

Deccan Education Society's
FERGUSSON COLLEGE, PUNE
(AUTONOMOUS)

SYLLABUS UNDER AUTONOMY

THIRD YEAR B.VOC.
SEMESTER –V

SYLLABUS FOR T.Y.B.VOC.
DIGITAL ART & ANIMATION

Academic Year 2018-2019

**Deccan Education Society's
FERGUSSON COLLEGE (AUTONOMOUS), PUNE 411004
Scheme of Course Structure (Faculty of Science)
2018-2019
T. Y. B. Voc. - Digital Art & Animation**

Semester	Course Code	Title	Paper No.	Credits	Exam (I / E)	Marks (I / E)
V	BVA3501	Game Design	I	4	(I / E)	50+50
	BVA3502	Introduction to Compositing	II	4	(I / E)	50+50
	BVA3503	Introduction to C Programming Languages	III	4	(I / E)	50+50
	BVA3511	Photography - 1	IV	6	(I / E)	75+75
	BVA3512	VFX - I	V	6	(I / E)	75+75
	BVA3513	Compositing - II	VI	6	(I / E)	75+75
VI	BVA3601	Motion Graphics	I	4	(I / E)	50+50
	BVA3602	Action Script	II	4	(I / E)	50+50
	BVA3603	VFX - II	III	4	(I / E)	50+50
	BVA3611	Game Production	IV	6	(I / E)	75+75
	BVA3612	Digital Editing	V	6	(I / E)	75+75
	BVA3613	Photography - 2	VI	6	(I / E)	75+75

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - V**PAPER - I****TITLE: GAME DESIGN****PAPER CODE: BVA3501****[CREDITS - 4]****LEARNING OBJECTIVES:**

1. In this subject, students will learn about gaming industry and pipeline for the game production.
2. The complete pre production work of any game will be done in this semester.
3. Students will also design their own game concept and will work on it throughout the semester.
4. A common 3D platform i.e. Blender is also included here for making 3D content which will be required for the game.

	Title and Contents	No. of Lectures
Unit - I	Introduction to Gaming 1.1. Origin and growth of gaming industry 1.2. Gaming: meaning and defining 1.3. Gaming as modern entertainment 1.4. Game Development Process	05
Unit - II	Introduction to Blender 2.1. Introducing Blender 3D 2.2. Interface & Modelling tools 2.3. Texturing with UV Unwrapping 2.4. Basic Animation	12
Unit - III	Classification and Pre-production of Gaming 3.1 Classification of games 3.2 Pre-production - concept and idea 3.3 Script Writing for Game Production 3.4 A simple Game Design Document (GDD) for a Game.	10
Unit - IV	Production and Logic Implementation 4.1 Production - Scene Building from above GDD 4.2 Blender Game Engine - Game Logic Implementation with Programmatic movements and Actions. 4.3 Game Testing and Building EXE	12
Unit - V	Structure and Functioning 5.1 Structure and functioning of gaming company: 5.2 Classification of games based on Genre 5.3 Other Game Engines. 5.4 Game production team members and responsibilities	06

Reference Books:

1. The Art of Game Design: A Book of Lenses by Jesse Schell Publisher: CRC Press (12 September 2008), ISBN-10: 0123694965 ISBN-13: 978-0123694966
2. Game Mechanics: Advanced Game Design (Voices That Matter), Ernest Adams

- (Author), Joris Dormans (Author), Publisher: New Riders; 1 edition (15 June 2012) ISBN-10: 0321820274 ISBN-13: 978-0321820273
3. Game Coding Complete, Fourth Edition Paperback Mike McShaffry (Author), David Graham (Author), Publisher: Cengage Learning PTR; 4th edition (March 5, 2012), ISBN-10: 1133776574 ISBN-13: 978-1133776574
 4. Game Development Essentials: Game Story & Character Development Paperback Marianne Krawczyk (Author), Jeannie Novak (Author) Publisher: Cengage Learning; 1st edition (March 23, 2006) ISBN-10: 1401878857 ISBN-13: 978-1401878856

Assignments:

1. Submit a 3D Puzzle Game along with GDD - Each.
2. Submit a 3D Coin Counting Game / Shooting Game along with GDD-Group.

