B.Sc. (Graphics and VFx)

Program Outcomes (POs)

PO01: Ability to define and discuss how artistic compositions are created.

PO02: An ability to apply the technical aspects of cinematography and photography

PO03: An ability to apply principles of animation in standard software.

PO04: An ability to animate a character with motion path.

PO05: Ability to describe various keying techniques and work with green and blue screen

Program Specific Outcomes (PSOs)

PSO01: An ability to understand basic concepts of graphics and illustrations with applications.

PSO02: An ability to recognize, adapt and to apply the knowledge of graphics designing and visual effects.

PSO03: An ability to discuss the transition from traditional animation process to computer animation process.

PSO04: An ability to make 3D models using model planning, poly tools, scene, edition, organic poly modelling, and mapping.

PSO05: An ability to understand how to use a popular animation tool for shading and lighting surfaces.

PSO06: An ability to create motion graphics and amazing visual effects for video using standard software.

PSO07: An ability to discuss Web Technology and Web design elements

Course Outcomes (COs)

2019-20 Batch

Semester	Course Code	Course Name	Course Outcomes (COs)
I	16BSA1C03	Graphics and Illustrations	**CO1**: Understand basic concepts of graphics and illustrations along with their applications. **CO2**: List the types of drawings and drawing compositions. **CO3**: Describe color theory and typography. **CO4**: Discuss the laws of design, resolution and file formats. **CO5**: Understand the types of illustrations.
	16BSA1C04	Digital Illustrations	**CO1**: Create sophisticated artwork using various tools. **CO2**: Illustrate graphic skills by learning paint tools and different effects available in a standard digital illustration software. **CO3**: Understand raster graphics, symbols, and 3D. **CO4**: Understand exporting, creating, and printing Web graphics. **CO5**: Learn to combine text and graphics to create digital graphics, illustrations, and typography for all kinds of media.
	16BSA1C05	Concepts of Cinematography & Photography	**CO1**: Understand basic concepts of cinematography. **CO2**: Discuss the basics of digital photography. **CO3**: List the various types of cameras. **CO4**: Discuss the camera lenses, **CO5**: Understand camera controls and other aspects of camera.
	16BSA1C06	Digital Painting	**CO1**: Understand the basics of digital painting. **CO2**: Discuss the fundamentals of canvas and brushes of standard digital painting software. **CO3**: List the various tools and techniques of painting styles. **CO4**: Apply different filters and effects. Understand layers. **CO5**: Draw, sketch and paint using various artistic tools.
	16BSA1C07	Audio - Video Editing	**CO1**: Understand the basic difference between analog and digital audio. **CO2**: Understand working of standard audio editing software. **CO3**: List the different options of exporting files. **CO4**: Discuss the workspace of standard video editing software. **CO5**: List the audio and video effects.
	16BSA1C08L	Design Portfolio	**CO1**: Design Resume of a Graphic Designer. **CO2**: Design a cover letter for resume. **CO3**: Create a Design portfolio.

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II	16BSA2C03	Concepts of 2D Animation	**CO1**: Discuss the history of animation. **CO2**: Discuss the need for animation. **CO3**: Understand animation techniques. **CO4**: Discuss the transition from traditional animation process to computer animation processes. **CO5**: Understand storyboarding, model sheet and character development.
	16BSA2C04	Storyboarding and Animatics	**CO1**: Discuss techniques and rules of storyboarding films. **CO2**: List various features of storyboards. **CO3**: Discuss examples of storyboards for animation films. **CO4**: Discuss animatics which are often used in the Media industry. **CO5**: Explain the process of directing shots in storyboards.
	16BSA2C05	Application of 2D Animation Principles	**CO1**: List the twelve principles of animation. **CO2**: Discuss the twelve principles of animation. **CO3**: Discuss the workspace of a standard 2D animation software interface. **CO4**: Understand animation. **CO5**: Applying twelve principles of animation using a standard 2D animation software interface.
	16BSA2C07L	2D Animation Portfolio	**CO1**: Discuss and understand the goals and objectives of a multimedia project **CO2**: Explain how to create a detailed script for text, audio and video **CO3**: Explain the different multimedia blocks in a presentation. **CO4**: Explain the steps involved in the production for 2D Animation Portfolio **CO5**: Explain the steps involved to run a movie in 2D Animation Portfolio
	16BSA2C06	Digital Modeling	**CO1**: Discuss foundation in 3D Modeling. **CO2**: List different ways of modeling to model equipment. **CO3**: Develop training models and videos. **CO4**: Create architectural visualization studios, movie effects, and other 3D graphic. **CO5**: Learn to make 3D models using model planning, poly tools, scene, edition, organic poly modeling, and mapping.
III	16BSA3C01	Texturing 3D Models	**CO1**: To understand the concept of shading and texturing **CO2**: To understand UVW co-ordinate system **CO3**: To understand the working of shading nodes **CO4**: To understand the functionality and working of bump maps, normal maps, and displacement maps. **CO5**: To understand the fundamentals of refraction and reflection

