M.Sc. (Graphic Animation and Multimedia)

Scheme of Examination & Syllabus
w.e.f. academic session 2019-2020

First Semester

Paper Code	Subject Name	T	P	I	Time	Credits
MGM-101	Visual Arts and Creativity	-	75	25	4 Hours	4
MGM-102	Graphic Designing and Publishing	50	25	25	4 Hours	4
MGM-103	Multimedia and Technologies	75	-	25	4 Hours	4
MGM-104	Story, Script and Storyboarding	50	25	25	4 Hours	4
MGM-105	Techniques of 2D Animation	50	25	25	4 Hours	4
	Total Marks=500					**20**

Second Semester

Paper Code	Subject Name	T	P	I	Time	Credits
MGM-201	Film Appreciation and Cinematography	75	-	25	4 Hours	4
MGM-202	Digital Video Production and VFX	50	25	25	4 Hours	4
MGM-203	Multimedia Programming	50	25	25	4 Hours	4
MGM-204	3D Modeling and Texturing	50	25	25	4 Hours	4
MGM-205	Cyber Laws and Intellectual Property Rights	75	-	25	4 Hours	4
Open Elective Paper (for any student of university)	Photography	-	50	-	2 Hours	2
	Total Marks=500					**22**

Third Semester

Paper Code	Subject Name	T	P	I	Time	Credits
MGM-301	Motion Graphics	-	75	25	4 Hours	4
MGM-302	3D Rigging	50	25	25	4 Hours	4
MGM-303	3D Animation and Rendering Techniques	50	25	25	4 Hours	4
MGM-304	Sound and Video Design	50	25	25	4 Hours	4
MGM-305	Web Media Production	75	-	25	4 Hours	4
Open Elective Paper (for any student of university)	Videography	-	50	-	2 Hours	2
	Total Marks=500					**22**

Fourth Semester

Paper Code	Subject Name	T	P	I	Time	Credits
MGM-401	Portfolio Development	75	-	25	4 Hours	4
MGM-402	Instructional Material Design	75	-	25	4 Hours	4
MGM-403	Multimedia Marketing and Research	75	-	25	4 Hours	4
MGM-404 Elective Paper	(i) Television Production	50	25	25	4 Hours	4
	(ii) 2D Production	50	25	25	4 Hours	4
	(iii) 3D Production	50	25	25	4 Hours	4
	(iv) Sound Production	50	25	25	4 Hours	4
	(v) Web Production	50	25	25	4 Hours	4
	(vi) Android Application Development	50	25	25	4 Hours	4
	(vii) Graphic Designing	50	25	25	4 Hours	4
MGM-405	Training / Internship	-	75	25	-	4
	Total Marks=500					**20**

MGM 101
Visual Arts & Creativity

Total Marks: 100,
Practical Marks: 75
Internal Assessment: 25
Time: 3 Hrs.

There will be a practical based paper and there will be only a practical examination in this paper. External examiner will evaluate the skills of students in this field of visual art & creativity. Examiner will give on-the-sport assignment/task to the students. Beside this viva voice (Oral Examination) will be conducted by the examiner for testing the knowledge of the student of the field. During semester student have to prepare a portfolio and will submit it to the examiner duly signed by the subject teacher at least 20 days before the commencement of the theory examination

UNIT-I

Development of Art & Ideas

- Origin of Art**:**
    - Study of Prehistoric Indian Art
    - Visual Arts & Its Forms & Creative Pedagogies
- Drawing Concepts
- Perception of Color
- Pictorial Composition

UNIT-II

Drawing & 3D Design

- Perspectives on the Creative Process
- Living & Non-Living objects
- Basic Elements & Principles of 3D Design
- Calligraphy & Typography

UNIT-III

Development of Character Design

- Anatomy & Proportions
- Body Types, Poses, Facial Expression
- Model sheet of Character
- Character Line-up

UNIT-IV

Clay Modeling

- Introduction to different kind of clay
    - Natural clay & Synthetic clay
- Create various shapes through clay
    - Volume, space & dimensions of objects
    - 2D & 3D geometrical
- To Study Human & Animal body
    - Eyes, Nose, Lips, Cat, Dog, Penguin etc.

References:
1. Drawing Human Anatomy: Giovanni Civardi
2. Keys to Drawing (Paperback) byBert Dodson
3. Fundamentals of Drawing: A Complete Professional Course for Artists, Barrington Barber, Paperback

MGM-102
GRAPHIC DESIGNING AND PUBLISHING

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT-I

Introduction to graphics

- Introduction to graphics, tools of graphics, uses & types of graphics
- Meaning and definition of graphics design
- Elements and principles of graphic design
- Graphics Overview: Raster graphics, Vector graphics

UNIT-II

Corel draw

- Tools and menus, Effects and masking
- social advertising
- Cartoon character design, Product design

Photoshop

- Introduction to Photoshop, workspace and photo editing tools
- Filters and Adjustments
- Digital matte painting

Unit-III

Illustrator

- Introduction to Illustrator, Applications and features, Illustrator interface
- Aligning objects, working with groups, arrange object, distributing objects. Templates
- Transforming objects: Scaling, Reflection, Distorting and Shearing objects
- Coloring and painting
- Using effects, appearance attributes and graphics styles

Unit – IV

Publishing

- Authoring and process of publishing
- Publishing types, newspaper and magazine publishing
- Research papers and publications
- Packaging and its types, Functions of Packaging

MGM 103
Multimedia and Technologies

Total Marks: 100,
Theory Marks: 75,
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit I

Multimedia Elements, Multimedia Applications, Multimedia System Architecture, Evolving Technologies for Multimedia Systems, Multimedia Databases; Types of Compression, Binary Image Compression Schemes, Color, gray scale, still-video image compression, video Image compression, audio compression; Data and File format standards- RTF, TIFF, RIFF, MIDI, JPEG, AVI, JPEG

Unit II

Key Technology Issues, Pen Input, Video and Image Display Systems, Print Output Technologies, Image Scanners, Digital Voice and Audio, Video Images and Animation, Full Motion Video; Magnetic Media Technology, Optical Media, WORM optical drives, Hierarchical Storage Management, Cache Management for storage systems.