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - V
PAPER - II
TITLE: INTRODUCTION TO COMPOSITING
PAPER CODE: BVA3502

[CREDITS - 4]

LEARNING OBJECTIVES:

1. This subject covers a very important software Adobe after effects.
2. This subject will teach students about compositing.
3. They will learn about composition Chroma, Text Animation, background removal and many other aspects.

	Title and Contents	No. of Lectures
Unit - I	Getting to know the workflow 1.1 Creating a project and importing footage 1.2 Creating a composition and arranging layers 1.3 Adding Effects and modifying layer properties 1.4 Animating the composition 1.5 Previewing your work 1.6 Optimizing performance in After Effects 1.7 Rendering and exporting your composition 1.8 Customizing the workspace 1.9 Controlling the brightness of the user interface 1.10 Finding resources for using After Effects	05
Unit - II	Creating a basic animation using effects and presets 2.1 Importing footage using Adobe Bridge 2.2 Creating the composition 2.3 Working with imported Illustrator layers 2.4 Applying effects to a layer 2.5 Applying an animation preset 2.6 Previewing the effects 2.7 Adding transparency 2.8 Rendering the composition	04
Unit - III	Animating Text 3.1 About text layers 3.2 Creating and formatting point text 3.3 Animating with scale key frames 3.4 Animating using parenting 3.5 Animating imported Photoshop text 3.6 Animating text using a path animation 3.7 Animating type tracking 3.8 Animating text opacity 3.9 Using a text animator group 3.10 Cleaning up the path animation 3.11 Animating a non-text layer along a motion path 3.12 Adding motion blur 3.13 Using a text animation preset 3.14 Exporting Text Animation	04
Unit - IV	Working with Shape Layers 4.1 Adding a shape layer 4.2 Creating custom shapes 4.3 Creating stars 4.4 Incorporating video and audio layers	10

	4.5 Applying a Cartoon effect 4.6 Adding a title bar 4.7 Using Brainstorm to experiment 4.8 Retiming the composition 4.9 Review questions and answers	
Unit - V	Working with Masks 5.1 About mask 5.2 Creating a mask with the Pen tool 5.3 Editing a mask 5.4 About Rotoscoping 5.5 Feathering the edges of a mask 5.6 Replacing the content of the mask 5.7 Adding a reflection 5.8 Creating a vignette 5.9 Adjusting the color	08
Unit - VI	Using the Brush Tool 6.1 Wire Removal 6.2 Creating a segmentation boundary 6.3 Fine-tuning the matte 6.4 Creating a transition from the full clip to the foreground 6.5 Creating the logo 6.6 Review questions and answers	08
Unit - VII	Performing Color Correction 7.1 Adjusting color balance 7.2 Replacing the background 7.3 Removing unwanted elements 7.4 Correcting a range of colors 7.5 Warming colors with the Photo Filter effect	06

References:

1. After Effects CS6 classroom in a book - Author Adobe Creative Team, Pearson Education.
2. After Effects CS5 in simple steps by Kogent Learning Solutions Inc. - Wiley.

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - V
PAPER - III
TITLE: INTRODUCTION TO C PROGRAMMING LANGUAGES
PAPER CODE: BVA3503

[CREDITS - 4]

LEARNING OBJECTIVE:

The course fully covers the basics of programming in the “C” programming language and demonstrates fundamental programming techniques, customs and vocabulary including the most common library functions and the usage of the pre-processor. Also, to familiarize the students with basic concepts of computer programming and developer tools. To present the syntax and semantics of the ‘C’ language as well as data types offered by the language and allow the students to write their own programmes using standard language infrastructure regardless of the hardware or software platform.

	Title and Contents	No. of Lectures
Unit - I	Introduction to C 1.1 History 1.2 Structure of a C Program 1.3 Functions as building blocks 1.4 Keywords 1.5 Identifiers 1.6 Variables 1.7 Constants character, integer, float, string, escape sequences 1.8 Data types: Built-in and user defined 1.9 Operators and Expressions: Operator types (arithmetic, relational, logical, assignment, bitwise, conditional, other operators) 1.10 Precedence and associativity rules 1.11 Simple programming	10
Unit - II	Control Structures 2.1 Decision making structures: if, if-else, switch 2.2 Loop control structures: while, do-while, for 2.3 Nested structures 2.4 Break and continue	10
Unit - III	Functions in C 3.1 What is a function? 3.2 Use of functions 3.3 Passing values between functions 3.4 Scope rule of functions 3.5 Calling convention 3.6 Return type of functions 3.7 Call by value and call by reference 3.8 Recursion	10
Unit - IV	Arrays, pointers and structures 4.1 Array declaration, initialization 4.2 Types one, two and multidimensional 4.3 Passing arrays to functions 4.4 What is Pointer? 4.5 Use of Pointer	10
Unit - V	Introduction OOP	05

