SACRED HEART COLLEGE
Autonomous

CURRICULUM AND SYLLABUS

FOR

M.A. DIGITAL ANIMATION

INTRODUCED FROM 2021 ADMISSION ONWARDS

BOARD OF STUDIES IN COMMUNICATION

Sacred Heart College, Thevara, Kochi, Kerala

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ACKNOWLEDGEMENT

This revised syllabus of M. A. Digital Animation tries to transmit the most essential and updated information to the students. Field trips, interactions with leading professionals, internships and engagement with practitioners in the industry and social issues are employed in administering the curriculum and syllabus. Industry relationships are promoted for professional competence on a long term basis. The candidates become eligible for a Degree after four semesters of study spanning over a period of two years and successful completion of the examination.

The Academic Council of the College decided to implement the revised with effect from academic year 2021-22.

School of Communication is grateful to all of those with whom we have had the pleasure to work during the restructuring of the syllabus and curriculum of M.A. Digital Animation Programme 2021 of Sacred Heart College (Autonomous), Thevara, Kochi.

There are many personalities whose support and guidance made this restructured syllabus a reality. We express our profound gratitude to the Honorable Principal, Governing council and the AcademicCouncil for their leadership and guidance for making this endeavor a great success.

We thank the members of BOS Core-Committee and all the staff members of SH School of Communication for offering their service for the flawless completion of the syllabus.

The successful completion of this syllabus is the end product of hard work by academicians from the College and eminent personalities from the media industry. We would like to thank them all for their valuable service during the restructuring process.

CONTENTS

1. INTRODUCTION

Sacred Heart School of Communication (SHSC) was established as the Communication and Media wing of Sacred Heart College, Kochi in 2012 with a vision to make use of the reach of communication media in society and utilize their powers for common good. SHSC gives emphasis to develop a balanced sensibility and creative initiative among the Under Graduate and Post Graduate level students.

The postgraduate programme in Digital Animation prepares graduates for a wide range of careers in the industry such as Traditional animation, 2D Digital Animation, Illustration, CGI, 3D animation Film making. The skills taught in the courses encompass craft at a technical level; yet also include design, drawing, critical thinking, creativity, daring, collaboration, and a fundamental awareness of theory and history. Throughout the program, students are engaged in all aspects of animation/post production, from concept development and production design to the completion of finished segments.

The program begins with design/animation history, theory and traditional hand skills, then progresses to current design/animation practices and technology. Students create script, storyboard, drawings, clay models, 2D animations, virtual models, 3D animations and lot more. The program encourages innovation while stressing strong technical and presentation skills. Students gain a background in design/animation history and theory and then experiment and develop their own creative approaches. The candidates become eligible for a post-graduation after four semesters of study, spanning over a period of 2 years and successful completion of the Examination.

The meeting of the Board of Studies in Communication held on 2nd August 2019 recommended the revision of the existing PG Digital Animation Syllabus in comparison with the parent university (MG University) syllabus with appropriate modifications. The Academic Council of the college decided to implement the revised syllabus with effect from the academic year 2021-22.

The revision of syllabus is processed on the basis of Outcome Based Education (OBE) principles with specific goals or outcomes set for the Programme and for each Course. Students are expected to achieve the specified outcomes at the completion of the educational experience.

1.1 PROGRAMME OUTCOMES

At the end of the programme, the students will be:

PO1: Capable of exercising their critical thinking in creating new knowledge leading to innovation, entrepreneurship and employability.

PO2: Able to effectively communicate the knowledge of their study and research in their respective disciplines to their employers and to the society at large.

PO3: Able to make choices based on the values upheld by the college, and have the readiness and know-how to preserve environment and work towards sustainable growth and development.

PO4: Possessing an ethical view of life, and have a broader (global) perspective transcending the provincial outlook.

PO5: Possessing a passion for exploring new knowledge independently for the development of the nation and the world and are able to engage in a lifelong learning process.

1.2 PROGRAM SPECIFIC OUTCOMES

At the end of the programme, the students will:

PSO 1: Understand the history of Animation, basics of Animation and understanding the Visual Effects, Film Techniques, and develop software skills required to demonstrate competence in these fields.

PSO 2: Understand all processes involved in Pre-Production, Production and Post Production in Digital animation.

PSO 3: Be capable of adapting to new ideas and technology and constantly upgrade their skills with an attitude towards independent and lifelong learning.

PSO 4: Develop confidence for entrepreneurship and innovations through positive attitude for practical living with strong updating in specialized areas.

PSO 5: Develop conceptual understanding, critical awareness and skills for successful career and entrepreneurship - Explore technical knowledge in diverse areas of Digital Animation, Visual Effects and Film techniques and experience an environment conducive in cultivating skills for successful career, entrepreneurship and higher studies.