Unit III

Types of Multimedia systems, Virtual Reality Design, Components of Multimedia system, Distributed Application Design Issues, Multimedia Authoring and User Interface, Hypermedia Messaging, Distributed Multimedia Systems

Unit IV

Secured Multimedia, Digital Rights Management Systems, Technical Trends, Multimedia encryption, Digital Watermarking, Security Attacks; Multimedia Authentication, Pattern, Speaker and Behavior Recognition, Speaker Recognition, Face Recognition

Reference Material:

- Weixel, Fulton, Barksdale.Morse, "Multimedia Basics", Easwar Press 2004.

- Andleigh PK and Thakrar K, "Multimedia Systems", Addison Wesley Longman, 1999.

- Fred Halsall, "Multimedia Communications", Addison Wesley, 2000.

- Ralf Steinmetz, KlaraNahrstedt, "Multimedia, computing, communications and applications", Prentice Hall, 1995.

- Tay Vaughan, "Multimedia making It work", TMH 5th Edition 2001.

MGM-104
Story, Script and Storyboarding

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit I

Story

Elements of story, Resources and ideas from life, Story Genres, Characters and the story, character driven stories, Event driven stories.

Story structures and styles

Narrative, non-narrative, abstract, absurd with reference to stories for animated film Basic writing for Animation, Story Structure, Plot, Dramatic structure, Conflict, Setting mood, Rising action, Falling Action, Dénouement, Resolution

Unit II

Script

Anatomy of a Script, Script Elements and Scene Heading, Action, Characters, Dialogue, Parenthetical, Extension, Transition, Shots, Page Breaking, Finer Points, Dual Dialogue, and Adlibs, Abbreviations and Montages, A Series of Shots and Short Lines/Poetry/Lyrics, transitions, continuity etc.

Titles or Opening Credits, and Superimpose or Title, Title Page, Production Drafts, Top Continued and Bottom Continued, Locking Script Pages and Locking Scenes, Header, Do's and Don'ts, Other Script Formats, radio scripts, TV scripts, animation film scripts.

Unit III

Storyboarding

Introduction to Storyboard, Importance of StoryBoard, difference between storyboard and Graphic Comic, Difference between Story, Script and Storyboard.Advantages of Storyboard in Animation and Anatomy of a Storyboard.

Unit IV

Shots

Introduction to various shots, Camera angles and Camera Movements used in Storyboard panels.continuity and Timing, Building a sequence of shots. Use of Perspective, Composition, Light & Shadow in Storyboarding.

Script to Storyboard

Designing a storyboard based on a short script, Use of Thumbnails and Quick story sketches, Creating visual narrative using Animatics.

Reference Material:

- Animation history and production by aparna vats; new delhi publishers; First edition 2017

- Story: Substance, Structure, Style and the Principles of Screenwriting by Robert McKee

- The Way of the Storyteller by Ruth Sawyer

- Comic Book Design: The Essential Guide to Creating Great Comics and Graphic Novels Gary Spencer Millidge

- Facial Expressions: A Visual Reference for Artists, Mark Simon, Publisher: Watson-Guptill,

- The Animation Book: A Complete Guide to Animated Filmmaking--From Flip-Books to Sound Cartoons to 3- D Animation, Three Rivers Press

- The Illusion of Life: Disney Animation, Ollie Johnston and Frank Thomas, Publisher: Disney Editions;

- Making Comics: Storytelling Secrets of Comics, M... by Scott McCloud

- The Art of story board by John Hart

- 'How to Write for Animation' by Jeffrey Scott's book

- Animation Art: From Pencil to Pixel, the world of Cartoon Anime and CGI- Jerry Beck

- The Animation Bible: A Practical Guide to the Art of Animating from Flipbooks to Flash [Paperback], Maureen Furnis

MGM-105
Techniques of 2D Animation

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit I

- Interface of Adobe Flash/ Animator

- Flash workspace , Timeline, Using Tools to create character for animation

- Shape tween and motion tween,Symbols and Keyframes

- Character Model Sheet, Character Line Up in Software such as Photoshop and Flash.

Unit II

- Introduction to Layout and importance of layout in Animation.

- Cinematic Camera Angles, Aspect Ratio, Preparing/Posing Layouts, Camera Movements – tracking, zoom, panorama, Camera movement calculation to animation – matching speeds.

- Principles of animation; Creating object animation (Different weighted ball with different properties, Book fall from book self, moving object interaction with other moving objects, pendulum and Tail animation) using all principles of animation.

Unit III

- Character Animation; Creating walk cycle for male and female characters, creating run and jump for biped and quartered characters

- Acting for Animation

  - Basics of Facial Expressions with different Emotions, Understanding the Gestures and Postures. Understanding the importance of acting in animation, Body Language, Pulling , pushing and lifting objects.

Unit IV

- Facial Animation

  - Adding life to characters using expressions. Classical approaches to depict various expressions and emotions. The mechanics of eye movements, blinking, talking, and making various gestures, Lip sync with dialog

- Rendering and Output

  - Fundamentals of rendering and exporting, Exporting still images and sequences. Learning output formats, terminologies related to rendering.

Reference Material:

- Animator's Survival kit – Richard Williams, Pub.-Focal Press.

- Timing for Animation – Harold Whitaker, Pub.-Focal Press.

- Cartoon Animation – Preston Blair, Pub.-Walter Foster.