Reference Book:

1. Object Oriented Programming with C++: E. Balaguruswamy.
2. Let us C by Yashwant Kanitkar

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - V
PAPER - IV
TITLE: PHOTOGRAPHY - 01
PAPER CODE: BVA3511

[CREDITS - 6]

Learning Objective:

1. Apply knowledge of Professional Motion Picture Cameras
2. Apply principles of camera control, including film exposure, focus and camera optics.
3. Apply knowledge of 16mm sync sound film production technology and hard disk.
4. Recorders, location recording, timecode, slating and rushes syncing.

	Title and Contents	No. of Lectures
Unit - I	History of Photography 1.1 Evolution of Photography 1.2 Film Photography Recording formats 1.3 Digital Photography Recording Formats	08
Unit - II	Camera Functioning 2.1 Basics of Image Formation 2.2 Metering 2.3 White Balance 2.4 Aperture 2.5 Shutter Speed 2.6 ISO	10
Unit - III	Lenses, Filters, Metering 3.1 Types of Lenses 3.2 Evaluative / 3D Matrix	08
Unit - IV	Color Theory 4.1 Color Space 4.2 Histogram 4.3 Focus Modes 4.4 Focusing Area Modes	09
Unit - V	Lightning Techniques 5.1 Sources of Lights 5.2 Types of Lights in Photography (Main / Key Light, Fill Light, Cut Light / Kick Light, Background Light) 5.3 Flash Compensation 5.4 Green Screen Lighting	10

References:

- Fundamentals of Photography Book by Tom Ang.
- Cinematography: Theory and Practice: Image Making for Cinematographers and Directors, by Blain Brown.
- The Filmmaker's Handbook: A Comprehensive Guide for the Digital Age: 2013 Edition.
- Guide to Postproduction for TV and Film: Managing the Process by Barbara Clark.

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - V
PAPER - V
TITLE: VFX I
PAPER CODE: BVA3512

[CREDITS - 6]

Learning Objective:

Student will learn the various methods of Visual Special Effects for live action & Animation Films and to create Environments which looks realistic with the help of different techniques used for VFX. Student will also know the different tools of VFX, which are currently used in industry.

	Title and Contents	No. of Lectures
Unit - I	Introduction to VFX 1.1 Concept & Terminology 1.2 Different methods & tools used for VFX 1.3 Comparative study of various tools used for VFX 1.4 Interface of node based VFX tool [NATRON]	07
Unit - II	Digital Representation of Visual Information 2.1 Image Generation 2.2 Digital image file Formats 2.3 Digital Video file Formats 2.4 Geometric Transformation	09
Unit - III	Rotoscopy 3.1 Introduction to Roto 3.2 Types of Roto 3.3 Masking 3.4 Video Tracking & Stabilizing	10
Unit - IV	Compositing 4.1 Matte Image 4.2 Multisource Operators (Tools) 4.3 Compositing with Pre-multiplied images	09
Unit - V	Node based Tool [NATRON] 5.1 Color correction, Color Grading, Day to Night Conversion 5.2 Paint, Frame Range, AppendClip 5.3 Chroma setup 5.4 Film Colorization, Retime 5.5 Rendering	10

Reference Books:-

1. ISBN-10: 1480157090: Digital Stereoscopy Scene to Screen 3D Production Workflows.
2. ISBN-10: 111835205X: Match Moving: The Invisible Art of Camera Tracking.
3. ISBN-10: 0240817818: Compositing Visual Effects: Essentials for the Aspiring Artist, 2nd Edition.
4. ISBN-10: 0415812291: Production Pipeline Fundamentals for Film and Games.
5. Natron Documentation Release 3.0: The Natron Documentation Authors.
6. Reference Link: <https://opensource.com/life/15/7/getting-started-with-natron>

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - V
PAPER - VI
TITLE: COMPOSITING II
PAPER CODE: BVA3513

[CREDITS - 6]

LEARNING OBJECTIVES:

1. This subject covers a very important software Adobe after effects.
2. This subject will teach students about compositing.
3. They will learn about composition Chroma, Text Animation, background removal and many other aspects.

