

**Department of Technology,  
Savitribai Phule Pune University  
(Formerly University of Pune)**



**Structure for 3 Years Full Time Course of  
B.Sc. in 3D Animation and VFX  
Under Faculty of Science and Technology**

## **Savitribai Phule Pune University, Pune**

### **Bachelor of Science (Under Science and Technology Faculty and Electronics and Electrical Technology Board)**

(To be implemented from Academic year 2021-2022)

- 1. Title of Program: B.Sc. 3D Animation and VFX (Bachelor of Science)**
- 2. Preamble: The systematic and planned curriculum from 1<sup>st</sup> year to 3<sup>rd</sup> year shall motivate and encourage the students pursuing the higher education in this field.**
- 3. Introduction:**

#### **At first year of under-graduation:**

As the basis of Animation and Visual Effects is traditional art, in this semester we will go through Art History as first theory subject, the art history through 15th Century, art history through 16th century Along with it our second subject is Animation and Computer Graphics Introduction, whereas student will get in detail the mediums, types, meanings, techniques which has been used during time worldwide. Leaving them an detailed understanding of the art world and its exponential source of creation to cultivate creative aspect as an Artist. The practical subject in the 1st semester is purely about traditional fundamental making an non artist get a good hand on his pencil, color and other mediums. In the second semester Student will get hands on basics computer graphics software's. creating a perfect environment for a non computer digital students into the computer graphics design industry. Here they will be learning on creating branding material various business. Logos, print media and visual digital art.

**At second year under-graduation:** After getting into computer graphics now in second year Visual effects will be introduced. with all the related department, Rotoscopy, paint, camera track, cleanup and compositing will be perfected. Along with it figure drawing will give a detail understanding of human figure, line of action and drawing form live to imaginary character poses. Color fundamentals will only enhance the sense of colors, how to use them to make the output look more memorizing. Animation and Visual Effects Production principles are introduced to make a clear understanding about how things flow between departments. and the pipeline differs in top international production houses.

**At third year under-graduation:** Digging deeper in the third year has physics for artist explaining the color, light and motion in real world, storytelling to compose a short film of their own and main focus using all these knowledge they will work on their demo reel where they can put not just the technical aspect to it but also fantasy imaginary like artistic touch to us. In this semester students will start going for interviews in various international and domestic animation, visual effects, advertising and gaming companies.

**Need for Launching B.Sc. 3D Animation and Visual Effect Degree Course:**

- a) To provide skilled, up to date digital artists for animation, visual effects, advertising and gaming companies.
- b) To fulfill the minimum skill set requirement in 3D Animation and Visual Effects Industry and to be able to just smoothly join in biggest production company pipeline.

The student will be taken from the deep understanding of Art, history of VFX and animation. After creating professionalize traditional artist the world of 3D animation and Visual effects being introduced at the specialized technical digital artist. having expertise on one of the TOP most software and pipeline techniques from top most production houses. With the merge of this CGI(computer Graphics Imaginary) software and traditional art along with a great sense of esthetic studies an Industry ready artist is ready to be picked by any international, domestic companies like 3D Animation production studio, VFX Studios, Digital marketing companies, advertising companies, high end automobile mechanical companies.

It becomes most crucial to get on going production knowledge along with newly introduced plug-in or studio software's to stay on board. also training from top production various department's experienced artist with our students which we are providing exclusively First time in India where award winner animations artists will visit and observe the work of the students pursuing this course.

It is, therefore, the degree course will not only enable the student to thrive in Computer Graphics Industry but literally be ready to be taken by world's best production companies. Also enhancing their entrepreneurship options an opportunities as a digital artist.

**4. Objectives:**

This course will create industry ready skilled artists. who are trained on going software's, ongoing pipelines in top production houses. Not just technically well trained but artistically well enhanced to produce own creative content good enough for highest quality requirement worldwide in 3D

Animation and Visual Effects industry. The program aims to help the students understand the fascinating world of Animation, VFX and Motion Graphics for film, broadcast and other media pads. This program offers Degree Certification in Animation & VFX. The duration of this program is 3 years (6 Semester). In addition to introducing students to the world of 3D digital art and VFX visualization, this program exposes students to Industry relevant software's. On successful completion of the program, students can continue their learning further to a professional level within Digital Art and VFX production design.

**Program Objectives:**

- The program will produce graduates who will be competent ideators in advertisement, animation and VFX industry
- The graduates will be able to adapt to the fast changing entertainment technology platforms
- The graduates will become effective collaborators and through innovative methodologies in storytelling, they will be able to address the social, technical and business challenges and opportunities.
- Graduates will be a good team players and in course of time will be able to lead the team to find solutions and improvements in their field of expertise which includes design, technology and storytelling
- The graduates will be able to present ideas efficiently, effectively and with adequate confidence.
- The graduates will be able to function in multiple disciplinary teams
- Graduates will be able to understand the need for lifelong learning and technology up gradation, through taking up refresher programs.
- Graduates will be able to understand professional and ethical responsibilities.

**5. B.Sc. 3D Animation and VFX Program Structure:**

- The Program is a Three Years (Six semesters) Full Time Degree Program.
- Each week 4 lectures theory and practical together of 3 hours will be held.
- The program shall be based on **credit system** comprising of **120** credits.
- All the six semesters shall have four Courses and 20 credits.
- Theory Courses offered shall be of 4 credits and practical courses credits differs from 4, 6 to 8 credits given the requirement of the particular course.
- For Theory Course, one credit is equivalent to one clock hour direct teaching in a week and for Practical Course, one credit each is equivalent to one and half hours of laboratory work in a week.

## **6. Eligibility for Admission**

### **First year B.Sc. 3D Animation and VFX**

Higher Secondary School Certificate (10+2) in any stream students from all over India State Board of Secondary and Higher Secondary Education.

**Note:** Admissions will be given on the basis of the entrance exam score that students will score once applied for the course.

**Lateral Second Year entry** to students completing Certificate Course of 1 year (Certificate Course in Professional Visual Effects) OR 1.5 years (Certificate Course in Professional 3D Animation and VFX) offered by Savitribai Phule Pune University at Taksha Animation and Arts School.

## **7. Medium of Instruction:** English

## **8. Award of Credits:**

- Each course having 4 credits shall be evaluated out of 100 marks and student should secure at least 40 marks to earn full credits of that course.
- One credit is evaluated for 25 marks. This will be divided into 50 % internal assessment and 50 % end semester examination. The candidate appearing for the subject needs to pass in the internal assessment to be eligible to appear for end semester examination.
- The passing criteria for internal assessment is 30%, for end semester is 30%, but the combined passing (for internal plus end semester) is 40%.