1.3 COURSE DURATION AND FINAL OUTPUT

The course will be completed over a period of 2 years, as 4 semesters. There will be workshops, debates,

and/or exhibitions in every semester regarding relevant topics of each theory and practical course of instruction. The completion of course facilitates the production of a 2D and a 3D project at the final semester with the understanding of concepts, application level knowledge and creativity of each candidate.

1.4 ELIGIBILITY FOR ADMISSION

1) Any student with a bachelor's degree in any subject with a minimum mark of 45 percent ororequivalent grade is eligible to apply for admission to the MA Communication andJournalism programme. A relaxation of 5 percent of marks is given to SC and ST students tosecure admission to the programme. (However, preferences will be given to the candidates with training in Multimedia, Animation, Graphics, Videography, Film Appreciation, Journalism, Communication, Visual Arts, Painting, Theatre, Architecture and Music.)

2) Candidate should submit a port-folio of their works along with their application

3) Candidates must clear a qualifying examination based on aptitude, general topics related to media, English and an Interview.

4) Merit list will be drawn on the basis of the port-folio, qualifying examination and interview in the ratio 20:40:40)

1.5 MEDIUM OF INSTRUCTION AND ASSESSMENT

The medium of instruction and assessment shall be English.

2. REGULATIONS FOR POST GRADUATE PROGRAMMES UNDER CREDIT SEMESTER SYSTEM (CSS) – 2021

2.1 TITLE

These regulations shall be called 'SACRED HEART COLLEGE REGULATIONS FOR POST GRADUATE PROGRAMMES UNDER CREDIT SEMESTER SYSTEM (CSS) – 2021

2.2 SCOPE

Applicable to all Post Graduate (PG) programmes of the college with effect from 2021-22 admissions. The provisions herein supersede all the existing regulations for the post graduate programmes of the college.

2.3 DEFINITIONS

2.3.1 '**Programme**' means the entire course of study and examinations.

2.3.2 **'Duration of Programme'** means the period of time required for the conduct of the programme. The duration of post graduate programme shall be of four semesters spread overtwo academic years.

2.3.3 **'Semester'** means a term consisting of a minimum of ninety working days, inclusive of examination, distributed over a minimum of eighteen weeks each having five working days, each with five contact hours of one hour duration.

2.3.4 **'Course'** means a segment of subject matter to be covered in a semester. Each course is to be designed variously under lectures/ tutorials / laboratory or fieldwork/ study tour /seminar / project / practical training / assignments / evaluation etc., to meet effective teaching and learning requirements.

2.3.5 **'Credit' (Cr)** of a course is the numerical value assigned to a course according to the relative importance of the content of the syllabus of the programme.

2.3.6 '**Extra credits**' are additional credits awarded to a student over and above the minimum credits required for a programme.

2.3.7 '**Programme Credit'** means the total credits of the PG Programmes. For PG programmes the total credits shall be eighty.

2.3.8 **'Programme Elective Course'** means a course, which can be chosen from a list of electives and a minimum number of courses is required to complete the programme.

2.3.9 **'Elective Group'** means a group consisting of elective courses for the programme.

2.3.10 '**Programme Project'** means a regular project work with stated credits on which the student undergoes a project under the supervision of a teacher in the parent department / any appropriate institute in order to submit a dissertation on the project work as specified.

2.3.11 '**Internship**' is on-the-job training for professional careers.

2.3.12 '**Plagiarism**' is the unreferenced use of other authors' material in dissertations and is a serious academic offence.

2.3.13 '**Seminar'** means a lecture by a student, expected to train the student in self-study, collection of relevant matter from the books and internet resources, editing, document writing, typing and presentation.

2.3.14 **'Evaluation'** is the process by which the knowledge acquired by the students is quantified as per the criteria detailed in the regulations.

2.3.15 **'Repeat Course'** is a course that is repeated by a student for having failed in that course in an earlier registration.

2.3.16 **'Audit Course'** is a course for which no credits are awarded.

2.3.17 **'Department'** means any teaching department offering a programme of study approved by the college / institute as per the Act or Statute of the University.

2.3.18 'Department Council' means the body of all teachers of a department in a college.

2.3.19 'Faculty Advisor' is a teacher nominated by a Department Council to coordinate the continuous evaluation and other academic activities undertaken in the department.

2.3.20 'College Coordinator' means a teacher from the college nominated by the College Council to look into the matters relating to CSS-PG system.

2.3.21 'Letter Grade' or simply **'Grade'** in a course is a letter symbol (A^+, A, B^+, B etc.) which indicates the broad level of performance of a student in a course.

