

MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WB

Syllabus for B.Sc. in VFX Film Making (BVFM) Programme
(Effective for Students Admitted in Academic Session 2019-2020)

SEMESTER III

Paper: LISTENING AND SPEAKING SKILLS IN ENGLISH

Code: BVFM -301

Contacts Hours / Week: 3L+1T

Credits: 2

Marks: 100

Module	List Of Topics and Exercises
1	Objectives: <ul style="list-style-type: none">• To introduce the students to the speech sounds of English in order to enable them to listen• To English and speak with global intelligibility. To enable the students to speak English confidently and• Effectively in a wide variety of situations. To help the students to improve their reading efficiency By refining their reading strategies.
2	Speech Sounds: <ul style="list-style-type: none">• Phonemic symbols – Vowels – Consonants – Syllables – Word stress – Stress• in polysyllabic words – Stress in words used as different parts of speech – Sentence stress – Weak forms and strong forms – Intonation
3	Speech Sounds: <ul style="list-style-type: none">• Phonemic symbols – Vowels – Consonants – Syllables – Word stress – Stress• Polysyllabic words – Stress in words used as different parts of speech – Sentence stress – Weak forms and strong forms

Suggested Readings: V. Sasikumar, P Kiranmai Dutt and Geetha Rajeevan, .
Communication Skills in English. Cambridge University Press and Mahatma Gandhi
University.

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PRACTICALS

Paper: CLAY MODELLING

Code: BVFM -391

Contacts Hours / Week: 2T+6P

Credits: 4

Marks: 100

Module	List Of Topics and Exercises
1	Focuses on modelling characters with different types of clay. Clay models are used to improve visualization while modeling 3D digital characters. Use overlaying modelling to feel and understand the anatomy, proportions and depth of the model
2	Types of Clay Use of plasticize, polymer, POP, other non-hardening plastic clay, wax, various types of water based clay etc.
3	Tools used for Clay Modelling Tool slice cutter, scraper ,carver ,ribbon cutter etc. made of polished hardwood ,wire and modelling tools etc.,

Paper: FUNDAMENTALS OF CG MODELING

Code: BVFM -392

Contacts Hours / Week: 2T+6P

Credits: 4

Marks: 100

Module	List Of Topics and Exercises
1	Focuses on using 3d software to build sets and props. The 3d modelling tools required and are also encouraged to develop their own 3d scenes. Modelling interior and exterior sets based on a designed layout is also a focus during this part of the course.
2	Creating NURBS primitive objects, Creating NURBS curves, attaching and detaching curves, NURBS components, Editing NURBS surfaces <ul style="list-style-type: none">• Revolving• Lofting and extruding curves to create surfaces, attaching and detaching surfaces• Socking• Stitching surfaces
3	Creating polygon primitive objects, polygon components, editing polygon surfaces, combining and separating polygons <ul style="list-style-type: none">• Creating polygon primitive objects• Polygon components• Editing polygon surfaces• Combining and separating polygons

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	<ul style="list-style-type: none">• Splitting and sub-dividing polygons• Extruding polygons, Merging vertices, Bevel
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Suggested Software: Autodesk Maya

Suggested Readings: Autodesk Maya 2018 by Tickoo Sham

Paper: TEXTURING & LIGHTING, CAMERA

Code: BVFM -393

Contacts Hours / Week: 2T+6P

Credits: 4

Marks: 100

Module	List Of Topics and Exercises
1	Focuses on creating shaders and materials. Encouraged to study the surface features of the various objects and create shaders accordingly. This section also covers the workflow involved in texturing characters.
2	<ul style="list-style-type: none">• Creating Shaders and Materials<ul style="list-style-type: none">○ Understanding shader attributes, Creating shading networks, connecting nodes in work area, using 2d and 3d texture nodes, applying maps to various material attributes like transparency maps, bump maps etc.,• UV Mapping Techniques<ul style="list-style-type: none">○ Understanding UV's, editing UV's and using mapping projections on polygon surfaces, planer mapping, cylindrical mapping, spherical mapping, automatic mapping, working with UV texture editor window• Unwrapping UVs<ul style="list-style-type: none">○ Understanding unwrapping, unwrapping props and characters to facilitate texture painting, relaxing and unfolding UV's, split UV's, creating UV sets
3	<ul style="list-style-type: none">• Creating various types of lights, light properties, understanding light attributes, direct and indirect lighting, using maps on light attributes, break light links, make light links
4	Illuminating 3d Scenes, Global Illumination <ul style="list-style-type: none">• Understanding global illuminations, GI photons, photon maps, final gathering, combining GI and FG, HDRI images, caustics, subsurface scattering, creating physical sun and sky• Understanding Renderers• Basic to advanced renderers• Multi pass and multilayer rendering

Equipment: DSLR Camera and Studio Light setup

Suggested Software: Autodesk Maya

Suggested Readings: 1. Maya Texturing and Lighting by Lee Lanier

2. Maya Texturing and Lighting by Lee Lanier

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Paper: VIDEO & AUDIO EDITING /INTRODUCTION TO NUKE

Code: BVFM -394

Contacts Hours / Week: 2T+6P

Credits: 4

Marks: 100

Module	List Of Topics and Exercises
1	<p>Focuses on manipulating and rearranging video shots to create a new work. Editing is usually considered to be one part of the post production process — other post-production tasks include titling, color correction, sound mixing.</p> <p>Assembling the timeline (Video Editing)</p> <ul style="list-style-type: none">• Editing from the Bin- Cutting down Your Sequence - Navigating the Timeline- Thinking Nonlinearly - Trimming Fundamentals - Methods of Trimming - Types of Trim <p>Importing and Exporting audio</p> <ul style="list-style-type: none">• Importing and Exporting Motion Audio, Types of Effects -Effect Design - Rendering – Key frames-
2	<p>Introduction Nuke</p> <ul style="list-style-type: none">• User interface• Overview of Tools & Nodes• Navigating Viewer <p>Creating Geometry & Nodes</p> <ul style="list-style-type: none">• Animate nodes• Transform, Merge, Geo Node• Roto scoping, Paint, wire and rig removals• Tracking, <p>How to render final out put</p>

Suggested Software: Adobe Premier, Nuke

Suggested Readings: Adobe Premiere CC Classroom Andrew Faulkner,

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Sessional

Paper: FILM ANALYSIS

Code: BVFM -381

Contacts Hours / Week: 4P

Credits: 2

Marks: 100

Module	List Of Topics and Exercises
1	<ul style="list-style-type: none">• Introduction of film ,The beginning, The Pioneers, The coming of talkies, the studio system , the golden age of animated film• Different kinds of film format, Documentary, short films & 2d Animation Films, Indian news reel, Parallel cinema, Commercial Cinema, Multiplex Cinema,• Producing animated film, Production crew and their functions, animated film production equipment's and steps in 2d & 3d film making.• Appreciation of the animated film, Understanding of visual effects and work of animation in feature film appreciation, review, and critique.• Analysis of some landmark 3d animated movies