



BSc (Animation)

Program Outcome

The objectives of the B.Sc. (Animation) Course shall be as follows:-

- To familiarize the students with various approaches, methods and techniques of Animation Technology.
- To develop competencies and skills needed for becoming an effective Animator.
- Mastering traditional & digital tools to produce stills and moving images.
- Exploring different approaches in computer animation.
- To enable students to manage Animation Projects from its Conceptual Stage to the final Product creation.
- To train students in applying laws of human motion and psychology in 2-D or 3-D Characters.
- To develop expertise in life-drawing and related techniques.
- To apply Audio and Video Production Techniques to an Animation Project.

Course Outcome

F.Y. B.Sc (Animation)

AN-1101: Introduction to Elements of Information Technology

Students will able to:

- Defining a system
- The role of computer in information systems
- What are the characteristic and element of information system?
- What are the various types of information system and models?
- What are the different types of specialized information system?

AN-1102: Introduction to Programming Languages

Students will able to:

- Understand the concepts and terms used to describe languages that support the imperative, functional, object-oriented, and logic programming paradigms.
- Solve problems using the functional paradigm.
- Solve problems using the object-oriented paradigm.
- Solve problems using the logic programming paradigm.
- Critically evaluate what paradigm and language are best suited for a new problem.

AN-1103: Basics of Animation

Students will be able to:

- This course will offer skill development in the use of software to develop storyboards and 2-dimensional animation including creating, importing and sequencing media elements to create multi-media presentations.
- Emphasis will be on conceptualization, creativity, and visual aesthetics.
- This course takes the students through various aspects of animation using a variety of 2 dimensional software.
- Developing concepts, storyboarding and production of several 2 dimensional animations will be accomplished.

AN-1104: Foundation Art

Students will be able to:

- Understand the formal elements of art and/or design through art analysis and develop competency in their application through studio practice.
- Learn how to use materials, tools and processes, effectively and safely, from a variety of media (painting, sculpture, ceramic, photography), to create original works of art.
- Select appropriate media to convey specific artistic expression that effectively communicates the artist intent.
- Develop creative problem-solving strategies as a means to create strong artwork.
- Demonstrate critical skills through specific class projects.
- Present, discuss, and support artwork through individual and group critiques.

AN-1105: Computer Based 2D Animation

Students will be able to:

- 2D Animation I is an intermediate course for traditional, digital and cut-out animation.
- This course provides students the fundamental skills to produce traditional style animation as well as puppet animation and the knowledge of the principles of animation to be built upon in subsequent courses leading up to the Portfolio course.
- Students can also apply skills learned in this class in other areas including motion graphics, stop motion and basic traditional animation.

AN-1106: Introduction to Graphics

Students will be able to:

- Understand and apply the basic principles, techniques, and algorithms for generating and interacting with simple graphical objects on a display screen.
- Gain awareness of common computer graphics software.

AN-1106: Elements of 3D Design

Students will be able to:

- During the term of the course, students will learn to work within virtual 3-D space and build volumetric objects including: vertices, splines, polygons, primitive shapes and Sub Patch geometry.
- Students will use these tools to build complex objects then learn the basic 3-D rendering tools and techniques including: surface channels, procedural textures, image mapping, light types and settings, camera settings and use, as well as a variety of rendering options, including ray-tracing. Students will also learn the importance of file backup and management.

AN-1108: Introduction to Mass Communication and Media Literacy

Students will be able to:

- To introduce students to the basic factors affecting human communications.
- To deepen students' understanding of society's impact on the media and the media's impact on individuals and society.
- To develop a working knowledge of the theories of mass communications, past and present
- To understand the characteristics of the mass communications media, focusing on the major media, their history, their technology, and their multicultural influence
- To understand the legal and ethical issues affecting media in the United States and abroad, including the influence of governmental structure on media roles and development
- To develop analytical skills and critical thinking concerning the media of mass communications through reading, discussion, and written assignments
- To understand media output as expressions of individual and human values within technical, economic, historical and social contexts
- To increase students' knowledge of globalization and consolidation within the media and their effects.