- The Animator's Survival Kit - Richard Williams

- Basics Animation: Digital Animation - Andrew Chong

MGM 201
Film Appreciation and Cinematography

Total Marks: 100,
Theory Marks: 75,
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Introduction to Indian Cinema

- History of Indian Cinema: Realism, Neo-realism
- Other arts and cinema - theater, painting
- Cinema and Literature, Language in Indian Cinema
- Foreign Cinema

UNIT II

Film Genres

- What are Movie Genres?
- Westerns and Gangster Films, Mysteries and Film Noir, Horror, Fantasy and Science Fiction(Scifi), Thrillers
- Romantic Comedy Musicals and Documentaries, Drama

UNIT III

Cinematography

- What is Cinematography?
- Lighting Color Saturation and Desaturation
- The Camera, Lens and Their Uses Framing Special Effects
- Cinematography Editing - Time and Space, Narrative, Shot, Set and Design, Lighting, Sound/Music

UNIT IV

Hollywood, Short Films and Animation

- Criticism and Analysis
- Famous Animated Movies
- Best Movie Oscar Winners
- Award winning short films and Web Series

Reference Material:

- Allen, Robert & Douglas Gomery. Film History: Theory and Practice. New York: McGraw- Hill, Inc., 1987.
- Carroll, Noel. Mystifying Movies: Fads and Fallacies in Contemporary Film Theory. New York: Columbia University Press, 1988.
- Gledhill, Christine & Linda Williams. Eds. Reinventing Film Studies. London: Arnold, 2000.
- Stam, Robert & Toby Miller. Eds. Film and Theory: An Anthology. London: Blackwell Publishers, 2000.
- Stam, Robert & Toby Miller. Eds. A Companion to Film Theory. London: Blackwell Publishers,1999

MGM-202
Digital Video Production and VFX

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs.

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit I

Video Editing

Introduction and history of evolution of the specialized stream called Editing. Deciding an edit. Develop an understanding of the digital video production process: pre-production, shooting, editing, and post-production. Understanding importance of editing in the flow of a narrative.Pace and Rhythm in editing. Linear and Non Linear Film Editing.

Editing Tool

Working with interface. Importing supported files and saving project. Understanding tools and palettes, timeline and project panel.Previewing footages.Managing footages.

Unit II

Working with footages

Setting up project, removing frames, naming, finding and deleting footages, learning file size limitations, Using markers, In-out points, Scaling clips, adding transitions. Changing and replacing transitions. Adding Key, Time remapping, video formats and resolutions.Editing mode, changing Frame size, Exporting, Aspect Ratio, Pixel Aspect Ratio, Audio sample rate, Color Correction and Grading.

Unit III

Introduction to AfterEffects

Working with interface. Importing supported files and saving project. Understanding tools and palettes, timeline and project panel.Previewing footages. Managing footages, Introduction to Layers System(2D, 3D layers), Working with different types of Tools, Key Frame Animation

Working with footages

Rotoscope Techniques(Overview on Roto paint, Animating Roto Shape, Paint Techniques), Wire Removal Techniques, Green/Blue screen, Understanding of Pre-composing/Nesting, 3D Render Pass Comping, Color Correction & Grading.

Unit IV

Creating Masks

Key, Matte, Alpha, and Mask, Creating a Luma-Key, Creating a Chroma-Key, Creating a Mask(The Difference Mask, The Color Difference Mask, Geometric Primitives, Drawing Shapes, Painting a Mask, Combo Masks).

Compositing

Introduction to Compositing, Compositing CGI(Multipass Compositing, Depth Compositing, Multiplane Compositing, Working with Premultiplied CGI), Blue Screen Compositing (The Blue Screen Composite, About Keyers, Compositing Outside the Keyer, Shooting Blue Screens and Green Screens).

References:

- Editing Digital Video : The Complete Creative and Technical Guide by Robert Goodman (McGraw-Hill), Pub.- McGraw-Hill/TAB Electronics.

- Adobe premiere pro Bible by Adele Droblas, Pub.-Wiley.

- The Art and Science of Digital Compositing: Techniques for Visual Effects, Animation and Motion Graphics (The Morgan Kaufmann Series in Computer Graphics) by Ron Brinkmann

- Video editing: a post-production by S.E. Browne

- The technique of film editing by Reisz and Miller

- Grammar of editing by Roy. Thompson

- Rotoscoping: Techniques and Tools for the Aspiring Artist

MGM 203
Multimedia Programming

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT-I

Fundamental Of Computer Programming

- Programming Environment, Basic Syntax, Data Types, Variables, Keywords, Basic Operators, Decision Making, Control Statements, Numbers, Characters, Arrays, Strings Functions

UNIT-II

Web Essentials, HTML, CSS

- Basic Structure of a Web Page
- Basic Tags: Links, Images, Fonts, Colour and Character entities
- Images, Forms, Lists, Tables
- Block and Text level Elements

UNIT-III

JavaScript & PHP

- JavaScript Introduction, Variables and Data types, Control Structures, JavaScript Objects.
- PHP, PHP language Basics , Files and directories, Data Retrieval

UNIT-IV

SQL and Database Management

- Introduction to Sql: Creating Databases and Tables
- Sql Queries: Inserting, Deleting, Updating Data, Joins
- Sorting and Filtering Data
- Querying Sql Database in PHP

Reference Material:

- Paul Wilton and Jeremy McPeak, "Beginning JavaScript, 3rd Edition", Wrox Press Inc., 2007.
- Mercer, Kent, Nowicki, Squier and Choi, "Beginning PHP5", John Wiley & Sons, Inc., 2004.
- Jeffrey C. Jackson, "Web Technologies: A Computer Science Perspective", Pearson Education, 2006.
- Chris Bates, "Web Programming – Building Intranet applications", Wiley Publications, 3rd Edition, 2009.
- Deitel, Deitel& Nieto, "Internet and World Wide Web - How to Program", Prentice Hall, 4th Edition, 2008.
- www.w3schools.com

