

# Maulana Abul Kalam Azad University of Technology, West Bengal

## Syllabus of B.Sc.in VFX Film Making (CBCS )

Effective from academic session 2021-22

### SEMESTER-1

#### Paper: INTRODUCTION TO DRAWING

Code: BVFM 101

**Course Objective:** The course is designed to provide an introduction to the fundamental aspects of design, drawing methodologies as well as visual communication. Students will be able to develop a sense of design aesthetics as well as create better processes of design systems. They can understand the form by learning basic shapes, composition and light, perspective figure drawing.

Sl	Course Outcome	Mapped modules
1	Remembering	M1, M2
2	Understanding the course	M1, M2, M3, M4
3	Applying the general problem	M3, M4
4	Analyse the problems	M3, M4
5	Evaluate the problems after analysing	M3,M4
6	Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Introduction to Basic Drawing	6	25		
M 2	Introduction to Basic Perspective	8	25		
M 3	Basic Figure Drawing	8	25		
M 4	Masses of the Figure	8	25		
		<b>30</b>	<b>100</b>		

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### Introduction to Drawing

Total Credit: 4

Total hours of lectures: 30 hours

Sl.	Topic/Module	Hour
1.	<b>Module 1- Introduction to Basic Drawing:</b> <ul style="list-style-type: none"><li>• Comprehensive introduction to the essentials of drawing</li><li>• Points and lines- Types, Direction, Quality, lines and outlines, contours, Lines as value, Shapes, Geometric and Rectilinear, Curvilinear and Biomorphic, Abstract, Positive.</li><li>• Learn the fundamentals of shape</li><li>• Mastering the art of drawing shapes and achieving a deeper understanding of all forms.</li><li>• Composition of the forms and working with light and shade.</li></ul>	6
2.	<b>Module 2- Introduction to Basic Perspective:</b> <ul style="list-style-type: none"><li>• Understanding the basic elements (of perspective &amp; how they work together to create illusion of 3D forms.</li><li>• The various elements of perspective and composition would enable students to expressively and aesthetically arrange their subjects within the boundaries of a drawing space.</li><li>• Learn the One-point, Two-point and Three-point perspective principles with practical examples</li><li>• How to use one &amp; two-point perspective to draw three dimensional objects from your imagination</li><li>• Have a clear understanding of how to build perspective grids.</li><li>• Draw objects and environments- interiors and exteriors</li></ul>	8
3.	<b>Module 3-Basic Figure Drawing:</b> <ul style="list-style-type: none"><li>• Deeper understanding of the curves and lines that make up male and female bodies.</li><li>• Dynamics of freehand sketching</li><li>• Line of action, apply the line, C-curve, and S-curve to the figures.</li><li>• Draw great action poses using gesture drawings</li><li>• Capture and draw gesture poses properly.</li></ul>	8
4.	<b>Module 4- Masses of the Figure:</b> <ul style="list-style-type: none"><li>• Scale and Proportion- Human scale, Contrast and Confusion, Ideal Proportion,</li><li>• Contrast and emphasis- Contrast, Isolation, Placement, Absence of Focal point</li><li>• Rhythm- Rhythm and motion, Alternating and Progressive Rhythm, Rhythmic Sensation.</li><li>• Add basic shapes to represent body parts.</li><li>• Draw an incredible variety of poses, actions, and gestures with the correct relationships between forms.</li></ul>	8

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### Suggested Readings:

1. Fun with Pencil – Andrew Loomis.
2. Basic figure drawing techniques - Greg Albert
3. Anatomy and Drawing by Victor Perard
4. Andrew Loomis - Figure Drawing For All It's Worth
5. Perspective Made Easy – Ernest R. Norling
6. Learn how to draw - John Hagan

### Paper: INTRODUCTION TO DRAWING (P)

Code: BVFM 191

**Course Objective:** The course is designed to provide an introduction to the fundamental aspects of design, drawing methodologies as well as visual communication. Students will be able to develop a sense of design aesthetics as well as create better processes of design systems. They can understand the form by learning basic shapes, composition and light, perspective figure drawing.

