knowledge of the concept of 3D production pipeline
- Communicate effectively at workplace
- Describe health, safety and hygiene related issues
- Communicate effectively at workplace
- Demonstrate the animation steps
- Explain the concept of biped walk cycle and run cycle
- Demonstrate the concept of facial expression and lip sync
- Demonstrate the concept of bouncing balls and steps of animation
- Demonstrate the knowledge of project setting and animation rendering
- Demonstrate the ability to work in a team and adapt to different work environment
- Demonstrate the ability to present attributes for effective performance at workplace

3.0 Course Structure

This course is a planned sequence of instructions consisting of modules called as Units.

| NSQF Level 1 (Class 9) | | | | |
|------------------------|----------------|---|--------------------------------|----------------------------|
| S.No. | Unit Code | Unit Title | No. of Notional Learning Hours | Pre-requisite Unit, if any |
| 1. | MEAM101-NQ2015 | Introduction to Computers and Internet Navigation | 25 | Nil |
| 2. | MEAM102-NQ2015 | Communication at Workplace | 25 | Nil |
| 3. | MEAM103-NQ2015 | Personality Development | 15 | Nil |
| 4. | MEAM104-NQ2015 | Introduction to Animation | 15 | Nil |
| 5. | MEAM105-NQ2015 | Principles of Animation | 15 | Nil |
| 6. | MEAM106-NQ2015 | Introduction to 2D Animation | 10 | Nil |
| 7. | MEAM107-NQ2015 | 3D Production Pipeline | 15 | Nil |
| Total | | | 120 | |

Successful completion of 120 hours of theory sessions and 80 hours of practical activities and on-the-job learning is to be done for full qualification.

| NSQF Level 2 (Class 10) | | | | |
|-------------------------|----------------|-----------------------------------|--------------------------------|----------------------------|
| S.No. | Unit Code | Unit Title | No. of Notional Learning Hours | Pre-requisite Unit, if any |
| 1. | MEAM201-NQ2015 | Advance Computer Training | 30 | MEAM101-NQ2015 |
| 2. | MEAM202-NQ2015 | Communication at Workplace(Basic) | 30 | MEAM102-NQ2015 |
| 3. | MEAM203-NQ2015 | Customer Centricity | 10 | Nil |
| 4. | MEAM204-NQ2015 | Digital Film Making | 20 | Nil |
| 5. | MEAM205-NQ2015 | Basics of Video and Sound Editing | 15 | Nil |
| 6. | MEAM206-NQ2015 | Basic Compositing | 15 | Nil |
| Total | | | 120 | |

Successful completion of 120 hours of theory sessions and 80 hours of practical activities and on-the-job learning is to be done for full qualification.

| NSQF Level 3 (Class 11) | | | | |
|-------------------------|----------------|--|--------------------------------|----------------------------|
| S.No. | Unit Code | Unit Title | No. of Notional Learning Hours | Pre-requisite Unit, if any |
| 1. | MEAM301-NQ2015 | Health, Hygiene, Safety and Ergonomics | 20 | Nil |
| 2. | MEAM302-NQ2015 | Communication at Workplace (Intermediate) | 30 | MEAM202-NQ2015 |
| 3. | MEAM303-NQ2015 | Animation (Windows and Editor) | 15 | Nil |
| 4. | MEAM304-NQ2015 | Introduction to 2D Animation - Adobe Flash and Photoshop | 20 | Nil |
| 5. | MEAM305-NQ2015 | Basic Tools and Techniques of Animation in Maya | 15 | Nil |
| 6. | MEAM306-NQ2015 | Camera and Motion Path Animation | 20 | Nil |
| Total | | | 120 | |

Successful completion of 120 hours of theory sessions and 180 hours of practical activities and on-the-job learning is to be done for full qualification.

| NSQF Level 4 (Class 12) | | | | |
|-------------------------|----------------|---|--------------------------------|----------------------------|
| S.No. | Unit Code | Unit Title | No. of Notional Learning Hours | Pre-requisite Unit, if any |
| 1. | MEAM401-NQ2015 | Biped Walk and Run Cycle | 20 | Nil |
| 2. | MEAM402-NQ2015 | Communication at Workplace (Advanced) | 30 | MEAM302-NQ2015 |
| 3. | MEAM403-NQ2015 | Posing of Body Mechanics | 15 | Nil |
| 4. | MEAM404-NQ2015 | Facial Expression and Lip Sync | 15 | Nil |
| 5. | MEAM405-NQ2015 | Advanced Acting | 15 | Nil |
| 6. | MEAM406-NQ2015 | Bouncing Balls and Steps of Animation | 15 | Nil |
| 7. | MEAM407-NQ2015 | Quadruped Walk Cycle and Run Cycle | 15 | Nil |
| 8. | MEAM408-NQ2015 | Basics of Project Setting and Animation Rendering | 15 | Nil |
| Total | | | 140 | |

Successful completion of 140 hours of theory sessions and 160 hours of practical activities and on-the-job learning is to be done for full qualification.