## **9. Evaluation Pattern:**

- As per SPPU CBCS norms

## **10. Completion of Degree Program:**

A student, who earns 120 credits, shall be considered to have completed the requirements of the B. Sc. Aviation. Degree program and CGPA will be calculated for such student as per the norms of Savitribai Phule Pune University

**Course Structure of B.Sc- 3D Animation and VFX**

**SEM-I**

Course	Title of Course	Credits		Lectures/Week			Evaluation		
		Th	Pr.	Th	Tu	Pr.	CA	ES	Total
BSC101	Art History - Animation & VFX	4		4	-	-	50	50	100
BSC102	Animation & Computer graphics	4		4	-	-	50	50	100
BSC103	Foundation of Arts		6	-	-	12	75	75	150
BSC104	Sketching Fundamentals		6	-	-	12	75	75	150
	Total	8	12	8		24	250	250	500

**SEM-II**

Course	Title of Course	Credits		Lectures/Week			Evaluation		
		Th	Pr.	Th	Tu	Pr.	CA	ES	Total
BSC201	Lab Practice-1		6	-	-	12	75	75	150
BSC202	Lab Practice-2		6	-	-	12	75	75	150
BSC203	Analysis of Form		4	-	-	8	50	50	100
BSC204	Indian Art History	4		4	-	-	50	50	100
	Total	4	16	4		32	250	250	500

**SEM-III**

Course	Title of Course	Credits		Lectures/Week			Evaluation		
		Th	Pr.	Th	Tu	Pr.	CA	ES	Total
BSC301	Figure Drawing		4	-	-	8	50	50	100
BSC302	Preproduction principles	4		4	-	-	50	50	100
BSC303	Visual Effects Production I		6	-	-	12	75	75	150
BSC304	Color Fundamentals	4		4	-	-	50	50	100
BSC305	Physics for Artist	4		4	-	-	50	50	100
	Total	12	10	10		20	275	275	550

**SEM-IV**

Course	Title of Course	Credits		Lectures/Week			Evaluation		
		Th	Pr.	Th	Tu	Pr.	CA	ES	Total
BSC401	Color and Design	4	-	4	-	-	50	50	100
BSC402	Fundamental of Texture and Shading	4	-	4	-	-	50	50	100
BSC403	Story Boarding Theory and Principles	4	-	4	-	-	50	50	100
BSC404	3D Animation I	-	6	-	-	12	75	75	150
	Total	12	6				225	225	450

**SEM-V**

Course	Title of Course	Credits		Lectures/Week			Evaluation		
		Th	Pr.	Th	Tu	Pr.	CA	ES	Total
BSC501	Narrative Story telling	4		4	-	-	50	50	100
BSC502	3D Animation II		4	-	-	8	50	50	100
BSC503	Visual Effects Production II		6	-	-	12	75	75	150
BSC504	Mini Project		8	-	-	16	100	100	200
	Total	4	18	4		36	250	250	550

**SEM-VI**

Course	Title of Course	Credits		Lectures/Week			Evaluation		
		Th	Pr	Th	Tu	Pr.	CA	ES	Total
BSC601	Major Project	-	12	-	-	24	150	150	300
BSC602	Lab Practice-3		4	-	-	8	50	50	100
BSC603	Myths and symbols	2		2	-	-	25	25	50
	Total	2	16	2		32	225	225	450

**Lab Practice -1:** Visual Digital Art 1- CorelDraw, Illustrator

**Lab Practice -2:** Visual Digital Art 2- Photoshop, InDesign

**Lab Practice -3:** Animation and Visual Effect Editing- Video Editing Softwares for 3D Animation and VFX

**Note :Compulsory**

Students produce short projects as experiments in concepts, style or technology. Students may either work in Preproduction, 3D Animation, Visual Effects, post production or game designing according to their inclination prerequisites, or, with consent of the Faculty, they may work in any medium appropriate to their experience and resources. While producing their own work, students also serve as production planning team and production crew for all other projects.



Seminars and workshops Any one activity per course from the following

1. Acting for Animation
2. Clay modeling
3. Live figure drawing
4. Environment study urban and rural
5. Various Painting mediums
6. On field vfx shoot visit
7. Digital Photography
8. Seminars for 3D Animation Gaming and VFX industry senior artists
9. Live object study
10. Animation Film festival participations

**Course Code:** BSC101

**Course Title:** Art History - Animation & VFX

**Total Contact Hours:** 60

**Total Credits:** 04

**Total Marks:** 100

**Objectives:**

1. Student will learn art aesthetics from different centuries and genres. Mastering 3D Animation and VFX requires high end understanding in art history.
2. This will help student to identify the different eras of Art through the history.
3. This class focuses on why some of the art was created during certain eras and their influence on the society and the world.
4. Animation and VFX conceptually will be introduced to settle non technical background student into this industry.
5. Knowing art history and Animation and VFX it will leave the basic fundamentals very strong of our B.Sc. students
6. Animation is a vast industry it includes 2D animation, pre production, production, post production, 3D Animation building assets for game
7. Gathering all the knowledge of Art History and Animation and VFX student will be ready to take the next jump into creating things with this knowledge.

**Learning Outcomes:**

Students who successfully complete this course will be able to:

1. Understand, identify and design art relating to that particular art work in that time frame.
2. Creates a strong base for a non artistic background to enter into this creative industry.
3. The growth of Animation and VFX leaving their trademarks way back since the last century is exponential and quite outstanding.
4. Understanding what exactly the Animation and VFX industry is made now since the constant efforts of numerous production houses worldwide.
5. Art history deep understanding will give a vast amount of visual library for more creative creation in their upcoming course.

**Unit 1:Art History I**

Art Historians, their art styles, mediums and methods of art is not just a great inspiration for next generation upcoming artists but also a power to create something inspirational and legendary. When you know the pioneers work over the period of time you can delve more into the artist side of the industry which is one of the most expensive market in the world. Art history through 15th century, art history through 19th century and 20th century art study.

**Unit 2 Art History through 15th century**

In this course we examines the major period styles of art in Western civilization from prehistory to the late Gothic and early Renaissance periods. Key artists, artwork and art historical language are thought. Students will analyze stylistic and cultural characteristics of art and recognize how historical issues influence artistic development.

