

ALAGAPPA UNIVERSITY

(Accredited with A+ Grade by NAAC (CGPA: 3.64) in the Third Cycle), Graded as
Category-I University and granted autonomy by MHRD-UGC)

DIRECTORATE OF COLLABORATIVE PROGRAMMES



Certificate in 3D Animation

Regulations and Syllabus

[For those who join the Course in July 2023 and after]

CHOICE BASED CREDIT SYSTEM

GENERAL INSTRUCTIONS AND REGULATIONS

Certificate in 3D Animation conducted by Alagappa University, Karaikudi, Tamil Nadu through its Collaborative Institution Applicable to all the candidates admitted from the academic year 2023 onwards.

1. Eligibility:

A pass in the SSLC Examination conducted by the Government of Tamil Nadu, or an examination accepted as equivalent there to by the syndicate for admission to Certificate in 3D Animation

2. Admission:

Admission is based on the marks in the qualifying examination.

3. Duration of the course:

The course shall extend over a period of 6 Months under non-semester pattern

4. Standard of Passing and Award of Division:

- a. Students shall have a minimum of 40% of total marks of the university examinations in each subject. The overall passing minimum is 40% both in aggregate of Continuous Internal Assessment and external in each subject.
- b. The minimum marks for passing in each theory / Lab course shall be 40% of the marks prescribed for the paper / lab.
- c. A candidate who secures 40% or more marks but less than 50% of the aggregate marks, shall be awarded **THIRD CLASS**.
- d. A candidate who secures 40% or more marks but less than 60% of the aggregate marks, shall be awarded **SECOND CLASS**
- e. A candidate who secures 60% or more of the aggregate marks, shall be awarded **FIRST CLASS**
- f. The Practical/project shall be assessed by the two examiners, by an internal examiner and an external examiner.

The valued answer papers/assignments should be given to the students after the valuation is over and they should be asked to check up and satisfy themselves about the marks they have scored.

g. All mark lists and other records connected with the continuous Internal Assessments should be in the safe custody of the institute for at least one year after the assessment.

6. Attendance:

Students must have earned 75% of attendance in each course for appearing for the examination.

Students who have earned 74% to 70% of attendance to be applied for condonation in the prescribed form with the prescribed fee.

Students who have below 60% of attendance are not eligible to appear for the examination. They shall re-do the semester(s) after completion of the programme.

7. Examination:

Candidate must complete course duration to appear for the university examination. Examination will be conducted with concurrence of Controller of Examinations as per the Alagappa University regulations. **University may send the representatives as the observer during examinations.** University Examination will be held at the end of each semester for duration of 3 hours for each subject. Certificate will be issued as per the AU regulations. Hall ticket will be issued to the candidates upon submission of the list of enrolled students

along with the prescribed course fee.

8. Question Paper Pattern:

Maximum: 75 Marks	Duration: 3 Hours
Part A – Short answer question with no choice	: 10 X 02 = 20
Part B – Brief answer with either or type	: 05 X 05=25
Part C – Essay – type questions of either / or type	: 03 X 10=30

9. Miscellaneous

- Each student possesses the prescribed text books for the subject and the workshop tools as required for theory and practical classes.
- Each student is issued with an identity card by the University to identify his/her admission to the course.
- Students are provided library and facilities for development of their studies.
- Students are to maintain the record of practicals conducted in the respective laboratory in a separate Practical Record Book and the same will have to be presented for review by the University examiner.
- Students who successfully complete the course within the stipulated period will be awarded the degree by the University.

10. Fee Structure

Course fee shall be as prescribed by the University and 50% of the course fee should be disbursed to University. Special fees and other fees shall be as prescribed by the Institution and the fees structure must be intimated to the University. Course fees should be only by Demand draft / NEFT and AU has right to revise the fees accordingly.

Non-semester Pattern

Examination	Course Fee payment deadline
April/May	Fee must be paid before 30 th October academic year

11. Other Regulations:

Besides the above, the common regulation of the University shall also be applicable to this programme.

