



CHHATRAPATI SHAHU JI MAHARAJ UNIVERSITY, KANPUR

Programme : B.Sc. Game Art & Design
Apprenticeship Embedded Degree Programme

Course Structure (with effect from 2026-27)

Semester 1				
Sl. No.	Category of Course	Code No.	Course Title	Credits
1	Core Course 1	B330101T	Drawing & Painting	4
2	Core Course 2	B330102T	Principles of Animation	4
3	Core Course 3	B330103T	Storytelling & Storyboarding	4
4	Minor Course	B330104T	UI/UX Design	3
5	Skill Enhancement Course (SEC)	VOC189	Digital Art	3
6	Co-Curricular	Z011102	Communicative English-I	2
Total Credits				20

Semester 2				
Sl. No.	Category of Course	Code No.	Course Title	Credits
1	Core Course 1	B330201T	Game Design Fundamentals	4
2	Core Course 2	B330202T	Character Design for Games	4
3	Core Course 3	B330203T	Level Design for Games	4
4	Minor Course	B330204T	History of Gaming	3
5	Skill Enhancement Course (SEC)	VOC190	Fundamentals of Photography & Cinematography	3
6	Co-Curricular	Z021202	Communicative English-II	2
Total Credits				20

Semester 3				
Sl. No.	Category of Course	Code No.	Course Title	Credits
1	Core Course 1	B330301T	3D Game Asset Modeling	4
2	Core Course 2	B330302T	Environment Art & World Building	4
3	Core Course 3	B330303T	Game Engine Fundamentals (Unity & Unreal)	4
4	Minor Course	B330304T	PBR Texturing & Material Creation	3
5	Skill Enhancement Course (SEC)	VOC191	Game UI Design	3
6	Co-Curricular	Z031301	Physical Education and Yoga	2
Total Credits				20

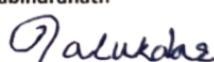

Prof. Virendra Kr Vyas


Prof. Manukonda Rabindranath


Prof. Prashant Kumar


Dr. Om Shankar Gupta


Dr. Hariom Kumar


Dr. Hoimawati Talukdar


Dr. Diwakar Awasthi
(Coordinator)

Semester 4				
Sl. No.	Category of Course	Code No.	Course Title	Credits
1	Core Course 1	B330401T	Character Art Production	4
2	Core Course 2	B330402T	Environment Art Production	4
3	Core Course 3	B330403T	Technical Art Fundamentals	4
4	Minor Course	B330404T	Unreal Engine for Game Artists	3
5	Skill Enhancement Course (SEC)	VOC192	Digital Portfolio & Professional Practice	3
6	Co-Curricular	Z041403	Community Connect	2
Total Credits				20

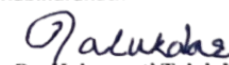
Semester 5				
Sl. No.	Category of Course	Code No.	Course Title	Credits
1	Core Course 1	B330501T	Advanced Game Art Production	5
2	Core Course 2	B330502T	Real-Time Rendering & Optimization	5
3	Core Course 3	B330503T	Multiplayer & Open World Game Production	5
4	Specialization Course	B330504T	Specialization Project (Character Art / Environment Art / Technical Art / UI Art)	5
5	Project	B330505R	Major Game Art Production Project	5
Total Credits				25

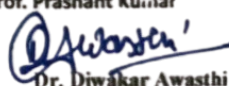
Semester 6				
Sl. No.	Category of Course	Code No.	Course Title	Credits
1	DSE	B330601A	Apprenticeship with Industry	25
Total Credit				25


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 (Coordinator)

Programme: B.Sc. Game Art & Design		Year: First	Semester: I
Course Code: B330101T		Course Title: Drawing & Painting	
Course outcomes: 1. Demonstrate improved drawing and sketching skills. 2. Apply principles of composition and color effectively in art. 3. Utilize digital drawing and painting tools proficiently. 4. Create concept art and illustrations.			
Credits: 4		Core Course-1	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Drawing and Sketching: Introduction to Drawing, Observation Skills, Line Drawing, Shapes and Forms, Perspective Basics, Light and Shadow, Object Sketching, Human Proportion Basics, Gesture Drawing and Visual Representation Techniques.		15
II	Composition and Color Principles: Principles of Design, Balance, Contrast, Rhythm, Emphasis and Harmony, Color Theory, Color Wheel, Color Schemes, Psychological Effects of Colors, Composition Techniques for Visual Storytelling and Artistic Expression.		15
III	Digital Drawing and Painting Techniques: Introduction to Digital Art Tools and Software, Digital Brushes and Layers, Tablet-Based Drawing, Digital Painting Workflow, Texture Creation, Rendering Techniques, Lighting Effects, Digital Painting Fundamentals.		15
IV	Concept Art and Illustration Development: Concept Art Process, Visual Development, Character Design, Environment Illustration, Creative Ideation Techniques, Illustration and Presentation Methods.		15
Suggested Readings: • Andrew Loomis – Fun with a Pencil • Betty Edwards – Drawing on the Right Side of the Brain • James Gurney – Color and Light • Scott Robertson – How to Draw			
Suggested Continuous Evaluation Methods: • Sketchbook Assignments • Composition Exercises • Color Studies • Digital Painting Projects • Concept Art Development • Portfolio Review • Class Presentations • Practical Demonstrations			
Suggested equivalent online courses: • Adobe Digital Painting Courses. • Skillshare – Concept Art & Illustration. • Udeemy – Digital Painting Masterclass.			
Prof. Virendra Kr Vyas		Prof. Manukonda Rabindranath	Prof. Prashant Kumar
Dr. Om Shankar Gupta		Dr. Hariom Kumar	Dr. Hoimawati Talukdar
		Dr. Diwakar A (Coordin	

Programme: B.Sc. Game Art & Design		Year: First	Semester: I
Course Code: B330102T		Course Title: Principles of Animation	
Course outcomes: 1. Apply fundamental animation principles. 2. Create dynamic and expressive character animations. 3. Develop environmental animations that enhance the viewer experience. 4. Apply advanced animation techniques to improve quality animation.			
Credits: 4		Core Course 2	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Animation Principles: History and Evolution of Animation, Animation Workflow, Introduction to the 12 Principles of Animation (Squash & Stretch, Anticipation, Staging, Straight Ahead & Pose-to-Pose, Follow Through & Overlapping Action, Slow In & Slow Out, Arcs, Secondary Action, Timing, Exaggeration, Solid Drawing and Appeal), Observation and Motion Analysis.		15
II	Character Animation Fundamentals: Acting for Animation, Body Mechanics, Weight and Balance, Walk Cycles, Run Cycles, Facial Expressions, Lip Synchronization Basics, Gesture and Performance Animation, Creating Dynamic and Expressive Character Motions.		15
III	Environmental and Object Animation: Principles of Environmental Motion, Natural Phenomena Animation (Water, Fire, Smoke, Wind), Mechanical and Object Animation, Camera Movement, Scene Dynamics, Interaction Between Characters and Environment, Enhancing Visual Experience through Motion Design.		15
IV	Advanced Animation Techniques and Production: Advanced Timing and Spacing, Animation Polish and Refinement, Acting and Emotional Performance, Advanced Character Mechanics, Animation Quality Control, Animation Pipeline Integration, Portfolio Development, Industry Standards and Project-Based Animation Production.		15
Suggested Readings: • Richard Williams – The Animator's Survival Kit • Frank Thomas & Ollie Johnston – The Illusion of Life: Disney Animation • Ed Hooks – Acting for Animators • Tony White – Animation: From Pencils to Pixels • Preston Blair – Cartoon Animation			
Suggested Continuous Evaluation Methods: • Animation Exercises • Bouncing Ball and Pendulum Assignments • Walk Cycle Projects • Character Acting Tests • Environmental Animation Tasks • Scene Animation Projects • Portfolio Development • Viva Voce and Presentations			
Suggested equivalent online courses: • Pixar in a Box – Animation Basics • Animation Mentor Foundations • CG Spectrum – Animation Essentials • Coursera – Animation and Motion Fundamentals • LinkedIn Learning – Principles of Animation			
Dr. Om Shankar Gupta		Prof. Manukonda Rabindranath	Dr. Hoimawati Talukdar

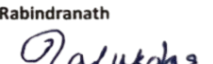
Programme: B.Sc. Game Art & Design		Year: First	Semester: I
Course Code: B330103T		Course Title: Storytelling & Storyboarding	
Course outcomes: • Craft engaging narratives. • Understand various narrative structures relevant to Animation. • Create compelling characters for storytelling. • Develop proficiency in using storyboarding as a visual storytelling tool.			
Credits: 4		Core Course-3	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Storytelling: Introduction to Storytelling, Importance of Stories in Animation and Visual Media, Elements of Story (Theme, Plot, Conflict, Setting, Character), Three-Act Structure, Narrative Arc, Story Development Process, Types of Stories and Genres.		15
II	Narrative Structures and Script Development: Classical and Modern Narrative Structures, Linear and Non-Linear Storytelling, Hero's Journey, Character Arc, Scene Construction, Dialogue Writing Basics, Script Formatting, Story Analysis and Adaptation for Animation Projects.		15
III	Character Creation and Visual Storytelling: Character Design for Storytelling, Personality Development, Character Motivation and Conflict, Visual Communication Through Character Actions and Expressions, Relationship Building, World Building, Character Sheets and Story-Driven Design Approaches.		15
IV	Storyboarding Techniques and Production: Principles of Storyboarding, Camera Angles and Shot Composition, Cinematic Language, Scene Visualization, Action and Continuity, Storyboard Panels and Timing, Animatics Creation, Digital Storyboarding Tools, Portfolio Development and Presentation of Storyboards.		15
Suggested Readings: • Syd Field – <i>Screenplay: The Foundations of Screenwriting</i> • Robert McKee – <i>Story</i> • Christopher Vogler – <i>The Writer's Journey</i> • Francis Glebas – <i>Directing the Story</i> • Marcos Mateu-Mestre – <i>Framed Ink</i> • Walt Stanchfield – <i>Drawn to Life</i>			
Suggested Continuous Evaluation Methods: • Story Writing Assignments • Character Development Exercises • Script Writing Tasks • Story Analysis Reports • Storyboard Sheet Preparation • Animatic Creation • Group Discussions and Presentations • Final Storyboarding Project			


