Sant Gadge Baba Amravati University, Amravati

Part A

Faculty: Interdisciplinary Studies

Programme: B. Sc. Animation

POs:

1. Students will get knowledge of 2D, 3D Animation, VFX, Matte painting, Gaming, Interactive and print media.

2 Able to analysis critical problem and come up with creative solution using their knowledge and lastest technology.

3 Communicate with audiences using creative tools such as presentation, design and storytelling.

4 Mastering latest technologies as per industrial requirements.

5 Having a clear understanding of professional and ethical values.

6 Competence to adapt with cutting edge technologies.

7 Function effectively as an individual, team member or leader in multidisciplinary settings.

8 Recognize the need for and have the preparation and ability to engage in independent and life-long learning.

PSOs:

1. Animation learning through script to screen

2 Animation learning, visual effects, interactive, gaming and science technology

3 Job opportunities in Storytelling, storyboard designing, matt painting, comic designing, 3D designing, Rigging, 2D, 3D animation, music & dubbing, game designing

4 Use of science, engineering & technology in animation

5 Research opportunities

6 Use of animation in medical, engineering, mechanical designing

7 Use of animation in augmented reality and virtual reality science

Employability Potential of the Programme:

The animation industry is opening up a wide range of career possibilities. There is more demand for creativity in the animation industry, and people are trying to reshape it according to their ideas. A wide variety of employment opportunities is available for qualified animators and related experts, including graphic designers, game developers, multimedia developers, and 3D modelers. The majority of these professionals can work in fields like advertising, theatre, film and television, cartoon production, e-learning, video gaming, and online and print journalism. There are plenty of opportunities for animation within both the public and private sectors. Aside from all of these fantastic opportunities, multimedia experts and animators can also work as entrepreneurs or start their businesses if they have sufficient capital and expertise. Therefore, the animation is the best option and an excellent choice for candidates who have great drawing skills and want to become animators. The demand for content grows tremendously today, and animators and artists who can meet this demand will be successful in the industry in the future as well. Few of career options are listed below

1) Art Directors
Art directors are responsible for the visual style and images in magazines, newspapers, product packaging, movies and television production. They create the overall design and direct others who develop artwork or layouts. Art directors review and approve designs, artwork, photography, and graphics developed by other staff members, talk to clients to develop an artistic approach and style, coordinate activities with other artistic and creative departments, develop detailed budgets and timelines, and present designs to clients for approval.

2) Animators
Animators create animation and visual effects for everything from films and video games to television, mobile devices and other forms of media using illustrations and software programs. Animators also create graphics and develop storyboards, drawings, and illustrations. They create, plan, and script animated narrative sequences and assist with background design and production coordination. Animators may also research upcoming projects to help create realistic designs or animation, they edit animation and effects on the basis of feedback from directors, other animators, game designers, or clients, and they meet with clients.

3) Animation Directors
Animation directors recruit and coordinate animation teams. They lead each team from the beginning to the end of an animated film production. Animation directors typically have years of experience in the art and animation industries. For this reason, among others, animation directors are the most sought after professionals in the entertainment industry. In addition to recruiting, coordinating and managing animation teams, animation directors work with the director (the person managing the production overall) by interpreting briefs and communicating them to the animation team. During the production process, animation directors review all work produced by animators and assistants. They answer to the production department on longer projects regarding schedule, budget, and output. It is the animation director's job to make sure the creative desires and production requirements are met, which means, the animation director must be able to negotiate with both departments to reach the best agreement for the good of the production.

4) Background painters
Background painters (also matte painters) are responsible for creating backgrounds for animated and live-action films. A background painter may create an entire matte painting, such as a village or skyline, where animation or live action occurs in only a few spots. This requires advanced skills in developing 2D and 3D backgrounds.
Background painters may draw, paint or create backgrounds manually, by computer or both for animated and live action productions. With a strong sense of compositing, design, color, and proportioning, these creative individuals design backgrounds for characters and objects to live in and move through in a natural manner. Some of the different types of software used includes Maya, Photoshop, and Illustrator.

5) Concept artists
Concept Artists also called "conceptual artists," create visual images of ideas for use in areas such as animation, comic book illustration, gaming, advertising, print, and many others. Concept artists work with other art departments to ensure that the right visual style is reflected in each part of the project. Concept artists have a unique skill set. They have mastered the art of using paint, pencils, software programs, or whatever it takes to draw weapons, vehicles, environments, graphics, or the characters needed for any given project.

6) Color key artists
Color key artists create background paintings and color keys that lighting, materials, and production teams use for animated features, television series, and animated shorts. They have a sharp eye for color along with advanced software skills. Color key artists may use programs such as Adobe Illustrator and Photoshop for color styling. In the animation or game design industry, color key artists develop color schemes in animations, they paint and design animation backgrounds, and they work with technical directors on light rigging. Also called "background painters" or "look development painters," color key artists create color schemes that are appropriate for different lighting situations such as "at night' or "underwater." A typical job with an animation or game studio may require painting/rendering color keys for animations along with expertise in industry software programs such as Adobe Illustrator and Photoshop.

7) Cartoonists
Cartoonists draw advertising, political, social, and sports cartoons. Some cartoonists work with artists who create the idea or story and write captions, and sometimes the cartoonist will write captions themselves. Most cartoonists have critical, comic, or dramatic talents in addition to drawing skills.In the animation industry, cartoonists render drawings of characters, environments, and objects for small and large-scale productions. Additional duties may include developing moods and color patterns, dramatizing action, and create and paint background scenes. Cartoonists may draw characters and scenes manually, on the computer or a combination of the two.TV and film cartoonists may draw animated cartoons, prepare model drawings and sketches of characters, and draw special effects for animation projects.