Sl	Course Outcome	Mapped modules
1	Remembering	M1, M2
2	Understanding the course	M1, M2, M3, M4
3	Applying the general problem	M3, M4
4	Analyse the problems	M3, M4
5	Evaluate the problems after analysing	M3,M4
6	Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Introduction to Basic Drawing	8	40		
M 2	Introduction to Basic Perspective	8			
M 3	Basic Figure Drawing	12	40		
M 4	Masses of the Figure	12			
		<b>40</b>	<b>80</b>		

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**Effective from academic session 2021-22**

**Introduction to Drawing (P)**

Total Credit: 2

Total hours of lectures: 40 hours

Sl.	Topic/Module	Hour
1.	<b>Module 1- Introduction to Basic Drawing:</b> <ul style="list-style-type: none"><li>• Warm up exercises – drawing circles, spirals, curves.</li><li>• Drawing lines- Types, Direction, Quality, lines and outlines, contours, Lines as value, Shapes, Geometric and Rectilinear, Curvilinear and Biomorphic, Abstract, Positive.</li><li>• Learn the fundamentals of shape</li><li>• Mastering the art of drawing shapes and achieving a deeper understanding of all forms.</li><li>• Composition of the forms and working with light and shade.</li></ul>	8
2.	<b>Module 2- Introduction to Basic Perspective:</b> <ul style="list-style-type: none"><li>• Creating the basic elements (of perspective &amp; how they work together to create illusion of 3D forms..</li><li>• Drawing objects like table, chair, bed, vehicles in one &amp; two-point perspective</li><li>• Draw objects and environments- interiors and exteriors using reference.</li><li>• Draw objects and environments- interiors and exteriors from imagination</li></ul>	8
3.	<b>Module 3-Basic Figure Drawing:</b> <ul style="list-style-type: none"><li>• Sketching male and female bodies using gesture line freehand sketching</li><li>• Line of action, apply the line, C-curve, and S-curve to the figures.</li><li>• Draw great action poses using gesture drawings by applying the line, C curve and S curve to the figures</li><li>• Capture and draw gesture pose properly.</li></ul>	12
4.	<b>Module 4- Masses of the Figure:</b> <ul style="list-style-type: none"><li>• Add basic shapes to represent body parts.</li><li>• Draw an incredible variety of poses, actions, and gestures with the correct relationships between forms.</li></ul>	12

**Suggested Readings:**

1. Fun with Pencil – Andrew Loomis.
2. Basic figure drawing techniques - Greg Albert
3. Anatomy and Drawing by Victor Perard
4. Andrew Loomis - Figure Drawing For All It's Worth
5. Perspective Made Easy – Ernest R. Norling
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## Syllabus of B.Sc.in VFX Film Making (CBCS )

Effective from academic session 2021-22

### Paper: ADVANCE DRAWING

Code: BVFM102

**Course Objective:** The course is designed to provide learning and application industry-standard drawing techniques. Students will be able to draw realistic and conceptual content with appropriate light or value, shadow texture and form using effective techniques. The students will be able to create drawing just about anything from observation, whether it be people and figures, landscapes, cityscapes, still life and more.

Course Outcome	Mapped modules
Remembering	M1, M2, M3, M4
Understanding the course	M1, M2, M3, M4
Applying the general problem	M1, M2
Analyse the problems	M3, M4
Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Dynamic drawing of human figure	5	25		
M 2	Detailed Figure Drawing	5	25		
M 3	Composition with Light & Shade	12	25		
M 4	Force Drawing & anatomy	10	25		
		<b>30</b>	<b>100</b>		

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## Syllabus of B.Sc.in VFX Film Making (CBCS )

Effective from academic session 2021-22

### Advance Drawing

Total Credit: 4

Total hours of lectures: 30 hours

Sl.	Topic/Module	Hour
1.	<b>Module 1-Dynamic Drawing of Human Figure:</b> The students will be able to visualize the figure in the tremendous variety of poses which the body takes in action, poses which plunge the various forms of the body into deep space and show them in radical foreshortening. <ul style="list-style-type: none"><li>• Draw the human form from any angle or pose</li><li>• Pose the human form</li><li>• Draw male and female figures</li><li>• Draw the figure without using reference</li><li>• Have the ability to create a figure from their mind</li></ul>	5
2.	<b>Module 2- Detailed Figure Drawing:</b> <ul style="list-style-type: none"><li>• Anatomy and structure of the realistic eye, nose, mouth and ear before learning how to accurately draw them, either from imagination or from a subject.</li><li>• Drafting hair and drapery</li><li>• Detailed figure of human, animal and birds including gesture, line, block-in, structural drawing, and applying tone or value</li><li>• Drawing the expression sheets</li></ul>	5
3.	<b>Module 3- Composition with Light &amp; Shade:</b> <ul style="list-style-type: none"><li>• "Rules" of composition</li><li>• Understanding the concepts of perspective as a tool in visual content creation</li><li>• Application of the knowledge concerning light and shade, composition, spatial usage, and so on</li><li>• Observe &amp; Draw realistic light and shadow</li><li>• Draw Landscape</li><li>• Draw backgrounds – (Foreground, mid ground &amp; Background)</li><li>• Pencil Rendering Color – Still Life</li><li>• Texturing , Scene Composition (including character)</li><li>• How to bring your drawings to life with detail and texture.</li></ul>	12
4.	<b>Module 4- Force Drawing and Anatomy:</b> <ul style="list-style-type: none"><li>• Introduction to Action Drawings</li><li>• Forceful Shape and form (Humans, Animals , Birds)</li><li>• Exploring the different facets of motion and the human body.</li><li>• Basics of proportions, and how to simplify the skeleton.</li><li>• Drawing the skeleton and learning where all the muscles attach, which is key to drawing figures from imagination.</li><li>• Stresses the function of each body part and how gravity relative to different poses affects the aesthetics and form of muscle.</li><li>• Drawing realistic figures from imagination.</li></ul>	10