**Unit 3 Art history through 19th century**

This course examines the major period styles of art in Western civilization from the high Renaissance through Impressionism. Students are introduced to key artists, artwork and art historical language. Students will analyze stylistic and cultural characteristics of art and recognize how historical issues influence artistic development

#### **Unit 4: Art History II**

This course provides an introduction to art historical methods and historiography, with an emphasis on historical development of current practices, interpretive methodology, critical theory, debates within the field, and cross-disciplinary dialogues. Students will consider the definition of and approach to art-historical problems from late Renaissance to the present.

#### **Unit 5: History of Animation**

This course examines aesthetic and technical evolutions in animation in historical context. Students will identify and analyze the work of the creative visionaries, fine artists, and technical pioneers behind classic animated characters such as Bugs Bunny to con-temporary animated feature films and beyond.

Stop motion - in depth understanding and workflow

2D Traditional Animation - in depth understanding and workflow

Oil painting animation - in depth understanding and workflow

Clay animation - in depth understanding and workflow

2D Digital Animation - in depth understanding and workflow

Animation for Games - in depth understanding and workflow

Animation in AR - in depth understanding and workflow

Animation in VR- in depth understanding and workflow

Motion Graphics - in depth understanding and workflow

#### **Books:**

1. *The Story of Art* by Professor **E.H. Gombrich**
2. Art history by Marilyn Stokstad
3. The Art of Seeing by Mary Pat Fisher, Paul J. Zelanski, and Paul Zelanski

**Course Code:** BSC102

**Course Title:** Animation & Computer graphics

**Total Contact Hours: 60**

**Total Credits: 04**

**Total Marks: 100**

#### **Objectives:**

1. What is Animation and how it was used for entertainment
2. The computer graphics industry and its branches
3. Need and sectors where animation and computer graphics is used
4. Introduction to computer graphics technology for animation production houses

5. Work flow in various industries and its understandings

**Learning Outcomes:**

Students who successfully complete this course will be able to:

6. Understand, identify and design art relating to that particular art work in that time frame.
7. Creates a strong base for a non artistic background to enter into this creative industry.
8. The growth of Animation and VFX leaving their trademarks way back since the last century is exponential and quite outstanding.
9. Understanding what exactly the Animation and VFX industry is made now since the constant efforts of numerous production houses worldwide.
10. Art history deep understanding will give a vast amount of visual library for more creative creation in their upcoming course.

**Unit 1: Animation I**

This course introduces students to the core 3D animation techniques used to make CG animated feature films and VFX work. You'll learn how the creation of various types of animation and its many tools and workflows as they are used in major animation and VFX studios, preparing you for specialized study in the track of your choice

**Unit 2: Animation II**

In this course, students recall the principles of animation and apply them specifically to character animation. Students expand their drawn animation skills with a particular focus on volume and form. Expanding student's digital tool repertoire and developing professional studio practices and procedures is also tackled.

**Unit 3: History & Technology of Visual Effects & Computer Animation**

This class will analyze the history of special effects techniques and apply that knowledge to contemporary visual effects and animation. Starting with in-camera techniques, topics from traditional stop motion, motion control, matte paintings, models and miniatures, to modern computer-generated visual effects and animation, compositing and production methodology will be covered.

**Unit 4: History of Visual Development**

To create the future of the profession, you must understand the past. You'll explore the impact specific designers and artists have had, and see how production techniques, costs, financing, and marketing have evolved over time.

**Books:**

1. **The Animator's Survival Kit** by Richard Williams.
2. **The Art Of Animation** by walk disney.
3. **The Art of Animal Character Design** by David colman

**Course Code: BSC103**

**Course Title: Foundation of Arts (Traditional Art)**

**Total Contact Hours: 90 hrs.**

**Total Credits: 06**

**Total Marks: 150**

**Learning Outcomes:**

After successfully completing this traditional art practical course, the students will be able to:

1. understand color, its techniques of watercolor to use for small object paintings.
2. Deep understanding colors in a composition, painting or artwork.
3. Understanding of techniques of watercolor paintings.
4. Practical knowledge of charcoal drawing.
5. quick paint of watercolor.
6. Landscape and environment in details study with watercolors.
7. Techniques and details study with acrylic color medium.

**List of Practicals:**

1. Live object study with charcoal 20 sketches per month.
2. Personalized Color pallet creation 12 types art work in water color at the end of the semester.
3. Live object study with water colors 5 fruits, 5 different types of plants, 5 types of leafs, 5 types of trees submit at the end of the semester.
4. Clothed painting 15 various draperies types submissions at the end of the semester.
5. 15 different types of city/village architectural landscape submissions at the end of the semester.
6. Narrative art work 20 different subjects given as per the faculty in the class, submissions at the end of the semester.
7. Vehicles 15 from different time in the history used by mankind submissions at the end of the semester.
8. Stylized art work compositing 10 paintings and sketch and pen or soft pastels or charcoal but output of entirely different styles, submissions at the end of the semester.
9. 5 cohesive series of watercolor paintings suitable for exhibition. Demonstrations will include a wide variety of mixed media to complement the watercolor media submissions at the end of the semester.
10. 5 compositions done in soft pestle with couple of objects in the frame. art from live reference and submissions at the end of the semester.
11. Professional art works 6 submissions at the end of the semester.
12. same compositing painted in 3 different color pallet 1 detailed submissions at the end of the semester.

**Course Code: BSC104**

**Course Title: Sketching fundamentals (Traditional Art)**

**Total Contact Hours: 90 hrs.**

**Total Credits: 06**

**Total Marks: 150**

**Learning Outcomes:**

After successfully completing this traditional art practical course, the students will be able to:

1. Student will dig deep into perfecting the art of sketching.
2. Professional 2D production artist potential course structure.
3. Understanding and practical knowledge of shading and how it works.
4. Advance understanding of perspective studies from the shapes of cubes and circles
5. sketching from live object is one of the most challenging in order to match it to the live reference.
6. being able to portray the art you want to on paper.

**List of Practicals:**

1. line work practice submission 200 pages front and back per month .
2. Circles of different shapes and sizes practice pages 100 per month submission.
3. 1 point perspective 100 sketches at the end of the semester.
4. 2 point perspective 50 sketches at the end of the semester.
5. chair in 2 point perspective.
6. 3 point perspective 10 sketches at the end of the semester.
7. 4 point perspective 5 sketches at the end of the semester.
8. 5 point perspective 2 sketches.
9. drawing of a tyre in 2 point perspective 2 submission one eye level and another one top view.
10. Pencil shading assignments 15 sketches per month.
11. live object sketching 5 from live references.
12. live environment sketches 5 at the end of the semester.
13. 5 different sketching techniques object drawing at the end of the semester.
14. architectural structure of various types in student's chosen methods, medium and technique 15 at the end of the semester.
15. Creative narrative visual communication on random 15 topics at the end of the semester.