4.0 Classroom Activities

Classroom activities are an integral part of this program and interactive lecture sessions, followed by discussions should be conducted by trained teachers. Teachers should make effective use of a variety of instructional aids, such as Videos, Colour Slides, Charts, Diagrams, Models, Exhibits, Hand-outs, Recorded Compact Discs, etc. to transmit knowledge in projective and interactive mode.

5.0 Practical Activities

Activities that provide practical experience in laboratory set up would include hands on training, case based problems, role play, games, etc. on various incidents and practical exercises in skill lab. Equipment and supplies should be provided to enhance hands-on experiences for students. Trained personnel should teach specialized techniques. A training plan signed by teacher that reflects equipment, skills and tasks should be prepared for training of the students in the organization/industry.

6.0 On-the-Job Training

On-the-job training (OJT) occurs whenever more experienced employee or supervisor teaches less experienced person on how to do one or more tasks of a job. The training utilizes actual equipment and materials. OJT should be undertaken in a structured manner with a training plan under the supervision of an experienced trainer or supervisor. A training plan that reflects tasks to be performed and competencies to be imparted should be prepared and signed by the student, teacher, and supervisor at the workplace for training of the students in the organization/industry. The trainer should break down all the steps of the job and train the students as per the training plan. In a structured OJT, the following steps should be followed:

Step 1: The Instructor or the trainer tell, show, demonstrate, and explain. The trainer gives an overview of the task while explaining the constructional details and use of the tools, equipment, materials, etc. in performing the tasks.

Step 2: The Instructor or the trainer demonstrates each step in detail, actually doing the steps of the task and explaining each step, one at a time, while the trainee watches. The steps may not necessarily be demonstrated in the sequence of actual operation, as sometimes it is better that simple tasks are demonstrated first to build confidence. Showing finished products at each appropriate step will help the learner understand what is required as outcome. While demonstrating, the trainer explains why each step is done in the way it is done.

Step 3: It involves direct trainee participation. The trainer monitors the progress on a checklist of competencies and offers feedback and pointers where and when needed.

Step 4: The trainee practices with clearly defined targets for performance standards.

7.0 Certification

Upon successful completion of this course the State Education Board and the Media and Entertainment Sector Skill Council (MESCC) will provide a certificate to the student verifying the competencies acquired by the candidate. For more details about MESCC visit the website of Media and Entertainment Sector Skill Council at <http://www.mescindia.in/>.

8.0 Syllabus - Achievement Standards and Teaching/Training Methods

NSQF Level 1 (Class 9)

| Unit Code: MEAM 101- NQ2015 | | Unit Title: Introduction to Computers and Internet Navigation | | |
|-----------------------------------|--|--|--|--|
| Location: | | Duration: 25 hours | | |
| Classroom and Computer Lab | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| | Demonstrate the use of computer peripherals | <ol style="list-style-type: none"> 1. Describe the parts of a computer system 2. Describe the use of different types of software 3. Differentiate between primary and secondary memory 4. Differentiate between system software and application software 5. Distinguish between common I/O ports and connectors | <ol style="list-style-type: none"> 1. Identify hardware components of computer 2. Connect various parts and devices of computer system. 3. Start and shut down a computer system | <p>Interactive lecture: Introduction to computer system</p> <p>Activity: Practice sessions on identification of various components of computer system and connecting them to the Central Processing Unit (CPU)</p> |
| | Manage files and folders | <ol style="list-style-type: none"> 1. Describe the purpose of files and folders 2. Describe the procedure for locating files and folders on the drive | <ol style="list-style-type: none"> 1. Create a file and folder. 2. Locate and rename a folder and file 3. Delete a file or folder. 4. COPY-PASTE file and folder 5. CUT-PASTE file and folder | <p>Interactive lecture: Managing files and folders</p> <p>Activity: Practice sessions on managing files and folders</p> |
| | Demonstrate the use of Internet, surfing and social networking sites | <ol style="list-style-type: none"> 1. Describe purpose of internet and world wide web 2. Explain the terms - Internet Service | <ol style="list-style-type: none"> 1. Demonstrate how to connect to internet 2. Open and close web browsing application 3. Enter the URL in the | <p>Interactive lecture: Internet and using the browsers and social networking sites</p> |

