

CERTIFICATE COURSE IN 3D ANIMATION

REGULATIONS AND SYLLABUS
FOR
CERTIFICATE COURSE IN 3D ANIMATION
OFFERED BY
BHARATHIAR UNIVERSITY, COIMBATORE
FROM 2008-2009

UNDER THE
UNIVERSITY INDUSTRY INTERACTION AND
CONSULTANCY SERVICE CENTRE (UIICSC)
COLLABORATIVE PROGRAMME

CERTIFICATE COURSE IN 3D ANIMATION

REGULATIONS AND SYLLABUS

REGULATIONS

1. Description of course/objective of the course

This course is designed to prepare technicians with specialized skills, knowledge and attitude to work in Animation field.

The program will be conducted at any Amaze Multimedia Centre recognized by Bharathiar University under the UIICSC Collaborative Program.

2. Eligibility

A pass in 10+2 Examination/PUC/ Equivalent to H.S.C

3. Duration of the Course

The Course shall extend over a period of 6 months.

4. Courses and scheme of examination

Course No.	Course Title	University Examination		Credits
		Internal	External	
1. Theory	Maya Modeling and Texturing	40	60	4
2. Theory	Animation and Rigging	40	60	4
3. Practical	Character Modeling	40	60	4
4. Practical	Character Animation	40	60	4

5. Practical Training

Being a practical oriented program, the focus will be more on practical training. The candidate shall undergo practical training of the computer laboratory of Amaze Multimedia or other computer laboratories of Bharathiar University affiliated institutions.

6. Requirement to appear for examination

Candidate should put in a minimum of 90% attendance to appear for the examinations.

7. Passing minimum

To pass

- A candidate shall secure a minimum of 40% in the University examination for practical and theory and overall 40% in each of the paper (Internal + External) to pass the examination. A candidate failing in any one of the components has to reappear for that particular component in the supplementary examinations.

8. Classification of successful candidate

- A candidate who obtains 75% and above, aggregate in theory and practical examinations, in the first attempt shall be deemed to have passed the examination with distinction.
- A candidate who obtains from 60% to 74% of the aggregate in theory and practical examinations, in the first attempt shall be deemed to have passed the examination in the first class.
- Other Successful candidates shall be declared to have passed the examination in the Second class.

9. Conferment of degree

A candidate who has passed all the examination as prescribed shall be eligible to receive the “CERTIFICATE COURSE IN 3D ANIMATION” from Bharathiar University.

10. Course Material

Course Material shall be supplied by Amaze Multimedia.

11. Revision of Regulation and syllabus

The syllabus and regulations of the courses are subject to modification by the University whenever necessary.

12. Question Paper Pattern

Theory examination will be for 100 marks with the following components which will be converted into 60 marks.

- Multiple Choice / one word answers: 20x1=20 marks(no choice)
- Short notes(100 words / one paragraph) : 5x6=30 marks(either/or type)
- Descriptive (300 words 1 ½ page) : 5x10=50 marks(either/or type)

SYLLABUS

Course 1 : Maya Modeling and Texturing (Theory)

UNIT -1

Maya Basic Modeling – Maya Interface – Creating objects using EP curve, CV curve – Making Table Lamp – Polygon Terminology, Polygon over view – Modeling a dice using Boolean – Making An Box using loft – Modeling some inorganic objects – Creating Terrain using sculpt geometry tool.

UNIT -2

B.G & Set Modeling – Creating Mountains – Interior & Exterior Modeling – Modeling a garden – Modeling a Landscape.

UNIT -3

Maya Character Modeling – Modeling the eyes, nose – Modeling the Leg of the Character – Modeling the body – Modeling a Female Character – Modeling a Male Character – Modeling a High Polygonal.

UNIT – 4

Material assigning – Hyper Shade over view – Shades and Textures – Material Linking – Light Linking to the materials – Mental Ray Shades – Mental Ray Textures – Image based Lighting Shades – Controlling Photon Emission from Shades.

UNIT – 5

Character UV Texturing – UV Texturing over View – Applying Texture for Dice – Applying UV's for Inorganic Models – Applying UV's for head – Applying UV's for body – Applying UV's for B.G.

Suggested Readings

1. Paul Steed : Modeling a Character in 3Ds Max 7, Published by dreamtech, Second Edition – 2005.
2. John Kundert – Gibbs, Eric : Mastering Maya 7, Wiley Publishing Edition 2006.
Kunzen Dort, Dariush Derakhashani,
Mick Larkins, Eric Keller, Boaz Livny,
Mark E.A. de Soura

Course 2 : Animation and Rigging (Theory)

UNIT -1

Basic Animation – Animation Principles – Camera animation – Key Frame Animation – Dope Sheet Editor – Tracks Editor.