**Course Code: BSC201**

**Course Title: Lab Practice-I (Visual Digital Art 1)**

**Total Contact Hours: 90hrs.**

**Total Credits: 06**

**Total Marks: 150**

**Learning Outcomes:**

After successfully completing this traditional art practical course, the students will be able to:

1. Strong base on computer graphics software's, its functions.
2. Fundamentals of Digital visual communication to pursue the course.
3. Creative art work for various types of brands.
4. Creating branding digital material for multiple kind of business.
5. understanding client's requirement .
6. Understanding of rules and art of digital composition.
7. working on actual commercial brands and companies.
8. Clear fundamentals of pixel based image manipulation
9. usage of vector based image manipulation.

**List of Practicals:**

1. Brochure design for a college/educational institute 5 detailed submissions at the end of the semester.
2. Bill book design in vector based software of students choice. 4 design by the end of the month.
3. Magazine columns showing information and articles content in a vector based software.
4. Magazine layout as per class faculty's requirements 2 submissions.
5. Pamphlet design for 5 different types of businesses or institutions.
6. Art work showing today's all subjects issues, integrative visual commutation social awareness submissions 10 ideas submissions at the end of the semester.
7. 4 Different color schemes in 1 standard concept explaining the process behind it submissions at the end of the semester.
8. Leaflet/Flyer designs of 4 different concept brands submissions at the end of the semester.
9. Product design for a product. Complete commercial digital art works. 5 pages of explaining the product and its design and its idea behind it.
10. Designing logos, defining reasons behind the shape, color, placement art work style behind it. 10 logos traditional art work behind it of 2 pages for each logo. 30 pages submissions at the end of the semester.
11. narrative art work aiming a particular audience. 5 art works in different styles submissions at the end of the semester.
12. 50 abstract digital art work submissions at the end of the semester.
13. 50 compositions of shapes submissions at the end of the semester.

**Course Code: BSC202**

**Course Title: Lab Practic- II (Visual Digital Art 2)**

**Total Contact Hours: 90 hrs.**

**Total Credits: 06**

**Total Marks: 150**

**Learning Outcomes:**

After successfully completing this traditional art practical course, the students will be able to:

1. Understanding of artist side of the market when it comes to client requirement and art work price variation.
2. experience of doing branding for well established companies from various sectors.
3. Participation into digital visual art competition.
4. Student will start his artist blog and start putting work over there.
5. Digital skills enhanced till the preproduction part of the animation and VFX industry
6. Exact understanding of digital platform in commercial and media world.
7. Deep understanding of conceptualizing a brand/idea. and building visual digital art material around and related to it.

**List of Practicals:**

1. Photoshop image retouching effects 15 assignments of human photograph/still.
2. Digital Color pallet as per mood board. 5 Moods and 3 pallets each submissions at the end of the semester.
3. Image manipulation in photoshop, different layer merging effects. 5 submissions at the end of the software.
4. Creating advertisement for 3 different food brands, 5 advertisements of environmental social topics and 10 advertisements daily used products. Submission at the end of the semester.
5. 5 Logos in coreldraw, 5 logos in Illustrator and 5 logos in photoshop submissions at the end of the semester.
6. contradict visual art works 10 submissions at the end of the semester.
7. Complete digital marketing content for student's own imaginary created product. 15 pages submissions at the end of the semester.
8. 5 Visiting card designs in a student's choice vector based software and 5 visiting card designs in photoshop submissions at the end of the semester.
9. problem solving art work 15 submissions at the end of the semester.

**Course Code: BSC203**

**Course Title: Analysis of form (Art Esthetics )**

**Total Contact Hours: 60 hrs.**

**Total Credits: 04**

**Total Marks: 100**

**Learning Outcomes:**

After successfully completing this art esthetic practical course, the students will be able to:

1. draw form of any kind organic form.
2. Detailed study of Tree formation and artwork behind it in order to draw in depth.
3. Understanding of various types of form. and its properties.



4. Rocks form analysis and detailed techniques of drawing real like or stylized rocks.
5. Study and analysis of 3 stage texture and form formation methods.
6. Ability to breakdown any drawing object into parts and in detailing.
7. make student understand lighting shading and reflection properties of different objects and materials.

**List of Practicals:**

1. Study of different 50 types of big size trees and its form analysis, detailed submissions at the end of the semester.
2. detailed study of basic form like sphere, cube, pyramid , cylinder etc
3. form analysis study of mountains and its formations. its detailed study of getting the texture right on to the sketch.
4. Flower forms of 5 different types in shading styles of student's choice style of art work submissions at the end of the semester.
5. Realistic drawing showing form analysis 50 sketches per month
6. Light and shadow 20 sketches demonstrating different angles of light on the object submission per month.
7. heightened realism in artwork 5 sketches submissions at the end of the semester.
8. shadow utilizing 5-value system sketches 6 in detail submissions at the end of the semester.
9. in depth study of classical drawing assignment as per faculty in the class suggests. 6 sketches submissions at the end of the semester.
10. Human muscle form analysis with the shadow, soft edges shading of 200 muscles sketches submissions at the end of the semester.

**Course Code: BSC204**

**Course Title: Indian Art History**

**Total Contact Hours: 60**

**Total Credits: 04**

**Total Marks: 100**

**5 Hours/Week**

**Objectives:**

1. Understanding in depth the Indian art history.
2. Discovering the different artists styles from the period of time.
3. The evaluating and understanding the techniques .
4. Indian art history holding as a base of their course final project for reference as stylization.
5. Understanding the style difference between artists, time and social context considered.

**Learning Outcomes:**

Students who successfully complete this course will be able to:

1. Knowing in depth of our own country's art history which is enriched with mythological concepts.

2. portray the inspiration from Indian art history and become able to explore for their own styles which is the most crucial thing to have in animation and vfx industry.
3. Can use this knowledge while working on any movie, advertisement, gaming or multimedia project.
4. Enriching the visual library for fantasy, mythical, ancient time referred projects.
5. Knowing the influence of Indian art history world wide
6. Types of Indian Arts and detailed study of each.