8) Character animators
Character animators create and design characters using animation software, 3D modeling, 2D animations, and even puppetry. These creative professionals develop characters that use movement to tell a story, whether it's for film, television, video games or mobile applications. Character animators create then manipulate animated characters to interact in digital environments by using computer software such as Motion Builder 3D, Flash Professional, LightWave, Maya and other programs. They also draw storyboards, create models, and design environments. Character animators work with sound engineers to make sure movements are in harmony with sound, and they work with clients to help pitch ideas and develop concepts.

9) Character riggers
Character riggers are experts at manipulating the geometry of characters in their interaction with environments. Character riggers accomplish this through a thorough understanding of physics and anatomy, operating systems such as UNIX, and software such as Autodesk Maya, Motion Builder, 3D Studio Max, and XSI.Character rigging is a very tedious process. It requires creativity, precision, and an eye for detail. As such, character riggers are responsible for using computer programs to form skeletons by creating a series of bones that deform and animate specific parts of the character. Character riggers may also help develop tools for animation production processes, collaborate with modelers and animators, and develop new techniques to solve character production challenges.

9) Compositing Artist
Compositing artists are some of the most important players in the production process. They are responsible for helping create the final finished animation, film or other project by detecting errors and developing compositing strategies, which results in an overall balanced look. Compositing artists may use compositing software such as Adobe After Effects, Flame 3D Visual Effects (VFX), Motion 5, Nuke, or others to help flesh out the final touches. Compositing artists work with lighting directors and FX artists to help create the final finished product. According to the career center at DePaul University, compositing artists, FX artists, and lighting director's work together to develop compositing strategies and achieve an aesthetically balanced overall look. The compositing artist corrects errors that may not have been anticipated by other departments. Compositing artists may also work with lighting and digital or live action elements.

10) Directors
Directors help create films, television shows, videos, live theater, animated productions, and other performing arts productions by supervising actors, camera crews, and other staff. In a nutshell, the director "directs" the entire production. In some cases, the director is also the creator of the project, so he may provide the vision and determine the visual style of the production. If the director has not already written the piece, he will work closely with the filmmaker, screenwriter, designers, and producers to come up with a final design and direction for the piece before production begins. Directors have a lot of responsibility. The final product is largely in their hands and it must be delivered according to clients' desires. If the piece is the directors own creation (from screenplay to final product), he still has to answer to investors, meaning, the final product must be good enough to turn a profit. In addition to producing a film, television series, commercial, or video that sells, directors must also handle management, budgeting, scheduling, hiring, and firing.

11) **Digital painters**
Digital painters work with 2D drawn animation, 2D computer animation, and 3D digital computer animation. They add color to images created by animators and work as part of a team consisting of compositors, color key artists, scanners, and color stylists. The entire team works under the direction of the head of digital color and compositing.
Digital painters receive drawings from the animation or other related department. They use computer software to clean up line work, if needed, and then add color using software programs such as Photoshop, Toon Boom, Illustrator, Animo, and/or Opus Creator. Digital painters have a keen eye for color and detail. These fine artists also understand

the animation process, which helps them deliver spectacular images.

12) Effects Animator
Effects animators are responsible for adding natural or supernatural characters or things to animated films. They work with VFX supervisors to determine the most effective approach to solving effects issues and develop the finished, final product. Effects animators create effects based on concept art and design from art departments. They use 3D lighting and effects as well as compositing tools to achieve the desired look. In addition to VFX supervisors, effects animators work with technical directors, designers, and art directors to create realistic effects. Effects animators collaborate with other departments on the best approach to improving throughput. This requires thorough knowledge of tools and interfaces. Effects animators are experts with Houdini, Renderman, Mantra, Nuke, and other technology used to create effects.

13) Flash animators
Flash animators create animation for websites, videos, advertising and marketing, games, and education materials using Adobe Animate CC (formerly Adobe Flash). Flash animators may also use Adobe Photoshop, Illustrator, Dreamweaver (formerly Macromedia Dreamweaver), Autodesk 3ds Max (formerly 3D Studio and 3D Studio Max, and After Effects.Flash animators have excellent design, art, and layout skills as well as a superior command of high-end 3D packages. They coordinate with creative directors to ensure that the animation compliments the design and works in harmony with the technology used to drive the finished product. Flash animators may also create storyboards and design multimedia presentations.

14) Film and video editors
Film and video editors manipulate images that entertain or inform an audience. They arrange footage shot by camera operators and collaborate with producers and directors to create the final content. Typical duties include organizing digital footage with video-editing software, discussing filming and editing techniques with a director to improve a scene, and editing scenes based on the director's vision. Nearly all editing work is completed on a computer, and editors often have training in a specific type of editing software.Editors often have one or more assistants that support him or her keeping track of each shot in a database or loading digital video into an editing bay. Assistants may also perform editing tasks.

15) Graphic Designers
Graphic designers use art and technology to create catchy graphics for websites, logos, and illustrations in everything from advertising to aerospace. Thanks to the wide variety of exciting industries graphic designers serve, graphic design is number 18 on the list of Top 20 Best Jobs for Most graphic designers will agree that there is never a dull moment in this dynamic career field.