| | | | | |
|--|-------------------------------------|---|---|---|
| | | <p>Provider, Uniform Resource Locator, Hyperlink, etc.</p> <ol style="list-style-type: none"> 3. Name different web browsers 4. Describe the risks associated with the online activities, like unintentional disclosure of personal information, bullying or harassment, targeting of users by predators and virus | <ol style="list-style-type: none"> 4. address bar 4. Search documents using search engines 5. Navigate forward and backward between previously visited webpages 6. Carry out search for specific information using a keyword and phrase 7. Save a page to a location 8. Set the browsers webpage 9. Block and allow pop-ups and cookies 10. Delete browsing history | <p>Activity: Practice sessions on using internet and social networking sites and use different search engines</p> |
| | <p>Demonstrate the use of Email</p> | <ol style="list-style-type: none"> 1. Describe the purpose of email 2. Explain the structure of email address 3. Describe the various features of email and their uses 4. Describe the advantages of using email, like speed of delivery, low cost, facility for attachment of documents, spell check facility, etc. 5. Describe the difference between the To, CC and BCC fields. 6. Describe the procedure of sending, forwarding and searching emails 7. Discuss the best practices to be adopted while using email | <ol style="list-style-type: none"> 1. Create an email account 2. Compose an email 3. Insert and remove a file attachment 4. Open the Sent box to see the emails sent 5. Add signatures 6. Prepare and save a draft message in Drafts folder 7. Use a spell check tool for checking spelling mistakes and correcting spelling errors 8. Copy text from another source into an email 9. Retrieve emails saved in the Drafts box and edit them before sending. 10. Flag email as Spam and recover email from Spam folder 11. Manage an email account by moving emails into folders/labels 12. Manage email account by deleting unwanted messages from inbox and trash folder 13. Update an address book from incoming email 14. Search for email | <p>Interactive lecture: Using Email services</p> <p>Activity: Practice sessions on opening and managing email account</p> |

| Unit Code: MEAM 102- NQ2015 | | Unit Title: Communication at Workplace | | |
|-----------------------------------|--|--|--|--|
| Duration: 25 hours | | | | |
| Location: | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| Classroom | Identify elements of communication cycle | <ol style="list-style-type: none"> 1. Describe the meaning of communication 2. State the different elements of communication cycle 3. Differentiate between Sender, Message, Medium, Receiver and Feedback. 4. Describe the importance of active listening | <ol style="list-style-type: none"> 1. Identify elements of communication cycle 2. Draw a diagram of communication cycle | <p>Interactive lecture: Elements of communication cycle</p> <p>Activity: Drawing a communication cycle</p> <p>Case based problems</p> |
| | Provide feedback | <ol style="list-style-type: none"> 1. Describe the meaning of feedback 2. Describe the importance of feedback 3. Describe the characteristics of feedback 4. Differentiate between descriptive and specific feedback | <ol style="list-style-type: none"> 1. Construct a sentence for providing descriptive and specific feedback 2. Demonstrate the use of different characteristics of feedback | <p>Interactive lecture: Characteristics of feedback</p> <p>Activity: Assignment on constructing sentences for providing descriptive and specific feedback</p> <p>Case based problems</p> |
| | Overcome barriers in communication | <ol style="list-style-type: none"> 1. Describe the factors that act as communication barrier 2. Describe the ways to overcome barriers in effective communication | <ol style="list-style-type: none"> 1. Enlist barriers to effective communication at workplace 2. Demonstrate the ability to overcome barriers in communication | <p>Interactive lecture: Barriers in communication</p> <p>Activity: Group discussion on factors responsible for barrier in communication</p> |
| | Apply principles of communication | <ol style="list-style-type: none"> 1. Describe the various principles of effective communication | <ol style="list-style-type: none"> 1. Construct a sentence that convey all facts required by the receiver 2. Construct a sentence emphasizing on specific message 3. Communicate in a manner that shows respect to the receiver | <p>Interactive lecture: Principles of effective communication</p> <p>Activity: Role play, games and assignment on constructing sentences that convey facts and emphasize on specific message</p> |