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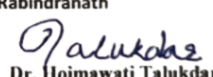

Dr. Hoimawati Talukdar


Prof. Prashant Kumar


Dr. Diwakar Awasthi
(Coordinator)

Suggested equivalent online courses:

- Pixar in a Box – Storytelling
- Coursera – Storytelling and Narrative Design
- LinkedIn Learning – Storyboarding Foundations
- Udemy – Storyboarding for Animation
- CG Spectrum – Visual Storytelling Essentials

Programme: B.Sc. Game Art & Design		Year: First	Semester: I
Course Code: B330104T		Course Title: UI UX Design	
Course outcomes: • Design and create effective UI/UX elements. • Apply principles of user interface design to enhance navigation. • Implement strategies to improve the overall user experience. • Develop UI/UX designs suitable for different platforms. • Conduct usability testing and iterate designs based on feedback.			
Credits: 3		Minor Course	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Introduction to UI/UX Design: Overview of UI and UX Design, Importance of User Experience in Digital Products, User-Centered Design Process, Difference between UI and UX, Design Thinking Fundamentals, Human-Centered Design, Elements of User Interface, Introduction to Design Tools and Workflows.		15
II	User Interface Design Principles: Layout and Grid Systems, Typography and Readability, Color Theory and Accessibility, Visual Hierarchy, Navigation Design, Information Presentation, UI Components and Patterns, Design Systems, Responsive Design Principles and Interface Consistency.		15
III	User Experience Design and Research: User Research Methods, Personas and User Profiles, User Journey Mapping, Information Architecture, Wireframing Techniques, Low and High-Fidelity Prototypes, Interaction Design Principles, Accessibility Standards, Improving User Experience through Research and Testing.		15
IV	Platform Design, Usability Testing and Iteration: Designing for Web, Mobile and Cross-Platform Applications, Usability Testing Methods, Heuristic Evaluation, A/B Testing Fundamentals, Feedback Collection and Analysis, Iterative Design Process, UX Metrics and Analytics, UI/UX Case Studies and Final Design Project.		15
Suggested Readings: ☐ Don Norman – The Design of Everyday Things ☐ Alan Cooper, Robert Reimann & David Cronin – About Face: The Essentials of Interaction Design ☐ Steve Krug – Don't Make Me Think ☐ Garrett N. – The Elements of User Experience ☐ Joel Marsh – UX for Beginners ☐ Jenifer Tidwell – Designing Interfaces			
Suggested Continuous Evaluation Methods: ☐ UI Design Assignments ☐ Wireframing Exercises ☐ User Research Reports ☐ Persona Development ☐ User Journey Mapping ☐ Prototype Design Projects ☐ Usability Testing Reports ☐ Case Study Analysis			
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 Dr. Om Shankar Gupta		 Dr. Hariom Kumar	
		 Dr. Hoimawati Talukdar	
		 Prof. Prashant Kumar	
		 Dr. Diwakar Awasthi (Coordinator)	

☐ Final UI/UX Project Presentation

Suggested equivalent online courses:

- *LinkedIn Learning – UX Foundations*
- *Udemy – UI/UX Design Masterclass*
- *Figma Academy*
- *Coursera – User Experience Research and Design*

Programme: B.Sc. Game Art & Design		Year: First	Semester: I
Course Code: VOC189		Course Title: Digital Art	
Course outcomes: • Create digital art assets. • Employ digital painting techniques to enhance visuals. • Develop concept art that aligns with design objectives. • Apply texturing and shading skills to enhance graphics. • Integrate digital art effectively into character design.			
Credits: 3		SEC	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Digital Art and Asset Creation: Introduction to Digital Art, Digital Art Workflow, Raster and Vector Graphics, Digital Drawing Fundamentals, Understanding Graphic Tablets and Input Devices, Layers and Selections, Basic Asset Creation Techniques, Composition and Visual Design Principles.		15
II	Digital Painting Techniques: Introduction to Digital Painting Software, Brush Tools and Customization, Color Theory for Digital Media, Lighting and Shadow Techniques, Texture Painting, Rendering Methods, Matte Painting Basics, Enhancing Visual Quality through Digital Painting Workflows.		15
III	Concept Art Development and Design Visualization: Concept Art Fundamentals, Research and Reference Collection, Ideation and Thumbnail Sketching, Environment Concept Art, Prop Design, Visual Storytelling Techniques, Design Thinking in Concept Development, Creating Artwork Aligned with Project Objectives.		15
IV	Texturing, Shading and Character Design Applications: Surface Texturing Techniques, Material Creation, Shading Principles, Character Design Fundamentals, Costume and Prop Development, Integration of Digital Art into Character Design, Portfolio Artwork Development and Industry-Oriented Project Execution.		15

Suggested Readings:

- James Gurney – *Color and Light*
- 3DTotal Publishing – *Digital Painting Techniques*
- Scott Robertson – *How to Draw*
- 3DTotal Publishing – *Beginner's Guide to Digital Painting*
- Michael Hampton – *Figure Drawing: Design and Invention*

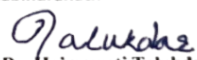

Prof. Virendra Kr Vyas

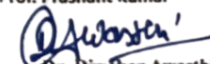

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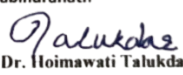
Suggested Continuous Evaluation Methods:

- Digital Sketching Assignments
- Asset Creation Exercises
- Digital Painting Projects
- Concept Art Development Tasks
- Character Design Assignments
- Texturing and Shading Exercises
- Portfolio Reviews
- Presentations and Viva Voce

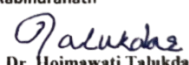
Suggested equivalent online courses:

- Adobe Photoshop for Digital Artists
- **Coursera** – Fundamentals of Graphic Design
- **CG Spectrum** – Digital Painting Essentials
- **Udemy** – Digital Art and Illustration Masterclass
- **LinkedIn Learning** – Digital Painting Foundations

Programme: B.Sc. Game Art & Design		Year: First	Semester: I
Course Code: Z011102		Course Title: Communicative English-1	
Course outcomes:			
• Proficient written and verbal communication in media settings. • Critical analysis and interpretation of media-related content. • Effective presentation and public speaking abilities. • Collaborative communication skills suitable for team environments. • Application of language skills in media and entertainment contexts			
Credits: 2		Co- Curricular	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=30
I	• Foundations of English Language • Reading Comprehension Strategies • Writing Techniques for Media • Verbal and Non-verbal Communication • Media Literacy and Critical Analysis • Presentation Skills for Media Professionals • Group Communication Dynamics • Cultural Sensitivity in Communications  Prof. Virendra Kr Vyas  Prof. Manukonda Rabindranath  Prof. Prashant Kumar  Dr. Om Shankar Gupta  Dr. Hariom Kumar  Dr. Hoimawati Talukdar  Dr. Diwakar Awasthi (Coordinator)		

Programme: B.Sc. Game Art & Design		Year: First	Semester: II
Course Code: B330201T		Course Title: Game Design Fundamentals	
Course outcomes: - Understand the fundamental principles, concepts, and terminology of game design. - Analyse different game genres, mechanics, gameplay systems, and player experiences. - Apply game design principles to create engaging game concepts and design documents. - Develop basic game prototypes using industry-standard design methodologies. - Evaluate game designs through playtesting, user feedback, and iterative improvement.			
Credits: 4		Core Course-1	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics	No. of Lectures Total=60	
I	Introduction to Game Design: Introduction to Game Design, History and Evolution of Video Games, Types of Games, Game Genres, Elements of Games, Core Game Loop, Player Motivation, Rules, Objectives, Challenges, Rewards, Game Development Pipeline and Roles in Game Development.	15	
II	Game Mechanics and Gameplay Design: Game Mechanics, Gameplay Systems, Difficulty Balancing, Level Progression, Game Economy, Reward Systems, Risk vs Reward, Player Psychology, Player Engagement, User Experience (UX) in Games, Interactive Design Principles.	15	
III	Game Concept Development: Game Idea Generation, Design Thinking for Games, High Concept Document, Game Design Document (GDD), Character and Environment Concepts, Storytelling for Games, World Building, Mission Design, Level Flow, Paper Prototyping Techniques.	15	
IV	Game Prototyping and Playtesting: Rapid Prototyping, Prototype Evaluation, Playtesting Methods, User Feedback Collection, Game Balancing, Iterative Design Process, Documentation, Portfolio Development, Case Studies of Successful Games, Final Game Design Project Presentation.	15	
Suggested Readings: - Jesse Schell – <i>The Art of Game Design: A Book of Lenses</i> - Ernest Adams – <i>Fundamentals of Game Design</i> - Scott Rogers – <i>Level Up! The Guide to Great Video Game Design</i> - Tracy Fullerton – <i>Game Design Workshop</i> - Katie Salen & Eric Zimmerman – <i>Rules of Play</i>			
Suggested Continuous Evaluation Methods: - Game Analysis Assignments - Game Design Document (GDD) - Game Mechanics Design Exercise - Paper Prototype Development - Playtesting Report - Game Pitch Presentation - Final Game Design Project - Viva Voce  Prof. Virendra Kr Vyas  Prof. Manukonda Rabindranath  Prof. Prashant Kumar  Dr. Om Shankar Gupta  Dr. Hariom Kumar  Dr. Hoimawati Talukdar  Dr. Diwakar Awasthi (Coordinator)			
Suggested equivalent online courses: - Game Design and Development – Coursera - Introduction to Game Design – edX - Unity Learn – Game Design Essentials			

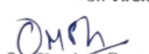
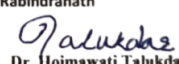
- *Game Design Workshop – Udemy*
- *Epic Games Learning Portal – Game Design Fundamentals*