2.3.22 'Grade Point' (GP), is an integer indicating the numerical equivalent of the broad level of performance of a student in a course.

2.3.23 'Grade Point Average' (GPA) is an index of the performance of a student in a course. It is obtained by dividing the sum of the weighted grade points obtained in the course by the sum of the weights of the course ($GPA = \sum WGP/\sum W$).

2.3.24 'Weighted Grade Point' (WGP) is obtained by multiplying the grade point by its weight (WGP = GP x weight).

2.3.25 'Credit Point' (CP) of a course is the value obtained by multiplying the grade point (GPA) by the credit (Cr) of the course (CP = GPA x Cr).

2.3.26 'Semester Grade Point Average' (SGPA) is the value obtained by dividing the sum of credit points (CP) obtained by a student in the various courses taken in a semester by the total number of credits of the courses taken by him/her in that semester. The SGPA shall be rounded off to two decimal places and it determines the overall performance of a student at the end of a semester.

2.3.27 'Cumulative Grade Point Average' (CGPA) is the value obtained by dividing the sum of credit points in all the courses taken by the student for the entire programme by the total numberof credits and shall be rounded off to two decimal places.

2.3.28 '**Grade Grade Points'** means grade points awarded to a student for course(s), in recognition of

meritorious achievements in NSS/Sports/Arts and cultural activities, as per the orders issued by the college from time to time.

2.4 ATTENDANCE

Being a regular college, physical presence in the regular activities, especially, classes and exams, is mandatory for the students. However, if a student secures 75% of attendance he/she is eligible to appear for the exams, provided there are no other impediments like disciplinary proceedings, malpractice record etc.

2.4.1 **Absence:** A student found absent for one hour in the forenoon or afternoon session is deprived of the attendance for the entire session as far as eligibility for final exam is concerned.

2.4.2 **Leave**: A student has to formally report his/her absence with reasons either in advance, or immediately after the absence for obtaining an approved leave. This applies to all sorts of leave – medical, on duty or similar cases.

2.4.3 The student has to retain a copy/section of the approved leave form and produce the same as proof, in case there is any confusion regarding the leave sanctioning. In the absence of such proof, the claims will not be entertained.

2.4.4 **Duty Leave**: A student representing the college in sports, arts, social service or academic matters, has to get sanction from the class teacher concerned and submit the leave application form duly endorsed by the class teacher and the Head of the Department, and submit it to the Vice Principal. The same will be forwarded by the Vice Principal for attendance entry. The approval of the Department of Physical Education and the class teacher is required for granting attendance related to sports. The time limit for submission mentioned above is applicable in the case of duty leave as well.

2.4.5 **Condonation**: A student may have the privilege of condonation of attendance shortage (up to a maximum of ten days) on the basis of genuineness of the grounds of absence (medical reasons or college duty), duly recommended by the department. This is not a matter of right. It is a matter of privilege based on Principal's discretion and the good conduct of the student on the campus. A student of PG programme may have only one such opportunity.

2.4.6 **Re-admission**: A student whose attendance is inadequate will have to discontinue the studies. Such students, whose conduct is good, may be re-admitted with the approval of Governing Body, on the basis of recommendation from the department, and assurance from the student and the guardian regarding good conduct and compliance in academic and discipline matters. Forthis the prescribed re-admission fee has to be paid.

2.4.7 Unauthorised absence & removal from rolls: A student, absent from the classes continuously for ten consecutive working days without due intimation or permission, shall be removed from the rolls, and the matter shall be intimated to the student concerned. On the basis of recommendation of the department concerned, re-admission process may be permitted by the Principal.

2.5 PROGRAMME REGISTRATION

2.5.1 A student shall be permitted to register for the programme at the time of admission.

2.5.2 A PG student who registered for the programme shall complete the same within a period of eight continuous semesters from the date of commencement of the programme.

2.6 PROMOTION

A student who registers for the end semester examination shall be promoted to the next semester. However, in extreme circumstances, a student having sufficient attendance who could not register for the end semester examination may be allowed to register notionally by the Principal with the recommendation of the Head of the Department concerned and by paying the prescribed fee.

2.7 EXAMINATIONS

All the end semester examinations of the college will be conducted by the Controller of Examinations. The Principal will be the Chief Controller of Examinations. An Examination Committee consisting of the Chief Controller of Examinations, Controller of Examinations, Additional Chief Superintendent, Deans, IQAC Coordinator and other faculty members nominated by the Principal will act as an advisory body on the matters relating to the conduct of examinations.