| Unit Code: MEAM 103- NQ2015 | | Unit Title: Personality Development | | | |
|-----------------------------------|--|--|---|--|---|
| Location: Classroom | | Duration: 15 hours | | | |
| | | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| | | Describe the basic personality traits, types and disorders | <ol style="list-style-type: none"> 1. Describe the meaning of personality 2. Describe how personality influence others 3. Describe basic personality traits 4. Describe common personality disorders- paranoid, antisocial, schizoid, borderline, narcissistic, avoidant, dependent and obsessive | <ol style="list-style-type: none"> 1. Demonstrate the knowledge of different personality types | <p>Interactive lecture: Personality traits, types and disorders</p> <p>Activity: Role Play</p> |
| | | Demonstrate the ability to communicate clearly and politely on telephone | <ol style="list-style-type: none"> 1. Describe the procedure of greeting the customer on telephone call 2. Enlist the preparations to be made before receiving a telephone call | <ol style="list-style-type: none"> 1. Demonstrate the ability to convey message clearly and completely over telephone 2. Demonstrate the procedure for leaving message on telephone 3. Demonstrate the procedure to answer the telephone call | <p>Interactive lecture: Communicating clearly and politely on telephone</p> <p>Activity: Games based on improvement of telephonic conversation's skills</p> |
| | | Demonstrate the ability to work independently | <ol style="list-style-type: none"> 1. Describe the importance of the ability to work independently 2. Describe the types of Self Awareness 3. Describe the meaning of Self-motivation and Self-regulation | <ol style="list-style-type: none"> 1. Setting goals 2. Plan and finish tasks in a specific period, with no help or directives 3. Demonstrate how to work independently 4. Demonstrate the qualities required for working independently | <p>Interactive lecture: Working independently</p> <p>Activity: Complete a task independently within a specific time period without any help</p> |
| | | Demonstrate team work skills | <ol style="list-style-type: none"> 1. Describe the important factors in team building 2. Describe factors influencing team work | <ol style="list-style-type: none"> 1. Demonstrate the ability to work in a team | <p>Interactive lecture: Importance of team work</p> <p>Activity: Playing games for improving team work skills</p> <p>Group discussion</p> |
| | | Demonstrate impressive appearance and grooming | <ol style="list-style-type: none"> 1. Describe the importance of dressing appropriately, looking decent and positive body language 2. Describe the term grooming 3. Prepare a grooming checklist 4. Describe the techniques of self-exploration | <ol style="list-style-type: none"> 1. Demonstrate impressive appearance and groomed personality 2. Demonstrate ability to self- explore | <p>Interactive lecture: Importance of impressive appearance and grooming</p> <p>Activity: Prepare a chart of different dressing styles for various occasions Practice session on self-exploration</p> |

| Unit Code: MEAM104- NQ2015 | | Unit Title: Introduction to Animation | | | |
|--|---|---|--|---|--|
| Location: Classroom/ Digital Studio | Duration: 15 hours | | | | |
| | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method | |
| | Describe the history of animation | <ol style="list-style-type: none"> 1. Explain the evolution of animation, with examples 2. Describe the history of animation | <ol style="list-style-type: none"> 1. Explain how the animation industry evolved from its early days 2. Give examples of the use of animation | Interactive Lecture: History of animation Activity: Prepare a scrap book on history of animation Discussion on milestones in evolution of animation | |
| | Demonstrate the knowledge of various types of traditional animation methods | <ol style="list-style-type: none"> 1. Describe the various traditional methods of animation (e.g. hand drawn animation) | <ol style="list-style-type: none"> 1. Give examples of traditional methods of animation 2. Demonstrate the knowledge of hand drawn animation and Claymation (animation using clay) | Interactive Lecture: Traditional animation practices Activity: Ask students to perform internet search on various traditional practices in animation and submit a presentation Prepare a Flipbook of images to demonstrate the traditional method of animation | |
| | Demonstrate the knowledge of modern methods of Animation - e.g. Stop Motion Animation | <ol style="list-style-type: none"> 1. Describe the meaning of Stop Motion Animation | <ol style="list-style-type: none"> 1. Differentiate between modern animation and traditional animation 2. Describe the procedure adopted for Stop Motion Animation | Interactive Lecture: Stop Motion Animation Activity: Visit to a Animation Studio for understanding the various methods of animation | |
| Demonstrate the knowledge of the process of Computer Animation (2D & 3D Animation) | <ol style="list-style-type: none"> 1. Describe the basic concepts of computer animation 2. Describe the advantages of computer animation over traditional animation methods | <ol style="list-style-type: none"> 1. Differentiate between 2D and 3D animation 2. Demonstrate the knowledge of Digital animation approaches (frame by frame, shape and motion tweening) 3. Identify pivot point locations of nodes, groups and other 3D | Interactive Lecture: Various aspects of 2D and 3D animation Activity: Create and edit node based-hierarchies within a 3D environment | | |