16) **Inbetweener artist**
The animation historians at Disney say that, "at most animation studios, the best animators only sketched a few animation drawings, leaving gaps in between. Later on, a person called an "inbetweener" would finish the scenes by drawing in between the areas that the animator had left." Well, not much has changed about this key position.Today most job descriptions affirm that inbetweeners are responsible for the continuity of movement between scenes in an animated production. Inbetweeners decide how animated characters will move when transitioning between major key movement scenes. After the animator draws out key scenes, it is up to the inbetweener to take the images and create the characters' movements in transitioning between scenes. Inbetweeners use illustration and 2D animation skills to complete assigned tasks. Many aspiring animators spend several years in the inbetween department in order to gain valuable experience in the industry.

17) Key animators
Key animators work primarily for animation studios and motion picture and video production companies, as well as gaming companies. Some may work for advertising or marketing firms.

18) Lighting technicians
 In animation, lighting technicians work with the lighting department to create color keys, compositing renderings, and light rigs for shots. In addition to animation skills, lighting technicians use design skills and knowledge of shadows and lighting to create the environments and characters that the project calls for. Depending on the animation project, lighting technicians use back, key, fill, and background light to illuminate subjects, backgrounds, and scenes. They use a variety of techniques to create appropriate lighting schemes for situations such as a rainy day, underwater, darkness, foggy, sunny, or whatever the project dictates.

14) 3D Modelers
3D modelers build 3D characters and environments that are based on the concept art. To create the models' surfaces or skins, they paint and wrap 2D textures on a digital frame. Modelers also create character skeletons, which animators then control. Modeling is performed using a variety of programs such as Maya, 3DS Max, Pixar's RenderMan, POV-Ray, and many others. The characters and environments 3D modelers create are used for video games and 3D movies as well as images and modeling for websites, graphic designs, animation, film effects, simulations, broadcast design, special effects, characters and props for film, television effects, CD-Rom design, and location-based entertainment. These multi-talented professionals also create images/models for geologists, architects, scientists, engineers, healthcare agencies, and more.

15) Storyboard artists
Storyboard artists draw storyboards for animated features, films, television commercials and other ad campaigns, music videos, video games, and more. The storyboard artist begins creating the storyboard after a concept or script has been written. The storyboard presents the "action" in a series of scenes or "panel by panel," which allows filmmakers, advertisers, and producers to evaluate the project before beginning production. Storyboards are also used to provide direction during production. Storyboard artists draw scenes by hand or computer. They might sketch in black and white or produce full color storyboards manually or by computer. Also called "storyboarders," storyboard artists work with producers, directors, and film crew from start to finish by sketching scenes during initial meetings, and editing or eliminating scenes as the project progresses.

16) Stop motion animators

Stop motion animators use models, puppets, or clay to create animated films, television commercials, and branded entertainment. Stop motion animation is also called stop frame, model animation, puppet animation, and clay animation.

Stop motion animators combine the art of photography, narrative skill, and the ability to manipulate lighting and calculate angles to create stop motion animation without digitally manipulating it. The animator creates pictures of objects, characters, or scenes that show them in various positions. When the pictures run together, it appears that the object is moving on its own. This creates one of the most unique forms of animation, which is neither cartoon-like nor similar to computer-generated animations.

17) Pre Production Artist

The Production Associate works on a project through the completion of pre-production. As a PA, they are available to support the artists and production crew on all tasks during pre-production and production. Gathering all artwork including character models, props and location designs for shipments to production facilities, including labelling, categorizing and creating final model packs for shipment. Organizes asset files, uploads models to Insight, preps files for Background Painters and Color Designer. Maintain all artwork files to be in standardized formats, including naming conventions.Assisting in the creation and maintenance of design lists as needed. Take notes at assigned meetings - conference calls (BlueJeans) with Vendor, animation launches, etc. Getting Director's approval on artwork. Providing any necessary materials for artists including reference. Quality control for line quality in digital artwork Communicating any delays to Production Manager or Supervisor immediately Assisting in the archival of artwork once a production is completeMake suggestions for streamlining and improving pipelines including ideas for re-use, workflow efficiencies, and flagging complexity issues. Assisting in prepping materials for awards submissions. Update and maintain production art boards.Maintains a helpful attitude, while showing eagerness and curiosity. Helps organize morale events as directed by the Line Producer / Associate Producer or Production Manager/Production Supervisor. Performing all other applicable duties as assigned by Line Producer or Production Manager

18) Content Writer

The job of a content writer is to create print and digital content for companies that provides information or showcases the products or services they offer. To develop content that accurately reflects company ideals, content writers often research the material they need to write each article or product description. They collaborate closely with a content manager and clients to write according to a company's editorial style.

19) Project Coordinator & Manager

Production coordinators keep everything in the animation pipeline running smoothly by supporting all departments with their production requirements. They are responsible for creating and maintaining asset databases and for tracking the delivery of assets to third parties. They schedule and attend reviews and can be responsible for taking detailed notes. They can be responsible for checking stocks of and reordering studio supplies, as well as organizing couriers and shipments. Production coordinators help with the accounts by processing invoices and keeping the petty cash records. They can provide holiday cover for other members of the production team. Their role will vary slightly depending on the size of the company that they're employed by. If they're working for a larger production company, they may be responsible for uploading and delivering completed animated series episodes to broadcasters and animated films to distribution partners. If they are working for a small independent production company, they may be required to work on reception.

