

Information Brochure

MASTER IN ANIMATION DESIGN



BIRLA INSTITUTE OF TECHNOLOGY, MESRA

(Deemed University under section 3 of UGC Act 1956)

Jaipur Campus

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About the Animation and Multimedia Department

Due to new mindset of people in the environment of globalization, the entertainment industry, particularly film and television, has been witnessing high growth, technology intervention and experimentation. Animation & Multimedia is the area that contains all these main aspects. The beauty of this segment lies in conveying the message in a very interesting and simple way.

The Animation & Multimedia department at Jaipur Center has skilled and learned teaching staff having academic and industrial experience. The department has excellent lab infrastructure for fine arts, 2D & 3D Animation, acting and well-equipped computer systems for multimedia application. The department has specialized soft wares like: MAYA, COMBUSION, 3DS-MAX, Toon Boom Studio, Adobe Suite, FLASH, etc.

The courses covered under this department are B.Sc. in Animation & Multimedia and Master in Animation Design. The Department functions as a fast moving community with full commitment to excellence. Guest faculties and professionals regularly visit the campus to interact with the students and deliver lectures. The Department also undertakes live projects in animation from the industry and the production of these projects are done as part of the exposure programme for the students. This field is IT enabled as well as principle based, the course structure and the lab space have been planned accordingly to accommodate both traditional principles and modern practices. The facilities include dedicated animation labs with projectors and 1:1 man machine ratio, an ever-increasing list of titles in the library and spare labs for overtime. There is a common Internet lab for the students.

Along with academic activities the institution also conducts co-curricular activities like Technical Fest, Sports Event and a Cultural Festival every year.

The 3 years B.Sc. Degree Course in Animation & Multimedia was launched in the year 2005. As the timing was perfect and there was a requirement of this course, it immediately picked up pace. Three batches have successfully graduated and most students have been placed

in various prestigious companies like zee Network, Star plus, Doordarshan, Midi Tec., Marwah Studio, Beehives, Escotoonz, Maya Entertainment Ltd., 3D Solutions, Eden Animation Studio and other various designing studios.

Master in Animation Design Programme

The need for Master Program in animation was felt for answering the specialization and further experimentation aspect of the science. The Bachelor program in Animation and Multimedia at Jaipur center sets the base and gives introduction to specialization but the graduate students need a real world exposure for high-end projects. At Jaipur Center, three major disciplines have been identified for dedicated study - animation, 3D art and gaming.

Master in Animation Design is a 2-year full time course. The first year is common and the second year is of specialization in a chosen stream. Writing, designing and production are covered in depth in the context of 2D production, 3D production and game production.

The student will start with paperwork and use software like 3D Max, Maya, Z- Brush, Adobe design suite and some game engines. The course work will make the student conversant with seamlessly combining paperwork and digital work.

Eligibility Criteria

Graduation in one of the streams-Fine arts, Performing Arts or Visual Arts from the recognized university with minimum 55% marks. (45% for SC/ST)

Or

Graduation in any stream from a recognized university with minimum 50% marks and one- Year working experience in art related field. (45% for SC/ST)

Master in Animation Design Course will be of particular interest to:

- **Graduates in Animation & Multimedia, Fine Arts, Performing Arts, and Visual Arts who wish to specialize and obtain a formal qualification in Animation Design.**
- **Graduates in any stream with one-year working experience in art related field, which require background knowledge of Animation Design. This course may be taken to obtain the relevant knowledge and skills.**

Career Opportunities

Upon successful completion of the Post graduation Degree programme, one will be able to manage an animation of multimedia project, from its conceptual stage to the final presentation using industry standard tools.

With the arrival of new computer animation technologies skilled animators are producing stunning visuals for computer games, multimedia, web, television and feature films etc. thus enabling the Post Graduates with endless opportunities.