| | | | | |
|--|---|--|---|--|
| | | | objects | (generate conceptual skeleton for 3D models, apply skin to bind joints to geometry, modify the bind and skin weights and design custom character rigs for animation) |
| | Describe production pipeline | 1. Explain the concept of production pipeline | 1. Demonstrate the knowledge of steps involved in the animation production pipeline | Interactive Lecture: Concept of Production pipeline Activity: Visit to a Animation Studio |
| | Describe the process of pre-production and story-boarding | 1. Describe the concepts of pre-production and story-boarding activities | 1. Explain the pre-production activities 2. Develop a short storyboard | Interactive Lecture: Preproduction activities and storyboarding Activity: Develop storyboards |

| Unit Code: MEAM105-NQ2015 | | Unit Title: Principles of Animation | | |
|------------------------------|---|--|---|--|
| Duration: 15 hours | | | | |
| Location: | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| Classroom/ Digital Studio | Describe twelve principles of animation | 1. Define twelve principles on which animation is established: <ul style="list-style-type: none"> • Squash and Stretch • Exaggeration • Anticipation • Ease In and Out • Arcs • Overlapping Action and Follow-through • Pose to Pose and Straight Ahead Animation • Reference and Planning • Timing • Staging • Appeal • Personality 2. Describe different techniques of animation | 1. Explain twelve basic principles of animation 2. Enlist the advantages and limitations of different animation techniques | Interactive Lecture: Principles of animation Activity: Case study Students should be asked to experiment on animating techniques and create collaborative storyboards |

| Unit Code: MEAM 106- NQ2015 | | Unit Title: Introduction to 2D Animation | | |
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| Location: Classroom/ Digital Studio | Duration: 10 hours | | | |
| | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| | Demonstrate the concept of 2D Animation | <ol style="list-style-type: none"> 1. Explain the basics of 2D animation 2. Explain the concept of production, pre-production and post-production | <ol style="list-style-type: none"> 1. Demonstrate knowledge of storyboard image 2. Describe in details the phases- preproduction, production and post-production | <p>Interactive lecture: 2D animation</p> <p>Activity: Video Sessions of 2D animated clips</p> |
| | Demonstrate different types of 2D Animation | <ol style="list-style-type: none"> 1. Describe path animation and stop-motion animation 2. Describe rotoscoping 3. Demonstrate knowledge on cinemagraphs | <ol style="list-style-type: none"> 1. Explain the process of different 2D animation 2. Describe the details on functionality | <p>Interactive lecture: Types of 2D Animation</p> <p>Activity: Prepare a chart containing various 2D animation processes with some examples</p> |
| | Demonstrate the basic process of 2D animation | <ol style="list-style-type: none"> 1. Describe work cycle of 2D animation 2. Explain the process of creating a walkcycle | <ol style="list-style-type: none"> 1. Differentiate between 2D and 3D animation 2. Demonstrate how to create a torsion | <p>Interactive lecture: Process of 2D Animation</p> <p>Activity: Create 2D animations using tools and techniques of the software application; import/add assets in line with storyboard and plan; Assemble assets in frames on the timeline and animate movement</p> |
| Demonstrate the flash animation | <ol style="list-style-type: none"> 1. Explain the process of limited animation or cut-out animation 2. Describe email as a mode of capturing conversations 3. Describe meetings as a mode of capturing conversations | <ol style="list-style-type: none"> 1. Demonstrate knowledge on flash cartoon | <p>Interactive lecture: Flash animation</p> <p>Activity: Create walk cycle poses in flash</p> | |

