



மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்

MANONMANIAM SUNDARANAR UNIVERSITY

**SYLLABUS FOR DIPLOMA IN MULTIMEDIA ANIMATION
PROGRAM OFFERED THROUGH DIRECTORATE OF VOCATIONAL
EDUCATION (COMMUNITY COLLEGES AND VOCATIONAL SKILL DEVELOPMENT
CENTRES) FROM 2019 - 2020**



கல்விசார் நிலைக்குழுக் கூட்டம்

**MEETING OF THE STANDING COMMITTEE ON
ACADEMIC AFFAIRS HELD ON WEDNESDAY
THE 22nd JANUARY 2020**

DIPLOMA IN MULTIMEDIA ANIMATION

பல்லுடக அசைவூட்டத்தில் பட்டயம்

SCHEME OF EXAMINATION

Subject code	Title of the Course	Credit	Hours	Passing Minimum
Semester I				
C19MA11/E19MA01	Introduction to Computer Graphics and Multimedia	6	90	40/100
C19MA12/E19MA02	Basics of Multimedia Production	6	90	40/100
C19MA13/E19MA03	Introduction to Animation	6	90	40/100
C19CE10/E19CE10	Communicative English	6	90	40/100
C19MAP1/E19MAP1	Practical I-Adobe Graphic Suite	4	120	40/100
Semester II				
C19MA21/E19MA04	Website Design and Management	6	90	40/100
C19MA22/E19MA05	Animation Using MAYA	6	90	40/100
C19LS23/E19LS05	Life skill	6	90	40/100
C19MA24/E19MA06	Designing Using 3D Max	6	90	40/100
C19MAP2/E19MAP2	Practical II-Multimedia Animation using MAYA & 3D Max and Project	8	120	40/100

Eligibility for admission: Pass in 10th std examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each Course is 40%. Classification will be done on the basis of percentage marks of the total marks obtained in all the Courses and as given below:

- 40 % but less than 50 % - Third class
 50 % but less than 60 % - Second class
 60 % and above - First class

Theory Paper

Internal Marks-25

External Marks-75

Syllabus**First Semester:-**

- Course I - Introduction to Computer Graphics and Multimedia
 Course II - Basics of Multimedia Production
 Course III - Introduction to Animation
 Course IV - Communicative English
 Course V - Practical I-Adobe Graphic Suite

Second Semester:-

- Course VI - Website Design and Management
 Course VII - Animation Using MAYA
 Course VIII - Life Skill
 Course IX - Designing Using 3D Max
 Course X - Practical II-Multimedia Animation using MAYA & 3D Max and Project

***(Semester Pattern for Community College Only)**

SEMESTER I

Course I

(C19MA11/E19MA01) Introduction to Computer Graphics and Multimedia

Unit I **18 Hrs**

Introduction to Computers, Development of Computers, Computer Application
Internet Technologies

Unit II **18 Hrs**

Introduction to Multimedia, Multimedia objects, Hypertext and Hyper Media,
Multimedia Applications, Features for a Multimedia System

Unit III **18 Hrs**

Introduction to Multimedia Concepts, Graphics and Animation, Image
Processing, Blogs and Social Media, Production and Process

Unit IV **18 Hrs**

Introduction to Multimedia Design –Balance, Scale, Proportion, Movement,
Dominance, Harmony-Rhythm and Repetition

Unit V **18 Hrs**

Introduction to Multimedia Devices, Scanner, Digital cameras, Printer, Server,
Mixer

Reference

1. “Multimedia Systems” by Ralf Steinmetz and Klara Nahrstedt
2. “Multimedia Communications: Directions and Innovations” by J. D. Gibson
3. “Introduction to Data Compression” by K. Sayood
- 4 “Multimedia Systems, Standards, and Networks” by A. Puri and T. Chen

Course II

(C19MA12/E19MA02) Basics of Multimedia Production

Unit I

18 Hrs

Representation of Multimedia Objects, Analog and Digital Formats, Font and their representation (bitmap, true type), Types of Graphics: Raster & Vector representation, Aspects in Image formats (Depth, Resolution, compression, file formats) , Aspects in Audio formats (speech and wideband audio, Audio quality, file formats) ,Aspects in Video formats (frame rate, file formats, video compression, Broadcast standards)