S.Y. B.Sc. (Animation) Sem -I

AN-2101: Value Education

Students will able to:

- To understand the relationship between education and values.
- To appreciate the need for value education.
- To understand the objectives of value education in schools.
- To identify the different sources of value education.
- To understand different approaches to value education.
- To plan different learning experiences for children to develop values among themselves.

AN-2102: 3D Production

Students will able to:

- This course introduces students to all the major features of Maya.
- Introduction, Modelling, Texturing Rendering and popular workflow.
- Concepts are quickly reviewed and explained and then demonstrated using Maya.
- Students will gain proficiency by following class examples as well as creating projects and exercises.
- The coursework is designed to make sure the student is exposed to all relevant aspects of CG creation with Maya with an eye toward giving the student a base foundation from which to explore and expand.

AN-2103: Graphics Art

Students will able to:

- Have a proficiency in a broad range of design skills pertaining to publication design
- Have a basic understanding of typography, color, layout, tables, images, graphics, styles and interactive elements.
- Be able to navigate Adobe Workspace, Set up a document, and work with pages.
- Understand how to work with frames, importing & linking graphics
- Be able to import and edit text, work with typography and style sheets
- Efficiently use color, transparencies, and tables
- Have an understanding of output, exporting and packaging.
- Be able to create a print-ready document.
- Have the ability to create a well-designed layout, brochure or other design materials for print or web.

AN-2104: Multimedia Systems

Students will be able to:

- Multimedia will help to improve computer penetration in various spheres of life.
- In the present scenario, Multimedia and web design technology play an important role in the field of education, agriculture, product launch, science and technology, corporate development and enhanced business opportunities.
- The increasing variety and range of hardware and software used for Multimedia and Web-Site Design, the demand for the manpower in these fields has escalated.
- This training program has been envisaged with an objective to develop specialized manpower required for these activities.

AN-2105: Animation Techniques –I

Students will be able to:

- Adobe After Effects allows you to create videos containing animation and special effects for graphics-related projects. You can use After Effects to animate, alter, and composite media using various tools and optional plug-ins.
- The program is widely used by motion-graphics professionals, website designers, and visual effect artists for post-production on digital films, DVD, video, and the web.
- This subject was designed to teach students how to successfully use After Effects, no matter if they have ever used the program before or not. Both the beginner and seasoned user can benefit from this course, starting with the basics of the program including navigation and continuing on to more advanced features, including.

AN-2106: Production Process

Students will be able to:

- Video Post-production is a linear process of film making.
- Video Post-production includes Picture editing, Sound effects editing, Music composition, Visual effects, Sound mixing and Color correction.
- There are three processes of film making: Video Pre-production, Video Production and Video Post-production.
- Video Post-production is the last stage of film making process.
- Video Post-production process is started when shooting ends.
- Video Post-production Process follows the Video production phases.

S.Y. B.Sc. (Animation) Sem-II

AN-2201: Value Education

Students will able to:

- To enable students assume responsibility for their work and duty in the day-to-day learning and work situations and develop positive attitude and skills to work productively and efficiently.
- To help students learn to appreciate, demonstrate sensitivity and skills in fulfilling their responsibility as citizens towards shaping of a better society.

AN-2202: 3D Production

Students will able to:

- Gained basic concepts and understanding of tools related to 3D production.
- Become comfortable with basics of modeling, lighting, texturing and rendering.
- Understand the fundamentals of strong 3D design.

AN-2203: Introduction to Action Script

Students will able to:

- Recognize, locate, and navigate through all aspects of the new CS4 user interface.
- Create, manipulate, and edit text and graphics to obtain desired graphical outcomes.
- Understand, create, and edit symbols, filters and instances in 3D spaces.
- Design, create, edit, and manipulate animation using several animation tools and techniques.
- Utilize tweens and articulated motions with inverse kinematics to morph shapes.
- Design, create, and edit a flash based navigation menus and interactive movies.
- Utilize and understand sound and sound formats in flash movies. Explain and utilize components to create interactivity.
- Load, control, and remove movie clips and masks in movie content.
- Publish flash movies in numerous formats and contexts in a professional and web friendly manner.