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	16BSA3C02	Lighting and Rendering Models	**CO1**: To understand the types of lights and shadows available in Maya. **CO2**: To understand the placement and uses of the three lights, namely, key light, fill light, and back light. **CO3**: To understand the three-point lighting setup used in visual media and its importance in comprehending and executing lighting. **CO4**: To create the background of a daylight setup using sunlight, fill lights, rim lights, and highlights. **CO5**: To understand and plan a night light setup.
	16BSA3C03	Rigging	**CO1**: To understand the concept of rigging and the most commonly used types of rigging. **CO2**: To understand the connection between multiple objects. **CO3**: To explain aim constraints and its uses. **CO4**: To explain the rigging workflow of a fully functional mechanical model by assigning controllers, constraints, and the Freeze Transformations command. **CO5**: To understand the concept of deformers.
	16BSA3C04	Character Animation	**CO1**: To understand the working of the dope sheet and its importance in creating animations. **CO2**: To create a bouncing ball animation and edit it using the commands available in the graph editor and dope sheet. **CO3**: To animate a pendulum using the slow in slow out, arc, and overlapping principles of animation. **CO4**: To create a sack animation and add weight and balance to the object (sack) to make it appear realistic. **CO5**: To explain the line of action and its importance in bringing out the characteristics and attitude of the character.
	16BSA3S251	Digital Sculpting	**CO1**: To understand the working of standalone sculpting software. **CO2**: To explain tools and brushes. **CO3**: To understand the different controls. **CO4**: To explain how to work with gravity. **CO5**: To explain textures and materials.
	16BSA3S252	Advanced Rendering	**CO1**: To recognize the User Interface of standalone Rendering software. **CO2**: To identify the use of Attributes for Polygons, Curves, Particles, Surfaces Volumes, and XGen and Bifrost. **CO3**: To recognize the need for Lights. **CO4**: To perform the steps to add Area Light, Point Light, Spot Light, Directional Light, and Light Filters. **CO5**: To list the various Camera types.

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IV	16BSA4C01	Digital Compositing	**CO1**: To understand basic concepts of compositing and various types of compositing **CO2**: To Understand the process of importing & adding various digital assets **CO3**: To understanding the step by step approach in creating animations and adding effects **CO4**: To understand some of the popular compositing techniques applied to animation **CO5**: To understand the working of a 3D layer and 3D camera.
	16BSA4C02	VFX Overview	**CO1**: To understand general workflow of a standard VFX software **CO2**: To Understand the basic features of the software interface **CO3**: To Understanding functions of tools available in the Toolbar **CO4**: To Understand working of key frames in the Dope sheet **CO5**: To Understand the concept of nodes and how to work with it
	16BSA4C03	Rotoscopy	**CO1**: To impart basic concepts of Rotoscopy in VFX **CO2**: To understand the general workflow of vfx softwares **CO3**: To Understand the process of creating traditional key-framed roto and assisted roto **CO4**: To Understand the process of creating animated mattes **CO5**: To Understand the step by step approach in exporting mattes, vector shapes and trackers to compositing softwares
	16BSA4C04	Wire removal and Color Grading	**CO1**: To Understand the process of wire removal **CO2**: To Understand the techniques used today for removing wires **CO3**: To Understand various methods and tools used to color correct with the help of examples **CO4**: To Understand the steps for implementing color correction **CO5**: To Understand the steps for grading techniques
	16BSA4C05	Green/ Blue screen and Matte painting	**CO1**: To impart the keying techniques especially green and blue screen used in many fields to remove backgrounds from the subject **CO2**: To understand some of the major factors to consider while keying **CO3**: To understand the importance of light, exposure, and color theory **CO4**: To understand composition that is required for matte painting **CO5**: To impart knowledge of mixing techniques such as digital painting, compositing and Photoshop magic to create the wonderful scenes