Programme: Game Art & Design		Year: First	Semester: II
Course Code: B330202T		Course Title: Character Design for Games	
Course outcomes: • Understand the principles and workflow of game character design. • Create original game characters using concept art, anatomy, and visual storytelling. • Apply shape language, proportions, color theory, and costume design to develop appealing characters. • Prepare production-ready character sheets suitable for game development pipelines. • Develop a professional character design portfolio following industry standards.			
Credits: 4		Core Course-2	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Introduction to Character Design: Introduction to Character Design, Role of Characters in Video Games, Character Design Pipeline, Types of Game Characters (Hero, Villain, NPC, Creature), Shape Language, Character Silhouette, Character Archetypes, Reference Collection, Mood Board Development, Visual Storytelling.		15
II	Anatomy and Character Development : Basic Human Anatomy for Artists, Body Proportions, Facial Structure, Gesture Drawing, Expressions, Character Personality, Costume Design, Accessories, Hairstyles, Props, Color Theory for Characters, Character Turnaround Sheets.		15
III	Digital Character Creation : Digital Sketching Techniques, Character Illustration Workflow, Line Art, Coloring Methods, Lighting Basics, Rendering Techniques, Stylized vs Realistic Characters, Creature Design Fundamentals, Fantasy and Sci-Fi Character Design, Character Presentation.		15
IV	Production Pipeline and Portfolio Development : Game Production Workflow, Character Sheet Preparation, Expression Sheet, Pose Sheet, Asset Breakdown, Character Documentation, Portfolio Development, Industry Case Studies, Design Critique, Final Character Design Project and Presentation.		15
Suggested Readings: • Scott Robertson – How to Draw • 3DTotal Publishing – Beginner's Guide to Digital Painting in Photoshop • Tom Bancroft – Creating Characters with Personality • Michael Hampton – Figure Drawing: Design and Invention • Frédéric Monceau – Character Design Quarterly			
Suggested Continuous Evaluation Methods: • Character Sketchbook • Mood Board Assignment • Anatomy Drawing Exercises • Character Turnaround Sheet • Expression Sheet • Digital Character Illustration • Portfolio Review			
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- *Final Character Design Project*
- *Viva Voce*

Suggested equivalent online courses:

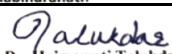
- *Character Design for Games – CGMA*
- *Character Creation Fundamentals – Udemy*
- *Digital Character Design – Coursera*
- *Concept Art & Character Design – Domestika*
- *Character Design Learning Path – ArtStation Learning*

Programme: Game Art & Design		Year: First	Semester: II
Course Code: B330203T		Course Title: Level Design for Games	
Course outcomes: • Understand the principles and workflow of game level design. • Design engaging, balanced, and player-centric game levels using industry-standard methodologies. • Apply spatial planning, gameplay flow, and environmental storytelling techniques. • Develop playable level prototypes using modern game engines and level design tools. • Create professional level design documentation and portfolio-ready projects.			
Credits: 4		Core Course-3	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics	No.of Lectures Total=60	
I	Fundamentals of Level Design: Introduction to Level Design, Role of a Level Designer, Evolution of Level Design, Types of Game Levels, Player Experience (PX), Core Gameplay Loop, Level Objectives, World Building, Game Spaces, Exploration vs Linear Design, Level Design Pipeline.	15	
II	Level Planning and Gameplay Flow: Level Layout Planning, Blockout Techniques, Whiteboxing, Player Navigation, Checkpoints, Spawn Points, Pacing, Difficulty Curve, Risk and Reward, Puzzle Design, Mission Flow, Game Balancing Fundamentals.	15	
III	Environment and Interactive Design: Environmental Storytelling, Visual Landmarks, World Composition, Interactive Objects, NPC Placement, Collectibles, Traps and Obstacles, Lighting for Navigation, Audio Cues, UI Indicators, Accessibility in Level Design.	15	
IV	Level Prototyping and Production: Introduction to Unity and Unreal Level Editors, Greyboxing, Playtesting Techniques, User Feedback Analysis, Level Optimization, Bug Identification, Level Documentation, Portfolio Development, Industry Case Studies, Final Level Design Project.	15	
Suggested Readings: • Scott Rogers – <i>Level Up! The Guide to Great Video Game Design</i> • Jesse Schell – <i>The Art of Game Design: A Book of Lenses</i> • Christopher Totten – <i>An Architectural Approach to Level Design</i> • Ernest Adams – <i>Fundamentals of Game Design</i> • Steve Lee – <i>Level Design for Games</i>			
Suggested Continuous Evaluation Methods:  Prof. Virendra Kr Vyas  Prof. Manukonda Rabindranath  Prof.  Dr. Om Shankar Gupta  Dr. Hariom Kumar  Dr. Hoimawati Talukdar  Mr. Diwakar Awasthi (Coordinator) • Level Layout Sketches • Whitebox Level Design Assignment			

- *Gameplay Flow Analysis*
- *Environment Storytelling Exercise*
- *Greybox Prototype Development*
- *Level Design Documentation*
- *Portfolio Review*
- *Final Level Design Project*
- *Viva Voce*

Suggested equivalent online courses:

- *Unity Learn – Level Design Essentials*
- *Unreal Engine Learning – Level Design Fundamentals*
- *Coursera – Game Design and Development*
- *CGMA – Level Design for Games*
- *Udemy – Game Level Design Masterclass*

Programme: Game Art & Design		Year: First	Semester: II
Course Code: B330204T		Course Title: History of Gaming	
Course outcomes: • Demonstrate knowledge of key events and phases in the history of gaming. • Analyze the influence of technological advancements on gaming evolution. • Discuss the impact of gaming on culture and society. • Understand the evolution of game design concepts and genres. • Develop a historical perspective on the gaming industry.			
Credits: 3		Minor	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Origins and Evolution of Video Games: Introduction to Gaming History, Early Electronic Games, Arcade Era, Home Console Revolution, Evolution of PC Gaming, Major Milestones in the Gaming Industry, Influential Games and Developers.		15
II	Game Genres and Technological Advancements: Evolution of Game Genres, Role of Graphics, Audio and Artificial Intelligence, Online Gaming, Mobile Gaming, Virtual Reality (VR), Augmented Reality (AR), Cloud Gaming and Emerging Technologies.		15
III	Gaming Culture and Industry: Impact of Gaming on Society, Gaming Communities, eSports, Indie Game Development, Game Publishing, Global Gaming Markets, Ethics in Gaming, Diversity and Inclusion, Business Models in the Gaming Industry.		15
IV	Modern Gaming and Future Trends: Contemporary Game Design Practices, Cross-Platform Development, Live Service Games, Serious Games, Educational Games, Future Technologies, Case Studies of Successful Games, Industry Analysis, Research Presentation and Portfolio Activity.		15
Suggested Readings: • <i>Tristan Donovan – Replay: The History of Video Games</i> • <i>Steven L. Kent – The Ultimate History of Video Games</i> • <i>Jesper Juul – Half-Real: Video Games between Real Rules and Fictional Worlds</i> • <i>Katie Salen & Eric Zimmerman – Rules of Play: Game Design Fundamentals</i> • <i>Ernest Adams – Fundamentals of Game Design</i>			
 Dr. Om Shankar Gupta  Prof. Manukonda Rabindranath  Dr. Hariom Kumar  Dr. Hoimawati Talukdar  Dr. Diwakar Awasthi (Coordinator)			

Suggested Continuous Evaluation Methods:

- Research Assignments
- Game Timeline Presentation
- Case Study Analysis
- Group Discussions
- Industry Research Report
- Seminar Presentation
- Quiz and Viva Voce
- Continuous Internal Assessment

Suggested equivalent online courses:

- History of Video Games – Coursera
- Introduction to Game Design – Coursera
- Unity Learn – Explore the Games Industry

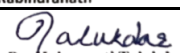

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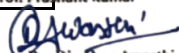

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 Prof. Prashant Kumar


 Dr. Om Shankar Gupta


 Dr. Hariom Kumar


 Dr. Hoimawati Talukdar

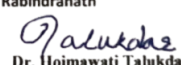

 Dr. Diwakar Awasthi
 (Coordinator)

Programme: B.Sc. Game Art & Design		Year: First	Semester: II
Course Code: VOC190		Course Title: Fundamentals of Photography & Cinematography	
Course outcomes: • Understand the fundamental principles of photography and cinematography along with their applications in digital media. • Demonstrate proficiency in camera handling, exposure control, composition, framing, lighting, and visual storytelling. • Apply photographic and cinematographic techniques to capture high-quality still images and cinematic videos. • Utilize industry-standard digital cameras, mobile filmmaking techniques, and basic post-production workflows. • Develop creative visual content and produce a professional photography and cinematography portfolio suitable for animation, VFX, filmmaking, and digital media industries.			
Credits: 3		SEC	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Photography & Camera Systems: Introduction to Photography and Cinematography, History and Evolution, Importance in Animation, VFX and Digital Media, Types of Cameras (DSLR, Mirrorless, Cinema Camera and Smartphone), Camera Components, Exposure Triangle (ISO, Aperture and Shutter Speed), Lens Types and Focal Length, Image Resolution, Aspect Ratio, File Formats (RAW & JPEG), Basic Camera Handling and Safety.		15
II	Composition, Visual Communication & Cinematic Language: Principles of Visual Communication, Rule of Thirds, Leading Lines, Framing, Perspective, Depth of Field, Camera Angles, Shot Sizes, Camera Movements (Pan, Tilt, Dolly, Crane, Gimbal and Handheld), Visual Continuity, Storytelling through Photography and Cinematography, Mood Creation using Composition and Camera Techniques.		15
III	Lighting, Digital Imaging & Content Creation: Natural and Artificial Lighting, Three-Point Lighting Setup, Colour Temperature, White Balance, Basic Sound Recording Concepts, Indoor and Outdoor Photography, Portrait, Product and Landscape Photography, Basic Colour Correction, Image Enhancement, Mobile Photography and Mobile Filmmaking Techniques		15