AN-2204: Multimedia Communication

Students will able to:

- Understanding the multimedia communications systems, application and basic principles, Analysis of the multimedia streaming,

- Performing and establishing multimedia communication terminals.
- Presentation of multimedia communications.

AN-2205: Animation Techniques-II

Students will be able to:

- This may seem like an obvious thing to say. However, our selection of different group work processes will depend on the goals of the session. So, a key starting point is to be clear about what we want to achieve – and to make sure that this is conveyed to our meeting participants from the start.
- The main purpose of this paper is to share information on a range of techniques that can help animate partnership meetings. In my experience, such approaches can yield better results but they also have a number of spin off benefits. For example, participants often enjoy the meetings more; their energy levels often remain higher so they are more productive; and these techniques often foster stronger partnerships as people relax and get to know one another better.

AN-2206: Production Process –II

Students will be able to:

- To prepare students in the production aspects of Film Television & New Media, as required by the present media environment all across globe.
- To empower the students in the production & managerial aspects of the media business with due emphasis on latest production techniques, along with marketing and branding management of various media products and associated services.
- To develop creative temperament and mindset needed in the content production segment of media industry.
- To inculcate competencies thereby enabling to undertake professional work.
- To provide an active industry interface by way of co-learning.
- To take the students through the entire pipe line of production process with regards to the content creation for various media pads, providing the students an insight in to the correlation that exists between content creation and associated commercial aspects of media business.

T.Y. B.Sc. (Animation) Sem-III

AN-3101: Script Writing

Students will be able to:

- The concept of story is as old as human experience, language, and the desire to make sense of existence. In this course we will explore the origins of story and its archetypal structure in myth, and examine the evolution of structure in a variety of forms, and focus on how that structure ultimately lends itself to providing the template for screenwriting.
- One only has to try and imagine a story without characters to realize there can't be one without the other. The more engaging the characters, the more interesting and compelling the story. Through lectures, discussions, screenings, and individual and collaborative in-class assignments, students will come away with an arsenal of techniques useful for creating well-developed characters whose motives and actions are organic to the plot, relevant to the story's thematic intentions, and a delight for actors and audiences alike. Students will apply these techniques and explore their created characters further within a specific dramatic context.
- Students are guided through basic story principles and encouraged to develop three feature script pitches that they then present to a story board which will give them feedback and let them know which story to proceed with. Emphasis is on viability of projects and on choosing stories that are the best learning tools. This course extends through Term 2.

AN-3102: Web Technology

Students will be able to:

- Formulate a working definition of interactive multimedia;
- Demonstrate competence in using the authoring program Hyper Studio;
- Demonstrate the use of animation, digitized sound, video control, and scanned images;
- Demonstrate the use of Netscape to access the Course Home Page and Tips and Tricks;
- Use basic instructional design principles in the development of stacks;
- Will develop conceptual maps of content and process for interactive multimedia instructional programs

AN-3103: Game Design

Students will be able to:

- Discuss and define the terms and principles of game design and development.
- Select and evaluate programming and scripting languages to develop particular games.
- Define the structure and duties of the game development team.
- Practice animation production and creation tools.
- Apply the mathematics used in game design.
- Apply the physics needed to design computer games.
- Apply artificial intelligence to developing computer games.
- Explain the networking issues involved in games development.

AN-3104: Digital Editing

Students will be able to:

- Better understand techniques editors use to construct stories.
- Have a thorough working knowledge of a non-linear editing software.
- Be able to do professional style color correction.
- Know how to create high quality motion graphics.
- Understand video formats and principles.