2.8 EVALUATION AND GRADING

2.8.1 Evaluation

The evaluation scheme for each course shall contain two parts:

a. **Continuous Internal Assessment (CIA)**

b. **End Semester Examination (ESE)**

25% weightage shall be given to internal evaluation and the remaining 75% to external evaluation and the ratio and weightage between internal and external is **1:3**, for the courses with or without practicals (except the courses offered by the School of Communications). In the case of courses offered by the School of Communications, the internal-external assessment ratio shallbe **1:1**. In their case, the components for evaluation and their respective weightage shall be

determined by their Board of Studies. Both internal and external evaluation shall be carried out in the grading system and the GPAs are to be rounded to two places of decimals.

2.8.2 Direct Grading: The direct grading for the components of CIA shall be based on six letter grades (A+, A, B, C, D and E) with numerical values of 5, 4, 3, 2, 1 and 0 respectively as per the following scale of accuracy/level of quality. The questions for internal test papers and the end semester examination shall be prepared in such a way that the answers can be awarded A+, A, B,C, D and E grades.

Grade	**Grade Points**	**Scale of accuracy/Level of quality**
A+	5	Greater than or equal to 90%
A	4	80% to less than 90%
B	3	60% to less than 80%
C	2	40% to less than 60%
D	1	20% to less than 40%
E	0	Less than 20%

2.8.3 Grade Point Average (GPA): Internal and external components are separately graded and the combined GPA shall be calculated for each course with weightage **1** for internal and **3** for external.

2.8.4 Components of Continuous Internal Assessment (CIA): Grades shall be given to the evaluation of theory/practical/project/comprehensive viva-voce and all internal evaluations arebased on the Direct Grading System.

The Board of studies of the respective subject is permitted to make changes, if necessary, with regard to the weightages for the components of CIA without changing the total weightage of 5.

a. Components of Internal Evaluation (for theory)

Sl.No	**Components**	**Weightage**

i.	Assignments	1
ii.	Seminar	1
iii.	Quiz/Field study/Industrial Visit/Viva Voce/Study Tour/Workshop	1
iv.	Test paper-1	1
v.	Test paper-2	1
	Total	5

b. Components of Internal Evaluation (for practical)

Components	**Weightage**
Assignments	1
Written/ Lab Test/Workshop	1
Mini projects	2
Viva Voce	1
Total	5

c. Components of Internal Evaluation (for project)

Components	**Weightage**
Relevance of the topic and analysis	2
Project content and presentation	2
Project viva voce	1
Total	5

d. Components of Internal Evaluation(for comprehensive viva voce)

Components	**Weightage**
Comprehensive viva voce (all courses from first semester to fourth semester)	5
Total	5

2.8.5 Components of End Semester Examination (ESE):

a. For Theory

Evaluation shall be based on the following pattern of questions:

Sl. No.	Type of Questions	Weight	*Number of questions to be answered
1	Short answer type questions	1	8 out of 10
2	Short essay/problem solving type questions	2	6 out of 8
3	Long essay/problem solving type questions	5	2 out of 4

*Board of studies of respective subjects can decide on the number questions in each type of questions.

b. For Practical

Components of External Evaluation (for practical)

Components	Weightage
Progress in work/ Laboratory Involvement	3
Written/ Lab Test	6
Record/Report	3
Viva Voce	3
Total	15

The Board of studies of the respective subject is permitted to make changes, if necessary, with regard to the weightages for the components of Practical Examinations (External) without changing the total weightage i.e. 15. The pattern of questions for external evaluation of practical examinations can also be prescribed by the respective Board of Studies.

c. Components of External Evaluation (for project)

Components	Weightage
Relevance of the topic and analysis	3
Project content and presentation	7
Project viva voce	5
Total	15

d. Components of External Evaluation(for comprehensive viva voce)

Components	Weightage
Comprehensive viva voce (all courses from first semester to fourth semester)	15
Total	15

2.8.6 Project: Project work is a part of the syllabus of most of the programmes offered by the college. The guidelines for doing projects are as follows:

i. Project work shall be completed by working outside the regular teaching hours.
ii. Project work shall be carried out under the supervision of a teacher in the concerned department or an external supervisor.
iii. A candidate may, however, in certain cases be permitted to work on the project in an industrial / Research Organization/ Institute on the recommendation of the Supervisor.
iv. There should be an internal assessment and external assessment for the project work in the ratio 1:3
v. The external evaluation of the project work consists of valuation of the dissertation (project report) followed by presentation of the work and viva voce.