Unit II

18 Hrs

Concepts in Multimedia Production Process, Image Editing, Graphic Creation and Editing, Video Production Process, Audio Production

Unit III

18 Hrs

Introduction to Compression Technology, Basics image compression , Basics of Audio compression , Basics of Video Compression

Unit IV

18 Hrs

Multimedia Application Design, Content design, Technical design, Visual design, Design metaphors

Unit V

18 Hrs

Multimedia Authoring and Publishing, Definition of an Authoring System, Uses of an authoring system, Offline Publishing, Online Publishing

Reference

- Tay Vaughan, “Multimedia making it work”, Tata McGraw-Hill, 2008.
- Rajneesh Aggarwal & B. B Tiwari, “Multimedia Systems”, Excel Publication, New Delhi, 2007.
- Li & Drew, “Fundamentals of Multimedia” , Pearson Education, 2009.
- Parekh Ranjan, “Principles of Multimedia”, Tata McGraw-Hill, 2007
- Anirban Mukhopadhyay and Arup Chattopadhyay, “Introduction to ComputerGraphics and Multimedia”, Second Edition, Vikas Publishing House.

Course III

(C19MA13/E19MA03) Introduction to Animation

Unit I

18 Hrs

Introduction to animation, Basic Principles in animation, Design and Motives in Animation, Drawing for Animation

Unit II

18 Hrs

Perspective in animation, Perspective- blocks and boxes, Vanishing point in horizon, Outside horizon and indoors, Scale diagrams in perspective, Different viewpoints, Importance of eye level

Unit III

18 Hrs

Objects in perspective: Animals in perspective, Human forms in perspective, Shapes in perspective with light and shade, Construction drawing of animals with foreshortened cylindrical forms.

Unit IV

18 Hrs

Advanced Animation Principles: Timing for inanimate objects, Bird flight, Other types of animation cycles, Special effects, Flames, Smoke, Water, Rain, Snow, Explosions, Repeat movements of inanimate objects, Accentuating a movement.

Unit V

18 Hrs

Basic expressions: Lip movement, Key animation, Clean up, Character design, Shapes to define, Characterization and Expression

Reference

1. The Complete Animation Course" by Chris Patmore.
2. The Animator's Workbook" by Tony White.
3. The Animator's Survival Kit: A Manual of Methods, Principles, and Formulas for Classical, Computer, Games, Stop Motion, and Internet Animators" by Richard Williams.
4. The Animation Book: A Complete Guide to Animated Filmmaking-From Flip-Books to Sound Cartoons to 3-D Animation" by Kit Laybourne.
5. Handbook Of Multimedia & Animation, By Shukla A.S

Course IV

(C19CE10/E19CE10)COMMUNICATIVE ENGLISH

1. **Basic Grammar:**

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

2. **Bubbling Vocabulary:**

- a. Synonyms
- b. Antonyms
- c. One – work Institution

3. **Reading and Understanding English**

- a. Comprehension passage
- b. Précis – writing
- c. Developing a story from hints.

4. **Writing English**

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

5. **Speaking English**

- a. Expressions used under different circumstances
- b. Phonetics

Reference :

1. V.H.Baskaran – “English Made Easy”
2. V.H.Baskaran – “English Composition Made Easy”
(Shakespeare Institute of English Studies, Chennai)
3. N.Krishnaswamy – “Teaching English Grammar”
(T.R.Publication, Chennai)
4. “Life Skill” – P.Ravi, S.Prabakar and T.Tamzil Chelvam,
M.S.University, Tirunelveli

Course V
(C19MAP1/E19MAP1)Practical I
Adobe Graphic Suite

Important Aspects to be covered in Laboratory Segment

- Creating Objects, colors and text
- Frame-by Frame animation
- Usage of layers
- Symbols
- Tweened animation
- Motion tween
- Shape tween
- Animation using Guide layer
- Masking
- Buttons
- Sounds
- Action script

Semester II
Course VI

(C19MA21/E19MA04)Website Design and Management

Unit I **18 Hrs**

Brief History of Internet, What is World Wide Web?, Why create a web site?, Web Standards, Audience requirement. Basics in Web Design,

Unit II **18 Hrs**

Web Design Principles, Basic principles involved in developing a web site, Planning process, Five Golden rules of web designing, Home Page Layout, Design Concept.