### **Unit 1: Indian Art History I**

Indian artist styles historically followed Indian religions out of the subcontinent, having an especially large influence in Tibet, South East Asia and China. Indian art has itself received influences at times, especially from Central Asia and Iran, and Europe. In historic art, sculpture in stone and metal, mainly religious, has survived the Indian climate better than other media and provides most of the best remains. Many of the most important ancient finds that are not in carved stone come from the surrounding, drier regions rather than India itself. Indian funeral and philosophic traditions exclude grave goods, which is the main source of ancient art in other cultures..

### **Unit 2: Indian Art History II**

In Depth study of various famous and most ancient art forms that exists in India. Knowing the each art style from different time era.

Warli Art, tie dye art, Carving art, Screen painting, cave painting, bamboo art etc.

### **Unit 3: Mythological characters**

Indian mythological characters are numerous and have great deal of characteristics as well as super powers. A great sense of existence of the characters and their amazing back stories. this will not only give students a great deal of library for script writing, character development, and story writing.

Devas, Asuras, Dummy Gods, Animal gods etc.

### **Unit 4: Mythological Environment**

In the world of fantasy and imaginary its the biggest plus point to have as many and as versatile environment reference library. By giving this module we are giving a great deal of visual library to our students where they can mix and match or pick up few elements from variety of mythological environments of India.

### **Books:**

1. **Mahabharat by vyasa**
2. **The History of Indian Art by Sandhya Ketkar**
3. **Indian Art and Culture - For Civil Services Preliminary and Main Examinations**

**Course Code: BSC301**

**Course Title: Figure Drawing (Drawing for Animation)**

**Total Contact Hours: 60 hrs.**

**Total Credits: 04**

**Total Marks: 100**

**Learning Outcomes:**

After successfully completing this art esthetic practical course, the students will be able to:

1. Character line of action from live drawing.
2. quick live character cylindrical figurative drawing.
3. figurative drawing of a male 7.5 head for a regular male figurative perfection.
4. figurative drawing of a male 6.5 head for a regular male figurative perfection.
5. Extreme hero poses in figurative drawings.

**List of Practicals:**

1. 10 poses every day submission at the end of the semester.
2. 50 extreme poses could be in extreme perspective either as well submission at the end of the semester.
3. 8.5 head super hero character figurative study with different body proportions in cylindrical form 20 submission at the end of the semester.
4. 3.5 head character figurative drawing study 20 submission at the end of the semester.
5. clothed figurative drawing with proper drapery shading or flow.
6. Human anatomy study sketches 50 submission at the end of the semester.
7. 3D Volumetric figurative sketches 30 submission at the end of the semester, poses as per faculty assessment in class.
8. 5 minutes quick figurative live drawings 200 submission at the end of the semester.
9. shading on 3d volumetric figurative drawings, 10 sketches submission at the end of the semester.
10. small thumbnails in the page filled. each thumbnail with line of action of 1 or 2 or 3 characters. connecting the motion of the characters in synchronicity as the thumbnails proceed on the page. 5 pages with different motion in the line of action synchronicity, submission at the end of the semester.

**Course Code: BSC302**

**Course Title: Production Principles**

**Total Contact Hours: 60 Hours**

**Total Credits: 04**

**Total Marks: 100**

**Objectives:**

1. Understanding in depth the Indian art history.
2. Discovering the different artists styles from the period of time.
3. The evaluating and understanding the techniques .
4. Indian art history holding as a base of their course final project for reference as stylization.

5. Understanding the style difference between artists, time and social context considered.

**Learning Outcomes:**

Students who successfully complete this course will be able to:

1. Knowing in depth of our own country's art history which is enriched with mythological concepts.
2. portray the inspiration from Indian art history and become able to explore for their own styles which is the most crucial thing to have in animation and vfx industry.
3. Can use this knowledge while working on any movie, advertisement, gaming or multimedia project.
4. Enriching the visual library for fantasy, mythical, ancient time referred projects.
5. Knowing the influence of Indian art history world wide
6. Types of Indian Arts and detailed study of each.

**Unit 1: Computer Animation Production**

This course introduces students to the core 3D animation pipeline workflow used to make CG animated feature films and VFX work. Introducing to biggest software production in a animation and VFX studios and its many tools and workflows as they are used in major animation and VFX studios, preparing you for specialized study in the track of your choice.

**Unite 2: Preproduction Principles**

This course will provide students with an introduction to professional preproduction with an emphasis on idea generation, concept design, visual development, and storyboarding. The latest techniques of preproduction as used in animation and VFX will be introduced to students.

**Unite3: Production Principles**

Students learn and drill in design fundamentals for both 2D and 3D game play such as risk and reward, level layout and flow, balancing compelling game play, technical scripting and building suspense through story. As students progress, they learn specialized aspects of design such as monetization, unique control types, rapid development via iteration and production methods working.

**Unit 4: Producing for Animation and Visual effects**

In this course, the business of pre-production management in feature animation, game and post-production visual effects entertainment project workflows will be introduced. Students will be trained in the professional practices entailed in the start-to-finish cultivation and delivery of entertainment projects. Students will receive hands-on training by selecting and producing several commercial projects during the semester.

**Course Code: BSC303**

**Course Title: Visual Effects production I**

**Total Contact Hours: 90 hrs.**

**Total Credits: 06**

**Total Marks: 150**

**Learning Outcomes:**

After successfully completing this art esthetic practical course, the students will be able to:

1. Clean up plate in visual effects.
2. wire removal in After Effects, prep paint for VFX shot plate
3. VFX Rotoscopy, Stereo Rotoscopy technique in post production
4. 2D Camera track and 3D camera track on footages to stabilize the moment.
5. Effects on videos, extra particles and fluid effects creating various elements.
6. Compositing for visual effects.
7. camera projection for environments in the shot
8. video editing and digital video treatment for final output.

**List of Practicals:**

1. VFX Rotoscopy on 35 footages of minimum 1 minute submission at the end of the semester.
2. Stereo rotoscropyof 15 footages submission at the end of the semester.
3. vfx paint 10 footages prop paint. High end output 2 pixel submission at the end of the semester.
4. Video editing with several types of videos. Music video, advertisement video, movie trailer video, educational e learning video and shot film video editing. Each type 5 video editing versions with different treatments.
5. 2D advertise concept, movie concept illustration using After Effects and Photoshop.
6. 5 different environment camera projection shots. submission at the end of the semester.
7. 25 high resolution highly camera jerk footages camera track submission at the end of the semester.
8. Composting for post production, as given the assignment in the class 4 video compositing submission at the end of the semester.