MGM 204
3D Modeling and Texturing

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT-I

Modeling Basics

- Polygon Modeling Basics
- Using CV/EP Curves
- NURBS/Surface Modeling
- Sculpting Tools
- Hard Surface Modeling: Interiors/Exteriors, Props etc.
- Organic Modeling: Character Modeling

UNIT-II

Introduction to Zbrush

- Zbrush Interface, ZTools: Primitives, Subtools, Geometry, Deformations
- Basic Brush: Type, Size, Intensity, Color, Alpha, Stroke
- Symmetry, Masking, Slicing, Clipping
- Working with DynaMesh
- Transpose: Move, Scale, Rotate
- Retopology Workflow for Animation (Zbrush to Maya)

UNIT-III

UV Mapping

- UV Projections: Planar Maps, Cylindrical Maps, Spherical Maps, Automatic Mapping, Camera based Mapping
- 3D Cut and Sew UV Tool
- UV Editor and UV Toolkit: Unfold, Normalize, Distribute, Layout, Optimize
- UV Sets Editor
- Exporting UV Maps: UV Snapshot

UNIT-IV

Texturing and Shading

- Hypershade Editor
- Using Images as Textures
- Normal Maps, Bump Maps, Displacement Maps
- Multi-Layered Texture and Alpha Maps
- Texturing with Substance Painter

Reference Material:

- Prof. Sham, PixologicZBrush 2018: A Comprehensive Guide, CADCIM Technologies, 2019, ISBN: 978-1640570481

- Beginner's Guide to ZBrush, 3DTotal Publishing, 2017, ISBN: 978-1909414501

- Kurt Papstein, ZBrush Characters and Creatures, 3DTotal Publishing, 2015, ISBN: 978-1909414136

- Chris Legaspi, Anatomy for 3D Artists: The Essential Guide for CG Professionals, 3dtotal Publishing, 2015, ISBN: 978-1909414242

- Lee Lanier, Advanced Maya Texturing and Lighting, Sybex, 2015, ISBN: 978-1118983522

MGM 205
Cyber Laws and Intellectual Property Rights

Total Marks: 100,
Theory Marks: 75
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT-I

Cyber Threats

Cyber Crimes, vulnerabilities, risks, theft, Hacking, Virus/Worm attacks, DOS attack, Trojan , Spoofing, Spamming, E-commerce/ Investment Frauds, Defamations, Privacy, Confidentiality, Cyber Stacking

UNIT-II

Cyber Law & Information Technology Act 2000

Cyber Jurisprudence, Cyber Ethics, Cyber- Jurisdiction, Hierarchy of Courts, Civil and Criminal Jurisdictions, Overview of IT Act, 2000, Section 66a of IT Act, Amendments and Limitations of IT Act, Digital Signatures, Cryptography.

UNIT-III

Patent Law

Patents – International Law, Patents Law- Emerging Trends, Social Implication of Patents, Infringement of Patents.
Introduction to Copyrights as forms of Intellectual Property, Copyright Law in India (Copyright Act of 1957), Copyright infringement.
Right conferred by Registration and use of Trademarks, Infringement of Trademarks and passing off, Offences, remedies and enforcement, Trademarks, International Law.

UNIT-IV

Intellectual Property Rights

Introduction to Intellectual Property Rights, Evolution of Intellectual Property Laws
Standards and Concepts in Intellectual Property, IPRs and Information Technology IPRs, Management of Intellectual Property Rights, Law of Intellectual Property and Ethical Issues, Intellectual Property Rights in India and abroad.

Reference Material:

- Law and practice of intellectual property in India by VikasVashishth

- Intellectual property by A.Kalank

- Intellectual property- patents, copyrights ,trademarks and allied rights by Cornish W R

- Patents, copyrights, trademarks and design by B L Wadhera

- Intellectual property law by P Narayana

- Patents, copyrights, trademarks and design by Rajeev Jain

Open Elective Paper- (2nd Semester)
Photography

Time: 3 Hrs.
Total Marks: 50

There will be two assignments and two class tests for the subject. The student have to submit at least 02 assignments and they should also have appear in each class tests. The entire syllabus will be practical based.

Unit-I

- Concept and definition of Photography
- Digital and analog photography
- Types of lenses and working
- Types of still camera

Unit-II

- Indoor and outdoor photography
- Working with still camera
- Compositions of photograph, frame, modes of photography
- Feature photography

Unit-III

- Editing of photographs
- Introduction to editing softwares
- Genre of photography, candid, wildlife, sports, fashion and glamour
- Importance of lighting and reflector in photography

Unit-IV

- Placement and selection of photographs in journalism
- Caption and outline writing in photography
- Camera basics:- aperture, shutter speed, film speed, exposure, color temperature
- Creative and aesthetic approaches of a photographer

MGM 301
Motion Graphics

Total Marks: 100,
Practical Marks: 75
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

There will be a practical based paper and there will be only a practical examination in this paper. External examiner will evaluate the skills of students in this field of Motion Graphics. Examiner will give on-the-sport assignment/task to the students. Beside this viva voice (Oral Examination) will be conducted by the examiner for testing the knowledge of the student of the field. During semester student have to prepare a portfolio and will submit it to the examiner duly signed by the subject teacher at least 20 days before the commencement of the theory examination

UNIT I

Introduction to Adobe After Effects

Understanding GUI and related terminologies, Managing and setting up workspace. Project panel, Footage, Composition, Timeline, Effects and Presets. Importing and Organizing footages and files, Using Ram preview for playback.

Compositions and Layers

Creating & saving projects. Understanding broadcasting fundaments, Pixel aspect ratios and frame rates, Trimming, Splitting and understanding concept of In and Out points. Understanding layer stacks, modes and switches. Shape layers and solid layers, Mask and transparent layers. Pre-composing, and pre-rendering, Using Layer effects. Color correction and color adjustment, Light Layer, Null Layer and Adjustment Layer.