IV	Photography & Cinematography Project: Pre-production Planning, Shot Division, Storyboard Interpretation, Photo Essay Development, Short Cinematic Sequence Production, Basic Video Editing Workflow, Portfolio Development, Copyright and Ethics, Presentation Techniques, Final Photography & Cinematography Project and Portfolio Review.	15
Suggested Readings: • Blain Brown – <i>Cinematography: Theory and Practice</i> • Bryan Peterson – <i>Understanding Exposure</i> • Michael Langford – <i>Langford's Basic Photography</i> • Joseph V. Mascelli – <i>The Five C's of Cinematography</i> • Scott Kelby – <i>The Digital Photography Book</i> • Tom Ang – <i>Digital Photography Masterclass</i>		
Suggested Continuous Evaluation Methods: • Camera Handling Exercises • Exposure & Composition Assignments • Portrait Photography Project • Product & Landscape Photography • Camera Movement Practice • Lighting Setup Exercises • Photo Essay Development • Cinematic Short Scene Production • Portfolio Development • Viva Voce		
Suggested equivalent online courses: • Photography Foundations – LinkedIn Learning • Fundamentals of DSLR Photography – Udemy • Adobe Lightroom Essential Training – LinkedIn Learning • Introduction to Filmmaking – FutureLearn • The Language of Hollywood: Storytelling, Sound and Color – Coursera		

Programme: Game Art & Design		Year: First	Semester: II
Course Code: Z021202		Course Title: Communicative English-II	
Course outcomes: • Apply fundamental English language skills for effective communication. • Analyse and interpret texts using reading comprehension strategies. • Create clear and professional written content for media. • Demonstrate effective verbal and non-verbal communication skills. • Evaluate media content using critical thinking and media literacy. • Deliver effective presentations and collaborate confidently in group discussions.			
Credits: 2		Co-Curricular	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics	No.of Lectures Total=30	
I	• Foundations of English Language • Reading Comprehension Strategies • Writing Techniques for Media • Verbal and Non-verbal Communication		
Dr. Om Shankar Gupta Dr. Hariom Kumar Dr. Hoimawati Talukdar			

	• Media Literacy and Critical Analysis • Presentation Skills for Media Professionals • Group Communication Dynamics	
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Programme: B.Sc. Game Art & Design		Year: 2nd	Semester: III
Course Code: B330301T		Course Title: 3D Game Asset Modeling	
Course outcomes:			
- Understand the principles and workflow of 3D asset creation for games. - Create optimized low-poly and high-poly game assets using industry-standard modeling techniques. - Apply topology, proportion, and modular design concepts for real-time game production. - Prepare game-ready assets with proper UV layouts and optimization techniques. - Develop a portfolio of production-ready 3D game assets following industry standards.			
Credits: 4		Core Course-1	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of 3D Modeling: Introduction to 3D Game Asset Modeling, Evolution of 3D Graphics, Game Asset Pipeline, Types of Game Assets, Polygon Modeling Concepts, Coordinate System, Primitive Objects, Object Transformations, Industry Software Overview (Blender, Maya).		15
II	Modeling Techniques: Low Poly Modeling, High Poly Modeling, Edge Loops, Topology Fundamentals, Hard Surface Modeling, Organic Modeling Basics, Modular Asset Creation, Scale and Proportion, Scene Organization.		15
III	Optimization for Games: Game Ready Modeling, Polygon Budget, Mesh Optimization, Level of Detail (LOD), UV Mapping Fundamentals, Asset Naming Convention, Pivot Management, Export Standards, File Formats (FBX, OBJ, GLTF).		15
IV	Production Workflow: Asset Library Creation, Production Pipeline, Quality Check, Asset Presentation, Portfolio Development, Industry Standards, Collaboration Workflow, Case Studies, Final 3D Asset Project.		15
Suggested Readings:			
- William Vaughan – Digital Modeling - Andrew Gahan – Game Art Complete 3DTotal – Beginner's Guide to 3D Modeling - Autodesk Maya Documentation - Blender Manual			
Suggested Continuous Evaluation Methods:			
- William Vaughan – Digital Modeling - Andrew Gahan – Game Art Complete 3DTotal – Beginner's Guide to 3D Modeling - Autodesk Maya Documentation - Blender Manual			
Suggested equivalent online courses:			
- Blender Fundamentals - Autodesk Maya Essentials - Unity Asset Creation - Unreal Engine Asset Pipeline - CG Cookie – Game Asset Modeling			
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		 Dr. Om Shankar Gupta	 Dr. Hariom Kumar
			 Dr. Hoimawati Talukdar
			 Prof. Prashant Kumar
			 Dr. Diwakar Awasthi (Coordinator)

Programme: Game Art & Design		Year: 2nd	Semester: III
Course Code: B330302T		Course Title: Environment Art & World Building	
Course outcomes: - Understand the principles of environment art and world-building for modern video games. - Design immersive game environments using composition, scale, architecture, and environmental storytelling. - Create modular environments, props, and natural assets following industry-standard workflows. - Apply optimization techniques for real-time game engines while maintaining visual quality. - Develop a professional environment art portfolio suitable for AAA and indie game studios.			
Credits: 4		Core Course-2	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Environment Art: Introduction to Environment Art, Evolution of Environment Design in Games, Environment Art Pipeline, Types of Game Environments, Environmental Storytelling, Scale and Proportion, Mood Boards, Reference Collection, Architectural Styles, Natural and Fantasy Environments.		15
II	Modular Environment Design: Principles of Modular Design, Blockout Techniques, Greyboxing, Modular Asset Creation, Props Design, Terrain Basics, Vegetation Design, Roads, Buildings, Interior and Exterior Environments, Scene Composition.		15
III	Environment Production Workflow: Hard Surface Modeling for Environment Assets, Organic Asset Creation, UV Mapping, Scene Assembly, Material Assignment, Lighting Fundamentals, Atmospheric Effects, Asset Optimization, Level of Detail (LOD), Real-Time Environment Production.		15
IV	Portfolio Development and Industry Pipeline: Environment Art Production Pipeline, Collaboration with Level Designers, Environment Documentation, Quality Assurance, Optimization for Unity and Unreal Engine, Portfolio Development, Industry Case Studies, Final Environment Art Project and Presentation.		15
Suggested Readings: - Andrew Gahan – Game Art Complete - Jason Busby – Mastering Unreal Engine 3DTotal Publishing – Environment Design for Games - William Vaughan – Digital Modeling - Scott Rogers – Level Up! The Guide to Great Video Game Design			
Suggested Continuous Evaluation Methods: - Environment Concept Board - Modular Asset Design Assignment - Terrain Creation Exercise - Environment Scene Development - Lighting and Mood Study - Portfolio Review - Final Environment Art Project - Viva Voce			


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 Dr. Om Shankar Gupta


 Prof. Manukonda Rabindranath

 Dr. Hariom Kumar


 Prof. Prashant Kumar

 Dr. Himawati Talukdar


 Dr. Diwakar Awasthi
 (Coordinator)

Suggested equivalent online courses:

- *Unreal Engine – Environment Artist Learning Path*
- *Unity Learn – Environment Design*
- *CGMA – Environment Art for Games*
- *ArtStation Learning – Environment Art*
- *Coursera – 3D Environment Design for Games*

Programme: Game Art & Design		Year: 2nd	Semester: III
Course Code: B330303T		Course Title: Game Engine Fundamentals (Unity & Unreal)	
Course outcomes:			
- Understand the fundamentals of modern game engines and their role in game development. - Create interactive game scenes using Unity and Unreal Engine. - Apply game objects, materials, lighting, physics, animation, and UI components in game engines. - Integrate game assets, optimize performance, and build playable game prototypes. - Develop industry-ready game engine projects following professional workflows.			
Credits: 4		Core Course-3	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Introduction to Game Engines: Introduction to Game Engines, Evolution of Game Engines, Unity and Unreal Engine Overview, Installation and Interface, Project Structure, Scene Management, Game Objects, Components, Transform Tools, Prefabs, Asset Management, Importing 2D and 3D Assets.		15
II	Scene Development and Gameplay Basics: Scene Creation, Terrain Creation, Materials and Textures, Lighting Fundamentals, Cameras, Audio Sources, Physics Engine, Collision Detection, Rigid Body Components, Particle Systems, Basic User Interface (UI), Navigation and Player Controls.		15
III	Scene Development and Gameplay Basics: Scene Creation, Terrain Creation, Materials and Textures, Lighting Fundamentals, Cameras, Audio Sources, Physics Engine, Collision Detection, Rigid Body Components, Particle Systems, Basic User Interface (UI), Navigation and Player Controls.		15
IV	Game Deployment and Optimization: Game Testing, Debugging Techniques, Performance Optimization, Lighting Optimization, Asset Optimization, Build Settings, Publishing for Desktop and Mobile Platforms, Version Control Basics, Industry Production Workflow, Final Playable Game Prototype and Presentation.		15
Suggested Readings:			
- Will Goldstone – Unity Game Development Essentials - Patrick Felicia – Unity from Zero to Proficiency - Jason Busby – Mastering Unreal Engine - Unity Learn & Unreal Engine Official Documentation			
Suggested Continuous Evaluation Methods:			
- Unity Interface Exercise - Unreal Engine Scene Creation - Asset Import Assignment - Interactive Scene Development - Blueprint / Visual Scripting Exercise - Mini Game Prototype - Final Playable Project - Viva Voce			


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 Prof. Prashant Kumar


 Dr. Om Shankar Gupta


 Dr. Hariom Kumar


 Dr. Hoimawati Talukdar


 Dr. Diwakar Awasthi
 (Coordinator)

Suggested equivalent online courses:

- *Unity Learn – Junior Programmer & Creative Core*
- *Unreal Engine Learning Portal – Unreal Engine Fundamentals*
- *Epic Games – Unreal Engine for Beginners*