**Course Code: BSC304**

**Course Title: Color Fundamental**

**Total Contact Hours: 60 Hours**

**Total Credits: 04**

**Total Marks: 100**

**Objectives:**

1. This course provides an examination of color and design principles
2. through the use of digital and traditional media color fundamentals in these sectors
3. An in-depth study of color and design principles.
4. Students will use analogous, complementary and analogous split complementary palettes to explore color harmony.

5. Additional topics include muting and toning of color, color psychology, advancing/receding color, simultaneous contrast, color proportion, the influence of light temperature on color, design unity and visual emphasis

**Learning Outcomes:**

Students who successfully complete this course will be able to:

1. Understanding color theory in detail.
2. Understanding and recognizing particular mood color board.
3. Color patterns 1 color pallet, 2 color pallet and 3 color pallet.
4. color theory for audience and character's character enhancing .
5. Contradictory color pallet need and usage in safe zone.

**Unit 1: Color and Design Application for Animation**

Students will study existing industry design to understand Art Direction for animated films. They will study application of value, color, and lighting. Using traditional and digital media, students will examine the psychology of color, how light effects color, and various color theory combinations to create interesting visual hierarchy in composition.

**Unit 2: Color, Perception and Space**

This course explores concepts of colors, perception and space with respect to art, art history and fine arts. Students will examine these concepts through various media, including painting, photography, model-making and written assignments that analyze the representational, theoretical and practical applications of color, culminating in a final project that challenges spatial perception.

**Unit 3: Color Science and Fabric Technology**

Discover the ways fabric and color interact in the character development developer. You will learn to identify important fabrics and investigate major color concepts through the use of fabric, so you can make informed color choices for designs or other future work.

**Course Code:** BSC401

**Course Title:** Color and Design

**Total Contact Hours:** 60 hrs.

**Total Credits:** 04

**Total Marks:** 100

**Objectives**

This course will examine the principles of colour theory and design. Students will gain an understanding of colour relationships, as well as learn to identify, and analyze the principles and elements of design. Students will utilize these theories and principles in the creation of their own unique designs. This class involves creative hands-on activities.

**Learning Outcomes**

1. Acquire knowledge and vocabulary of the colour wheel and the visible light spectrum.

2. Understand the three characteristics of colour: hue, value, and intensity.
3. Formulate a range of colour schemes.
4. Identify and apply the elements and principles of design.
5. Display professional, designer-level craftsmanship & eye.
6. Use of colour and experimenting with colours to showcase out of the box colour schemes.
7. Various types of theories of colour

Projects will be graded on the following criteria:

Ability to adhere to project requirements, Comprehension and demonstration of discussed Principles and Elements of Design, development of technical skills, creative solutions to design problems, and professional presentation.

**Course Code: BSC402**

**Course Title: Fundamentals of Texturing and Shading**

**Total Contact Hours: 60 hrs.**

**Total Credits: 04**

**Total Marks: 100**

### **Objectives**

1. Understanding of texturing and shading using real life references
2. Importance of texturing and how the lighting conditions behave differently with different material.
3. Use of lights to give the best possible outcome for your final image.
4. How different textures and lights behave with other elements like fire, water and wind.
5. Properties of texturing and shading studies, using master painters as case studies during class interaction.
6. How to breakdown your project into selecting the correct real life references and materials then applying them to different lighting conditions.

### **Learning Activities**

1. Students will be able create their own product shoot with their phone camera and showcase their learnings in the class.
2. Complete knowledge of how different materials behave with different lighting conditions.
3. In-depth knowledge on type of textures like water, glossy, matte, reflective & non-reflective surfaces and objects.
4. Applying real references and taking reference photos of the same object in the day during different lighting conditions.
5. Understanding shading and lighting industry terminology and then applying them on class assignments.
6. This class will develop the students eye to be more aware of their daily objects and lighting conditions. Which will make them a better artist when it comes to selecting materials and lights.

**Course Code:** BSC403

**Course Title:** Storyboarding Theory and Principles

**Total Contact Hours:** 60 hrs.

**Total Credits:** 04

**Total Marks:** 100

**Learnings:**

1. Storyboards present the visual image of what the viewer will be looking at on screen
2. whether it's a television set, a movie theater screen or a computer monitor.
3. A storyboard panel is a rectangular shaped box on a piece of paper.
4. This class is all about planning your story on paper and understanding the importance of story boarding
5. In the film making process and its vital for all mediums such as
6. Story board for Advertising,
7. Story board for TV, Story board for Film
8. Story board for corporate videos
9. Story board for presentation.

**Objectives:**

1. A storyboard is your roadmap when you make a video.
2. Like a script, your storyboard visually guides you throughout the production process.
3. By planning your video, you know which shots you need to create
4. how to create shots when filming begins.
5. students will learn a comprehensive skill set to storyboard for feature film.

**Unit 1 : Basics of Storyboarding**

Before making any movie, short film, gaming development or even an advertisement. A series of small thumbnails is roughly understanding, deciding the position of the objects in the frame, character position and camera moment. Basic knowledge of creating a story board for a short film will be studied in detail in this module.

**Unit 2 : Storyboard Integrated Advertising 2**

This course introduces students to the rapidly developing world of online ad units. The course will focus on developing concepts for and executing rich media in a demo format. Creative briefs, storyboards, and Flash demo techniques will be utilized to bring students' ideas to life.

**Unit 3 : Preproduction Principles for storyboarding**

This course will provide students with an introduction to professional preproduction with an emphasis on idea generation, concept design, visual development, and storyboarding. The latest techniques of preproduction as used in animation and VFX will be introduced to students.

**Unit 4 : Storyboarding 1: Camera Language & Animatics**

This course introduces students to the fundamentals of professional storyboarding. Topics covered include story development, camera language, stages in storyboarding, preproduction packets, and pitching. The basics of compiling and editing animatics and story reels are also be addressed.



## **Unite 5 Storyboarding 2: Drawing for Cartoons**

In this course, students will create storyboards for the fast-paced cartoon production environment of an animated series. Students will watch shows, study scripts and create original works.

**Course Code:** BSC404

**Course Title:** 3D Animation I

**Total Contact Hours:** 90 Hours

**Total Credits:** 06

**Total Marks:** 150

### **Objectives**

1. Students who successfully complete this course will be able to:
2. Animate their own character in the shot.
3. UV unwrapping of a model, organic and mechanical.
4. Texturing and shading on objects and characters and environments.
5. Lighting indoors and out door scenes. and rendering the scenes with multiple options of renders

### **Learning Outcome**

1. Introduction to Maya User interface, Navigation, Tools,
2. Menu Bar, Introduction to Maya Basic Animation Tools.
3. Graph Editor Tool Bar Buttons, Selecting and modifying keys, Navigating the graph, Selecting items in the graph.
4. Dope Sheet, Moving Keys in Dope Sheet, Time Line, Setting up output file size and resolution, Previewing Animation using Play blast.