UNIT II

Effects and Tools

Text effects Blur and Sharpen effects. Essentials of Chroma and keying. CC Snow, CC Rain, CC Blur effects etc. Learning Tracking fundamentals, Using trackers and stabilizing footages. Using four corner pins to track footage. Pen tool to draw custom shapes and masks. Text tool Puppet Pin and 3D camera tools.

UNIT III

Animation and Dynamics

Understanding Animation basics in after effects.Introduction to graph editor. Applying, selecting, editing, moving, copying and deleting key frames. Animating objects with Motion paths, motion blur and smoothing animation. Adding randomness to key values. Learning Interpolation types like Linear, Bezier and Auto Bezier, Continuous Bezier Interpolation and Hold Interpolation. Controlling speed of the animation.Using time remapping and frame blending.

UNIT IV

Audio and Transitions

Fundamentals of Audio: Technical terminologies related to Audio and Sound. Using Audio files, Synchronizing and editing audio, Controlling Pitch and Temp, Adding effects like Echo, Reverb.

Rendering

Fundamentals of rendering and exporting, Using Render Queue. Exporting still images and sequences. Learning output formats.

Reference Material:

- Broadcast Graphics On the Spot: Timesaving Techniques Using Photoshop and After Effects for Broadcast and Post Production - Richard Harrington

- Motion Graphics: Principles and Practices from the ground up- Ian Crook and Peter Beare

- Trish & Chris Meyer, Creating Motion Graphics, Focal Press

- Richard Harrington and Ian Robinson, Motion Graphics Studio Techniques, Adobe Press

- The After Effects Illusionist: All the Effects in One Complete Guide by Chad Perkins

- Creative Motion Graphic Titling for Film, Video, and the Web: Dynamic Motion Graphic Title Design - Yael Braha and Bill Byrne

- Motion Graphics with Adobe Creative Suite 5 Studio Techniques - Richard Harrington and Ian Robinson

MGM 302
3D Rigging

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Introduction To Rigging

- Basic Human Anatomical Structure
- Joints, Forward Kinematics, Inverse Kinematics
- Mirroring Joints, Reroot Skeleton, Connect/Disconnect Joints
- Joint Orientation

UNIT II

Basic Rigging

- Constraints
- Deformers
- Set Driven Key, Adding Custom Attributes
- Connection Editor, Expression Editor, Reference Editor

UNIT III

Character Rigging

- IK Handle Tool, IK Solvers(Rotate Plane, Single Chain, Spline), IK Controls, IK Preferred Angle, Pole Vector Constraint
- Mechanical Rig Setup: Props, Robots etc.
- Biped Rig Setup
- Quadruped Rig Setup
- IK/FK Switching in Arm Joints

UNIT IV

Skinning and Blend Shapes

- Skinning: Smooth Binding, Interactive Binding
- Editing Skin Weights: Weight Painting, Mirror Skin Weights, Copy Skin Weights, Hammer Skin Weights, Component Editor, Export/Import Skin Weights
- Blend Shapes and Shape Editor
- Editing Blend Shapes: Duplicate, Mirror, Flip
- Facial Controls: Eyelids, Eye brows, Mouth/Lips, Cheeks, Ears, Nose

Reference Material:

- Tina O'Hailey, Rig it Right! Maya Animation Rigging Concepts, Focal Press, 2013, ISBN: 978-0240820798
- Palamar T., Mastering Autodesk Maya 2016, Autodesk Official Press, 2015, ISBN: 978-1-119-05982-0
- Jason Patnode, Character Modeling with Maya and ZBrush, Focal Press, 2008, ISBN: 978-0-240-52034-6

- William Vaughan, Digital Modeling, 2012, ISBN: 978-0321700896

MGM 303
3D Animation and Rendering Techniques

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Animation Principles

- Principles of 2D & 3D Animation

- History of Animation

- Action Analysis

UNIT II

3D Animation Techniques

- Graph Editor

- Dope Sheet

- Walk Cycle, Run Cycle, Jumping

- Animation Parenting: Picking, Pushing, Lifting, throwing Objects

- Animation Layers

UNIT III

Basics of Rendering: Lights, Camera and Materials

- Basic Materials: Base Color, Diffuse, Specular, Reflection, Refraction, Transparency, Glow

- Lights: Point, Spot, Area, Directional, Volume, Ambient

- Camera: Camera Controls, Area Of View, Focal Length, Depth Of Field

- Hypershade Editor

- Rendering Settings: Image Format, Image/Animation extension, Frame Range, Renderable Cameras, Image Size

- Render: Render View, Render IPR View, Batch render, Render Sequence

UNIT IV

Rendering in Arnold

- Ray Tracing

- Renderers in Maya: Maya Software Renderer, Hardware Renderer, Solid Angle's Arnold Renderer

- Arnold Lights: Area, Skydome, Mesh, Photometric, Light Portal, Physical Sky

- Arnold Materials: aiStandard, aiFlat

- Arnold Settings: Sampling, Ray Depth, Motion Blur, AOVs

Reference Material:

- Les Pardew, Character Emotion in 2D and 3D Animation, Cengage Learning PTR, ISBN: 9781598633818

- Richard Williams, The Animator's Survival Kit, Farrar, Straus and Giroux, 2012, ISBN: 978-0865478978

- Ollie Johnston, Frank Thomas, The Illusion of Life: Disney Animation, Disney Editions, 1995, ISBN: 978-0786860708

- Jeremy Birn, Digital Lighting and Rendering, New Riders, 2013, ISBN: 978-0321928986

- Wes McDermott, The PBR Guide: A Handbook for Physically Based Rendering, Allegorithmic, 2018, ISBN: 978-2490071005

- Donna Betancourt, Arnold 5: First Lessons in Autodesk Maya 2018, Amazon Digital Services LLC, 2018

MGM 304
Sound and Video Design

Total Marks: 100,
Theory Marks: 50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Introduction

- Introduction to Sound & its forms.