Programme: Game Art & Design		Year: 2nd	Semester: III
Course Code: B330304T		Course Title: PBR Texturing & Material Creation	
Course outcomes:			
- Understand the principles of Physically Based Rendering (PBR) and material creation for modern game production. - Create realistic and stylized textures using industry-standard software and workflows. - Apply UV mapping, baking, and texture optimization techniques for real-time game engines. - Develop high-quality materials and texture libraries suitable for Unity and Unreal Engine. - Produce production-ready textured assets and build a professional game art portfolio.			
Credits: 3		Minor	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of PBR Workflow: Introduction to Texturing, Evolution of Digital Texturing, Physically Based Rendering (PBR), PBR Workflow, Material Properties, Albedo, Metallic, Roughness, Normal Maps, Ambient Occlusion, Height Maps, Texture Resolution, Texel Density, Industry Applications.		15
II	UV Mapping and Texture Baking: UV Mapping Principles, UV Unwrapping Techniques, Seam Placement, UV Packing, Texture Baking, High Poly to Low Poly Workflow, Normal Map Baking, Ambient Occlusion Baking, Curvature Maps, ID Maps, Mesh Preparation for Texturing.		15
III	Material Creation using Substance Painter: Introduction to Adobe Substance 3D Painter, Interface and Workspace, Smart Materials, Smart Masks, Layer-Based Texturing, Procedural Materials, Hand-Painted Textures, Decals, Weathering Effects, Surface Details, Export Presets for Unity and Unreal Engine.		15
IV	Production Pipeline and Portfolio Development: Texture Optimization, Material Libraries, Asset Presentation, Quality Assurance, Texture Compression, Importing Materials into Unity and Unreal Engine, Portfolio Development, Industry Standards, Case Studies, Final Texturing Project and Presentation.		15
Suggested Readings:			
- Wes McDermott – The PBR Guide - Allegorithmic – Substance Painter Documentation - Andrew Gahan – Game Art Complete 3DTotal Publishing – Game Artist's Guide to Texturing - Adobe Substance 3D Official Documentation			
Suggested Continuous Evaluation Methods:			
- UV Mapping Exercises - Texture Baking Assignment - Material Creation Exercise - Substance Painter Practical - Game Asset Texturing Project - Texture Library Development			
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- *Portfolio Review*
- *Final Production Asset*
- *Viva Voce*

Suggested equivalent online courses:

- *Adobe Substance 3D Painter Essentials – Adobe*
- *Substance Painter for Game Artists – Udemy*
- *CGMA – Texturing for Games*
- *ArtStation Learning – PBR Texturing Workflow*
- *Unreal Engine & Unity Material Workflow – Epic Games / Unity Learn*

Programme: Game Art & Design		Year: 2nd	Semester: III
Course Code: VOC191		Course Title: Game UI Design	
Course outcomes:			
- Understand the principles of User Interface (UI) design and User Experience (UX) for video games. - Design intuitive, visually appealing, and player-centric game interfaces for different gaming platforms. - Apply typography, color theory, iconography, layout, and interaction design principles in game UI. - Develop interactive UI prototypes and integrate UI assets into modern game engines. - Create a professional game UI portfolio demonstrating industry-standard design practices.			
Credits: 3		SEC	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Game UI Design: Introduction to Game UI, Evolution of Game Interfaces, UI vs UX in Games, Role of a Game UI Designer, Types of Game UI (HUD, Menus, Inventory, Dialogue Systems, Mini Maps), Design Process, Player-Centered Design, Platform-Specific UI (PC, Console, Mobile).		15
II	Visual Design Principles: Layout Design, Grid Systems, Typography, Color Theory, Icon Design, Buttons, Panels, Health Bars, Progress Indicators, Navigation Systems, Wireframing, Mood Boards, Accessibility Guidelines, UI Design Standards.		15
III	Interactive UI Prototyping: UI Design Workflow, Figma for Game UI Design, Interactive Prototypes, User Flow, UI Components, Design Systems, Responsive UI, Micro-interactions, Asset Export Workflow, Introduction to UI Implementation in Unity and Unreal Engine.		15
IV	Production Pipeline and Portfolio Development: Game UI Production Pipeline, UI Documentation, Design Handoff, UI Testing, Usability Evaluation, Iterative Design Process, Portfolio Development, Industry Case Studies, Current Trends in Game UI Design, Final Game UI Design Project and Presentation.		15
Suggested Readings:			
- Steve Swink – Game Feel: A Game Designer's Guide to Virtual Sensation - Jesse Schell – The Art of Game Design: A Book of Lenses - Jenifer Tidwell – Designing Interfaces - Alan Cooper – About Face: The Essentials of Interaction Design - Figma Official Documentation			
Suggested Continuous Evaluation Methods:			
- UI Research Assignment - Wireframe Design Exercise - HUD Design Project - Mobile Game Interface Design - Figma Prototype Development			
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- *UI Style Guide Creation*
- *Portfolio Review*
- *Final Game UI Design Project*
- *Viva Voce*

Suggested equivalent online courses:

- *Figma for UI/UX Design – Coursera*
- *Google UX Design Professional Certificate*
- *Game UI Design – Udemy*
- *Unity Learn – UI Toolkit Essentials*
- *Epic Games Learning – UMG (Unreal Motion Graphics) Fundamentals*


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(Coordinator)

Programme: Game Art & Design		year: Second	Semester: Third
Course Code: Z031301		Course Title: Physical Education and Yoga	
Course outcomes: Students will learn the introduction of Physical Education, Concept of fitness and wellness, Weight management and lifestyle of an individual. The student will also learn about the relation of Yoga with mental health and value Education. In this course student will also learn about the aspects of the Traditional games of India.			
Credits:2		Co- Curricular	
Max. Marks:		Min. Passing Marks:	
Unit	Topics		No. of Lectures Total=60
I	Physical Education: Meaning, Definition, Aim and Objective. Misconception About Physical Education. Need, Importance and Scope of Physical Education in the Modern Society. Physical Education Relationship with General Education. Physical Education in India before Independence. Physical Education in India after Independence		15
II	Concept of Fitness and Wellness: Meaning, Definition and Importance of Fitness and Wellness, Components of Fitness, Factor Affecting Fitness and Wellness. Weight Management: Meaning and Definition of Obesity. Causes of Obesity. Management of Obesity. Health problems due to Obesity. Lifestyle: Meaning, Definition, Importance of Lifestyle. Factor affecting Lifestyle. Role of Physical activity in the maintains of Healthy Lifestyle.		15
III	Yoga and Meditation: Historical aspect of yoga. Definition, types scopes & importance of yoga. Yoga relation with mental health and value education. Yoga relation with Physical Education and sports. Definition of Asana, differences between asana and physical exercise. Definition and classification of pranayama. Difference between pranayama and deep breathing. Practical: Asana, Suraya-Namaskar, Bhujang Asana, Naukasana, Halasana, Vajrasan, Padmasana, Shavasana, Makrasana, Dhanurasana, Tad Asana. Pranayam: Anulom, Vilom.		15
IV	Traditional Games of India: Meaning. Types of Traditional Games - Gilli- Danda Kanche Stapu Gutte, etc. Importance/ Benefits of Traditional Games. How to Design Traditional Games. Recreation in Physical Education: Meaning, Definition of Recreation, Scope and Importance of Recreation, General Principles of Recreation, Types of Recreational Activities. Aerobics and Zumba.(Fit India Movement)  Prof. Virendra Kr Vyas Dr. Om Shankar Gupta Dr. Hariom Kumar Prof. Manukonda Rabindranath Dr. Hoimawati Talukdar Prof. Prashant Kumar Dr. Dwakar Awasthi (Coordinator)		15
Suggested Readings 1. Singh, Ajmer, Physical Education and Olympic Abhiyan, “Kalayani Publishers”, New Delhi, Revised Addition, 2006 2. Patel, Shri krishna, Physical Education, “Agrawal Publishers”, Agra, 2014-15 3. Panday, Preeti, Sharirik Shiksha Sankalan, “ Khel Sanskriti Prakashan, Kanpur 4. Kamlesh M.L., “Physical Education, Facts and foundations”, Faridabad P.B. Publications. 5. B.K.S. Yengar, "Light and Yog. Yoga Deepika", George Allen of Unwin Ltd., London,1981.			

6. Braj Bilari Nigam, Yoga Power "The Kpath of Personal achievement" Domen and Publishers, New Delhi, 2001.
7. Indira Devi, "Yoga for You", Gibbs, Smith Publishers, Salt Lake City, 2002 Domenand Publishers, New Delhi - 2001.
8. Jack Peter, "Yoga Master the Yogic Powers", Abhishek Publications, Chandigarh, 2004.
9. Janice Jerusalem, "A Guide To Yoga", Parragon Bath, Baiihe-2004.
10. नारंग, प्रियंका, परम्परागत भारतीय खेल, " स्पोर्ट स् पब्लिकेशन" , नई प्रिल्ली, 2007

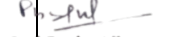
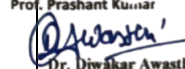
Programme: Game Art & Design		Year: 2nd	Semester: IV
Course Code: B330401T		Course Title: Character Art Production	
Course outcomes: - Understand the complete production pipeline for creating professional game-ready characters. - Create high-quality character models using sculpting, retopology, and optimization techniques. - Apply industry-standard workflows for UV mapping, texturing, materials, and presentation. - Prepare production-ready character assets compatible with Unity and Unreal Engine. - Develop a professional character art portfolio suitable for AAA and indie game studios.			
Credits: 4		Core Course-1	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Character Art Pipeline: Introduction to Character Art Production, AAA Game Art Pipeline, Character Art Workflow, Reference Collection, Mood Boards, Character Breakdown, Human and Creature Characters, Stylized vs Realistic Characters, Production Planning, Industry Standards.		15
II	High Poly Sculpting and Retopology: Digital Sculpting Fundamentals, Character Anatomy Review, Blocking Forms, Facial Features, Clothing and Accessories, High Poly Sculpting, Retopology Techniques, Edge Flow, Polygon Optimization, Preparing Low Poly Models.		15
III	Texturing and Material Development: UV Layout Optimization, Baking Workflow, Normal Maps, Ambient Occlusion, PBR Texturing, Material Creation, Skin, Hair, Cloth, Metal and Leather Materials, Character Presentation, Rendering Techniques.		15
IV	Game Integration and Portfolio: Exporting Character Assets, Importing into Unity and Unreal Engine, Material Setup, Character Optimization, LOD Generation, Asset Documentation, Portfolio Development, Industry Review Standards, Final Character Art Project Presentation.		15
Suggested Readings: - Andrew Gahan – Game Art Complete - Scott Spencer – ZBrush Character Creation - Anatomy for Sculptors – Uldis Zarins - Wes McDermott – The PBR Guide - Autodesk Maya & ZBrush Official Documentation			