COURSE STRUCTURE OF MASTER IN ANIMATION DESIGN

SEMESTER-I

S.No.	Subject Code	Subject	Unit
1.	MAD 1001	Traditional Animation (Sessional)	1 Unit
2.	MAD 1002	Writing and Storyboarding (Theory)	1 Unit
3.	MAD 1003	Character Design (Sessional)	1 Unit
4.	MAD 1004	Character Modeling & Texturing (Sessional)	1 Unit
5.	MAD 1005	Live Model Drawing (Sessional)	1 Unit
6.	MAD 1006	Mix Media Animation (Sessional)	1 Unit

TOTAL = 6 UNITS

SEMESTER-II

S.No.	Subject Code	Subject	Unit
1.	MAD 2001	Production Design-I (Sessional)	1 Unit
2.	MAD 2002	Digital Painting (Sessional)	1 Unit
3.	MAD 2003	Lighting and Rendering (Sessional)	1 Unit
4.	MAD 2004	Digital Animation/ Production Animation (Sessional)	1 Unit
5.	MAD 2005	3D Rig and Animation (Sessional)	1 Unit
6.	MAD 2006	Communication Skill (Theory)	1 Unit

TOTAL = 6 UNITS

SEMESTER-III

S.No.	Subject Code	Subject	Unit
1.	MAD 3001	Concept Art (Sessional)	1 Unit
2.	MAD 3002	Compositing and Editing Technique (Sessional)	1 Unit
3.	MAD 3003	Promotion & Advertising (Theory)	1 Unit
4.	MAD 3004	Guided Project	1 Unit

5. Elective Subjects: 2 Units

Student will choose any one group from the below mentioned tables for specialization

Group A

Animation

S.No.	Subject Code	Subject	Unit
1.	MAD 3005	Production Design (Sessional)	1 Unit
2.	MAD 3006	Production Management (Sessional)	1 Unit

Group B

3D Art

S.No.	Subject Code	Subject	Unit
1.	MAD 3007	Visual Effects & Motion Graphics (Sessional)	1 Unit
2.	MAD 3008	Scripting (MEL & MAX) (Sessional)	1 Unit

Group C

Game Art

S.No.	Subject Code	Subject	Unit
1.	MAD 3009	3D Game Art (Sessional)	1 Unit
2.	MAD 3010	2D Game Art (Sessional)	1 Unit

TOTAL = 6 UNITS

SEMESTER-IV

S.No.	Subject Code	Subject	Unit
1.	MAD 4001	Project	5 Unit
2.	MAD 4002	Seminar	1 Unit

TOTAL = 6 UNITS

TOTAL = 24UNITS

SYLLABUS

(MASTER IN ANIMATION DESIGN)

SEMESTER -I

S. No.	Subject Code	Subject Name	Paper	Unit
1.	MAD 1001	Traditional Animation	Sessional	1
<p>Observation, Acting for Animation (With and Without Dialogue), Four Legged Advanced Walks with attitude, Four Legged Advanced Runs with attitude, Dialogue or Acting with walk, Two Legged Advanced Runs with attitude, Expressions, Body Language and Attitude, Character Interaction, History of animation, styles of animation, Fundamental Demonstrations & their combinations.</p>				

S. No.	Subject Code	Subject Name	Paper	Unit
2.	MAD 1002	Writing And Storyboarding	Theory	1
<p>Introduction, Writing for Animation, Perspective/Camera Angles, Picture Composition, Lighting & Rendering, Staging, Techniques & Motifs, Elements of the Continuity Style, Graphic Narrative, and Storyboarding.</p> <p><u>Assignments: -</u></p> <p>Develop script to storyboard.</p>				

Reference Books: -

1. Script to screen
2. The art of layout and storyboarding
3. Shot by shot

S. No.	Subject Code	Subject Name	Paper	Unit
3.	MAD 1003	Character Design	Sessional	1

Creating Characters:

What is Character? Defining Character in terms of power, by their attitudes, Character roles and types, Character levels, Sources of Characters, Main Characters, Making Character Work, Building up a Character definition, Defining attributes, Defining Characters by appearance, Defining Characters by their Circumstances, by territory, by performance, by their rank, by their Fears, by their friends, by lifestyle, eccentricities & questionnaire.

Types of characters

Heroic, Evil / Villain, Comic, Supportive Character Era, Age and Costumes: -

Greek, Roman, Modern, Cultural analysis

Viability: -

Habitat, Culture, Justification.