- Mono & Stereo techniques.

- Sound production equipments.

UNIT II

Recording

- Common Recording Techniques

- Recording & formats

- Microphone setup & recording.

- Introduction with Sound effects & their uses

- Assignment: - Recording of audio (commentary, dubbing, music).

UNIT III

Editing

- Basic Sound Editing techniques.

- Basic timeline Editing:- Trim ,add and separate .

- Sound Editing: dialogue editing- Cleaning up audio , noise reduction, etc.

- Assignment :- studio project (recording /Editing) and Field interview

UNIT IV

Mixing

- Understanding – How to mix?

- Levels

- Equalization Technique- Equalizers: History and Application, EQ Parameters, EQ Types

- Panning

- Time based Effects

- Assignment: - Music and effects (Techniques of recording music/effects and their creative use)

Reference Material:

-   Audio book publishing, Power Publishers.

-   Sound Design: The Expressive Power of Music, Voice and Sound Effects in Cinema, by David Sonnenschein (Author)

-   A Thesis in Editing and Sound Design Paperback – 27 Jul 2011

-   by Gabriel Lamb (Author)

MGM 305

Web Media Production

Total Marks: 100,
Theory Marks: 75
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit- I

Web Media: Concept, role and responsibilities in society

Web media and social media projects

Digital media components and their advantages

Web enabled media and applications

Unit- II

Web Project stages: Planning, designing, development, testing, maintenance and promotions

Web Team: role and functions

Web team members: Co-operation, Coordination, Collaboration

Web hosting and registration services

Unit- III

Content creation techniques for media projects

Search engine optimization (SEO) techniques

Content streaming strategies and challenges

Web Modules: Emails, logins, weblogs, online polling, comments and feedbacks

Smartphone enabled services

Unit- IV

Cloud applications and securities

Cloud based technologies

Online media apps and tools

Data backup and restoration

Open Elective Paper- (3rdSemester)
Videography

Time: 3 Hrs.
Total Marks: 50

There will be two assignments and two class tests for the subject. The student have to submit at least 02 assignments and they should also have appear in each class tests. The entire syllabus will be practical based.

Unit-I
- TV and Video Production:- Meaning and Scope
- Importance of Concept, Idea and treatment in Production
- Production personnel's, their duties and responsibilities

Unit-II
- Introduction to Video Camera
- Types of Video Camera and their major components
- Basics shots and their composition
- Camera movement and angles

Unit-III
- Video Production Stage and importance
- Video Editing importance and scope
- Editing Problems and ethics
- Lighting techniques, equipments and control

Unit-IV
- Introduction to news anchoring
- Radio Jocky, an introduction
- Social Media emerges as new media
- Story Board and Scripting for T.V. Production

MGM 401: Portfolio Development

Total Marks: 100,
Theory Marks: 75
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit-I

Introduction to portfolio management: objectives and importance

Types of portfolios, phases

Evolution and role of portfolio management

Unit-II

Introduction to electronic portfolio

Benefits of e-portfolio

Process of e-portfolio

e-portfolio formats

Unit-III

Portfolio revision

Need for portfolio revision

Strategies for portfolio constraints

Portfolio assessment

Unit-IV

Portfolio analysis,

Process of portfolio analysis

Types of portfolio evaluation analysis

Need for evaluation, portfolio evaluation tools

MGM 402: Instructional Material Design

Total Marks: 100,
Theory Marks: 75
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit-I

Information processing: meaning, concept and processing

Cognitive information processing of learning

Unit-II

Instructional design: meaning, concept and principles

Instructional material design process, system approach to instructional design

Unit-III

Component of instructional design: instructional problem, learner characteristics, task analysis, instructional objective, content sequencing ,instructional strategies, instructional delivery, Evaluation instruments, instructional resources

Writing of performance objectives/learning outcome

Unit-IV

Models of instructional design: use of instructional design, level of instructional design, Difference between theory and model of instructional design

An overview of Dick and Carey model, ASSURE model and ADDIE model

David Merrill's theory of integration

MGM 403

Multimedia Marketing and Research

Total Marks: 100,
Theory Marks:75
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

Unit I

Research: meaning, objective and types

Introduction to various research approaches

Significance of research

Elements of good research

Unit II

Research process: define research problem, research design,

Research methodologies: survey method, content analysis, case studies Methods of data collection, processing and analyzing the data

Uses of research in multimedia production

Unit III

Marketing: meaning and scope, concept of multimedia marketing,

Tools and elements of multimedia marketing,

Benefits of multimedia marketing,

Multimedia marketing environment, marketing ethics

Unit IV

New trends in marketing: globalization and consumerism, green marketing, direct marketing, network marketing, event marketing.

Product decisions: new product development, product mix, product life cycle, branding and packaging; pricing methods and strategies

Promotion decisions: promotion mix, advertising, sales promotion, publicity and personal selling

MGM 404
Elective – I: (Television Production)

Total Marks: 100,
Theory Marks:50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Introduction

- Introduction to Television Broadcast

- Understanding Media

- Video Basics: Scanning, Aspect Ratio, Formats (NTSC, PAL, VGA, HDTV), Component Interface

- Stages of TV Production: Pre Production, Production and Post Production

- TV Production Team: Writers, Directors, Producers, Actors, Camera Operators, Production Manager, Line Producer, Executive Producer

UNIT II

Still Camera

- Working Principal of Still Camera

- Components of Still Camera

- Types of Still Camera: Compact, SLR, DSLR

- Basic Shots and Composition

Video Camera

- Working Principal of Video Camera

- Components of Video Camera

- Concept of Looking Space, Head Room, and walking space

- Importance of Cut Away, and Cut in Shots

- Camera movements and angles

UNIT III

Lighting

- Importance of Lighting

- Types of Lights: Key, fill, rim, kick, bounce etc.