	Title and Contents	No. of Lectures
Unit - I	ANIMATING LAYERS 1.1 Simulating lighting changes 1.2 Duplicating an animation using the pick whip 1.3 Animating movement in the scenery 1.4 Adjusting the layers and creating a track matte 1.5 Animating the shadows 1.6 Adding a lens flare effect 1.7 Animating the clock	05
Unit - II	DISTORTING OBJECTS WITH THE PUPPET TOOLS 2.1 Adding Deform pins 2.2 Defining areas of overlap 2.3 Stiffening an area 2.4 Animating pin positions 2.5 Recording Animation	04
Unit - III	COMPOSING LAYER PASSES 3.1 Necessity of Render Passes 3.2 Composing a CGI Element with all its render passes 3.3 Applying Layer Modes 3.4 Manipulating Passes to create effect and depth	06
Unit - IV	TRACKING & STABLIZING TECHNIQUES 4.1 Using motion stabilization 4.2 Using single-point motion tracking 4.3 Using multipoint tracking 4.4 Creating a particle simulation 4.5 Retiming playback using the Time warp effect	08
Unit - V	BUILDING 3D OBJECTS 5.1 Building a 3D object 5.2 Working with a null object 5.3 Working with 3D text 5.4 Creating a backdrop for 3D animation 5.5 Nesting a 3D composition 5.6 Adding a camera 5.7 Completing the scene 5.8 Animating 3D objects 5.9 Adding reflections to 3D objects 5.10 Animating a camera 5.11 Adjusting layer timing 5.12 Using lights 5.13 Adding effects 5.14 Adding motion blur	06

	5.15 Previewing the entire animation 5.16 Review questions and answers	
Unit –VI	PARTICLES 6.1 Introduction to particles & UI 6.2 Adding Particles to a scene 6.3 Particles in 3D Scene 6.4 Creating effects using Particles 6.5 Using Particle Presets 6.6 Previewing & Rendering Particles 6.7 Basic Scripting in AFX	08
Unit –VII	RENDERING AND OUTPUTTING 7.1 Creating templates for the rendering process 7.2 Creating templates for output modules 7.3 Exporting to different output media 7.4 Review questions and answers 7.5 Color Management in After Effects	08
References:		
1. After Effects CS6 classroom in a book - Author Adobe Creative Team, Pearson Education.		
2. After Effects CS5 in simple steps by Kogent Learning Solutions Inc. - Wiley.		

Deccan Education Society's
FERGUSSON COLLEGE, PUNE
(AUTONOMOUS)

SYLLABUS UNDER AUTONOMY

THIRD YEAR B.VOC.
SEMESTER - VI

SYLLABUS FOR T. Y. B. VOC.
DIGITAL ART & ANIMATION

Academic Year 2018-2019

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - VI
PAPER - I
TITLE: MOTION GRAPHICS
PAPER CODE: BVA3601

[CREDITS - 4]

LEARNING OBJECTIVES:

Motion graphics are graphics that use video and / or animation technology to create motion, similar to a video. These motion graphics are usually combined with audio for use in multimedia projects:

1. To demonstrate an understanding of motion graphic design principles in applied practice.
2. To identify methods and processes for conceptualizing in time-based media (diagramming, storyboarding, keyframing, etc.)
3. To design and complete professional (broadcast) quality motion-based projects.

	Title and Contents	No. of Lectures
Unit - I	A Brief History of Motion Graphics 1.1. Precursors of Animation 1.2. Early Cinematic Inventions 1.3. Experimental Animation 1.4. Motion Graphics in Film Titles 1.5. Motion Graphics in Television	12
Unit - II	Motion Graphics in Film and Television 2.1 Film Titles 2.2 Network Branding 2.3 Commercials 2.4 Public Service Announcements 2.5 Music Videos	08
Unit - III	Motion Graphics in interactive Media 3.1 The Interactive Environment 3.2 Motion over the Web 3.3 Motion in Informational Kiosks 3.4 Motion in Multimedia 3.5 Motion in DVD-Video	08
Unit - IV	Motion Graphics in the Environment 4.1 New Technologies 4.2 Immersive Environments 4.3 Animated Exteriors 4.4 Digital Signage 4.5 Performance 4.6 Alternate Spaces	08
Unit - V	Motion Literacy: Choreographing Movement 5.1 The Language of Motion 5.2 Spatial considerations 5.3 Temporal Considerations 5.4 Coordinating Movement	08
Unit - VI	Images, Live-Action and Type 6.1 Visual Properties 6.2 Image Considerations 6.3 Live-Action Considerations 6.4 Typographic Considerations	08

	6.5 Integrating Images	
	6.6 Live-Action and Type	

References Book:
Motion Graphic Design: Applied History and Aesthetics, Author: Jon Krasner,
ISBN: 9780240809892, Publisher: Focal Press.