UNIT - 2

Non-Linear Animation – Motion Path Animation – Using Clusters – Using Deformers – Key Frame Animation Flow Path Objects – Snap Animation.

UNIT – 3

Character Animation – Creating Walk Cycle – Creating Run Cycle – Female Walk – Male Walk – Four Leg Character Walk cycle – Four Leg Character Run cycle – Lazy Walk – Brisk Walk – Facial Animation – Expressions.

UNIT- 4

Basic Rigging – Creating Bones For Character – Creating Bones For Four Leg Character – Biped Rig – Quadruiped Rig – Vehicle Rig – Facial Rig.

UNIT – 5

Character Rigging – Creating Ik's for Character – Creating bone's for Character – Facial Rigging - Binding Shape – Binding & Weight for character – Full body IK.

Suggested Readings

1. John Kundert – Gibbs, Mick Larkins, Dariush Derakhshani, Eric Kunzendorf, Eric Keller, Boaz Livny, Mark E. A.de Soursa, with Ed Siomacco. : Mastering Maya 8.5 2007
Published by Wiley Inc.
2. Kelly L.Murudock : 3ds Max 9 Bible. Published by
Wiley, Inc. 2007.

Course 3 : Character Modeling (Practical)

UNIT – 1

Character Sketch – Creating 2D Sketches – Side View – Front View – $\frac{3}{4}$ th View.

UNIT – 2

Character Modeling – Modeling a House – Creating Mountains – Interior & Exterior Modeling - Modeling a garden – Modeling a Landscape.

UNIT -3

Maya Character Modeling – Modeling a Head Using Cube – Modeling the eyes, nose – Modeling the Leg of the Character – Modeling the body – Modeling a Female Character – Modeling a Male Character – Modeling a High Polygonal.

UNIT – 4

Material assigning – Hyper Shade over view – Shades and Textures – Material Linking – Light Linking to the materials – Mental Ray Shades – Mental Ray Textures – Image based Lighting Shades – Controlling Photon Emission from Shades.

UNIT – 5

Character UV Texturing – UV Texturing over View – Applying Texturing for Dice – Applying UV's for Inorganic Models – Applying UV's for head – Applying UV's for body – Applying UV's for B.G.

Suggested Readings

1. Boaz Livny and Eric Keller : 3ds Max 9 Essentials First Printed
in India 2007. Published by

2. John Kundert – Gibbs, Mick Larkins, Dariush Derakhshani, Eric Kunzendort, Eric Keller, Boaz Livny, Mark E. A.de Soursa, with Ed Siomacco. Elsevier, a divisions of Elsevier India Pvt Ltd.2007. : Mastering Maya 8.5 2007 Published by Wiley Inc.

Course 4 : Character Animation (Practical)

UNIT – 1

Beginner level introductory concepts to basic techniques in Animation, Principles of Animation Production.

(Description: The class is geared towards the beginner to intermediate student, and is centered on 2D character animation. Throughout each of the 3 weeks, the student will learn every introductory concepts for better understanding of forthcoming advanced techniques in 2D Animation.)

UNIT - 2

Intermediate level introductory concepts to basic techniques in Animation, Principles of Animation Production.

(Description: The class is geared towards the beginner to intermediate level, and is centered on 2D character animation. Throughout each of the 3 weeks, the student will learn everything from introductory concepts to advanced techniques in 2D Animation.)

UNIT – 3

Layout & Background Painting Basic and Advanced techniques layout & Basic and Advanced techniques in BG Painting.

(Description: The class is geared towards the beginner to intermediate student, and is centered on layout and Background painting for animation. Throughout each of the 3 weeks, the student will learn everything from introductory concepts of perspective, color keys to advanced techniques in layout and Background painting. The class is geared up towards the beginner to intermediate student, and is centered on layout for animation.)

UNIT – 4

Cleanup and In-between Introductory concepts to basic techniques in Animation, Principles of animation Production of cleanup and in-betweens.

(Description: The class is geared towards the beginner to intermediate student and is centered on Cleanup and in-between for 2D character animation. Throughout each of the 3 weeks, the student will learn everything from introductory concepts to advanced techniques in Cleanup and in-between.)

UNIT – 5

Digital Animation Course Introductory concepts of Animation, Animation Production, High-end Digital Production Software- US ANIMATION (V5.2).

(Description: The class is geared towards the beginner to intermediate student, and is centered on Digital Production. Throughout each of the 3 weeks, the student will learn everything from introductory concepts to advanced techniques in Digital Animation.)

Suggested Readings

1. John Kundert – Gibbs, Eric : Mastering Maya 7, Wiley
Kunzen Dort, Dariush Derakhashani, Publishing Edition 2006.
Mick Larkins, Eric Keller, Boaz Livny,
Mark E.A. de Soura
2. Kelly L.Murudock : 3ds Max 9 Bible. Published by
Wiley, Inc. 2007.