Buildings, Machinery and Sets

Body Types, Muscles Study, Anatomy Study, Creating Character Sheets, Creating Blueprints, Brief Introduction to Races and Geographical Culture, Costumes, Age, Fantasy Paradigms, Science fiction, Horror, Period.

Character Analysis of film or Serial

Assignments:

Creating blueprints based on above description.

Reference Books:

1. Anatomy for Fantasy Artist

Writer - Green Febry

2. Figure Drawing without a model

Writer - Ron Tiner

S. No.	Subject Code	Subject Name	Paper	Unit
4.	MAD 1004	Character Modeling & Texturing	Sessional	1

Color scheme, Geometry layout of character, Poly count, Topology, Cleanups of meshes, Node study, Proceduralism, Normal maps, Exporting and importing maps, Mapping theory.

S. No.	Subject Code	Subject Name	Paper	Unit
5.	MAD 1005	Live Model Drawing	Sessional	1

Practical session with life model under expert guidance, Study of gesture and acting, 1minutes, 5minutes and 20 minutes Drawing, Principles of observation and stylization. Single model drawing, multiple drawing, sequence poses, Clothing, lighting and Point of view.

Assignments:

Still life and outdoor

Reference Books & CD -

Bridgman lectures, Vilppu lectures.

S. No.	Subject Code	Subject Name	Paper	Unit
6.	MAD 1006	Mix media Animation	Sessional	1
Cutout, claymation, sand, chalk and experimental animation, building armatures, stop motion shooting, Miniature design, Assignments.				

Total - 6 Units

SEMESTER -II

S. No	Subject Code	Subject Name	Paper	Unit
1.	MAD 2001	Production Design - I	Sessional	1
Pre- Production, story art, look and feel development, Deciding the swatch, Style development, Scene layout and Layout theory.				

S. No.	Subject Code	Subject Name	Paper	Unit
2.	MAD 2002	Digital Painting	Sessional	1

Color theory, Study of light on various surfaces, Study of reflection and refraction, Using layers, Understanding Hue, Saturation and histogram, Color level and curves using brushes, Matte painting, BG Painting, Advantages of digital painting for production, Creating textures, Case studies.

S. No.	Subject Code	Subject Name	Paper	Unit
3.	MAD 2003	Lighting and Rendering	Sessional	1

Lighting systems, Lighting rig, Lighting for mood and drama, Basic lighting techniques, Image based lighting, Advance lighting and light tracing, Advance lighting and radiosity, Rendering basics, Using atmospheric effects, Using render elements and effects, Ray tracing and mental ray and V ray, Network rendering.

S. No.	Subject Code	Subject Name	Paper	Unit
4.	MAD 2004	Digital Animation	Sessional	1

Flash animation, Use of library graphic symbols, Compatibility with 3d tools and compositing tools, Animation basics, Animating with constraints and controllers, Working with expression controllers, Working with the track view, Lip synching.

S. No.	Subject Code	Subject Name	Paper	Unit
5.	MAD 2005	3D Rig and Animation	Sessional	1

Rigging character, Understanding the principles of IK and FK, Understanding morphs and creating morph targets, Skinning the character. Introduction to scripting for rigging, Creating self-custom attribute holders.

S. No.	Subject Code	Subject Name	Paper	Unit
6.	MAD 2006	Communication Skill	Theory	1

Introduction to communication, Group Discussion Sessions, Interviews, Presentation Skills, Listening skills, Time Management, Teamwork, Non Verbal Communication. Internal Communication, Resume writing, Report writing, Story weaving, Brainstorming. Media communication.

Total - 6 Units

SEMESTER -III

S. No.	Subject Code	Subject Name	Paper	Unit
1.	MAD 3001	Concept Art	Sessional	1
Use and role of concept art, Concept art and respect for project parameters, Fantasy characters, Habitats, Realism vs. Surrealism, Product design, Use of perspective, Shading and color.				

S. No.	Subject Code	Subject Name	Paper	Unit
2.	MAD 3002	Compositing and Editing Technique	Sessional	1
Handling Backgrounds layers and matte layers, Concept of foreground and background, Depth of field, CG and Live footage, Camera matching, Chroma key and editing technique, Delivery medium, Formats.				