T.Y. B.Voc. (DIGITAL ART & ANIMATION) SEMESTER - VI
PAPER - II
TITLE: ACTION SCRIPT
PAPER CODE: BVA3602

[CREDITS - 4]

LEARNING OBJECTIVES:

1. Flash Action Script is an object oriented programming (OOP) language that is designed specifically for media - rich website animation & interactive user interfaces.
2. This course is an introduction to Action Script for students who have no programming experience or beginners.
3. By the end of the course student will able to create user controlled animation simple games, and smart web pages that can adapt to the user's preferences.

	Title and Contents	No. of Lectures
Unit - I	Introduction to ActionScript 1.1 Variables and its scope in flash 1.2 Working with strict data type variables 1.3 Arithmetic operations with numbers and string data type	05
Unit - II	Conditional Logic 2.1 Script control 2.2 Multiple conditions 2.3 Nested conditions 2.4 Control user interaction 2.5 Switch Cases	05
Unit - III	Arrays 3.1 Understanding of Array 3.2 Properties and methods 3.3 Multidimensional arrays 3.4 Use of Array	05
Unit - IV	Loops 4.1 Importance of Loops 4.2 Types of loops 4.3 Nested loops 4.4 Loop Conditions	05
Unit - V	Functions 5.1 Understanding the role of functions 5.2 Creating functions 5.3 Reuse of function 5.4 Passing parameters to function 5.5 Local Variables 5.6 Return type functions	05
Unit - VI	Event Handler 6.1 Understanding of events 6.2 Event listener 6.3 Callbacks	04
Unit - VII	Creating Dynamic Assets 7.1 Attach Movie clips 7.2 Creating empty movie clips 7.3 Using movie clip as a button	06

	7.4 Creating dynamic text field 7.5 Working with drawing API	
Unit - VIII	Loading Assets 8.1 Loading text files 8.2 Loading JPEG and PNG files 8.3 Loading MP3 files 8.4 Loading FLV files	04
Unit - IX	XML 9.1 Introduction to XML 9.2 Understanding of XML	04
Unit - X	Built - in Classes 10.1 String Operations 10.2 Working with Text Field 10.3 Understanding of other classes	05
Reference Books:		
<ol style="list-style-type: none"> 1. ActionScript 3.0 Visual Quick Start Guide, Author: Derrick Yenburg. 2. Essential ActionScript 3.0, Author: Colin Moock. 3. Learning ActionScript 3.0, Author: Rich Shupe and Zevan Rosser. 		

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - VI
PAPER - III
TITLE: VFX II
PAPER CODE: BVA3603

[CREDITS - 4]

LEARNING OBJECTIVE:

Student will learn in this Semester to composing 3D objects in video footage. Match Moving process and various methods of Visual Special Effects for live action & Animation Films and to create Environments, which look realistic with the help of different techniques used for VFX. Student will also know the different tools of VFX which are currently used in industry.

	Title and Contents	No. of Lectures
Unit - I	Stereoscopic 3d Conversion and VFX 1.1 Stereoscopy and psychological aspect of 3D Stereoscopy types 1.2 HUD Effect, Stereoscopic Shooting (Using 3Ds Max or Maya Camera tool) 1.3 Narrative Grammar 2D to 3D Conversion	10
Unit - II	3D Objects and Match moving 2.1 Exploring a typical Match movie 2.2 Moving From 2D to 3D and Back again 2.3 Understanding the match moving process 2.4 Adding Rough Geometry and Refining the Camera 2.5 Creating a Camera Rig	10
Unit - III	VFX Compositing 3.1 Digital Compositing with CGI 3.2 Compositing Visual Effects 3.3 Particles 3.4 3D Compositing 3.5 Stereo Compositing	10
Unit - IV	VFX pipeline and project report 4.1 What is a pipeline? 4.2 An overview of film production 4.3 The Economics of film production 4.4 Pre-production in the film pipeline 4.5 Production in the film pipeline 4.6 Post production in the film pipeline	10
Unit - V	VFX Show Reel 5.1 Artist Profile 5.2 Work presentation 5.3 Interview Skill 5.4 Show reel	05