- Techniques of Lighting

- Lighting Equipment and Control

UNIT IV

Production Process

- TV Studio Production

- Single and Multi Camera Shooting

- Shooting Interview

- TV Production on Air

Reference Material:

- Brett Christophers , Envisioning Media Power: On Capital and Geographies of Television 2006

- Herbert Zettl, Television Production Handbook 2002

MGM 404
Elective – II: (2D Production)

Total Marks: 100,
Theory Marks:50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Story and Concept

- Story Development: Premise, Story Arc, Character Arc,, Plot, etc.
- Screenplay/Script
- Storyboard, Animatic
- Concept Designs: Composition of a scene, Color, Design, Value, FG, MG, BG elements
- Character Designs: Appeal, Reference, Personality, Visual Contrast

UNIT II

Asset Creation

- Vector graphics vs Raster Graphics
- Symbols: Types of Symbols, Creating and Using Symbols
- Character Development: Expression, Prop, Replacement Parts Library
- Background Development: BG, MG, FG Elements

UNIT III

Animation

- Principles of Animation
- Timing and Spacing in Animation
- Action Analysis
- Character animation: Expressions
- Lip Sync: Basic mouth expression A-E-I-O-U

UNIT IV

Adobe Animate (Flash)

- Timeline, Keyframing, InBetweening and Layering
- 2D Animation Techniques: Shape tween, Motion tween, Frame-By-Frame
- Masking
- Flash library
- Adding a sound in movie clip
- ActionScript
- Publishing & Exporting flash files

Reference Material:

- Fred Gerantabee, Adobe Flash Professional CS6 Digital Classroom, 2012
- Richard Williams, The Animator's Survival Kit, Farrar, Straus and Giroux, 2012, ISBN: 978-0865478978
- Ollie Johnston, Frank Thomas, The Illusion of Life: Disney Animation, Disney Editions, 1995, ISBN: 978-0786860708

MGM 404
Elective – III: (3D Production)

Total Marks: 100,
Theory Marks:50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Story and Concept

- Story Development: Premise, Story Arc, Character Arc,, Plot, etc.
- Screenplay/Script
- Storyboard, Animatic
- Concept Designs: Composition of a scene, Color, Design, Value, FG, MG, BG elements
- Character Designs: Appeal, Reference, Personality, Visual Contrast

UNIT II

Asset Creation

- Modeling: Polygon Modeling, NURBS/Surface Modeling, Sculpting (Zbrush)
- UV mapping and Texturing
- Environment Development
- Character Topology for Animation
- Character Rigging for Animation: Joints, FK/IK, Skinning, Constraints etc.

UNIT III

Animation

- Principles of Animation
- Timing and Spacing in Animation
- Action Analysis
- Character animation: Expressions
- Lip Sync: Basic mouth expression A-E-I-O-U

UNIT IV

3D Animation Techniques and Render

- 3D Animation Techniques: Motion Paths, Set Driven Key, Animation Layers, Animation Parenting
- Using Graph Editor, Dope Sheet
- Camera Animation: Camera Angles, Shots, and Movement in 3D
- Look Dev: Materials/Shading, Lighting, Fog/Atmosphere
- Rendering Settings, Render Layers(AOVs), Batch Render
- Compositing

Reference Material:

- Tina O'Hailey, Rig it Right! Maya Animation Rigging Concepts, Focal Press, 2013, ISBN: 978-0240820798
- Palamar T., Mastering Autodesk Maya 2016, Autodesk Official Press, 2015, ISBN: 978-1-119-05982-0
- Jason Patnode, Character Modeling with Maya and ZBrush, Focal Press, 2008, ISBN: 978-0-240-52034-6
- Richard Williams, The Animator's Survival Kit, Farrar, Straus and Giroux, 2012, ISBN: 978-0865478978
- Ollie Johnston, Frank Thomas, The Illusion of Life: Disney Animation, Disney Editions, 1995, ISBN: 978-0786860708

MGM 404
Elective – IV: (Sound Production)

Total Marks: 100,
Theory Marks:50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Introduction

- Sound: Physics, Importance and Use

- Properties of Sound: Pitch(Bass, Treble), Amplitude, Timbre, Duration, Envelope, Location

- Sound Aesthetics: Rhythm, Harmony, Contrast, Emotiveness, Resonance etc.

- Digital vs. Analogue Sound

UNIT II

Sound Modulation, Filters and Effects

- Voice Modulation

- Types of Sound Effects

- Noise, Echo, Reverb, Distortion

- Audio Filters: Meaning & Types

- Equalization: Meaning, Types & Process

UNIT III

Sound Recording and Equipments

- Sound Recording History

- Sound Recording Equipment

- Types of Sound: Mono, Stereo, Surround

- Types of Surround Sound: 5.1, 6.1 ,7.1

- Voice Over and Dubbing

- Using Logic Pro X for Creating and Recording Sound

UNIT IV

Sound Editing

- Adobe Audition Interface

- Sound Editing Techniques: Sound Bridge, Voice Over, Sonic Flashback, J-Cut, L-Cut

- Removing Noise from Samples

- Adding Effects: Delay, Echo, Reverb, Distortion, Equalization, Pitch Shift, Time Stretch, Modulation, Compression.