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### Suggested Readings:

1. Dynamic Figure Drawing by Burne Hogarth.
2. Force Drawing by Michael Matisse.
3. Classic Human Anatomy in Motion\_ The Artist's Guide to the Dynamics of Figure Drawing
4. Ken Hultgren - The Art of Animal Drawing
5. Drawing Animals – Victor Ambrus
6. Force\_ Animal Drawing\_ Animal locomotion and design concepts for animators
7. Animation Background & Layout – Mike S. Fowler

### Paper: ADVANCE DRAWING (P)

Code: BVFM 192

**Course Objective:** The course is designed to provide learning and application industry-standard drawing techniques. Students will be able to draw realistic and conceptual content with appropriate light or value, shadow texture and form using effective techniques. The students will be able to create drawing just about anything from observation, whether it be people and figures, landscapes, cityscapes, still life and more.

Course Outcome	Mapped modules
Remembering	M1, M2, M3, M4
Understanding the course	M1, M2, M3, M4
Applying the general problem	M1, M2
Analyse the problems	M3, M4
Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Dynamic drawing of human figure	5	40		
M 2	Detailed Figure Drawing	10			
M 3	Composition with Light & Shade	10	40		

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M 4	Force Drawing & anatomy	15			
		<b>40</b>	<b>80</b>		

**Advance Drawing (P)**

Total Credit: 2

Total hours of lectures: 40 hours

Sl.	Topic/Module	Hour
1.	<b>Module 1-Dynamic Drawing of Human Figure:</b> <ul style="list-style-type: none"> <li>• Drawing human poses from any angle or pose</li> <li>• Posing the human form</li> <li>• Drawing detailed male and female figures</li> <li>• Draw human figure without using reference</li> </ul>	5
2.	<b>Module 2- Detailed Figure Drawing:</b> <ul style="list-style-type: none"> <li>• Anatomy and structure of the realistic eye, nose, mouth and ear before learning how to accurately draw them, either from imagination or from a subject.</li> <li>• Drafting hair and drapery</li> <li>• Detailed figure of human, animal and birds including gesture, line, block-in, structural drawing, and applying tone or value</li> <li>• Drawing the expression sheets</li> </ul>	10
3.	<b>Module 3- Composition with Light &amp; Shade:</b> <ul style="list-style-type: none"> <li>• Drawing Landscape</li> <li>• Draw backgrounds – (Foreground, mid ground &amp; Background)</li> <li>• Pencil Rendering Color – Still Life</li> <li>• Texturing , Scene Composition (including character)</li> <li>• How to bring your drawings to life with detail and texture.</li> </ul>	10
4.	<b>Module 4- Force Drawing and Anatomy:</b> <ul style="list-style-type: none"> <li>• Action Drawings</li> <li>• Forceful Shape and form (Humans, Animals , Birds)</li> <li>• Exploring the different facets of motion and the human body.</li> <li>• Basics of proportions, and how to simplify the skeleton.</li> <li>• Drawing the skeleton, attaching muscles, which is key to drawing figures from imagination..</li> <li>• Drawing realistic figures from imagination.</li> </ul>	15

**Suggested Readings:**

1. Dynamic Figure Drawing by Burne Hogarth.
2. Force Drawing by Michael Matisse.
3. Classic Human Anatomy in Motion\_ The Artist's Guide to the Dynamics of Figure Drawing



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4. Ken Hultgren - The Art of Animal Drawing
5. Drawing Animals – Victor Ambrus
6. Force\_ Animal Drawing\_ Animal locomotion and design concepts for animators
7. Animation Background & Layout – Mike S. Fowler

### Paper: ENVIORNMENTAL SCIENCE

Code: BVFM103

**Course Objective:** The course is designed to facilitate students' understanding of complex environmental issues from a problem-oriented, interdisciplinary perspective. They will understand core concepts and methods from ecological and physical sciences and their application in environmental problem-solving. It will bring about an awareness of a variety of environmental concerns. It will attempt to create pro-environmental attitude and behavioural pattern in society that is based on creating sustainable lifestyles.