Reference Books:

1. Digital Stereoscopy Scene to Screen 3D Production Workflows, ISBN-10: 1480157090
2. Match Moving: The Invisible Art of Camera Tracking, ISBN-10: 111835205X
3. Compositing Visual Effects: Essentials for the Aspiring Artist, 2nd Edition, ISBN-10: 0240817818.
4. Production Pipeline Fundamentals for Film and Games, ISBN-10: 0415812291.

T.Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - VI
PAPER - IV
TITLE: GAME PRODUCTION
PAPER CODE: BVA3611

[CREDITS - 6]

Learning Objectives:

1. In this semester students will learn the game engine Unity.
2. Unity is software which is widely used in gaming industry for developing various games.
3. We can use this software for creating art as well as developing codes for games.
4. Student will also complete their game project which they have started in semester III.
5. Production & post production of the game will conclude in this semester.

	Title and Contents	No. of Lectures
Unit - I	Introduction to UNITY 1.1 Introduction to gaming and game development process 1.2 Unity Basics, Interface, Hierarchy & Inspector 1.3 Creating Projects	03
Unit - II	Project management and Importing assets 2.1 Importing Geometry 2.2 Importing Textures 2.3 Creating Materials - Bump and Specular	02
Unit - III	Programming and Game building 3.1 Basics of programming using C# scripts 3.2 Monodevelop editor 3.3 Variables and functions	05
Unit - IV	Creating our first 2D Game 4.1 Creating Assets 4.2 Importing and Setting up scene 4.3 Creating Menu, Level and Credits Scene 4.4 Basic Animation 4.5 Linking Scenes 4.6 Basic Script for Bg Scroll, Movement, Opponent Collision and Score 4.7 Adding Sound 4.8 Exporting to a EXE	10
Unit - V	Unity 3D 5.1 Terrains 5.2 Character Controller 5.3 Importing Animations from 3D Software 5.4 Physics and Rigidbody in Unity 5.5 Lighting and Baking Lights in the Scene	05
Unit - VI	Creating our first 3D Game 6.1 Creating Assets in Blender 6.2 Importing and Setting up scene 6.3 Creating Menu, Level and Credits Scenes 6.4 Linking Scenes 6.5 Basic Script for Rigidbody, Movement, Collision and Score	12

	6.6 Adding Sound 6.7 Exporting to a EXE	
Unit - VII	Particle System 7.1 Shuriken Particle System 7.2 Creating basic effects	03
Unit - VIII	Setting up Android Environment Optimizing our Game for Android Smartphones	05
Reference Books :		
<ol style="list-style-type: none"> 1. The Art of Game Design: A Book of Lenses - Jesse Schell, Publisher: CRC Press, (12 September 2008), ISBN-10: 0123694965 ISBN-13: 978-0123694966. 2. Game Mechanics: Advanced Game Design (Voices That Matter), Ernest Adams (Author), Joris Dormans (Author), Publisher: New Riders: 1st edition (15 June 2012), ISBN-10: 0321820274 ISBN-13: 978-0321820273. 3. Game Coding Complete, Fourth Edition, Mike McShaffry (Author), David Graham (Author), Publisher: Cengage Learning PTR: 4th edition (March 5, 2012), ISBN-10: 1133776574 ISBN-13: 978-1133776574. 4. Game Development Essentials: Game Story & Character Development, Marianne Krawczyk (Author), Jeannie Novak (Author), Publisher: Cengage Learning, 1st edition (March 23, 2006), ISBN-10: 1401878857: ISBN-13: 978-1401878856. 		

Assignments:

1. Submit a 2D Car Racing Game - Each (Windows / Android).
2. Submit a 3D Running Game - Group (Windows / Android).

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - VI
PAPER - V
TITLE: DIGITAL EDITING
PAPER CODE: BVA3612

[CREDITS - 6]

Learning Objectives:

1. The student will explain and use digital video capture and output methods.
2. To utilize appropriate compression schemes for various outputs.
3. To integrate and composite still graphics and animation into a production
4. To summarize and apply principles of video production
5. To identify the components of a digital video system.