2.9 PERFORMANCE GRADING

2.9.1 Students are graded based on their performance (GPA/SGPA/CGPA) at the examination on a 7 point scale as detailed below

Range	Grade	Indicator
4.50 to 5.00	**A+**	**Outstanding**
4.00 to 4.49	**A**	**Excellent**
3.50 to 3.99	**B+**	**Very Good**
3.00 to 3.49	**B**	**Good (Average)**
2.50 to 2.99	**C+**	**Fair**
2.00 to 2.49	**C**	**Marginal (Pass)**
Up to 1.99	**D**	**Deficient (Fail)**

2.9.2 No **separate minimum** is required for internal evaluation for a pass, but a minimum a '**C'** grade is required for a pass in an external examination. However, a minimum '**C'** grade is required for pass in a course and the programme as well.

2.9.3 A student who fails to secure a minimum grade '**C'** for a pass in a course shall be permitted to write the examination along with the next batch.

2.9.4 Improvement of GPA: The candidates who wish to improve the GPA of the external examinations of a course/courses can do the same by appearing in the external examination of the semester concerned along with the immediate junior batch. The facility is restricted to first and second semesters of the programme.

2.9.5 Computation of SGPA and CGPA: For the successful completion of a semester, a student should pass all the courses and score at least the minimum SGPA grade **'C'**. After the successful completion of a semester, Semester Grade Point Average (**SGPA**) of a student in that semester is calculated as the ratio of the sum of the credit points of all courses taken by a student in the semester to the total credits of that semester.

Thus, **SGPA = TCP/TCr**, where **TCP** is **Total Credit Point of that semester (** $\sum_{i=1}^{n} CP_i$ **)** and **TCr is Total Credit of that semester (** $\sum_{i=1}^{n} Cr_i$ **)** where '**n**' is the number of courses in that semester.

Cumulative Grade Point Average (**CGPA**) of a programme is calculated as the ratio of the sum of the credit points of all the courses of the programme to the total credits of the programme.

$$\text{CGPA} = \frac{\sum(\text{SGPA} \times \text{TCr})}{\sum \text{TCr}}$$

The SGPA/CGPA shall be rounded off to two decimal places.

For the successful completion of a programme, a student should pass all the courses and score at least the minimum CGPA grade **'C'**. However, a student is permitted to move to the next semester irrespective of her/his SGPA.

To ensure transparency of the evaluation process, the internal assessment grade awarded to the students in each course in a semester shall be published on the notice board/website at least one week before the commencement of external examination. There shall not be any chance for improvement for internal assessment grade.

The course teacher and the faculty advisor shall maintain the academic record of each student registered for the course which shall be forwarded to the controller of examinations through the Head of the Department and a copy should be kept in the department for at least two years for verification.

2.10 REGISTRATION FOR THE EXAMINATION

a. All students admitted in a programme with remittance of prescribed fee are eligible for the forthcoming semester examinations.
b. Online application for registration to the various End Semester Examinations shall be forwarded to the CE along with prescribed fee for each course in prescribed format.
c. The eligible candidates who secure the prescribed minimum attendance of the total duration of the course and possess other minimum qualification prescribed in the regulations for each course shall be issued the hall tickets. The hall ticket shall be downloaded by the students from the college website.

The mode of fee remittance shall be through the prescribed bank.

2.11 SUPPLEMENTARY EXAMINATIONS

Candidates who failed in an examination can write the supplementary examination conducted by the College along with regular examinations.

2.12 PROMOTION TO THE NEXT HIGHER SEMESTER

A candidate shall be eligible for promotion from one semester to the next higher semester if,

a. He / she secures a minimum 75 % attendance and registered for the End Semester Examination of the programme for which he/she is studying.
b. His / her progress of study and conduct are satisfactory during the semester completed, as per the assessments recorded by the course teachers and the Head of the Department concerned.

2.13 CERTIFICATES

1. Diploma and Degree certificates are issued by the Mahatma Gandhi University, Kottayam as per the act and statues of the University on the submission of the consolidated mark / score cards of the students by the College.
2. A consolidated mark / scored card shall be issued to the candidates after the publication of the results of the final semester examination taken by the candidate.
3. A Course Completion Certificate with classification shall be issued to students till the provisional certificate is issued by the university.

2.14 RANK CERTIFICATE

Candidates shall be ranked in the order of merit based on the CGPA secured by them. Grace grade points awarded to the students shall not be counted for fixing the rank/positions. Rank certificates shall be issued to the candidates who secure positions from the first to the third in theorder of merit. The position certificates shall be issued to the next seven candidates in the order of merit.

2.15 AWARD OF DEGREE

The successful completion of all the courses with **'C'** grade shall be the minimum requirement for the award of the degree.

2.16 MONITORING

There shall be a Monitoring Committee constituted by the Principal consisting of faculty advisors, HoD, a member from Teaching Learning Evaluation Committee (TLE) and the Deans to monitor the internal evaluations conducted by college. The course teacher, class teacher and the deans should keep all the records of the internal evaluation, for at least a period of two years, for verification.