20) Compositors (VFX)

Compositors create the final image of a frame, shot or VFX sequence. They take all the different digital materials used (assets), such as computer-generated (CG) images, live action footage and matte paintings, and combine them to appear as one cohesive image and shot. Compositors consider visual aspects of a scene. Realistic lighting is a key one of these. Anything caused by light hitting a lens is a compositor's responsibility. They relight in order to improve the look of the image. Compositors do 'chroma keying' (also just called keying). This is where they select a specific part of an image that has a distinct colour or lighting and extract it to be used elsewhere. This method is commonly used with 'green screen' or 'blue screen' footage, where a subject has been shot in front of a singularly green or blue background, in order to be able to place the subject in a different setting or environment later, in post-production. Compositors work as the last part of a VFX 'pipeline' (the name given to the VFX production process). They can be employed by VFX studios or work as freelancers.

Part B

Syllabus Prescribed for 2022 Year   UG Programme

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI301	**Animation-II**	**15**

Course Outcomes

1. Develop and distinguish various working styles of animators.

2. Critically analysis western animated film styles.

3. Critically analysis Indian animated film styles.

4. Differentiate and interpret knowledge of Indian and Western Animated movies on basis of styles, themes.

5. Recognize area for application according to animation styles and articulate skills for problem solving.

Unit	Content
Unit I	**DISNEY'S NINE OLD MEN** Critical analysis of works by Les Clark, Wolfgang "Woolie" Reitherman, Eric Larson, Ward Kimball, Milt Kahl, Frank Thomas, Ollie Johnston, John Mitchell Lounsbery, Marc Fraser Davis (**3 period**)
Unit II	**FAMOUS ANIMATION STYLES** World animation style:-Feature Film Style, Limited Animation, Manga style, Anime styles, Chinese styles (**3 period**)
Unit III	**THE FAMOUS INDIAN ANIMATORS** Pioneers of Animations films, Famous Animators and their working styles (**3 period**)
Unit IV	**INTERPRETING ANIMATION FILMS** Analyze and interpret 2D,3D Films using approaches and writing film review (**3 period**)
Unit V	**APPLICATION OF ANIMATION** Ad Films, News and Broadcasting, 3D Motion Paintings, Interactive Media (**3 period**)

Reference Books:
1. Industrial Light & Magic: The Art of Special Effects**;-** Thomas G. Smith, Ballantine Books,
2. Animated Life: A Lifetime of Tips, Tricks, Techniques and Stories from a Disney Legend: Floyd
3. The world history of Animation.,N Cavalier,University of Califorina Press.
4. Secrets of Oscar winning Animation: Oliver Cotte, Focal press,2006,ISBN: 9780240520700
5. Illusion of Life:- Frank Thomson, Hyperion,1995, 1st Edition, ISBN:- 0786860707

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI302	Aesthetic	15

Course Outcome.

1. Interpret basics of different art forms and concept of beauty and impact of art on the human mind.
2. Evaluate multiple perspective and cultural and cross cultural understanding through exploration of Visual art of diverse culture.
3. Develop artistic and aesthetic sensibilities among the learner to enable them to respond and appreciate the beauty in different art forms.

Course Content

Unit	Content
Unit I	**The Nature of Aesthetics** The Nature of Art, Art and Fine Arts, The Indian tradition of Aesthetics Art and beauty in ancient Indian literature, shadangas (six essential characteristics) of Indian painting, the Natyashastra and the literature of Kalidasa, Chitrasurtra-vishnudharmaottra purana,chitralakshanas (attribute of pictures) (3 periods)
Unit II	**Chitralakshanas** Chitralakshanas (Attributes of pictures), stylistics, the attributes of architect, types of painting, The Shadangas of China and Post Gupta period, **Appreciation of Art** People, Culture and Fashion, figurative paintings, abstract painting, sculpture, Art in Motion (3 periods)
Unit III	**Eastern and Western Aesthetics** Meaning, Origin, Aesthetic and poetry, Ancient Aesthetic, Greek and Roman aesthetic, story of eros. Similarities of poetry and aesthetics, Relation between Aesthetic, Art, Fine art, Ancient aesthetic: Greece and Roman, Medieval age, Age of enlightenment. (3 periods)
Unit IV	**British and German Aesthetic** Aesthetic idealism, analytical aesthetics, Benedetto Croce contribution to aesthetic, basic principles of aesthetic, Importance of form in aesthetic, French Aesthetics Marxist Aesthetic: Background, Marxist aesthetics, contribution of Tolstoy, Types of art according to Tolstoy. (3 periods)
Unit V	**Psychological and Modern Aesthetics** Theodor Lipps and the Concept of Empathy, Sigmund freud theories of aesthetic, narcissism,carl gustavjung theories, John Ruskin, Art and society, R.G Collingwood,symbolism aesthetic, existentialism aesthetic. (3 periods)

Reference Books:

1) The History of Indian Art, Anil Rao Sandhya Ketkar, Jyotsna Prakashan

2) A Brief History Of Indian Painting, Lokesh Chandra Sharma, Goel Publishing

3) Indian Art History; Prof. Jayprakash Jagtap, Jagtap Publishing House

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1) The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4

2) Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh

3) Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk

4) Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI303	Interactive computer graphics-I	**4**

Course Outcome.

1. Interpret basics of different art forms and concept of beauty and impact of art on the human mind.
2. Evaluate multiple perspective and cultural and cross cultural understanding through exploration of
Visual art of diverse culture.
3. Develop artistic and aesthetic sensibilities among the learner to enable them to respond and appreciate the beauty in different art forms.