	Title and Contents	No. of Lectures
Unit - I	Introduction to Video Editing 1.1 History of video production 1.2 Linear video editing 1.3 Non-linear (digital) editing 1.4 The future of video production	09
Unit - II	Digital Video Editing Terminology and Basic Concepts 2.1 Measuring video time 2.2 Measuring frame size and resolution 2.3 Video data compression 2.4 Capturing video 2.5 Components of a video editing timeline 2.6 Output devices and video delivery technology 2.7 Transparencies, superimposing, transitions, filters, special effects, animation, subclips, virtual clips 2.8 Storyboard techniques	06
Unit - III	Basic Editing Techniques 3.1 Capturing 3.2 Trimming 3.3 Assembling 3.4 Output 3.5 Transitions 3.6 Incorporating transitions into the editing process 3.7 Recognizing various standard transitions	10
Unit - IV	Audio 4.1 Capturing audio 4.2 Editing audio 4.3 Synchronizing audio	08
Unit - V	Advanced Editing Techniques 5.1 Titles and still graphics 5.2 Creating titles for video 5.3 Incorporating titles into video production 5.4 Incorporating still graphics into video production 5.5 Superimposing 5.6 Applying the Blue-Screen transparency key type 5.7 Applying the Chroma transparency key type 5.8 Adding motion paths 5.9 Apply motion settings 5.10 Create a traveling matte	12

	5.11	Understanding and creation of subclips	
	5.12	Understanding and creation of Virtual clips	

Reference Books:

1. Premiere Pro CS6 Digital Classroom, Author: Jerron Smith, AGI Creative Team, ISBN: 9781118553008, Publisher: John Wiley & Sons, 2012.
2. Motion Graphic Design: Applied History and Aesthetics, Author: Jon Krasner, ISBN: 9780240809892, Publisher: Focal Press.

T. Y. B. Voc. (DIGITAL ART & ANIMATION) SEMESTER - VI
PAPER - VI
TITLE: PHOTOGRAPHY II
PAPER CODE: BVA3613

[CREDITS - 6]

Learning Objectives:

1. To utilise Super 16 Aspect Ratio Production, with a view to providing content for Digital Television and Cinema Blow Up.
2. To work in a professionally oriented Group Environment, where teamwork is essential.
3. To apply the Principles of Film Cinematography, Lighting and Visual Aesthetics in the context of narrative.

	Title and Contents	No. of Lectures
Unit - I	Basic Grammar of Video 1.1 Camera Angles 1.2 Types of Shots 1.3 Rule of Third 1.4 Composition	11
Unit - II	Advance Lighting 2.1 Conventional, Soft and Diffused, Bounce, Source, Hard and Creative Lightings 2.2 Outdoor Lighting Wide and Huge Sets - Day Effect, Night Effect and Creative Lighting. Matching Indoor With Outdoor 2.3 Exposure Metering - Incident Light, Reflected Light, Spot Light, etc. Study about different kinds of Lights - Incandescent Lamps, Tungsten Halogen, HMI, PAR Lights, Kinoflo, etc.	09
Unit - III	Cinematography 3.1 Different Types of Film Movie Cameras. Mitchell NC-7, ARRI-2C, ARRI-3, ARRI-435 ES, ARRI-435 Advanced, ARRI-435 Extreme and ARRI-535 3.2 ARRI - ALEXA (PLUS, M and STUDIO Models), REDONE - Mx, RED - EPIC, RED - SCARLET 3.3 Slow and Fast Motions, Changing of Shutter Angles and Ramping 3.4 Special Effects using In-Camera techniques	10
Unit - IV	4.1 Responsibility of the Cinematographer 4.2 Pre-Production, Production and Post Production stages 4.3 Budget, Timelines, Recce	06
Unit - V	Post Production, Color Grading, Digital Intermediate 5.1 Image Processing 5.2 Color Gradations 5.3 Digital Audio recording, Editing and Reproduction 5.4 Video Editing - Media Management, Working in the audio, Effects & Transition, Animation, Titles 5.5 Special Effects	09

References:

1. Picture Perfect Practice and Picture Perfect Posing by Roberto Valenzuela.
2. Understanding Exposure by Bryan Peterson.
3. Film is not Dead by Jonathon Canlas.
4. The Art of Color by Itten.