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Dr. Hoimawati Talukdar


Prof. Prashant Kumar

Dr. Divakar Awasthi
(Coordinator)

Suggested Continuous Evaluation Methods:

- *Character Concept Development*
- *High Poly Sculpt Assignment*
- *Retopology Exercise*
- *UV & Baking Assignment*
- *Character Texturing Project*
- *Portfolio Review*
- *Final Character Art Production Project*
- *Viva Voce*

Suggested equivalent online courses:

- *Character Creation for Games – CGMA*
- *ZBrush Character Sculpting – Udemy*
- *ArtStation Learning – Character Art Pipeline*
- *Adobe Substance 3D Academy*
- *Epic Games Learning – Character Workflow in Unreal Engine*

Programme: Game Art & Design**Year: 2nd****Semester: IV****Course Code: B330402T****Course Title: Environment Art Production****Course outcomes:**

- Understand the complete production workflow for creating game environments used in modern video games.
- Design and develop modular environments, props, terrains, and natural assets following industry standards.
- Apply composition, lighting, materials, and optimization techniques for real-time game environments.
- Integrate environment assets into Unity and Unreal Engine while maintaining performance and visual quality.
- Develop a professional environment art portfolio demonstrating production-ready game environments.

Credits: 4**Core Course-2**

Max. Marks: 25+75

Min. Passing Marks: 10+25

Unit	Topics	No.of Lectures Total=60
I	Environment Art Production Pipeline: Introduction to Environment Art Production, AAA Game Environment Pipeline, Environment Planning, Reference Collection, Mood Boards, Environment Breakdown, Architectural Styles, Interior and Exterior Environments, Stylized and Realistic Environments, Production Planning.	15
II	Environment Asset Creation: Modular Asset Design, Hard Surface Modeling, Organic Asset Creation, Terrain Development, Vegetation Creation, Prop Design, Architectural Elements, Scene Composition, Scale and Proportion, Environment Blockout Techniques.	15
III	Materials, Lighting and Optimization: UV Optimization, PBR Materials, Material Libraries, Lighting for Real-Time Environments, Atmospheric Effects, Reflection Systems, Post Processing, Asset Optimization, Level of Detail (LOD), Performance Optimization for Games.	15
IV	Game Engine Integration and Portfolio Development: Importing Assets into Unity and Unreal Engine, Scene Assembly, Material Assignment, Lighting Setup, Environment Testing, Environment Documentation, Quality Assurance, Portfolio Development, Industry Case Studies, Final Environment Art Production Project and Presentation.	15

Suggested Readings:

- *Andrew Gahan – Game Art Complete*
- *Jason Busby – Mastering Unreal Engine*



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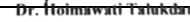
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Dr. Om Shankar Gupta



Dr. Hariom Kumar



Dr. Holmawati Talukdar



Dr. Diwakar Awasthi
(Coordinator)

- William Vaughan – Digital Modeling
- 3DTotal Publishing – Environment Design for Games
- Epic Games & Unity Official Documentation

Suggested Continuous Evaluation Methods:

- Environment Research Assignment
- Modular Asset Development
- Terrain and Vegetation Exercise
- Environment Lighting Project
- Scene Assembly Assignment
- Environment Optimization Exercise
- Portfolio Review
- Final Environment Production Project
- Viva Voce

Suggested equivalent online courses:

- Unreal Engine Environment Artist Learning Path
- Unity Learn – Environment Design
- CGMA – Environment Art for Games
- Art Station Learning – Environment Production
- Coursera – Real-Time Environment Design for Games

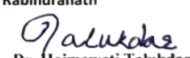
Programme: Game Art & Design	Year: 2nd	Semester: IV
Course Code: B330403T	Course Title: Technical Art Fundamentals	
Course outcomes: • Understand the role and responsibilities of a Technical Artist in modern game development. • Apply optimization techniques, shaders, materials, and asset integration for real-time game production. • Develop procedural workflows and automation techniques to improve game art pipelines. • Integrate art assets efficiently into Unity and Unreal Engine while maintaining performance standards. • Create technically optimized game assets and workflows suitable for AAA and indie game studios.		
Credits: 4		Core Course-3
Max. Marks: 25+75		Min. Passing Marks: 10+25
Unit	Topics	No.of Lectures Total=60
I	Introduction to Technical Art: Introduction to Technical Art, Role of a Technical Artist, Game Development Pipeline, Art and Programming Collaboration, Real-Time Rendering Concepts, Asset Pipelines, Production Workflow, Naming Conventions, Folder Organization, Industry Standards.	15
II	Introduction to Technical Art: Introduction to Technical Art, Role of a Technical Artist, Game Development Pipeline, Art and Programming Collaboration, Real-Time Rendering Concepts, Asset Pipelines, Production Workflow, Naming Conventions, Folder Organization, Industry Standards.	15
III	Asset Optimization and Engine Integration: Polygon Optimization, Draw Calls, Level of Detail (LOD), Texture Compression, Mesh Optimization, Collision Meshes, Asset Import Pipeline, Lighting Optimization, Performance Profiling, Memory Management, Cross-Platform Optimization.	15

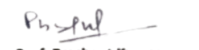
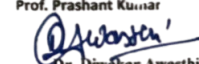

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Dr. Harim Kumar


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Prof. Prashant Kumar

Dr. Diwakar Awasthi
(Coordinator)

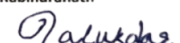
IV	Technical Pipeline and Portfolio Development: Automation Tools, Pipeline Documentation, Batch Processing, Asset Validation, Debugging Art Assets, Technical Problem Solving, Version Control Basics (Git), Collaboration Workflow, Portfolio Development, Final Technical Art Project and Presentation.	15
Suggested Readings: • <i>Eric Chadwick – Game Development with Blender</i> • <i>Andrew Gahan – Game Art Complete</i> • <i>Unity Technologies – Unity Manual</i> • <i>Epic Games – Unreal Engine Documentation</i> • <i>Wes McDermott – The PBR Guide</i>		
Suggested Continuous Evaluation Methods: • <i>Shader Creation Assignment</i> • <i>Material Development Exercise</i> • <i>Asset Optimization Practical</i> • <i>LOD Creation Assignment</i> • <i>Blueprint/Visual Scripting Exercise</i> • <i>Technical Documentation</i> • <i>Portfolio Review</i> • <i>Final Technical Art Project</i> • <i>Viva Voce</i>		
Suggested equivalent online courses: • <i>Unity Learn – Shader Graph Essentials</i> • <i>Epic Games Learning – Unreal Engine Blueprint Fundamentals</i> • <i>Coursera – Real-Time Rendering Fundamentals</i> • <i>Udemy – Technical Art for Game Development</i> • <i>ArtStation Learning – Technical Art Pipeline</i>		
Programme: Game Art & Design	Year: 2nd	Semester: IV
Course Code: B330404T	Course Title: Unreal Engine for Game Artists	
Course outcomes: • Understand the Unreal Engine production workflow for game art creation. • Create and assemble real-time game environments using Unreal Engine tools and features. • Apply lighting, materials, landscapes, foliage, Blueprints, and cinematic techniques to develop immersive game experiences. • Optimize game scenes for performance across multiple platforms using Unreal Engine best practices. • Produce a professional real-time environment project suitable for industry portfolio presentation.		
Credits: 3		Minor
Max. Marks: 25+75		Min. Passing Marks: 10+25
Unit	Topics	No.of Lectures Total=60
I	Introduction to Unreal Engine: Introduction to Unreal Engine, Evolution of Unreal Engine, Unreal Engine Interface, Project Setup, Viewport Navigation, Content Browser, Actors, Components, Asset Management, Importing 3D Assets, Project Organization, Unreal Engine Production Pipeline.	15

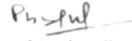

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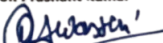

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II	Environment Development: Landscape Creation, Terrain Sculpting, Foliage System, Material Instances, Megascans Integration, Nanite Technology, Lumen Global Illumination, Environment Lighting, Sky Atmosphere, Volumetric Fog, Scene Composition, Real-Time Rendering.	15
III	Gameplay and Cinematics: Blueprint Visual Scripting Basics, Player Controller, Camera Setup, Collision System, Trigger Volumes, User Interface Integration, Sequencer, Cinematic Camera, Animation Integration, Audio Setup, Interactive Environment Development.	15
IV	Optimization and Portfolio Development: Performance Optimization, Level Streaming, World Partition, Packaging Projects, Debugging, Build Process, Quality Assurance, Documentation, Portfolio Development, Industry Case Studies, Final Unreal Engine Environment Project and Presentation.	15

Suggested Readings:

- Jason Busby – *Mastering Unreal Engine*
- Epic Games – *Unreal Engine Documentation*
- Andrew Gahan – *Game Art Complete*
- Jesse Schell – *The Art of Game Design*
- *Unreal Engine Learning Resources*

Suggested Continuous Evaluation Methods:

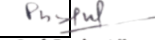
- *Unreal Engine Interface Exercise*
- *Environment Development Assignment*
- *Landscape Creation Practical*
- *Blueprint Exercise*
- *Lighting and Rendering Project*
- *Interactive Scene Development*
- *Portfolio Review*
- *Final Unreal Engine Project*
- *Viva Voce*

Suggested equivalent online courses:

- *Epic Games Learning Portal – Unreal Engine Fundamentals*
- *Unreal Engine 5 Complete Course – Udemy*
- *Coursera – Real-Time 3D Development*
- *CGMA – Unreal Engine for Environment Artists*
- *ArtStation Learning – Unreal Engine Workflow*