S. No.	Subject Code	Subject Name	Paper	Unit
3.	MAD 3003	Promotion & Advertising	Theory	1
<ul style="list-style-type: none">• Media Strategy: Types of Media, Media characteristics, Media objective, Evaluation of Media, Media Measurement in India, Media selection and scheduling, Media Buying.• Planning and executing an advertising campaign: Setting the advertising objective, Response Hierarchy models, DAGMAR, Defining the target audience, Apportioning the advertising, Budget.				

- Creative Strategy: Positioning Strategy, Creative approaches, Creative style, Mood and appeal of the message, The Big Idea, Elements of the messages Copy, Appeal of the message, Comparative Advertising.
- Other Tools of Promotion.
- Public Relations, Direct marketing, Sales Promotion, Merchandising, Event Marketing.

S. No.	Subject Code	Subject Name	Paper	Unit
1.	MAD 3004	Guided Project	Project	1

Students produce short projects as experiments in concepts, style or technology and are encouraged to take risks, break rules and explore their own unique creative potential. Students may either work in 2D or 3D, 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.

Elective Subjects ----- 2 Units

(Students will choose any one group from the below mentioned tables for specialization)

Elective Subjects

S. No.	Group -A (Animation)	Group -B (3D Art)	Group -C (Game Art)
1.	Production Design-II (Production Phase)	Visual Effects and Motion Graphics	3D Game Art
2.	Production Management	Scripting (MEL & MAX)	2D Game Art

S. No.	Group - A (Animation)			
1.	MAD 3005	Production Design -II (Production Phase)	Sessional	1 Unit
X-sheets, Dope sheets, Director's responsibilities, Using sound, Hook ups, Thumbnailing, Scene Breakdown, and compiling scene folder, Sound FX and Music.				
2.	MAD 3006	Production Management	Sessional	1 Unit
Handling folders <ul style="list-style-type: none"> ▪ Effects oriented folders ▪ Acting oriented folders ▪ Crowd scenes ▪ Pan scenes and Camera work 				
S. No.	Group - B (3D Art)			
1.	MAD 3007	Visual Effects and Motion Graphics	Sessional	1 Unit
Particles systems, Reactors, Fluid dynamics, Match movie, Concept of multi pass renders, Basics of motion graphics, Color theory, Color schemes, Layout design, Working with layers, Analysis of different motion graphics, Study of breakups, Motion graphics creation, Broadcasting essentials.				
2.	MAD 3008	Scripting (MEL & MAX)	Sessional	1 Unit
Introduction to Max script, Learning the interface, Max script syntax and terminology, Learning max script, Creating custom tools using max script, Use of debuggers, Introduction to MEL, Creating basic primitives with varying attributes, Creating custom Windows using MEL Use of different commands and their syntax, Using particle expressions to create simulations.				
S. No.	Group - C (Game Art)			
1.	MAD 3009	3D Game Art	Sessional	1 Unit
Game Assets, Game Design Document, Game Engines, Introduction Game Testing, Machinima, Games for various Platforms such as Mobile Games, Developing game assets- Models, Textures, sets, and animation.				
2.	MAD 3010	2D Game Art	Sessional	1 Unit
History of Game Development, Flash and 2D interactive platforms, Elements of a Game, Types of Games Story Development for Game, Script and Story Board Development for Game, Assets creation for 2D Games- Models, Textures, Sets, and Animation.				

SEMESTER - IV

S. No.	Subject Code	Subject Name	Paper	Unit
1.	MAD 4001	Project	Sessional	5

The students will pursue a complete production cycle of his own choosing with approval from the department. A detailed documentation, bible and production diary is to be prepared and submitted. These efforts are to be consulted by the department at regular intervals.

2.	MAD 4002	Seminar	Sessional	1
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The students according to their inclination and interest will get a topic as assignment. A presentation and document has to be prepared on the assigned topic and the concerned student has to prove his personal life experience and abilities as a factor for leveraging the quality of the project. Pertinent issues concerning animation production, management and technology would be covered. This event will facilitate the exchange of ideas, notes and pave ground for further areas of work.

Total - 6 Units

Total - 24 Units