| Unit Code: MEAM107- NQ2015 | | Unit Title: 3D Production Pipeline | | |
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| Location: Classroom/ Computer Lab/Digital Studio | Duration: 15 hours | | | |
| | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| | Describe the Pre-production activities | 1. Explain story boarding 2. Define layouts 3. Describe model sheets and animatic | 1. Demonstrate how to perform pre-production activities 2. Prepare a flow chart of pre- production activities and required materials/equipment 3. Identify the various drawing and text tools and the utility of the same (geometric, line, pen, brush, text, stroke, fill, point, erase, etc.) | Interactive lecture: Pre-production activities Activity: Visit to a digital film making studio to learn the pre-production activities |
| | Describe the concept of texturing and modelling (Production 1) | 1. Explain texturing and modeling 2. Explain the basic standards followed in texturing and modeling | 1. Create model for stop motion 3D animation 2. Texture a character | Interactive lecture: Concept of texturing and modelling Activity: Presentations Learn texturing and modeling on software |
| | Describe the concept of Lighting and Rigging (Production 2) | 1. Explain lighting and rigging 2. Explain the basic standards followed in lighting and rigging 3. State importance of lighting in animation | 1. Demonstrate the concept of lighting and rigging 2. Demonstrate the use of concept of lighting to create a bright image | Interactive lecture: Concept of lighting and rigging Activity: Presentations Learn lighting and rigging on software |
| Describe the post-production activities | 1. Describe the post production process of animation 2. Explain exporting and rendering | 1. Demonstrate how to perform post-production activities 2. Prepare a flow chart of postproduction activities and required materials/equipment | Interactive lecture: Post production activities Activity: Visit to a digital film making studio to learn the post production activities | |

NSQF Level 2 (Class 10)

| Unit Code: MEAM 201- NQ2015 | Unit Title: Advance Computer Training | | | |
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| Location: Classroom and Computer Lab | Duration: 30 hours | | | |
| | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| | Demonstrate knowledge of using applications of Windows 8 and Linux operating systems | 1. Describe functions of different desktop applications of Windows 8 Operating System 2. Describe the functions of different desktop applications of Linux Operating System | 1. Demonstrate the use of various applications of Windows 8 Operating Systems 2. Demonstrate the use of various applications of Linux Operating Systems 3. Draw flow chart for accessing, opening and closing the applications in the Windows 8 and Linux operating systems | Interactive lecture: Using applications of Windows 8 and Linux operating systems Activity: Practical session on using applications of Windows 8 and Linux operating systems |
| | Demonstrate knowledge of Microsoft Word | 1. State the tasks that can be performed on MS word 2. Describe different objects of MS word | 1. Demonstrate how to perform following activities in MSWord : <ul style="list-style-type: none"> • format text • use word art • use clip art, shapes and smart art • align the text • insert symbols • insert page borders • insert tables • set orientation • insert headers, footers and page number • make different types of chart • modify line spacing, create bulleted and numbered lists • spell and grammar check • save document • print document • use help option | Interactive lecture: Working on Microsoft Word Activity: Practice session on Microsoft Word |
| Demonstrate knowledge of Microsoft Excel | 1. State the tasks that can be performed on MS Excel 2. Describe different objects of MS Excel | 1. Demonstrate how to perform following activities in MS-Word : <ul style="list-style-type: none"> • format cells • insert rows and columns • use multiple sheets • align the text • insert symbols • perform simple | Interactive lecture: Working on Microsoft Excel Activity: Practice sessions on Microsoft Excel | |

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| | | | <ul style="list-style-type: none"> • calculations • set orientation • perform merging of the cells • make different types of chart • use filter option • perform sorting • save document • print document • use help option | |
| | Demonstrate ability to install and uninstall various software on computer | <ol style="list-style-type: none"> 1. Draw flow chart of browsing the program features on control panel tag 2. Enlist the pre-requisites of installing any program in Windows OS 3. Differentiate between licensed and unlicensed software packages | <ol style="list-style-type: none"> 1. Install and uninstall demo version of any of the open source antivirus 2. Install and uninstall Microsoft Office | <p>Interactive lecture: Install and uninstall various software on computer</p> <p>Activity: Practice sessions on configuring various software on computer</p> |

| Unit Code: MEAM 202- NQ2015 | | Unit Title: Communication at Workplace (Basic) | | | |
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| | | Duration: 30 hours | | | |
| Location: | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method | |
| Classroom | Demonstrate how to greet people and give self-introduction | <ol style="list-style-type: none"> 1. Write the sentences used to introduce oneself 2. Write sentences used to greet people on different occasions/situations | <ol style="list-style-type: none"> 1. Demonstrate how to give self-introduction to others using appropriate sentences with proper body language 2. Demonstrate how to greet people using appropriate words with proper body language | <p>Interactive Lecture: Greeting people and giving self-introduction</p> <p>Activity: Role play</p> <p>Make a chart of the sentences that can be used to greet the people and give self-introduction</p> | |
| | Demonstrate how to frame sentences for different occasions/situations | <ol style="list-style-type: none"> 1. Enlist the words commonly used for framing questions 2. State the adjectives that are generally used for describing people, things and places | <ol style="list-style-type: none"> 1. Demonstrate how to tell the time effectively using appropriate sentences 2. Identify the sentences used while meeting someone for the first time 3. Demonstrate use of appropriate sentences for describing people, things and places 4. Frame sentences to | <p>Interactive Lecture: Framing sentences for different occasions/situations</p> <p>Activity: Role Play</p> | |