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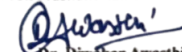

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Programme: B.Sc. Game Art & Design	Year: 2nd	Semester: IV
Course Code: VOC192	Course Title: Digital Portfolio & Professional Practice	
Course outcomes: • Develop a professional digital portfolio showcasing game art and design projects aligned with industry standards. • Demonstrate knowledge of professional practices, ethics, communication, and teamwork in the game development industry. • Prepare industry-ready documents including resumes, portfolios, project documentation, and personal branding materials. • Present and defend game art projects effectively through presentations, interviews, and portfolio reviews. • Plan career pathways by understanding freelancing, entrepreneurship, internships, studio workflows, and emerging opportunities in the gaming industry.		
Credits: 3	SEC	
Max. Marks: 25+75	Min. Passing Marks: 10+25	

Unit	Topics	No.of Lectures Total=60
I	Professional Portfolio Development: Introduction to Digital Portfolio, Importance of Professional Portfolio, Portfolio Planning, Portfolio Structure, Project Selection, Presentation Techniques, Documentation Standards, Portfolio Platforms (ArtStation, Behance, LinkedIn, Personal Website), Visual Identity and Branding.	15
II	Career Development and Professional Skills: Resume and CV Preparation, Cover Letter Writing, Professional Communication, Team Collaboration, Client Communication, Time Management, Project Management Basics, Workplace Ethics, Intellectual Property Rights, Copyright and Licensing in Digital Content.	15
III	Industry Practices and Entrepreneurship: Game Studio Workflow, Agile Development Process, Production Pipeline, Freelancing Platforms, Entrepreneurship in Digital Media, Startup Fundamentals, Client Handling, Proposal Writing, Cost Estimation, Project Delivery, Industry Expectations.	15
IV	Portfolio Presentation and Career Preparation: Portfolio Review Techniques, Presentation Skills, Interview Preparation, Mock Interviews, Industry Case Studies, Networking Strategies, Continuous Learning, Personal Development Plan, Career Opportunities in Game Art & Design, Final Portfolio Presentation.	15

Suggested Readings:

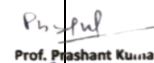
- Jason Bay – *The Ultimate Guide to Creating Your Portfolio*
- Andrew Gahan – *Game Art Complete*
- Richard Garriott – *Exploring Careers in Game Development*
- Austin Kleon – *Show Your Work!*
- ArtStation Learning Resources

Suggested Continuous Evaluation Methods:

- *Portfolio Planning Assignment*
- *Resume and Cover Letter Preparation*
- *LinkedIn & ArtStation Profile Development*
- *Personal Branding Exercise*
- *Project Documentation Submission*
- *Mock Interview*
- *Portfolio Review*
- *Final Digital Portfolio Presentation*
- *Viva Voce*


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Suggested equivalent online courses:

- *LinkedIn Learning – Building Your Creative Portfolio*
- *Coursera – Career Success Specialization*
- *Google Digital Garage – Personal Branding*
- *ArtStation Learning – Portfolio Development*
- *Udemy – Freelancing and Creative Career Development*

Programme: B.Sc. Game Art & Design	Year: 2nd	Semester: IV
Course Code: Z041403	Course Title: Community Connect	
Course outcomes: After successful completion of this course, students will be able to: • Explain the concepts, scope, and significance of community engagement and community connect in media and digital communication.		

● Identify stakeholders and develop effective community communication strategies for social and organizational initiatives. ● Apply participatory communication techniques to promote community development and public engagement. ● Evaluate community outreach programs using appropriate communication, participation, and impact assessment methods. ● Assess ethical issues, emerging trends, and the role of digital media in strengthening community relationships.		
Credits: 2		Co-Curricular
Max.Marks:25+75		Min.PassingMarks:10+25
Unit	Topics	No.of Lectures Total=60
I	Module I: Fundamentals of Community Connect Chapters 1. Introduction to Community Engagement 2. Meaning and Scope of Community Connect 3. Importance of Community Connect 4. Media and Society 5. Principles of Community Communication 6. Role of Media in Community Development Community Connect in the Digital Era	15
II	Module II: Community Communication and Stakeholder Engagement Chapters 1. Community Communication Strategies 2. Stakeholder Identification and Analysis 3. Public Participation and Civic Engagement 4. Community Relationship Building 5. Communication for Social Change 6. Leadership and Community Mobilization Planning Community Outreach Programs	15
III	Module III: Community Development and Digital Engagement Chapters 1. Community Development Concepts 2. Digital Platforms for Community Engagement 3. Social Media for Community Building 4. Community Awareness Campaigns 5. Monitoring and Evaluation of Community Programs 6. Case Studies of Successful Community Initiatives Sustainable Community Development Practices	15
IV	Module IV: Ethics, Emerging Trends and Future Scope Chapters 1. Ethics in Community Communication 2. Legal and Social Responsibilities in Community Engagement 3. Artificial Intelligence and Digital Technologies in Community Connect 4. Emerging Trends in Community Engagement 5. Inclusive and Participatory Communication Practices 6. Best Practices in Community Outreach and Development Future Scope of Community Connect in Media and Digital Marketing	15

Suggested Readings

Wilcox, D. L., Cameron, G. T., & Reber, B. H. (2022). Public Relations: Strategies and Tactics (12th Edition). Pearson.

Cutlip, S. M., Center, A. H., & Broom, G. M. (2022). Effective Public Relations (12th Edition). Pearson.

Servaes, J. (2020). Handbook of Communication for Development and Social Change. Springer.

Chaffey, D., & Ellis-Chadwick, F. (2022). Digital Marketing: Strategy, Implementation and Practice (8th Edition). Pearson.

Kotler, P., Kartajaya, H., & Setiawan, I. (2021). Marketing 5.0: Technology for Humanity. Wiley.

Ryan, D. (2021). Understanding Digital Marketing (5th Edition). Kogan Page.

Kapoor, N. (2022). Digital Marketing. PHI Learning Pvt. Ltd.

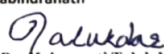
Melkote, S. R., & Steeves, H. L. (2015). Communication for Development: Theory and Practice for Empowerment and Social Justice (3rd Edition). Sage Publications.


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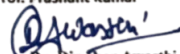

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Programme: B.Sc. Game Art & Design		Year: 3rd	Semester: V
Course Code: B330501T		Course Title: Advanced Game Art Production	
Course outcomes: • Apply advanced game art production techniques for creating high-quality game assets. • Develop production-ready characters, environments, props, and materials following AAA game studio standards. • Optimize game assets for real-time rendering while maintaining artistic quality. • Collaborate effectively within a professional game production pipeline. • Build a polished portfolio demonstrating advanced game art production skills.			
Credits: 5		Core Course-1	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Advanced Game Art Pipeline: AAA Game Production Workflow, Production Planning, Art Direction, Asset Breakdown, Reference Collection, Pipeline Management, Collaboration between Departments, Production Scheduling, Quality Standards, Industry Best Practices.		15
II	Advanced Asset Creation: Advanced Hard Surface Modeling, Organic Modeling, Hero Assets, Modular Asset Libraries, High-to-Low Poly Workflow, Advanced UV Techniques, Advanced PBR Materials, Trim Sheets, Decals, Procedural Workflows.		15
III	Production Optimization: Real-Time Rendering Pipeline, Performance Budgeting, Texture Streaming, Draw Call Optimization, Mesh Optimization, Lighting Optimization, Memory Management, Platform-Specific Optimization, Asset Validation.		15
IV	Final Production Workflow: Production Documentation, Team Collaboration, Version Control, Asset Review Process, Bug Fixing, QA Pipeline, Industry Review Standards, Portfolio Development, Final Production Project Presentation.		15

Suggested Readings:

- Andrew Gahan – *Game Art Complete*
- Scott Rogers – *Level Up! The Guide to Great Video Game Design*
- Wes McDermott – *The PBR Guide*
- Epic Games – *Unreal Engine Documentation*
- Unity Technologies – *Unity Manual*

Suggested Continuous Evaluation Methods:

- Andrew Gahan – *Game Art Complete*
- Scott Rogers – *Level Up! The Guide to Great Video Game Design*
- Wes McDermott – *The PBR Guide*
- Epic Games – *Unreal Engine Documentation*
- Unity Technologies – *Unity Manual*

Suggested equivalent online courses:

- CGMA – *Advanced Game Art*
- ArtStation Learning – *Advanced Game Asset Production*
- Unreal Engine Advanced Workflow – *Epic Games*
- Unity Learn – *Advanced Production Pipeline*
- Coursera – *Advanced Game Development*

Programme: B.Sc. Game Art & Design		Year: 3rd	Semester: V
Course Code: B330502T		Course Title: Real-Time Rendering & Optimization	
Course outcomes: • Understand the principles of real-time rendering and graphics optimization for modern game development. • Apply advanced rendering techniques, lighting systems, and post-processing effects in Unity and Unreal Engine. • Optimize game assets, scenes, materials, and shaders for high-performance gameplay across multiple platforms. • Analyse and improve rendering performance using profiling and debugging tools. • Produce optimized, visually compelling real-time game environments following industry best practices.			
Credits: 5		Core Course-2	
Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics		No.of Lectures Total=60
I	Fundamentals of Real-Time Rendering: Introduction to Real-Time Rendering, Rendering Pipeline, Rasterization, Global Illumination, Rendering Architectures, Physically Based Rendering (PBR), Lighting Models, Real-Time Shadows, Reflection Techniques, Rendering Workflow, Graphics APIs Overview.		15
II	Advanced Lighting and Materials: Dynamic Lighting, Baked Lighting, HDR Lighting, Global Illumination Techniques, Reflection Probes, Light Probes, Material Optimization, Shader Fundamentals, Shader Graph, Material Instances, Post Processing Effects, Volumetric Lighting.		15
III	Performance Optimization: Performance Profiling, GPU and CPU Optimization, Draw Calls, Batching Techniques, Occlusion Culling, Frustum Culling, Level of Detail (LOD), Texture Compression, Mesh Optimization, Memory Management, Asset Streaming, Performance Benchmarking.		15