Every programme conducted under Credit Semester System shall be monitored by the College Council under the guidance of IQAC Coordinator, Controller of Exams, Academic Deans and HoDs. An academic committee consisting of the vice principal, deans and teachers nominated by the Principal shall look after the day-to-day affairs of these regulations.

2.17 GRIEVANCE REDRESSAL MECHANISM

In order to address the grievance of students regarding Continuous Internal Assessment (CIA) a three-level grievance redressal mechanism is envisaged. A student can approach the upper level only if grievance is not addressed at the lower level.

Level 1: Level of the course teacher concerned

Level 2: Level of a department committee consisting of the Head of the Department, a coordinator of internal assessment for each programme nominated by the HoD and the course teacher concerned.

Level 3: A committee with the Principal as Chairman, Dean of the Faculty concerned, HOD of the department concerned and one member of the Academic Council nominated by the Principal every year as members

2.18 TRANSITORY PROVISION

Notwithstanding anything contained in these regulations, the Principal of the college has the power to make changes in these regulations, by due orders, that shall be applied to any programme with such modifications as may be necessary on the recommendations of the Board ofStudies of the respective programme.

3. PROGRAMME STRUCTURE

Course Code	Title of the Course	Course Type	Hours per week	Credits	Total Credits
FIRST SEMESTER					
21P1DGAT01	History of Animation	Theory	4	4	20
21P1DGAP01	Concept, Layout and Storyboarding	Practical	6	4	
21P1DGAP02	2D Design	Practical	5	4	
21P1DGAP03	3D Design	Practical	5	4	
21P1DGAP04	Film Techniques	Practical	5	4	
SECOND SEMESTER					
21P2DGAT02	Media Laws, Ethics and Education	Theory	5	4	20
21P2DGAP05	Object Animation and Pixilation	Practical	5	4	
21P2DGAP06	Traditional Animation	Practical	5	4	
21P2DGAP07	3D Advanced Studies	Practical	5	4	
21P2DGAP08	CG Foundation	Practical	5	4	
THIRD SEMESTER					
21P3DGAP09	3D Animation	Practical	5	4	23
21P3DGAP10	Compositing	Practical	5	4	
21P3DGAP11	Film Editing	Practical	5	4	
21P3DGAPJ1	Research Methodologies	Project	5	4	
21P3DGAPJ2	2D Digital Animation Project	Project	5	7	
FOURTH SEMESTER					
21P4DGAPJ3	3D Animation Project	Project	13	7	17
21P4DGAP12	Post Production	Practical	10	4	
21P4DGAPJ4	Port folio	Project	2	2	
21P4DGAIN1	Internship	OJT	1 Month	2	
21P4DGACV1	Comprehensive Viva-voce	Viva-voce		2	
				Total Credits	**80**

4. SYLLABUS

21P1DGAT01: HISTORY OF ANIMATION

72 Hours (4 hrs/week) **Credit – 4**

OBJECTIVES

This course focuses on the history of animation as a particular form of visual communication and also will be able to identify the major technological developments and aesthetic movements in the history of animation filmmaking. Screenings will include a wide range of commercial and experimental works produced throughout the world.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Explain the early animation attempts and optical devices.
CO 2. Analyse the role of pioneers and the efforts that took place in the field of animation.
CO 3. Analyse the issues and situations of different Animation studios in America
CO 4. Analyse the history and growth of European, Canadian and Indian animation
CO 5. Evaluate different styles of Japanese animation

Module 1

A Brief Pre-History – Phenakistoscope, Praxinoscope, Kinetsocope, Zoetrope, Thaumatrope, Early comic strips.

Module 2

Pioneers in animation - Winsor McCay, Otto Messmer, Max Fleischer, Walt Disney, John Bray. Use of Cels, Peg System.

Module 3

Study on the films related to American computer animation studios - The Disney Studio

Module 4

Short study on the films related to European and Canadian animation studios. Experimental animations from the National Film Board of Canada. Indian Animation history and studios.

Module 5

Japanese Animation, Character Study-Manga, Movies, Pioneers of Japanese Animation and Studios.

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3. Charles Solomon(1989), *Enchanted Drawings: The History of Animation*, Knopf.
4. Terrence Masson (1999), *CG 101: A Computer Graphics Industry Reference*, New Riders Press; 1 edition.
5. Tom Sito (2015), *Moving Innovation: A History of Computer Animation* , The MIT Press.
6. Christopher Finch (2013), *The CG Story: Computer-Generated Animation and Special Effects* , The Monacelli Press.
7. Garth Gardner PhD (2002), *Computer Graphics and Animation: History, Careers, Expert Advice* Garth Gardner Company.