AN-3105: VFX –I

Students will be able to:

- The program (VFX Course) includes fundamentals of film making, with Chroma shoot, 3D modeling, creating photo realistic lighting, particle effects.
- Students will learn to develop visual effects in tandem with characters and story.
- Focus on seamless integration of CGI and live action.
- Internship and Placement Opportunities with Well-Known Animation & VFX Studios.
- Training and Assistance in Building Portfolios, Show-reel and Resume.

AN-3106: Creative Thinking

Students will be able to:

- Understanding Creativity: The concept, definition, process etc.
- Creativity in Organizations: How to create systems that encourage creative problem solving.
- Tapping into Creativity: lateral thinking and other exercises.

- Be Aware his/ her own creative thought process.
- Be Able to approach business / managerial problems creatively.
- Be able to create situations at work/office which encourage creative problem solving.

T.Y. B.Sc. (Animation) Sem-III

AN-3201: IPR and Cyber Security

Students will able to:

- Understanding of core technology, applications, sensors used and IOT architecture along with the industry perspective.
- Principles and operations of different types of sensors commonly used on mobile platform will be taught in a manner that by the end of the course the students will be able to design and implement real time solutions using IOT.

AN-3202: User Interface (UI) Design

Students will able to:

- Gather useful information about users and activities through asking, looking, learning, and trying. Organize information about users into useful summaries with affinity diagrams.
- Convey user research findings with personas and scenarios.
- Learn and appreciate the skill of sketching as a process for user experience design.
- Learn to give and accept critiques of design ideas in a constructive manner.
- Demonstrate skills for low-fidelity prototyping and describe the strengths and weaknesses of a variety of prototyping methods.
- Appreciate the process of user experience design as a cyclical, iterative process.
- Understand the differences between usability and user experience.
- Analyze an interaction design problem and propose a user-centered process, justifying the process and identifying the trade-offs.
- Prepare high quality, professional documentation and artifacts relating to the design process for preparation for a professional portfolio.

AN-3203: Game Production

Students will be able to:

- The course covers an introduction to the electronic game design and development careers. It includes the history and philosophy of games, the game production process, employee factors for success in the field, and current issues and practices in the game development industry.
- The structure of the game industry: its history (literature, media studies, and design), the market, game genres, distribution and publishing channels, typical business models, and a competitive landscape of the industry. Topics include: market size and trends, retail and Internet distribution channels, single and multi-player game genres, PC, console, and cell phone platforms, and major industry players. Also included are the history of computers, electronic games and toys, and the construction and critique of a canon of significant and influential games.
- This course is aimed at the game design certificate student or the Visual Communication major who is interested in pursuing a career in game development. Design principles are reinforced through project-based assignments. Students are provided an opportunity to obtain real life experiences. Practicing professionals may upgrade their job skills.

AN-3204: Motion Graphics

Students will be able to:

- Compose & articulate conceptual solutions, which appropriately utilize motion graphics.
- To closely explore & demonstrate the relationship between form & content for the purpose of storytelling or advancing a narrative.
- To explore & demonstrate the effects of altered sequence & hierarchy on images & resulting content.
- Assess appropriate use of technology for a distinct design problem.
- Construct a conceptual framework, storyboard, or plan prior to conceptual implementation.
- Measure effectiveness of solution based on appropriate use of technology.
- Measure effectiveness of solution based on audience factors.

AN-3205: VFX-II

Students will be able to:

- Identify common visual effects used in motion graphics.
- Use various techniques for emulating realistic optical effects.
- Combine techniques to create rich environments.
- Predict common pitfalls in planning visual effects sequences.
- Merge elements from various sources to achieve intended effect.

AN-3206: New Media

Students will be able to:

- Develop a foundation that draws on history, theory and practice of media studies.
 - Theories for interpretation of diverse forms of technology, communication, and media.
 - Contemporary media production and human computer interaction.
- Develop advanced critical thinking skills in written analysis of text and visual media objects.
- Draw on a rigorous combination of theory, analysis and hands-on digital work in Development of original ideas in digital media.
- Collaborate as a team in development from original concepts to production of innovative Digital media.
- Understand the process of working with users in bringing ideas from concept to production.