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	16BSA4S361	Crowd Simulation	**CO1**: To understand concepts such as entities, behaviors, and Crowd characters. **CO2**: To understand the overall workflow of crowd **CO3**: To understand the process of skeleton definition and motion conversion **CO4**: To understand the process of translating animation from one skeleton to another **CO5**: To understand the steps to create behaviors for crowd entities
	16BSA4S362	Pre-visualization-Animation	**CO1**: To understand the process of movie making **CO2**: To understand the concept of Previsualization **CO3**: To understand different types of previsualization **CO4**: To understand difference between previsualization and animatics **CO5**: To understand various steps involved in Previsualization Development Process
V	16BSA5D111	Dynamics and Simulation for VFx	**CO1**: To understand how to paint on canvas using various types of brushes and paint strokes. **CO2**: To understand the concepts of fluid. **CO3**: To understand the concept of nCloth system **CO4**: To create dynamic simulations for clothes **CO5**: To describes working with Maya Fur.
	16BSA5D112	Animation - Matchmoving and Camera Tracking	**CO1**: To understand match moving and camera tracking. **CO2**: To track 3D Camera motion from video and image sequence **CO3**: To insert 3D computer graphic elements into a scene. **CO4**: To understand the application interface **CO5**: To understand the working with match mover application.
	16BSA5D221	3D Animation Portfolio	**CO1**: Creating a Structure of a 3D Animation Portfolio **CO2**: Selecting the Project to display in portfolio **CO3**: Describing the Lifecycle / Stages of the Project **CO4**: Listing Digital Assets in Portfolio **CO5**: Compiling the portfolio and presentation
	16BSA5D222	Digital Portfolio Development	**CO1**: Planning the portfolio **CO2**: Structuring the Portfolio **CO3**: Selecting the Projects to be displayed in portfolio **CO4**: Describing the General Design Features of a Portfolio **CO5**: Reviewing/Evaluating a Portfolio
VI	16BSA6S411	Building Next Generation Websites	**CO1**: To understand Web Technology and Web design elements. **CO2**: To describe HTML programming, **CO3**: To explain difference between HTML4 and XHTML **CO4**: To explain difference between HTML5, JavaScript and CSS. **CO5**: To understand jQuery

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	16BSA6S412	Web Development using Angular Js	**CO1**: To introduce students to the basic concepts of AngularJS framework. **CO2**: To understand how to use AngularJS in the development of Web applications. **CO3**: To understand basic concepts and components of AngularJS framework. **CO4**: Analyze MVC architecture concepts. **CO5**: Use important built-in filters.
	16BSA5D113	VFX -Match moving and Camera Tracking	**CO1**: To understand about match moving. **CO2**: To track the movement of a camera through a shot so that identical virtual cameras move can be reproduced in a 3D animation program. **CO3**: To apply camera tracking on footages. **CO4**: To describe how to track a plane. **CO5**: To explain how to view disconnected frames.
	16BSA6S412	Content Management System	**CO1**: To explain the various content types and nodes **CO2**: To list the steps to create, enable, rename, and delete menus **CO3**: To define users, roles, and permissions **CO4**: To describe and use a taxonomy **CO5**: To identify the steps to create views and use them