

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB

Syllabus for B.Sc. in 3D Animation Film Making (BAFM) Programme

(Effective for Students Admitted in Academic Session 2019-2020)

SEMESTER V

Paper: MEDIA ETHICS AND EDUCATION

Code: BAFM -501

Contacts Hours / Week: 5+1T

Credits: 3

Marks: 100

Module	List Of Topics and Exercises
1	<p>To understand the positive as well as negative influence of media and the critical, evaluation of media.</p> <ul style="list-style-type: none">• Ethics – Branches of Ethics, Media Ethics – Mass Media and the shape of the Human Moral Environment. Applied Ethics – Ethical issues in different media professions – Journalism, Cinema, Advertising, Photography, Graphic Design, Animation etc.- Overview of Codes and Regulations in India. Digital Media Ethics.• Media Education – Objectives and Skills – Key Concepts, Media Scenario: Present Trends – <p>Different Starting points for Media Education – Media Impact in Society – Social and Psychological impacts.</p>

Suggested Readings: 1. Mass Media and the Moral Imagination: Philip J Rossi
2. Media Education in India: Jacob Srambickal
3. Media Ethics: Bart Pattyn

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Practical

Paper: MODELING & TEXTURING

Code: BAFM -591

Contacts Hours / Week: 30P

Credits: 15

Marks: 300

Module	List Of Topics and Exercises
1	Learning Techniques of Advanced Character Modeling
2	Introduction to Z-Brush using various Sculpting brushes and Stencil maps on the characters.
3	Working on 2D, 2.5D, and 3D brushes. Advanced 3d Character Painting and Conceptualizing .Brushes- Alpha brush, stencil, fibre mesh etc.
4	Import and Export Normal Maps and Displacement maps
5	Encouraged to build cartoony, alien, human and animal characters. UV Mapping and UV Wrapping Techniques

Suggested Software: Adobe Photoshop Maya & Z-Brush

Suggested Readings: Advanced Maya Texturing and Lighting by P. Lee Lanier

Paper: TEXTURING & LIGHTING

Code: BAFM -592

Contacts Hours / Week: 30P

Credits: 15

Marks: 300

Module	List Of Topics and Exercises
1	Advanced Texturing- Z- Brush Introduction
2	Working on 2D, 2.5D, and 3D brushes. Advanced 3d Character Painting and Conceptualizing. Brushes- Alpha brush, stencil, fibre mesh etc.
3	Import and Export Normal Maps and Displacement maps
4	Encouraged to build Cartoony, alien, human and animal characters. UV Mapping and UV Wrapping Techniques
5	Advance Lighting Illuminating 3DScenes Using various lights to illuminate scenes, day lighting, night lighting, adding fog to environments, light glows, indoor and outdoor lighting, diffused lighting, 3-point lighting, key light, fill light and back light, Understanding global illuminations, GI photons, photon maps, final gathering, combining GI and FG, HDRI images, caustics, subsurface scattering, creating physical sun and sky.

Suggested Software: Adobe Photoshop, Maya & Z-Brush

Suggested Readings: Maya Texturing and Lighting by P. Lee Lanier

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Paper: RIGGING & CHARACTER ANIMATION

Code: BAFM -593

Contacts Hours / Week: 30P

Credits: 15

Marks: 300

Module	List Of Topics and Exercises
1	<p>Advanced Rigging</p> <ul style="list-style-type: none">• Inverse kinematics, forward kinematics• Ik spine rig, Ik Blend shapes,• Muscles system• Ribbon IK• Set driven Key, character sets• Redirect, prune membership tools <p>Body Mechanics</p> <p>Animating small actions to familiarize body movement. Sit & stand, climb, swim jump, character interaction with objects</p> <ul style="list-style-type: none">• Applying Animation Principles, Learning Techniques of Blocking, Primary and Secondary actions.• Creating different kinds of Acting (Actions)• Shooting the facial action according to their story.• Working on Animation Clips (Short Scenes which includes Acting, lip sync and Expressions)

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(Effective for Students Admitted in Academic Session 2019-2020)

Paper: LIGHTING & COMPOSITING, RENDERING

Code: BAFM -594

Contacts Hours / Week: 30P

Credits: 15

Marks: 300

Module	List Of Topics and Exercises
1	<p>Illuminating 3D Scenes Using various lights to illuminate scenes, day lighting, night lighting, adding fog to environments, light glows, indoor and outdoor lighting, diffused lighting, 3-point lighting, key light, fill light and back light,</p> <p>Understanding global illuminations, GI photons, photon maps, final gathering, combining GI and FG, HDRI images, caustics, subsurface scattering, creating physical sun and sky.</p> <p>Compositing</p> <ul style="list-style-type: none">• Introduction V-Ray, Render passes export into *.EXR file format• 3d Render passes, lighting for 3d compositing, Multi pass compositing• <p>Color Correction for 3D Compositing</p> <ul style="list-style-type: none">• Color Grades and Vignettes,• Compositing in Node based software <p>Introduction to Match Mover</p> <ul style="list-style-type: none">• Match mover fundamentals, understanding the production pipeline, Live action 3D Tracking <p>Tracking & 3D Tracking</p> <ul style="list-style-type: none">• Concepts of 2D Tracking for 3D, Perspective matching, Solving camera, Nodal plane shot, focal length shot

Suggested Software: Maya & NUKE

Suggested Readings: Advanced Maya Texturing and Lighting by P, Lee Lanier

Suggested Readings: The Magic of Houdini Paperback– by William

Sessional

Paper: STOP MOTION ANIMATION

Code: BAFM 581

Contacts Hours / Week: 3L+1T

Credits: 3

Marks: 100

Module	List Of Topics and Exercises
1	<p>Stop motion:</p> <ul style="list-style-type: none">• Students learn how to create the illusion of animation to tell a story with a series of pictures.• Practice the techniques of photographing for a stop-motion film.• Learn how to write a script then make a storyboard for their stop-motion film.