Course Content

Unit	Content
Unit I	**Introduction to UX and UI** An introduction to User Experience (UX), User Interface (UI), and usability concepts and definitions as they relate to embedded systems and interface development in particular and in general.
Unit II	**UX Analysis and Planning** A walk through early planning and analysis stages for UX projects: why the planning matters, methods. Introduction of Work Breakdown Structure (WBS) as a key approach to scope project tasks
Unit III	**UX Research UX Design** This module looks at integrating user needs, tasks, and concerns into our UX and UI design work. Standard methods for UX design will be presented, with a particular focus on usability heuristics, a proven approach to assessing and improving an interface design, and on various forms of sketching, an important design tool for every design engineer's toolkit. Focus for this module is on user research - understanding who the users are, what are they trying to accomplish, how your interface can design support and delight them.
Unit IV	**Wireframes to Prototypes** This course is focused on the application of the early UX research to actual user interfaces: the creation of wireframes, high-fidelity mockups, and clickable prototypes.
Unit V	**User Experience & Interaction Design for AR/VR/MR/XR** XR Design Process, Design Thinking, Ethics, and Guidelines for XR, Storyboarding & Physical Prototyping for XR Experiences, Digital Prototyping & Evaluation of XR Experiences

Reference Books:

1)

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)   The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2)   Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3)   Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4)   Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI304	Assets Building-I	**4**

Course Outcome.

Define knowledge of 3D animation and assets building.

2. Describe pipeline for 3D Animation films.

3. Demonstrate 3D character modeling, texturing, lighting and rendering process.

4. Demonstrate 3D props modeling, texturing, lighting and rendering.

5. Compose Lighting on props.

6. Demonstrate compositing techniques.

Course Content

Unit	Content
Unit I	**General Information of 3D Animation & Assets Building** Concept, Features and uses of 3D animation software's.
Unit II	**Pipeline For 3D Animation Films.** Process for 3D Animation films: Pre-production, production and post-productions
Unit III	**Nurbs and Surface Modeling.** Props Modeling, Logo Modeling, Conversion of Nurbs to Polygon
Unit IV	**3D paint Tool & Application of Basic materials.** Using 3D paint Tool for texturing Props, use of Basic Materials for Text & Logo.
Unit V	**Basic Lighting And Rendering** Lighting on Props, Lighting on Logo, Rendering, Images & Compositing

Reference Books:

1)   Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN:- 0470107405

2)   3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769-43-5

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)   The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4

2)   Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh

3)   Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk

4)   Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI305	Drawing for Animation-I	4

Course Outcome.

1. Draw simple and dynamic figure of human, animal and birds
2. Illustrate Human, Birds, Animals Figures with details.
3. Demonstrate drawing & painting in various forms.

Course Content

Unit	Content
Unit I	**Human Figure Study** Human figure study with various action, Dynamic human figure drawing
Unit II	**Animal Figure Study** Animal figure study with various action, Dynamic Animal figure study
Unit III	**Bird Study** Birds figure study with various action, Dynamic Birds figure study
Unit IV	**Drawing With Details** Human Head, Hands & Legs, Animals Head & Legs, Birds heads and wings.
Unit V	**Drawing & Painting** Concept Art, Still Life, Painting And Murals.

Reference Books:

1)   Dynamic Figure Drawing:- Burne Hogarth, Watson-Guptill Publications, 1996, 1st Edition
2)   Force character Design from Life Drawing:- Michael Mattesi, Focal Press, 2008, ISBN - 9780240809939
3)   Figure Study Made Easy :- Aditya Chari, GraceTM Prakashan, 2005, 1st Edition
4)   Bridgman's Life Drawing:- Bridgman George B Bridgman, Dover Publications,
5)   Animal Drawing Manual:- Gleann Vilppu, G.V. Vilppu publication, 2000, 1st Edition.

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)   The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2)   Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3)   Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4)   Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI306	Animation-II	**4**

Course Outcome.
1. Illustrate character design and symbolic rigging (Cell & Digital).
2. Apply knowledge of animation technique.
3. Construct dialogue & Facial expression.
4. Associate Animation principal & Animation Acting (Cell & Digital)
5. Compose scene with action, emotions & multiple characters.

Course Content

Unit	Content
Unit I	**Character design &Symbolic Rig** **Cell animation, Digital animation, Human, Animal, Birds**
Unit II	**Human, Animal & Birds** Cell animation, Digital animation, Human (Walk\Run\Jump), Animals(Walk, Run, Jumps & Gallops), Birds (Fly, Take off, Landing)
Unit III	**Dialogue & Facial Expression.** Blend Shapes Construction: a. Lips Shapes & Lips Sync. b. Expressions
Unit IV	**Animation Action with Rules** Action With Animation Rules. (Arc/Timing/ Anticipation/ follow-through & cautioning)
Unit V	**Acting Synchronization with Multiple Character** Scenes development with Action, emotion & Synchronization with character & background.

Reference Books:

1) Animator Survival Kit: - Richard Williams, Faber &Faber, 2002, 1st Edition.
2) Timing for Animation: - Harold Whitaker, CRC Press,2009,2nd Edition
3) Adobe Animate CC Classroom in a Book, Russell chun, Adobe press,2017,1st Edition

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1) The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2) Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3) Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4) Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI307	Layout & Background Design	**4**

Course Outcome.

1. Compose Layout design & Blue sketch.
2. Memorize Layout terms and techniques.
3. Use of Camera angles & Editing Rules for dynamic layout.
4. Develop digital colour application.
5. Demonstrate basic concept of Matt painting.