Unit III **18 Hrs**

Introduction to HTML, What is HTML, HTML Documents, Basic structure of an HTML document, Creating an HTML document.

Unit IV **18 Hrs**

Introduction to Web Publishing or Hosting, Creating the Web Site, Saving the site Creating web site structure, Creating Titles for web pages, Themes-Publishing web sites

Unit V **18 Hrs**

Introduction to Website Management, Working on the web site, Content Management Service, Search Engine Optimization, Website Updation

Reference

- Judith Jeffcoate, Multimedia in Practice - Technology &Applications, Prentice Hall, 1995
- Louis Molina, Multimedia – An Introduction Prentice Hall, 1998
- Norman Desmorais Multimedia on the PC McGraw Hill Inc, 1994

Course VII
(C19MA22/E19MA05)Animation Using MAYA

Unit I **18 Hrs**

Introduction to 3D Animation, Introduction to the Maya GUI, Basic 3D transforms (translation, rotation, scaling) and animation , Creating a 3D scene from primitives

Unit II **18 Hrs**

Polygon mesh editing tools , Materials and Texturing , Cameras and lighting

Unit III **18 Hrs**

Animation, Rendering, and Output Techniques, NURBS and spline-based modelling, Basic character setup , Animating a simple character

Unit IV **18 Hrs**

Blocking out a performance , Refining performance , Dynamic particle systems

Unit V **18 Hrs**

Compositing and final polishing techniques, Image Optimisation

Reference

1. Autodesk MAYA 2014 Essentials, Autodesk Official Press
2. Maya 2014 Essentials, SYBEX

Course VIII

(C19LS23/E19LS05) Life Skill

I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

II Attitude

- (a) Attitude
- (b) Self acceptance, self – esteem and self actualization
- (c) Positive thinking

III Problem Solving

- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management.

IV Computers

- (a) Introduction to Computers
- (b) M.S.Office
- (c) Power Point

V Internet

- (a) Introduction to internet
- (b) E – mail
- (c) Browsing

References:

- 1) Life Skill Programme course I & II by Dr. Xavier Alphona MCRDCE Publications. R.K.Mutt Road, Chennai – 28
- 2) ஆளுமை பண்பு வளர்த்தல் மற்றும் தகவல் தொடர்பு by M.Selvaraj Community College, Palayamkottai
- 3) “Life Skill” –P.Ravi, S.Prabahar & T.Tamil Chelvam, M.S. University, Tirunelveli

Course IX

(C19MA24/E19MA06) Designing Using 3D Max

Unit I **18 Hrs**

Introducing 3Ds Max , Importance of 3Ds Max

Unit II **18 Hrs**

Creating all type of Standard, Extended, Primitive objects, Convert all solid objects into Editable mesh , Convert all shapes in Editable Spline Creating Compound Objects Creating Doors, Windows frame, Pannel, Glasses using Boolean Creating Doors, Windows frame, Pannel, Glasses using Editor Spline.

Unit III **18 Hrs**

Importing AutoCAD 3D Building Model File in 3Ds Max , Applying Camera, Lights and Materials in 3D Model view , Rendering Model View using Default Scan line Renderer Rendering Building View using Mental Ray Renderer

Unit IV **18 Hrs**

Different types of Lens and Effects in Lights, Creating Road Night views , Spot light and Lens effects , Creating Bounce Effect of Water , Creating Smoke Effect, Creating Water Animation, Rotation of Fan Wheel

Unit V **18 Hrs**

Creating a scene with Fire Effects - Creating Inner wall, door with Frames in AutoCAD to Exterior Building Model - Importing Exterior and Interior building model in 3Ds Max - Setting the furniture in rooms according to its requirement -Walk Through of Building in Exterior and Interior

Reference

1. Autodesk 3DS Max 2015 Complete Reference Guide by Kelly L.Murdock
2. Autodesk 3DS Max 2015 Essentials by Randi L.Derakshani

Course X

Practical II

(C19MAP2/E19MAP2) Multimedia Animation using MAYA & 3D Max and Project

Important Aspects to be covered in Laboratory Segment

- Animate and Inanimate Objects
- Modeling
- Perspectives
- Movements
- Lighting
- Framing