21P1DGAP01: CONCEPT, LAYOUT AND STORYBOARDING

108 Hours (6 hrs/week) **Credit – 4**

OBJECTIVES

Students learn process through the practice of research, critical analysis, brainstorming and improvisational techniques to create ideas for effective animation. Material created in this class will form a foundation for subsequent conceptual work in the animation project.

COURSE OUTOMES

At the end of the programme, the students will be able to:

CO 1. Outline the methodologies of storytelling
CO 2. Analyse the story development, character and the content in relation to the animated short
CO 3. Utilise the storytelling methods for visual effectiveness
CO 4. Analyse the various techniques of composition and frame - editing principles, sound elements
CO 5. Create scripts writing and simple storyboards for digital media.

Module 1

Techniques of Animation – Different Types of Animation - Workflows of Different Types of Animation - Preproduction, Production and Post-Production Stages - Types of Animation - Experimental Animations.

Module 2

Developing Idea/ Concept - Story - Basic Elements of a Story – Types of Stories - Creating Story Ideas - Sources of Story Line - Adaption - Character Roles - Characterization– Dialogues – Basic Structure Of A Story – Old and Modern Structures – Concept of Acts –Theme – Subplots – Tone – Genre - Writing for Different Types and Groups of Audience – Animation Script - Animation Script Vs. Live Action Movie Script – Shot – Scene – Sequence – Screenplay Format – Elements of Screenplay Format –Montage.

Module 3

Character Designing - Features of a Character – Types/Kinds of Characters – Designing Props and Assets of Character – Creating Turn-around / Character Model Sheets – Blueprints - Character Size Comparison Charts – Character Attitude Poses

Module 4

Story Board - Definition - Importance of Story Boarding - Different Types of Story Boards - Story Board Formats - Elements of Storyboarding (Design, Colour, Light and Shadow, Perspective,Staging, Composition Rules) - Concept of Panels and Its Usages- Floor Plans - Storyboarding Movements - Illustrating Camera Techniques in a Story Board - Visual Continuity – Transitions - Digital Storyboarding.

Module 5

Introduction to the creation of Animatic – Scanning Storyboard panels and synchronizing it with the sound tracks.

References:

1. Christy Marx, *Writing for Animation, Comics and Games.*
2. Jean Ann Wright, *Animation Writing and Development: From Script Development to Pitch.*
3. Christopher Hart, *How to Draw Animation - Learn the Art of Animation from Character Design to Storyboards and Layouts.*
4. John Hart , *The Art of the Storyboard - Storyboarding for Film, TV, and Animation*
5. Jeffrey Scott, *How to Write for Animation*
6. Wendy Tumminello , *Exploring Storyboarding*
7. Don Bluth *Don Bluth's Art of Storyboard*:

21P1DGAP02: 2D DESIGN

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

Introduction to Figure drawing, use observational gesture and expressive drawings to demonstrate: proportion & measurement; volume, space, basic anatomy, composition; balance & movement; one, Two & Three point perspective drawings. Character Design according to concept/story.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Develop the skill of quick drawing, Life Sketches with Line of Action
CO 2. Build expressive drawings with different dimensions and perspectives
CO 3. Make use of the anatomy of human body for character animation
CO 4. Make use of the anatomy of animals, birds and reptiles for character animation
CO 5. Design animation characters according to the concept/story

Module 1

Sketching and Loosening exercises - Drawing from: Observation, Memory and Imagination - Still-life Drawing – Use of Basic Shapes and Forms - Sketching Poses (Study of Live Models, Attitude, Gestures) – Quick Sketches – Thumbnail Sketches - Life Sketching (Line of Action, Stick Figures, Balance, Rhythm, Positive and Negative Spaces) – Line of action in Simple Rice Sack, Box Ball Cylinder Form - Silhouettes - Caricaturing Fundamentals – Exaggeration.

Module 2

Perspective Drawing: Horizon/Eye Level – Vanishing Points – Orthogonal Lines - One Point Perspective - Two Point Perspective - Three Point Perspective - Multi- Point Perspective - Overlapping and Intersection of Shapes in One Point, Two Point and Three Point Perspective Views - Foreshortening.

Module 3

Human Anatomy: Male and Female Anatomy – Body Structure, Proportion and Construction of Body Parts (Torso, Face, Eyes, Nose, Ears, Mouth, Hand, Feet Etc.) - Anatomy of Different Age Groups (Babies, Kids, Teens, Young Adults, Aged) – Basic Proportions – Basic Understanding of the Skeletal and Muscle System - Basic anatomy; format and composition Balance and movement; focus and edge; relation of figure to environment - Study of Poses – Human Forms in Perspective.