Course Content

Unit	Content
Unit I	**Basic of Layout Design** Composition Rules, Layout for TV & Film Layout, Layout for Interactive media
Unit II	**Types of Layout** One field layout (TV/Film), Pan Layout (TV/Film): Horizontal Pan (Right to left & Left to Right), Vertical Pan (Up to Down & Down to top), Cross Pan, Subjective layout & Motion Techniques
Unit III	**Camera Angles & Editing Rules for Dynamic Layouts** Setting Up Your shots with Dynamic camera angles & editing rules.
Unit IV	**Study From Copy Layout & BG (Hand drawn & digital)** Copying the layout, Copying the colour background
Unit V	**Stylization & Colour Application (Hand drawn & digital)** Realistic layout with appropriate colour schemes, Stylize layout with appropriate colour schemes

Reference Books:

1)   Setting Up Your Shots: Great Camera Moves Every Filmmaker Should Know :- Jeremy Vineyard,
2)   Michael Wiese Productions,1999, ISBN :- 0941188736
3)   Layout and Composition for Animation:- Ed Ghertner, Focal Press, 2010,1st Edition
4)   Layout Background Layout:- Mike Fowler, Imprint,2002,Limited Edition ISBN:- 9780973160208

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)   The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2)   Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3)   Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4)   Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI308	Rigging & Blend Shapes-I	4

Course Outcome.

1. Describe the basic concept of Rigging.
2. Express Basic knowledge of Rigging (Characters & Props)
3. Application of Rigging
4. Application of constraint rigging.
5. Create Direct & Indirect connection in Rigging.

Course Content

Unit	Content
Unit I	**Introduction to Rigging** Rigging: concept, Software's used, Rigging tools
Unit II	**Fundamentals of Rigging** Joints, Parenting, Understanding Pivot, Outliner, Hyper Graph, Hyper Shade, Channel Control
Unit III	**Linear and Non-Linear Deformers** Lattice, Clusters, Bend, Squash, Wave
Unit IV	**Constraints Rigging** Point, Orient, Parent, Scale, Aim
Unit V	**Direct & Indirect Connection** Set driven, Expression

Reference Books:

1)   The History of Indian Art, Anil Rao Sandhya Ketkar, Jyotsna Prakashan
2)   A Brief History Of Indian Painting, Lokesh Chandra Sharma, Goel Publishing
3)   Indian Art History; Prof. Jayprakash Jagtap, Jagtap Publishing House

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)   The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2)   Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3)   Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4)   Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Part B

Syllabus Prescribed for 2022Year   UG Programme

Programme: B.Sc. Animation

Semester: IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI401	**Art Direction**	**15**

Course Outcome

1.   Explain Film theories and movements and train them in writing film criticism and reviews.
2.   Describe process of character and prop development.
3.   Analysis aesthetic structure, pattern of visual design
4.   Evaluate films various themes
5.   Interpret various color symbolisms. And apply them in painting.

Unit	Content
Unit I	**STYLIZATION OF FILM** Contemporary theories of film, semiotics and structuralism, Psychoanalysis, Feminism, Gender, Race, Post-Theory & Cognitive Film Theory, Deleuze and Film-Philosophy, Theories of Affect and Form. Film Movements: Realism, expressionism, Avant-garde and Art cinema, surrealism, Constructive criticism, negative arguments, affirmative arguments. Film Language, film criticism approaches and techniques,
Unit II	**CHARACTER AND PROP DESIGN** Developing characters, prop and concept art, character and characterization.
Unit III	**LAYOUT AND BG DESIGN** Research about story, locations, A Framework For An Aesthetic Structure Patterns In The Landscape The Importance Of A Visual Vocabulary, The Design Process (2 periods)
Unit IV	**STORY BOARDING AND ANIMATICS** Essential elements of storyboarding, plot, time, structure, screen play rules, script analysis and development,, Writing dialogues, shooting list, camera and character movement, composition, shot arrangement, cinematic storytelling, director point of view, visual design, Developing story board and animatic, designing character family, and concept art of film. (2 periods)
Unit V	**THEMATIC ELEMENTS** Themes: identifying the themes, evaluating the theme, Theme and symbolism Focus on plot, Focus on emotional effect, focus on character, focus on style and texture,

Reference Books:

1)   Micheal Rabiger, Mick Hurbis, *Directing the film: Techniques and Asethetic*, Focal Press,2017
2)   David Mamet, *On Directing Film*,Penguin Publication, 1992
3)   Steven, Ascher, *The Filmmakers Handbook: A Comprehensive guide for digital age*,
        Penguin publications, 2012 .
4)   Sergei Eisentein,*Problems of Film Direction*,University Press of Pacific,2004

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

Part B

Syllabus Prescribed for 2022Year UG Programme

Programme: B.Sc. Animation

Semester: IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI402	**Film Direction**	**15**

Course outcome

1. Develop competence in oral, written, and visual communication.

2. To distinguish among various levels of organizational communication and Communication barriers while developing an understanding of Communication as a process in an organization.

3. Construct dialogs for Films, Animation.

4. Paraphrase screenplay for Films, Dramas, etc

5. Demonstrate the ability to work effectively individually and collaboratively

.