### **Unite 1: Stretch and Squash**

Basic Exercise to truly understand the Animation Principles- Simple Bouncing Ball

Students will learn basics of how to use graph editor in Maya to understand relationship between time and space. This class will give full understanding of using all the 3 axes (X,Y& Z)

### **Unite 2: Timing and Spacing**

Animating a ball/ made of different material/s, surface/s and texture/s – Metal, Rubber, Plastic, Wood.

Follow Through, overlap, Animate a Ball with a tail (like a Squirrel)

### **Unite 3: Arcs and Exaggeration**

Animating different ball/ made of different material/s, surface/s and texture/s – Wood, Ping Pong, at the same time. Animating collision between two or more different bouncing ball in a environment in side view

**Course Code:** BSC501

**Course Title:** Narrative Story telling

**Total Contact Hours:** 60 Hours

**Total Credits:** 04

**Total Marks:** 100

**Objectives:**

1. Skills of story narration for short films.
2. story narration for full feature film, hollywood film study.
3. story telling for Animation and visual effects.
4. Skills of narrating different styles and genre of stories for film making and direction.
5. study of artists over the time.

**Learning Outcomes:**

Students who successfully complete this course will be able to:

1. English composition narrative story telling for full length films.
2. Short film story narration for animated and visual effects.
3. Story narration skills for story development
4. Group project working as script writer, dialog writer and one line story.

**Unit 1: Introduction to narrative story telling**

Narrative storytelling techniques are the method and means behind interesting narrative stories. Techniques like point of view, flashbacks, foreshadowing and tone all move the narrative process along, propelling the reader through completion of the story. These and other narrative techniques ground the reader in the current story while creating a framework and means of connection with other works that leaves a lasting impression long after the story is done.

**Unit 2: Point of View**

Point of view is the perspective the author chooses to use when writing a story. POV determines who is telling the story and how it is being told. First person or direct narration is told from the point of view of the storyteller. Third person omniscient or frame narration allows the reader to see the viewpoint of all individuals in the story, including information other characters may not know. Most narratives will maintain one POV throughout the entire story, but some authors use POV shift as a writing technique to provide the reader with more detailed information or a different understanding.

**Unit 3: Flashback**

A flashback reveals something about the story or characters that the reader doesn't know. Flashbacks often set up events that will occur in the story or explain a character's motives based on past behavior. Toni Morrison employed flashbacks heavily to explain the death of Sethe's children in the novel "Beloved," information not otherwise shared in the story. Flashbacks can provide important background information that can both clarify and move the story forward, as long as they do not confuse the reader.

#### **Unit 4: Foreshadowing**

Foreshadowing is a technique used to hint at things to come. The purpose is to create tension within the reader by insinuating possible scenarios for later use in the story. For example, a suicidal individual who discovers a hidden gun early in the story plants a seed in the reader's mind about its ultimate use. Foreshadowing can be a useful technique to suggest situations for later resolution.

#### **Unit 5: Tone**

Tone is the way in which a writer expresses himself in a story, using diction or word choice and imagery. Often authors convey tone through the style of their writing, such as Voltaire's use of satire in "Candide" or Steinbeck's derisive tone through the character of "George" in "Of Mice and Men." Tone helps the author communicate his feelings toward particular issues and regarding certain characters. This in turn helps the reader determine how to feel about the subject matter.

**Course Code: BSC502**

**Course Title: 3D Animation**

**Total Contact Hours: 60 hrs.**

**Total Credits: 04**

**Total Marks: 100**

#### **Learning Outcomes:**

After successfully completing this art esthetic practical course, the students will be able to:

1. The Art of 3d animation.
2. Polishing the modeling skills
3. specializing texturing and shading SSS skill sets
4. rendering with various renders.
5. effects with particles and fluids

#### **List of Practicals:**

1. Polishing final animation for demo reel.
2. Polishing final lighting scenes for demoreel shot compilation.
3. Advance texturing in mari / substance painter or mudbox.
4. Rendering multiple passes with maya for advance compositing
5. demo reel shot polishing and shot finalization sequence wise and shot wise.
6. Final demo reel assessment from industry experts
7. Final compositing with effects and if any CHF of the demo reel

**Course Code: BSC503**

**Course Title: Visual Effects Production II**

**Total Contact Hours: 120 hrs.**

**Total Credits: 08**

**Total Marks: 200**

**Learning Outcomes:**

After successfully completing this art esthetic practical course, the students will be able to:

1. Rotoscoping Human, Isolating extremities, Joints, Hands, Overlap, fixed shapes, faces and heads, hair
2. Concepts and tools for painting, Cleaning plates, Wire and Rig Removal, Pixel restoration.
3. Enhance technical skills for Visual effects workflow
4. Ability to adapt and address storytelling requirements to new technology and platforms.
5. Camera movement and calculations, exposure sheets. Movement of the character within a shot.
6. Composite organic and inorganic object on new BG with help of detailed rotoscopy
7. Create Special effects for desired visual effect

**List of Practicals:**

1. Familiarize the different types of splines used in various rotoscoping software. 10 footages done in Nuke submission at the end of the semester.
2. human, animal, and working on details. 10 footages done in Nuke submission at the end of the semester.
3. Understand masking of cloth and working with secondary motion 5 footages submission at the end of the semester
4. Final Image Manipulation and Compositing submission at the end of the semester.
5. The Integrated Matte Channel, Masks, Compositing at 5 footages the end of the semester.
6. Temporal Resolution, Temporal Artifacts,
7. Changing the Length or Timing of a Sequence,
8. KeyFraming 5 submissions creation and manipulation 5 submissions at the end of the semester.

**Course Code: BSC504**

**Course Title: Mini Project**

**Total Contact Hours: 120 hrs.**

**Total Credits: 08**

**Total Marks: 200**

**Learning Outcomes:**

This course includes collecting your best digital art, animation & Visual effects work and traditional art work. Student will make sure they only have best of best work selected for this course. How to professionally prepare for a Demo reel, which is the most important piece for artist when applying for any jobs in the industry.