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| | | | congratulate someone 5. Frame sentences to give good wishes to someone 6. Frame sentences to invite people on various occasions | |
| | Describe weather and express likes, dislikes, strengths, weaknesses and aspirations using proper sentences | 1. State the adjectives commonly used for describing weather 2. Write the words used for expressing likes, dislikes, strengths, weaknesses and aspirations | 1. Demonstrate the use of appropriate sentences for describing weather 2. Express likes and dislikes effectively 3. Express strengths and weaknesses effectively 4. Express aspiration using appropriate sentences | Interactive Lecture: Describing weather and express likes, dislikes, strengths, weaknesses and aspirations Activity: Role play Group Discussion |
| | Demonstrate the ability to pronounce effectively | 1. Define phonetics 2. State the importance of correct pronunciation 3. Describe the subfields of phonetics 4. Distinguish between phonetics and phonology | 1. Pronounce common English words in correct manner 2. Identify the applications of phonetics | Interactive Lecture: Pronouncing effectively Activity: Role play Group discussion Audio session on phonetics |

| Unit Code: MEAM 203-NQ2015 | | Unit Title: Customer Centricity | | |
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| Duration: 10 hours | | | | |
| Location: | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| Classroom | Demonstrate the skills to handle customers effectively | 1. Explain customer handling as important part of business cycle 2. Explain how to identify customer needs, preferences and expectations | 1. Demonstrate the knowledge of do's and don'ts while handling customers 2. Demonstrate how to maintain customer loyalty 3. Demonstrate how to build strong relationship with customers 4. Demonstrate how to decrease the customer's waiting time | Interactive Lecture: Handling customers effectively Activity: Role play Video/Audio screening of best practices of customer handling |
| | Demonstrate the skills of taking orders on call | 1. Describe the process of taking orders over telephone 2. Write the words/sentences used while taking orders on call | 1. Demonstrate the do's and don'ts while taking orders over telephone 2. Record and organize the orders accurately | Interactive Lecture: Taking orders on calls Activity: Role play Case based problem |

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| | | | | Video/Audio screening of best practices of taking orders on calls |
| Demonstrate how to handle customer complaints | <ol style="list-style-type: none"> 1. Describe typical types of customer complaints 2. Describe the steps of handling customer complaints | <ol style="list-style-type: none"> 1. Record and organize complaints 2. Demonstrate the following steps of handling customer complaints: <ul style="list-style-type: none"> • listening and understanding the complaint • empathize • offering the solution • executing the solution • taking follow up | <p>Interactive Lecture: Handling customer complaints</p> <p>Activity: Role play</p> <p>Video/Audio screening of best practices of handling customer complaints</p> | |
| Demonstrate how to answer enquiries | <ol style="list-style-type: none"> 1. Describe steps of answering enquiries 2. State Frequently Asked Questions (FAQs) while enquiries 3. Explain the importance of knowledge of product/services in answering enquiries | <ol style="list-style-type: none"> 1. Demonstrate how to answer enquiries in following manner: <ul style="list-style-type: none"> • acknowledge receipt of an enquiry/request • explain action taken as a consequence of the enquiry • make suggestions and justify recommendations • apologize and reject proposals • stipulate action requested or to be taken • establish goodwill and suggest contacts | <p>Interactive Lecture: Answering enquiries</p> <p>Activity: Role play</p> <p>Case study</p> <p>Video/Audio screening of best practices of answering enquiries</p> | |

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| Unit Code: MEAM204- NQ2015 | Unit Title: Digital Film Making | | | |
| Duration: 20 hours | | | | |
| Location: Classroom/ Computer Lab/Video and Sound Editing Studio | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| | Demonstrate the use of Digital Camera | <ol style="list-style-type: none"> 1. Explain features of a Digital Camera 2. Explain the essence of cinematography 3. Describe the terms zoom and dolly 4. Differentiate between the lens and the imager | <ol style="list-style-type: none"> 1. Demonstrate the use of Digital Camera | <p>Interactive lecture: Using digital camera</p> <p>Activity:Practice session on using Digital Camera</p> |
| | Demonstrate the | <ol style="list-style-type: none"> 1. Explain different | <ol style="list-style-type: none"> 1. Demonstrate the | Interactive lecture: |