Unit	Content
Unit I	**CONCEPT AND CONTENT DEVELOPMENT** Story development and script: essential elements of animated films, shaping story into movie, plot, time, structure, screen play rules, script analysis and development, authorship and aesthetics; cinematic storytelling, director's point of view, visual design, sound design, performance design, director's style. **(3 periods)**
Unit II	**RESEARCH AND FILM DESIGN** Director's screen grammar, film language, frame and the shot, the camera movements, language of the edit, screen direction, essentials of research and practice for directors. **(3 periods)**
Unit III	**PRE-PRODUCTION** Exploring the script, casting, acting fundamentals, directing the actor, rehearse, planning and visual design. **(3 periods)**
Unit IV	**PRODUCTION** Production crew, production technology, director role during shooting, monitoring and progress **(3 periods)**
Unit V	**POST PRODUCTION** Compositing and editing, rough cut, working with music, sound mix, finishing touches **(3 periods)**

Reference Books:

1)   Rizzo, Michael, *The Art Direction Handbook for Film & Television*, Taylor & Francis ,2015
2)   Nik Mohan, *Art Direction*, Bloomsbury Publishing, 2010
3)   Fischer, Lucy, *Art Direction and Production Design*, Rutgers University Press ,2015 .
4)   Sergei Eisentein,*Problems of Film Direction*,University Press of Pacific,2004

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)

Programme: B.Sc. Animation

Semester: III

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI403	Interactive computer graphics-II	**4**

Course Outcome.

1. Interpret basics of different art forms and concept of beauty and impact of art on the human mind.
2. Evaluate multiple perspective and cultural and cross cultural understanding through exploration of
Visual art of diverse culture.
3. Develop artistic and aesthetic sensibilities among the learner to enable them to respond and appreciate the beauty
in different art forms.

Course Content

Unit	Content
Unit I	**STRATEGY AND INFORMATION ARCHITECTURE** This course is focused on the early user experience (UX) challenges of research, planning, setting goals, understanding the user, structuring content, and developing interactive sequences.
Unit II	**WEB DESIGN: STRATEGY AND INFORMATION ARCHITECTURE** This course is focused on the early user experience (UX) challenges of research, planning, setting goals, understanding the user, structuring content, and developing interactive sequences. While the concepts covered will translate to many kinds of interactive media (apps, digital kiosks, games), The difference of agile vs. waterfall approaches, User personas and site persona, User testing
Unit III	**WEB DESIGN: WIREFRAMES TO PROTOTYPES** Actual user interfaces: the creation of wireframes, high-fidelity mockups, and clickable prototypes. Along the way we will also discuss: Responsive web design and mobile web challengeMobile-first approach, Web typograph, technologies that make the web work, such as HTML, CSS, JavaScript, server-side coding, and databases.
Unit IV	**Introduction to CMS** Why CMS, Advantages and Disadvantages of CMS, Setting up WordPress in Local Server, Setting up WordPress in Remote Server, Upgrading WordPress Understanding FTP WordPress Admin, Creating Users, User Rights & Roles Wordpress theme: installing,selection process,changing
Unit V	**Introduction to Motion Graphics** Introduction to softwareand understanding layers effect, Creating text and signature animation, Learning 2D and 3D chroma keying and making explainer video, Understanding video formats, compression, codecs output formats

Reference Books:

1) Rick Moore,*UI Design with Adobe Illustrator*, adobe Press,2012
2) Giles Colborne, *Simple and Usable Web, Mobile, and Interaction Design*, New Riders Press, 2010

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1) The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2) Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3) Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4) Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI404	Assets Building-II	**4**

Course Outcome.

1. Describe the concept of Polygon modeling.
2. Use of Polygon modeling.
3. Use of UV and texturing on Props and character models.
4. Use of Lighting on Props and character.
5. Apply Transfer Map on Props & characters.

Course Content

Unit	Content
Unit I	**Introduction of Polygon Modeling.** Polygon: Concept, components, Polygonal vertices, Polygonal faces, Polygonal edges Polygonal UVs, Basic polygonal primitive objects , Creating polygonal primitives
Unit II	**Polygon Modeling.** **Exterior Modeling , Interior Modeling, Character and Props Modeling.**
Unit III	**UV's And Texturing.** Types of Mapping, Introduction of UV's Text Editor, Application of UV and Texturing on Props and character models.
Unit IV	**Lighting.** Types And Used of lights, Application Lighting on Props & Character.
Unit V	**Transfer Maps and Rendering.** Application & used of Transfer maps, Render Settings, Render Engines, Mental Ray on props & characters.

Reference Books:

1)   Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN:- 0470107405
2)   3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769-43-5

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)   The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2)   Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3)   Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4)   Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: **IV**

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI405	Drawing for Animation-II	**4**

Course Outcome.

1. Illustrate various kinds of character art & design.
2. Express character attitude & Facial expression.
3. Compose story boarding design for various media.

Course Content

Unit	Content
Unit I	**Character Design (A)** Cartoon, Iconic
Unit II	**Character Design (B)** Realistic, Semi realistic
Unit III	**Character Design (C)** Mix & Match, Super Realistic
Unit IV	**Character Attitude & Expression sheet (Bible)** Character Attitude chart, Character Expression chart, Character lip sync, Character Family chart
Unit V	**Basic of Story Board Design** Story Board For TV, Story Board for Interactive.

Reference Books:

1) Dynamic Figure Drawing:- Burne Hogarth, Watson-Guptill Publications, 1996, 1st Edition
2) Force character Design from Life Drawing:- Michael Mattesi, Focal Press, 2008, ISBN-
3) 9780240809939
4) Figure Study Made Easy :- Aditya Chari, GraceTM Prakashan, 2005, 1st Edition
5) Bridgman's Life Drawing:- Bridgman George B Bridgman, Dover Publications,
6) Animal Drawing Manual:- Gleann Vilppu, G.V. Vilppu publication, 2000, 1st Edition.

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1) The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2) Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3) Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4) Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI406	Animation-III	**4**

Course Outcome.