1. Understanding on how to cut and edit the best demoree material.
2. How to showcase best of your work and only limit it to the best only and nothing less than your best.

3. How to showcase your work in regard to showing all your skillsets in the demoreel in a short duration and at the same time convey everything to the audience.
4. The work which is more involved and difficult to achieve, should be showcased in a way that it carries enough weightage in your demoreel.
5. How to select your best work and also apply changes to it to make it look better. Lot of these techniques will make the work stand out from other artist when applying for jobs .

**List of Practical's**

1. Collect all your traditional art work & digital art work for getting ready to prep for your Demoreel.
2. Digitally scan or photograph your art work. How to set the correct lighting while capturing your art. Artist will use lights and camera to photograph their work Demoreel.
3. Artist will make a rough story board of their edit on how they want to showcase their work, starting with their best digital art work or animations first and then their traditional art work.
4. Every three weeks artist will keep making changes to their edit for timing and also selecting correct background music for their final Demoreel.
5. Students have to submit a rough Demoreel with correct edits, timings, transitions and overlays to lock for final edit.
6. Students will have to do a final submission of their reel, which will be graded on how they can move to their industry professional driven Demoreel II class, which will be an advanced class for seniors

**Course Code: BSC601**

**Course Title: Major Project**

**Total Credits: 12**

**Total Marks: 300**

**Learning Outcomes:**

While every movie when you view on a big screen in the theatres is very heavily crafted and edited to keep the audience involved and engaged in the story. A good movie if not edited correctly will not look great when you watch it. But a well edited movie will always be more pleasing to watch. This class teaches the art and craft of editing movies, images and sound. Artist will apply lot of their skills from this class for their final Demo reel II class.

After successfully completing this art esthetic practical course, the students will be able to :

**Learning Outcome:**

1. Understanding basic to advanced editing techniques.
2. Industry terminology for editing and filmmaking process.
3. Planning your edits and shots as per story and story beats.
4. Choosing the correct sound also for background music.
5. How transitions make and break your edit, using the correct transitions to narrate your story.
6. Full knowledge of all types of cuts and tricks used to make your edits more dynamic than others

**Practical's:**

1. Creating your first edit from existing movie and using basic cut tools to create a 30-60 sec trailer without any sound or music.
2. Making a short 15 sec product movie edit by using your phone and house hold objects.
3. Shoot and edit your own teaser for a movie, only using original footage of video along with your own background sounds for every shot. This video will have no dialogue.
4. Editing a 60 sec video into a trailer for animation movie and use of transitions on how to tell a better story through your editing skills.
5. Final assignment will do to edit a music video with your own style with use of original soundtrack to make a complete assignment.

**Course Code: BSC602****Course Title: Lab Practice-3****Total Contact Hours: 60 hrs.****Total Credits: 04****Total Marks: 100**

This is an advance Demo reel class. Where Industry professional will work with the students directly to help them create their final demo reel. Guiding each student on how they should present themselves with their work when making a final demo reel for a Job. This call will give artist in-depth insight of what the industry is looking for and how to apply for the correct job.

**Learning Outcome:**

After successfully completing this art esthetic practical course, the students will be able to :

1. This call will help create a final demoreel for artist applying for various jobs in animation and visual effects industry.
2. How to show only your best possible work and remove everything that's not your best.
3. How to work with industry supervisors and professionals and what do they look when they see a artist demo reel.
4. Guest lectures from Industry Professionals to guide each student to make a demoreel which will help them get their first job in the industry.

**Practical's:**

1. Working on your final demoreel. We will start with your last assignment from Demoreel class I.
2. Preparing fr the final edit, one will have to put his idea and resume across and design the stationery of their own.
3. Final edit of the demoreel ideas will then be presented to class for critic and feedback from others and the instructors.
4. Students will then present this to a industry professional for final feedback and changes to the demoreel.
5. Students have to show at least three different versions for instructor to select a final one.
6. The final edit will go through several changes before its final submission. Student will have to be responsible to finish the demoreel with sound and any other effects and transitions.

**Course Code:** BSC603

**Course Title:** Myths and Symbols

**Total Contact Hours:** 30

**Total Credits:** 2

**Total Marks:** 50

**Objectives:**

1. Learning from ancient from of arts digging deep into its meanings.
2. Symbols study from various religious backgrounds.
3. Myths containing timeline transformation / evolution of world and their theories.
4. Strong visual library for artists to go through the final conceptualization.
5. comparison and commonness in myths and symbols from all over the world.

**Learning Outcomes:**

Students who successfully complete this course will be able to:

1. Will build a vast library of supernatural back stories which happen to be the base of 3d animation vfx industry.
2. Indian art myths and symbols over the period of time.
3. Mythology of various gods and their symbols related to it.

**Unit 1: Fundamentals of Myths and Symbols**

This course focuses on diverse cultural mythologies and their symbolic representations. Students learn to recognize the myths and symbols prevalent in modern society and to identify these themes within their own work.

**Unit 2: Power of Indian Myths and Symbols**

Gods and Goddesses and their avatars, their wahans, mythical legendary stories, the time line they were seen/been on this earth. Relating all that to a fictional subject will empower students artistic and purely creative side which is most needed in this industry.

**Course Code:** BSC305

**Course Title:** Physics for Artist

**Total Contact Hours:** 60 Hours

**Total Credits:** 04

**Total Marks:** 100

**Physics for Artist**

This course focuses on physical real-world properties of light, motion & sound.

Students in this call will develop a conceptual and quantitative understanding the fundamentals of Physics.

**Objectives:**

1. Basics & Laws of Physics
2. Physics for Animators and Visual Effects Artists.
3. Importance of Physics Fundamental's in your daily professional career.
4. How to bend some physic laws to work in your Design Conceptsfor the art work/animation you produce.
5. Artist will understand how to blend and change different physic laws into animation.
6. Getting artist to understand and apply the learnings in their projects which will help them calculate, speed, motion, arcing, distance and how objects travel in different conditions.

**Learning Outcome:**

1. Understanding of Physics in nature
2. Applying physics to their animation work to make things more simple.
3. Taking the understanding of all the basic Physic laws and how to bend them and change them to come up with new laws of their own and come generate new ideas.
4. One really gets a good understanding of motion and sound. And how to apply them in animation.
5. This class open's up the mind of artist to see what's beyond the physical.
6. Artist will be able to calculate lot of their animation and visual effects projects timings and length and duration of their work.
7. Artist will be creating some out of box idea to break some laws and show their perspective of learning in the class.

**Books:**

1. Applied Physics