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| | art of taking camera shots | types of camera shots | posture needed for close up shots 2. Demonstrate the posture required for the point of view shot | The art of taking camera shots Activity: Practice various ways to shoot a picture. Use a model if needed. |
| | Demonstrate the ability to build a story | 1. Describe the setting and character required in photography 2. Explain importance of plot 3. Explain importance of back story | 1. Enlist some basic rules and protocols in making a story theme 2. Build a short story | Interactive lecture: Building a short story Activity: Build a short story |
| | Describe the concept of standing, straight ahead and pose to pose action | 1. Describe protagonist and antagonist 2. Explain the 3 art structures 3. Explain importance of standing, straight ahead and pose to pose action in digital film making 4. Describe character arc and story structure | 1. Demonstrate the straight ahead and pose to pose action 2. Demonstrate the 3 art structures | Interactive lecture: Concept of standing, straight ahead and pose to pose action Activity: Write a short script for a story using straight ahead and pose to pose action & the 3 art structures |

| Unit Code: MEAM 205- NQ2015 | | Unit Title: Basics of Video and Sound Editing | | | |
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| | | Duration: 15 hours | | | |
| | | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
| Location: Classroom/ Computer Lab/Video and Sound Editing Studio | Use Adobe Premiere Pro | 1. Explain the concept of work spaces with examples 2. Describe video and sound editing projects and its creation | 1. Demonstrate the use of tool box of Adobe Premiere Pro | Interactive lecture: Using Adobe Premiere Pro Activity: Create a project in Adobe premiere pro | |
| | Edit the video | 1. Describe video editing work flow 2. Describe timeline panel 3. Explain basic standards followed in editing a video 4. Describe clips and its types | 1. Demonstrate how to edit the video | Interactive lecture: Editing a video Activity: Visit to a digital film making studio and learn how to edit a video | |
| | Use Adobe Sound Booth | 1. Describe the procedure of increasing or decreasing the amplitude of a range by using the volume pop-up menu | 1. Demonstrate the ability to use simple features of Adobe Sound Booth 2. Give demo of editing the beginning or end of an audio track | Interactive lecture: Using Adobe Sound Booth Activity: Hands on practice on the use of Adobe Sound Booth | |
| | Edit the sound | 1. Explain various ways of editing | 1. Demonstrate how to increase or decrease | Interactive lecture: Editing a sound track | |
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| | | audio track | the length of the range by clicking and dragging the start and end points of the audio track 2. Demonstrate how to edit the sound track | Activity: Visit to a digital film making studio and learn how to edit a sound track |
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| Unit Code: MEAM 206- NQ2015 | | Unit Title: Basic Compositing | | | |
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| | | Duration: 15 hours | | | |
| Location: Classroom/ Computer Lab/Digital Studio | Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method | |
| | Use Adobe after effects | <ol style="list-style-type: none"> 1. Explain work spaces and its types 2. Explain the concept and use of various tools of tool box | <ol style="list-style-type: none"> 1. Demonstrate how to create and arrange layers in a composition | Interactive lecture: Using Adobe after effects Activity: Visit to a digital film making studio and create an after effect photography | |
| | Demonstrate how to create compositions | <ol style="list-style-type: none"> 1. Explain the basic standards followed in compositions 2. Explain minimum requirements for compositing images through the following: <ul style="list-style-type: none"> • physical composition • multiple exposure • background projection • matting | <ol style="list-style-type: none"> 1. Composite the image using following techniques: <ul style="list-style-type: none"> • Physical composition • Multiple exposure • Background projection • Matting | Interactive lecture: Creating compositions Activity: Visit to a digital film making studio and learn how to create compositions | |
| | Demonstrate preview of Video and Audio | <ol style="list-style-type: none"> 1. Explain use of workspace 2. Explain use of current time indicator 3. Explain use of Safe Zones, Grids, Guides, and Rulers | <ol style="list-style-type: none"> 1. Demonstrate use of workspace 2. Move the current time indicator 3. Demonstrate working with Safe Zones, Grids, Guides, and Rulers | Interactive lecture: Previewing video and audio Activity: Visit to a digital film making studio and learn how to preview video and audio | |
| | Demonstrate the knowledge of compositing | <ol style="list-style-type: none"> 1. Define Layers 2. The various types of Layers 3. Explain transitions and effects (fade, dissolve, cut) | <ol style="list-style-type: none"> 1. Demonstrate working with effects through Effect Controls Panel | Interactive lecture: Compositing Activity: Visit to a digital film making studio and learn compositing | |