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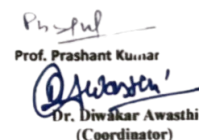
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IV	Production Pipeline and Deployment: Cross-Platform Optimization, Mobile Optimization, Console Optimization, Build Settings, Debugging Rendering Issues, Visual Quality Assessment, Technical Documentation, Production Workflow, Portfolio Development, Final Real-Time Rendering Project Presentation.	15
Suggested Readings: • <i>Tomas Akenine-Möller – Real-Time Rendering</i> • <i>Epic Games – Unreal Engine Documentation</i> • <i>Unity Technologies – Unity Graphics Manual</i> • <i>Jason Gregory – Game Engine Architecture</i> • <i>Wes McDermott – The PBR Guide</i>		
Suggested Continuous Evaluation Methods: • Lighting Setup Assignment • Shader Development Exercise • Material Optimization Practical • Performance Profiling Report • Scene Optimization Assignment • Cross-Platform Optimization Exercise • Portfolio Review • Final Rendering & Optimization Project • Viva Voce		
Suggested equivalent online courses: • <i>Epic Games Learning – Unreal Engine Rendering Essentials</i> • <i>Unity Learn – Graphics and Rendering</i> • <i>Coursera – Computer Graphics</i> • <i>Udemy – Real-Time Rendering in Unreal Engine</i> • <i>NVIDIA Developer – Real-Time Graphics Fundamentals</i>		

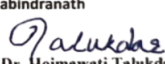
Programme: B.Sc. Game Art & Design	Year: 3rd	Semester: V
Course Code: B330503T	Course Title: Multiplayer & Open World Game Production	
Course outcomes: • Understand the principles, architecture, and production workflow of multiplayer and open-world game development. • Design scalable game worlds with interactive gameplay systems, environmental storytelling, and player progression. • Apply world-building, level streaming, multiplayer concepts, and optimization techniques using modern game engines. • Develop production-ready game environments integrating networking fundamentals, gameplay mechanics, and performance optimization. • Create professional documentation and portfolio projects demonstrating advanced game production skills.		
Credits: 5		Core Course-3
Max. Marks: 25+75		Min. Passing Marks: 10+25
Unit	Topics	No.of Lectures Total=60
I	Fundamentals of Multiplayer and Open World Games: Introduction to Multiplayer Games, Evolution of Multiplayer Gaming, Open World Game Design, Types of Multiplayer Games, Client-Server Architecture, Peer-to-Peer Architecture, Persistent Worlds, World Building Concepts, Player Progression Systems, Industry Pipeline for Large-Scale Game Production.	15

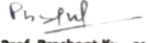

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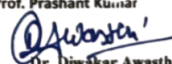

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II	World Design and Gameplay Systems: Open World Environment Planning, World Layout Design, Terrain Creation, Level Streaming, Mission and Quest Design, NPC Systems, Interactive Objects, Environmental Storytelling, Exploration Design, Navigation Systems, Open World Balancing Techniques.	15
III	Multiplayer Systems and Optimization: Networking Fundamentals, Multiplayer Gameplay Concepts, Synchronization Principles, Matchmaking Basics, Session Management, Performance Optimization, Asset Streaming, World Partition, Memory Optimization, Cross-Platform Considerations, Quality Assurance for Multiplayer Games.	15
IV	Production Workflow and Deployment: Team-Based Production Pipeline, Version Control, Production Documentation, Testing and Debugging, Build Management, Live Operations (LiveOps) Overview, Downloadable Content (DLC), Post-Launch Support, Portfolio Development, Final Multiplayer/Open World Game Production Project and Presentation.	15

Suggested Readings:

- Jason Gregory – *Game Engine Architecture*
- Jesse Schell – *The Art of Game Design: A Book of Lenses*
- Scott Rogers – *Level Up! The Guide to Great Video Game Design*
- Ernest Adams – *Fundamentals of Game Design*
- Epic Games & Unity Official Documentation

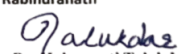
Suggested Continuous Evaluation Methods:

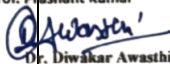
- Open World Design Document
- Terrain & World Layout Assignment
- Multiplayer Gameplay Analysis
- Quest Design Exercise
- Level Streaming Practical
- Production Documentation
- Portfolio Review
- Final Multiplayer/Open World Production Project
- Viva Voce


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Suggested equivalent online courses:

- Epic Games Learning – *Open World Tools in Unreal Engine*
- Unity Learn – *Multiplayer Game Development*
- Coursera – *Multiplayer Game Development*
- Udemy – *Unreal Engine Open World Development*
- CGMA – *Environment & Open World Design*

Programme: B.Sc. Game Art & Design	Year: 3rd	Semester: V
Course Code: B330504T	Course Title: Specialization Project (Character Art / Environment Art / Technical Art / Game UI)	
Course outcomes: • Demonstrate advanced knowledge and practical skills in a chosen specialization within Game Art & Design. • Execute a complete production workflow from concept development to final deliverables using industry-standard tools and techniques. • Apply project planning, documentation, iterative design, and quality assurance throughout the production process. • Present professional-quality assets and documentation suitable for employment or freelance opportunities. • Build a specialization-focused portfolio that reflects creativity, technical proficiency, and production readiness.		
Credits: 5	Specialization	

Max. Marks: 25+75		Min. Passing Marks: 10+25	
Unit	Topics	No. of Lectures Total=60	
I	Project Planning and Proposal: Identification of Specialization Area, Industry Research, Project Idea Development, Problem Identification, Reference Collection, Mood Board Development, Scope Definition, Production Schedule, Resource Planning, Project Proposal Presentation and Approval.	15	
II	Production Development: Concept Development, Asset Creation, Iterative Design Process, Technical Workflow, Production Milestones, Weekly Progress Review, Documentation, Mentor Feedback, Quality Improvement, Mid-Term Evaluation.	15	
III	Production Refinement: Optimization, Technical Validation, Testing, Error Correction, Final Asset Development, Pipeline Integration, Project Documentation, Presentation Preparation, Portfolio Organization, Industry Review.	15	
IV	Final Presentation and Portfolio: Final Project Submission, Portfolio Development, Project Documentation, Technical Report, Project Demonstration, Viva Voce, Industry Review, Peer Review, Career Readiness, Portfolio Publication.	15	

Suggested Readings:

- Andrew Gahan – *Game Art Complete*
- Jesse Schell – *The Art of Game Design: A Book of Lenses*
- Scott Rogers – *Level Up! The Guide to Great Video Game Design*
- Epic Games – *Unreal Engine Documentation*
- Unity Technologies – *Unity Learn Resources*

Suggested Continuous Evaluation Methods:

- Project Proposal Presentation
- Weekly Progress Review
- Milestone Evaluation-I
- Milestone Evaluation-II
- Mid-Term Jury
- Documentation Review
- Portfolio Assessment
- Final Project Demonstration
- Viva Voce


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Suggested equivalent online courses:

- CGMA – *Game Art Specialization*
- ArtStation Learning
- Epic Games Learning Portal
- Unity Learn
- Coursera – *Game Development Specialization*

Programme: B.Sc. Game Art & Design	Year: 3rd	Semester: V
Course Code: B330505R	Course Title: Major Game Art Production Project	
Course outcomes: • Execute a complete Game Art production project by applying knowledge acquired throughout the programme. • Demonstrate professional competency in planning, designing, developing, documenting, and presenting a production-ready game art project. • Collaborate effectively in multidisciplinary teams while following industry-standard production workflows. • Produce a polished portfolio-quality project integrating technical, artistic, and production skills.		

Present and defend the project before academic and industry experts using professional documentation and demonstrations.		
Credits: 5		Project
Max. Marks: 25+75		Min. Passing Marks: 10+25
Unit	Topics	No.of Lectures Total=60
I	Project Initiation and Planning: Project Identification, Problem Statement, Game Concept Development, Literature Review, Reference Collection, Requirement Analysis, Scope Definition, Team Formation, Project Planning, Production Schedule (Gantt Chart), Risk Assessment, Milestone Planning, Project Proposal Presentation.	15
II	Production and Development: Concept Art Development, Asset Production, Character Art, Environment Art, Props Design, UI Asset Development, Material Creation, Game Engine Integration, Iterative Development, Weekly Progress Reviews, Team Collaboration, Production Documentation.	15
III	Testing, Optimization and Documentation: Quality Assurance, Asset Validation, Performance Optimization, Bug Identification, User Testing, Feedback Analysis, Refinement, Technical Documentation, Design Documentation, Version Control, Final Build Preparation.	15
IV	Final Presentation and Portfolio Submission: Project Demonstration, Portfolio Preparation, Technical Report Submission, Project Presentation, Viva Voce, Industry Jury Review, Client/Faculty Feedback, Reflection Report, Career Readiness, Portfolio Publishing.	15
Suggested Readings: <i>Jesse Schell</i> – The Art of Game Design: A Book of Lenses <i>Andrew Gahan</i> – Game Art Complete <i>Scott Rogers</i> – Level Up! The Guide to Great Video Game Design <i>Jason Gregory</i> – Game Engine Architecture		
Suggested equivalent online courses: <i>Epic Games Learning Portal – Advanced Unreal Engine Projects</i> <i>Unity Learn – Production Ready Projects</i> <i>CGMA – Capstone Project</i> <i>Art Station Learning – Portfolio Projects</i> <i>Coursera – Game Development Specialization</i>		

Programme: Game Art & Design	Year: 3rd	Semester: VI
Course Code: B330601A	Course Title: Apprenticeship with Industry	
Course outcomes:		
Credits: 25		
Max. Marks: 25+75	Min. Passing Marks: 10+25	


 Prof. Virendra Kr Vyas


 Prof. Manukonda Rabindranath


 Prof. Prashant Kumar


 Dr. Om Shankar Gupta


 Dr. Hariom Kumar


 Dr. Hoimawati Talukdar


 Dr. Diwakar Awasthi
 (Coordinator)