Certificate in 3D Animation

Sem.	Course Code	Title of the Paper	Cr.	Max. Marks		
				Int.	Ext.	Total
I	21911	Autodesk Combustion	3	25	75	100
	21912	Autodesk 3DS Max	3	25	75	100
	21913	Autodesk Maya	3	25	75	100
		Total	9	75	225	300

Certificate in 3D Animation

2023 Onwards

Certificate in 3D Animation		
21911	AUTODESK COMBUSTION	Credits :3
Unit– I		
Objective 1	Students who want to learn visual effects and compositing	
Wire removal		
Outcome 1	Understanding this software will help aspiring students and experienced professionals to improve their skills in their field of animation and visual effects. <i>Questions: classify, compare, convert, Explain,Express, Illustrate, Outline, Relate, Show,Summaries, Translate.</i>	K2
Unit– II		
Objective 2	To improve their skills over combustion.	
Green matt/ blue matt removal		
Outcome 2	To became a trained professional in combustion field <i>Questions: classify, compare, convert, Explain,Express, Illustrate, Outline, Relate, Show,Summaries, Translate.</i>	K2
Unit– III		
Objective 3	To understand how to work with 3d animation using combustion.	
Masking		
Outcome 3	Become outstanding designer in vfx for a multitude of projects. <i>Question: Construct, Develop, Discover, Identify,Interview, modify, Predict, Practice, Solve.</i>	K3
Unit–IV		
Objective 4	To create visually engaging motion graphics and animations.	
Specil effects to video files		
Outcome 4	The students can able to redefine the video content in web sites <i>Question: Categories, Classify,Compare, Distinguish, Generate, Examine, Interpret, Operate, Simplify.</i>	K4
Unit–V		
Objective 5	To create the applications in film making process	
Save methods		
Outcome 5	It makes local and global job opportunities to the students immediately <i>Question: Assess, Choose, Compare, Determine, Evaluate, Explain, Interpret,Justify, Measure, Priorities, Prove, Select.</i>	K5
References:-		
<ol style="list-style-type: none"> 1. The Art of 3D Computer Animation and Effects, Isaac Kerlow, Wiley Publication. 2. 3D Animation Essentials, Andy Beane, Sybex Publication. 		

(On what level the COs & POs correlated each other -based on that we have to give marks)
 Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	M (2)	S (3)	M (2)	L (1)	S (3)	S (3)	S (3)	L (1)	L (1)	M (2)
CO2	L (1)	M (2)	S (3)	M (2)	S (3)	M (2)	L (1)	M (2)	L (1)	S (3)
CO3	S (3)	L (1)	M (2)	S (3)	M (2)	L (1)	M (2)	S (3)	M (2)	L (1)
CO4	M (2)	M (2)	L (1)	M (2)	L (1)	-	S (3)	M (2)	S (3)	M (2)
CO5	M (2)	L (1)	S (3)	L (1)	M (2)	M (2)	M (2)	L (1)	M (2)	M (2)
W.AV	1.8	1.6	2	1.8	2	1.4	2	1.6	1.6	1.8

S –Strong (3), M-Medium (2), L- Low (1)

Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S (3)	S (3)	L (1)	L (1)	M (2)
CO2	M (2)	M (2)	L (1)	S (3)	M (2)
CO3	M (2)	M (2)	M (2)	L (1)	L (1)
CO4	L (1)	M (2)	M (2)	S (3)	M (2)
CO5	L (1)	M (2)	M (2)	S (3)	M (2)
W.AV	1.6	2	1.4	2	1.6

S –Strong (3), M-Medium (2), L- Low (1)