1. Practice Animation principals using 3D software.
2. Illustrate Path Animation.
3. Demonstrate bouncing ball.
4. Illustrate wave principal.
5. Apply Animation principal (Bouncing Ball & Wave Principal)

Course Content

Unit	Content
Unit I	**Introduction to 3D Animation.** Overview, animation principals
Unit II	**Path Animation.** Straight path, Zig Zag Path, Weight & Timing
Unit III	**Bouncing Ball.** Understanding Animation principal by using various kinds of Balls.
Unit IV	**Wave Principle.** Understanding wave principal by using Props & Characters.
Unit V	**Ball With Biped and Quadruped characters.** A) Ball with Biped : a. Walk. b. Run. C. Jump. B) Ball with Quadruped : a. Walk. b. Run. C. Gallops.

Reference Books:

1) Animator Survival Kit: - Richard Williams, Faber &Faber, 2002, 1st Edition.
2) Timing for Animation: - Harold Whitaker, CRC Press,2009,2nd Edition
3) Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN:- 0470107405
4) 3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769-43-5

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1) The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2) Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3) Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4) Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI407	Matte Painting-I	**4**

Course Outcome.

1. Illustrate Digital Painting techniques.
2. Composed Matt painting with 2D & 3D generated contents.
3. Composed Matt with Animated & Live Objects
4. Use of Matt painting in various media.

Course Content

Unit	Content
Unit I	**Introduction to Matt painting** History, Use of Matt Painting, Types of Matt Painting
Unit II	**Copy of Matt painting by Famous Matt designers** Copy Matt Painting on Paper, Copy Matt Painting digital
Unit III	**Matt Painting for TV (Live / Animation)** Understanding Sequence & scene description, Requirement gathering and specification, Content development (2D / 3D/ Live), Layout & Colour schemes, Final Matt painting with TV Ratio
Unit IV	**Matt Painting for Film (Live / Animation)** Understanding Sequence & scene description, Requirement gathering and specification, Content development (2D / 3D/ Live), Layout & Colour schemes, Final Matt painting with Film Ratio.
Unit V	**Matt Painting for Drama or Live show** Understanding Sequence & scene description, Requirement gathering and specification, Content development (2D / 3D/ Live), Layout & Colour Scheme, Final Matt Painting with HD Ratio.

Reference Books:

1) Digital Matt painting handbook:- David B. Mattingly, Sybex,
2) Techniques of Dylan cole: Dylan cole, Gnomon workshop
3) Setting Up Your Shots: Great Camera Moves Every Filmmaker Should Know :- Jeremy Vineyard, Michael Wiese Productions,1999, ISBN :- 0941188736
4) Layout and Composition for Animation:- Ed Ghertner, Focal Press, 2010,1st Edition

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1) The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4
2) Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3) Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4) Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI408	Rigging and Blendshapes-II	**4**

Course Outcome.

1. Illustrate basic prop Rigging (Characters & Props)
2. Demonstrate basic mechanical rigging.
3. Practice fundamentals of Blendshapes
4. Illustrate winged character rigging.
5. Practice Basic cartoon rigging.

Course Content

Unit	Content
Unit I	**Basic Prop Rigging** Understanding Phenomenon of Prop rigging
Unit II	**Basic Mechanical Rigging.** Rigging Mechanical Props & Character
Unit III	**Fundamentals of Blendshapes.** Understanding deformation of props, character & BG.
Unit IV	**Fundamentals of Blendshapes.** Understanding deformation of props, character & BG.
Unit V	**Basic Cartoon Rigging.** Biped Character rigging and skinning

Reference Books:

1)   Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN:- 0470107405
2)   3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769-43-5
3)   Character Rigging and Animation :- Alias, Wavefront Publication,2002, ISBN:- 9780973005233

Any pertinent media (recorded lectures, YouTube, etc.) if relevant:

1)   The Paintings of India - The Art of India -https://youtu.be/5xpJeO_syN4

2)   Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh

3)   Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk

4)   Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo

Programme: B.Sc. Animation

Semester: IV

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
2ANI409	Dynamics & VFX-I	**4**

Course Outcome.

1. Describe basic concept of Dynamics
2. Practice dynamics tools.
3. Use nParticle system.
4. Illustrate container effects in 2D & 3D.
5. Illustrate Fluid effects.

Course Content

Unit	Content
Unit I	**Dynamics and Visual Effects.** Dynamics: Introduction, Applications, Software, Introduction to Visual effects (VFX)
Unit II	**Dynamics tools** Basic of Dynamics tools
Unit III	**Fundamentals of nParticle System.** Fundamentals of nParticle System.
Unit IV	**Basic Dynamic 2D & 3D Container Effects.** Smoke, Fire, Cloud
Unit V	**Basic Dynamics Fluid Effects.** Ocean, Pond\Wake, Motor Boat.

Reference Books:

1) Maya Professional tips and techniques: - Lee Lanier, Sybex,2007,ISBN:- 0470107405
2) 3ds Max 7.5 Projects :- Boris Kulagin, BPB Publications, 2006, ISBN:1-931769-43-5
3) Character Rigging and Animation :- Alias, Wavefront Publication,2002, ISBN:- 9780973005233

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2) Murals of India - Benoy K Behl #SrijanTalks | Ancient Art and Culture Of India | Cave Paintings-https://youtu.be/m3S2Gpnku3I?list=PLTotFEE2ywN7niLXiM0vitUQcWv2DRuEh
3) Kala aur sanskruti -https://youtu.be/ShDt3dD5Yqk
4) Types of Indian Paintings - Different kinds of Indian traditional & folk Paintings & Art.-https://youtu.be/r6XQSfTYZPo