Course Outcome	Mapped modules
Remembering	M1, M2, M3, M4
Understanding the course	M1, M2, M3, M4
Applying the general problem	M1, M2
Analyse the problems	M4
Evaluate the problems after analysing	M3, M4
Create using the evaluation process	M3, M4

Module Number	Content	Total Hours	%age of questions	Blooms Level (if applicable)	Remarks (If any)
M 1	Basic concepts of Environmental Science	3	10		
M 2	Environment-civilization interface	3	15		
M 3	Ecosystems	3	15		

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M 4	Environmental ethics	4	25		
M 5	Current environmental issues in India	3	15		
M 6	Concept of Sustainability	4	20		
		<b>20</b>	<b>100</b>		

Environmental Science

Total Credit: 2

Total hours of lectures: 20 hours

Sl.	Topic/Module	Hour
1.	<p><b>Basic concepts of Environmental Science:</b></p> <ul style="list-style-type: none"> <li>• Concept of environment; Principle and scope of environmental science;</li> <li>• Multidisciplinary approach of environmental science;</li> <li>• Basic concepts and genesis of global environmentalism; Environmental education and awareness;</li> <li>• Environmental ethics and global imperatives;</li> <li>• Anthropocentric environmental view.</li> </ul>	3
2.	<p><b>Environment-civilization interface:</b></p> <ul style="list-style-type: none"> <li>• Human society and settlement;</li> <li>• Process of cultural transmission;</li> <li>• Gradual social changes in relation to environment;</li> <li>• Nature vs. Nurture;</li> <li>• Global environmental problems and initiatives; Global and Indian context of demography.</li> </ul>	3
3.	<p><b>Ecosystems:</b></p> <ul style="list-style-type: none"> <li>• Concept of an ecosystem, introduction, types, characteristic features, structure and function of the following ecosystems :-Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries), producers, consumers and decomposers, energy flow in the ecosystem, ecological succession, food chains, food webs and ecological pyramids.</li> </ul>	3
4.	<p><b>Environmental ethics:</b></p> <ul style="list-style-type: none"> <li>• Issues and possible solutions Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust, Wasteland reclamation, Consumerism and waste products,</li> <li>• Environment Protection Act,</li> <li>• Air (Prevention and Control of Pollution) Act,</li> </ul>	4

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	<ul style="list-style-type: none"><li>• Water (Prevention and control of Pollution) Act, Wildlife Protection Act,</li><li>• Forest Conservation Act,</li><li>• Issues involved in enforcement of environmental legislation, Public awareness.</li></ul>	
5.	<b>Current environmental issues in India:</b> <ul style="list-style-type: none"><li>• Environmental movements and related issues in India-Bishnoism, Silent valley movement, Narmada Dam, Teheri Dam, Almetti Dam, River Linking,</li><li>• Joint Forest Management,</li><li>• Chipko movement, Apikko movement,</li><li>• River cleaning initiatives;</li><li>• Ecological restorations: case studies from Ramsar wetlands and mines; Waste land and their reclamation; Desertification and its control.</li></ul>	3
6.	<b>Concept of Sustainability:</b> <ul style="list-style-type: none"><li>• Sustainability indices;</li><li>• Strategies and debates on sustainable development;</li><li>• Concept of Sustainable Agriculture; India's environment action programme: issues, approaches and initiatives towards Sustainability;</li><li>• Sustainable development in practice;</li><li>• Urbanization; Urban sprawling and urban growth; Concept and characteristics of smart city; Urban resources and environmental problems; Carrying capacity analysis; Concept of ecological footprints.</li></ul>	4

### FIELD WORK

1. Visit to a local area to document environmental assets river/forest/grassland /hill/mountain
2. Visit to a local polluted site-Urban/Rural/Industrial/Agricultural
3. Study of common plants, insects, birds.
4. Study of simple ecosystems-pond, river, hill slopes, etc.

### Suggested Reading:

1. Erach Bharucha (2013), Textbook of Environmental Studies for Undergraduate Courses Second Edition, Hyderabad: UniversitiesPress.
2. C.R.Townsend, M.Begon&J . L . Harper (2008), Essentials of Ecology Third Edition, United Kingdom, Oxford: Blackwell Publishing.
3. H.V.Jadhav &V.M.Bhosale (2006), Environmental Protection & Laws, Mumbai: Himalaya Publishing House.
4. B.B.Singh (2016), Objective Environmental Sciences, Ramesh Publishing House.
5. N.Arrumugam, V.Kumaresan, Environmental Studies
6. Asthana D.K., Asthana Meera (2010), A Textbook of Environmental Studies, S Chand.