Certificate in 3D Animation		
21912	AUTODESK 3DS MAX	Credits :3
Unit– I		
Objective 1	To learn the skills required for 3d modelling and animation purposes.	
Intro About 3Ds Max, Introduction Tools & Menus, Different Types of Modeling		
Outcome 1	To improve their designing skills in 3d animation <i>Question: Construct, Develop, Discover, Identify, Interview, modify, Predict, Practice, Solve.</i>	K3
Unit– II		
Objective 2	To learn about architectural modelling	
Set Modeling, UV Texturing		
Outcome 2	Able to perform practical software for learning and practicing animation <i>Questions: classify, compare, convert, Explain, Express, Illustrate, Outline, Relate, Show, Summaries, Translate.</i>	K2
Unit– III		
Objective 3	To learn and create various unique built-in primitive shapes	
Materials Apply, Lighting		
Outcome 3	To develop and implement real time objects with animation and mixture effects <i>Question: Categories, Classify, Compare, Distinguish, Generate, Examine, Interpret, Operate, Simplify.</i>	K4
Unit–IV		
Objective 4	To learn and create simulation with built in shapes	
Camera Handling, Rendering		
Outcome 4	The students can obtain various skills and techniques required to develop various models and massive games. <i>Question: Assess, Choose, Compare, Determine, Evaluate, Explain, Interpret, Justify, Measure, Priorities, Prove, Select.</i>	K5
Unit–V		
Objective 5	To develop programming skills in real time object creation and gaming skills	
Save methods, Project		
Outcome 5	Able to know about the subset of 3d programming <i>Question: Choose, Compile, Compose, Construct, Create, Develop, Discuss, Elaborate, Estimate, Formulate, Maximize, Minimize, Modify, Propose, Solve.</i>	K6
References:-		
1. 3D Animation for the Raw Beginner, Roger King, CRC Press Publication		

(On what level the COs & POs correlated each other -based on that we have to give marks)
 Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	S (3)	S (3)	M (2)	L (1)	S (3)	M (2)	S (3)	L (1)	L (1)	M (2)
CO2	M (2)	M (2)	S (3)	M (2)	S (3)	L (1)	L (1)	L (1)	M (2)	S (3)
CO3	L (1)	L (1)	M (2)	S (3)	M (2)	S (3)	M (2)	M (2)	S (3)	L (1)
CO4	M (2)	-	L (1)	M (2)	L (1)	M (2)	S (3)	S (3)	M (2)	M (2)
CO5	L (1)	M (2)	S (3)	L (1)	M (2)	M (2)	M (2)	M (2)	L (1)	M (2)
W.AV	1.6	1.4	2	1.8	2	1.8	2	1.6	1.6	1.8

S –Strong (3), M-Medium (2), L- Low (1)

Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S (3)	M (2)	L (1)	S (3)	L (1)
CO2	M (2)	M (2)	L (1)	M (2)	S (3)
CO3	M (2)	L (1)	M (2)	M (2)	L (1)
CO4	L (1)	M (2)	M (2)	M (2)	S (3)
CO5	L (1)	M (2)	M (2)	M (2)	S (3)
W.AV	1.6	1.6	1.4	2	2

S –Strong (3), M-Medium (2), L- Low (1)