Reference Material:

- Talbot, Michael -Smith, Sound engineering explained, Focal Press, 2011

- Nisbett, Alec, The sound studio: audio techniques for radio, television, film and recording, Focal Press, 2003

- Mott, Robert L., Sound effects: radio, TV, and film, Focal Press, 1990

- Sonnenschein, David, Sound design: the expressive power of music, voice, and sound effects in cinema, Michael Wiese Productions, 2001

- Viers, Ric, The Sound Effects Bible: How to Create and Record Hollywood Style Sound Effects, Michael Wiese Productions, 2008

- Altman, Rick, Sound theory, sound practice, Routledge, 1992

-   Alburger,James, The Art of Voice Acting, Focal Press, 2010, ISBN: 9780240812113

-   Rumsey,Francis and TIM MCCORMICK, Sound and Recording,Focal Press 2009, ISBN: 9780240521633

MGM 404
Elective – V: (Web Production)

Total Marks: 100,
Theory Marks:50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct. .

UNIT I

Introduction

-   Introduction to Web Designing

-   Basic Elements of a Web Page

-   Introduction to HTML

-   Static and Dynamic Web Pages

UNIT II

Frontend: HTML, CSS, JS

-   Basic Structure of a Web Page

-   Basic Tags: Links, Images, Fonts, Colour and Character entities

-   Lists and Tables

-   Block and Text level Elements

-   Introduction to CSS

-   CSS Properties

UNIT III

Web Design

-   Layout Design of a Web Page

-   Interface between HTML and other coding languages

-   Working with External Libraries: Bootstrap & jQuery

-   Using Bootstrap Components

-   Project: Frontend for a Blogging Website

UNIT IV

Backend: PHP, SQL

-   PHP Basics

-   Introduction to MySql: Creating Databases and Tables

-   MySql Queries: Inserting, Deleting, Updating Data

-   Querying MySql Database in PHP (PDO)

-   PHP Form Handling using GET and POST Method

-   Project: Building a Students Directory with working Login and Signup Pages

Reference Material:

- Deitel, Deiteland Nieto, Internet and World Wide Web : How to Program, Edition, 2012, Prentice Hall, ISBN: 978-0-13-215100-9

- Stephen Wynkoop, Running a perfect website, QUE, 2nd Edition, 2001. ISBN: 9780789709448

- Chris Bates, Web Programming: Building Intranet applications, 3rd Edition, 2009, Wiley Publications,. ISBN: 9780470017753

MGM 404
Elective – VI: (Android Application Development)

Total Marks: 100,
Theory Marks:50
Practical Marks: 25
Internal Assessment: 25
Time: 3 Hrs. *(For Theory Exam)*

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT I

Introduction to Android

- What is Android?
- Basic Building Blocks of Android
- Application Structure
- Virtual Android Emulator and project setup
- Android API levels (versions & version names)

UNIT II

Java & SQL Basics

- OOP
- Inheritance
- Exception handling
- Packages & interfaces
- SQLite Programming

UNIT III

Android Programming Basics

- Views
- Intent
- Activities
- Storage and Content Providers
- Services
- Basic UX/UI: Form widgets, Text Fields, Layouts

UNIT IV

Advance Concepts

- Multimedia Services
- Maps, GPS and Location Based Services
- Animations and Graphics
- Publishing Apps to PlayStore

Reference Material:

- Dawn Griffiths, David Griffiths,"Head First: Android Development", OReilly 2015, ISBN: 9781449362188

- Greg Milette, Adam Stroud, "PROFESSIONAL Android™ Sensor Programming", John Wiley and Sons, Inc 2012, ISBN: 978111265055

- Paul Deital, Harvey Deital, Alexander Wald, "Android 6 for Programmers, App Driven approach", 2015, Prentice Hall, ISBN: 9780134289366

- http://developer.android.com/training/index.html

MGM 404
Elective – VII: (Graphic Designing)

Question paper for each theory paper will have two questions from each of the four units. Students will be required to answer any one Question from each unit. Unit V of the Question paper will have six questions out of which the student will require to answer any four Questions. Each unit will carry equal marks. Students have the option to attempt questions either in Hindi or English but within an answer to a question the language should be pure and correct.

UNIT-I

Introduction to graphics

- Introduction to graphics, tools of graphics, uses & types of graphics
- Meaning and definition of graphics design
- Elements and principles of graphic design
- Graphics Overview: Raster graphics, Vector graphics

UNIT-II

Corel draw

- Tools and menus, Effects and masking
- social advertising
- Cartoon character design, Product design

Photoshop

- Introduction to Photoshop, workspace and photo editing tools
- Filters and Adjustments
- Digital matte painting

Unit-III

Illustrator

- Introduction to Illustrator, Applications and features, Illustrator interface
- Aligning objects, working with groups, arrange object, distributing objects. Templates
- Transforming objects: Scaling, Reflection, Distorting and Shearing objects
- Coloring and painting
- Using effects, appearance attributes and graphics styles

Unit – IV

Publishing

- Authoring and process of publishing
- Publishing types, newspaper and magazine publishing
- Research papers and publications
- Packaging and its types, Functions of Packaging

Paper: MGM-405

Training / Internship

Total Marks: 100,
Training / Internship : 75
Internal Assessment: 25

The internship is compulsory for the students. Students have to go for internship for six weeks with an organization related to the field of specialization they opted. Marks awarded will be based on the report submitted by the student and assessment report given by the employer. The report will be evaluated by a panel of three examiners to be appointed by the Director of the Institute.

Introduction

Each student shall be supposed to prepare an internship/training report with CD/DVD (soft copy) content during the last semester of the course. The project work will be purely practical work. This report will be prepared in accordance with the format provided by the institute. Report should be printed both side with hard bound. Report should contain minimum 40-50 pages of text, graphics, visuals etc.

Each student will write his/her report according to the following format:

- Idea/concept of the project
- Treatment of the project
- Technical equipment used
- Workflow of the project
- Contribution of the student
- Main observations during the training
- Key points of learning

The students have to prepare a training project report under the supervision of the concerned teacher in the Institute. Students will submit a soft copy of the project to the concerned teacher.

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