Certificate in 3D Animation

2023 Onwards

Certificate in 3D Animation		
21913	AUTODESK MAYA	Credits :3
Unit– I		
Objective 1	To understand about the motion graphic features of mash nodes and 3d graphic tool sets	
Intro About MAYA, Introduction Tools & Menus, Different Types of Modeling		
Outcome 1	Students can able to create animated movies and cartoons <i>Questions: classify, compare, convert, Explain, Express, Illustrate, Outline, Relate, Show, Summaries, Translate.</i>	K2
Unit– II		
Objective 2	To understand and learn about the 3d animation features	
Character Modeling, UV Texturing		
Outcome 2	The learner can able to improve their designing skills in 3d animation <i>Questions: classify, compare, convert, Explain, Express, Illustrate, Outline, Relate, Show, Summaries, Translate.</i>	K2
Unit– III		
Objective 3	To understand and learn about 3d modelling features involved with it are uv editor workflow look and feel, polygon modelling, and open subdiv support.	
Materials Apply, Lighting		
Outcome 3	Able to do include clips and filter effects <i>Question: Categories, Classify, Compare, Distinguish, Generate, Examine, Interpret, Operate, Simplify.</i>	K4
Unit–IV		
Objective 4	To know about dynamics and effects	
Camera Handling, Rendering		
Outcome 4	Able to make a short movie with good writing. <i>Question: Assess, Choose, Compare, Determine, Evaluate, Explain, Interpret, Justify, Measure, Priorities, Prove, Select.</i>	K5
Unit–V		
Objective 5	To learn about interactive programming and simulation	
Save methods, Project		
Outcome 5	Able to create the channel and implement the creativity <i>Question: Assess, Choose, Compare, Determine, Evaluate, Explain, Interpret, Justify, Measure, Priorities, Prove, Select.</i>	K5
References:-		
1. Character Animation in 3D, Steve Roberts, Focal Press Publication		

(On what level the COs & POs correlated each other -based on that we have to give marks)

Mapping Course Outcome VS Programme Outcomes

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	M (2)	L (1)	M (2)	L (1)	M (2)	S (3)	S (3)	S (3)	L (1)	S (3)
CO2	S (3)	M (2)	S (3)	L (1)	L (1)	S (3)	L (1)	M (2)	M (2)	M (2)
CO3	L (1)	S (3)	M (2)	M (2)	S (3)	M (2)	M (2)	L (1)	S (3)	L (1)
CO4	M (2)	M (2)	L (1)	S (3)	M (2)	L (1)	S (3)	-	M (2)	M (2)
CO5	M (2)	L (1)	S (3)	M (2)	M (2)	M (2)	M (2)	M (2)	L (1)	L (1)
W.AV	1.8	1.8	2	1.6	1.8	2	2	1.4	1.6	1.6

S –Strong (3), M-Medium (2), L- Low (1)

Mapping Course Outcome VS Programme Specific Outcomes

CO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	S (3)	M (2)	S (3)	L (1)	L (1)
CO2	M (2)	M (2)	M (2)	L (1)	S (3)
CO3	M (2)	L (1)	M (2)	M (2)	L (1)
CO4	M (2)	M (2)	L (1)	M (2)	S (3)
CO5	M (2)	M (2)	L (1)	M (2)	S (3)
W.AV	2	1.6	1.6	1.4	2

S –Strong (3), M-Medium (2), L- Low (1)

Certificate Programme

Passing minimum

- A candidate shall be declared to have passed in each course if he/she secures not less than 40% marks in the End Semester Examinations and 40% marks in the Internal Assessment and not less than 40% in the aggregate, taking Continuous assessment and End Semester Examinations marks together.
- The passing minimum for CIA shall be 40% out of 25 marks (i.e.10 marks) in Theory/ Practical Examinations.
- The passing minimum for University Examinations shall be 40% out of 75 marks (i.e. 30 marks) for Theory /Practical papers.
- The candidates not obtain 40% in the Internal Assessment are permitted to improve their Internal Assessment marks in the subsequent semesters (2 chances will be given) by writing the CIA tests or by submitting assignments.
- Candidates, who have secured the pass marks in the End-Semester Examination and in the CIA but failed to secure the aggregate minimum pass mark (E.S.E + C I.A), are permitted to improve their Internal Assessment mark in the following semester and/or in University examinations.
- A candidate shall be declared to have passed in the Dissertation/Project report/Internship report if he/she gets not less than 40% marks in the Internal Assessment and End Semester Examinations and not less than 40% in the aggregate, taking Continuous assessment and End Semester Examinations marks together.
- A candidate who gets less than 40% in the Dissertation / Internship/ Project Report must resubmit the thesis. Such candidates need to take again the Viva-Voce on the resubmitted report/thesis.