Module 4

Anatomy of Animals, Birds, Reptiles: Body Structure - Basic Forms, Proportion and Construction of Body Parts, Head, Legs, Tails - Use of Perspectives While Drawing Animals, Birds, Reptiles and

Insects- Classic Cartoon Characters: Humans, Animals, Birds, Reptiles - Types of Construction: Cute, Screwball, Goofy, Heavy and Pugnacious - Fairy Tale Characters: Gnomes, Elves, Dwarfs, Hobbits and Witches.

Module 5

Character Types: Realistic, Stylised/Semi-Realistic and Cartoony - Understanding Cartoon Characters: Cartoon Constructions – Character Development - Drawing from Basic Shapes – Proportion (Short Fat, Tall - Distortion of Proportions - Cartoon Character: Faces, Eyes, Mouths, Hairs, Nose, Hands, Feet - Expressions: Facial and Hand.

References:

1. Preston Blair (1994), *Cartoon Animation (Collector's Series)* Walter Foster Publishing.
2. Richard Williams (2009), *Animator's Survival kit*, Faber; Main - Revised Edition.
3. Andrew Loomis (2011), *Drawing the Head and Hand*, Titan Books.
4. Victor Perard (2006), Anatomy and Drawing, New Enlarged Edition.
5. Joseph D'Amelio, *Perspective Drawing Hand Book.*

21P1DGAP03: 3D DESIGN

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

Students are introduced to 3D softwares with which they learn the production techniques like modeling, texturing, lighting and camera.

COURSE OUTCOMES

CO 1. Explain frame composition, camera angles and camera movements
CO 2. Examine and explain the use aperture, shutter speed and ISO
CO 3. Develop digital videos/photographs and apply the conceptual understanding to assess and improve the productions.
CO 4. Explain the various lighting tools and methods in film production and apply the knowledge in film lighting according to situations,
CO 5. Demonstrate skills for art direction

Module 1

Modeling using polygons and sub divisional surfaces.

Module 2

Basic Texturing, Projections, Maps, Materials, Shaders, Unwrapping, UV Texturing

Module 3

Basic lighting concepts, Interior, Exterior and Production lighting techniques.

Module 4

Introduction to 3D cameras and layouts.

Module 5

Basic Rendering techniques and passes

References:

1. Jeremy Birn (2000), *Digital Lighting and Rendering*, New Riders Press.
2. William Vaughan (2012), *Digital Modeling*, New Riders; 1 edition.
3. Lee Lanier (2006), *Advanced Maya Texturing and Lighting*; Sybex.
4. Adam Watkins (2012), *Getting Started in 3D with Maya*; 1 edition.

21P1DGAP04: FILM TECHNIQUES

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

Fundamental components of Sound, Camera basic techniques. Students learn to use creative thinking

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Explain frame composition, camera angles and camera movements
CO 2. Examine and explain the use aperture, shutter speed and ISO
CO 3. Develop digital videos/photographs and apply the conceptual understanding to assess and improve the productions.
CO 4. Explain the various lighting tools and methods in film production and apply the knowledge in film lighting according to situations,
CO 5. Demonstrate skills for art direction

Module 1

Visual Grammar and Aesthetics of Frame Composition: Study of Camera angles and movements

Module 2

Methods and Techniques of Digital Imaging: Photography, ISO, Shutter speed

Module 3

Creating Visual arts, technology of imaging moving objects Cinematography

Module 4

Types, Methods, Design of Light and Art of Lighting, Changing trends in Film Lighting Setup

Module 5

Creating the visual space for Screen, Elements of film screen, Art Direction

References:

1. David Stump (2014), Digital *Cinematography: Fundamentals, Tools, Techniques, and Workflows*, Focal Press.
2. Michael Rabiger (2013), *Directing: Film Techniques and Aesthetics*, Focal Press; 5 edition.
3. David Landau (2014), *Lighting for Cinematography: A Practical Guide to the Art and Craft of Lighting for the Moving Image*, Continuum Publishing Corporation; Reprint edition.
4. Henry Horenstein (2011), *Digital Photography: A Basic Manual*, Little, Brown and Company; 1 edition.

21P2DGAT02: MEDIA LAWS, ETHICS AND EDUCATION

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

To understand the positive as well as negative influence of media and the critical evaluation of media.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Recall and summaries Indian media laws and regulations in comparison with those of other nations.
CO 2. Relate, analyses and evaluate how media policies and regulations enable or constrain effective media environments.
CO 3. Outline and Examine the rights and responsibilities of media practitioners in the execution of their duties.
CO 4. Inspect the problems and limitations of applying old media laws in new media environments.
CO 5. Discuss the complex issues associated with media regulation and need for contextualizing legal and ethical practices according to change.

Module 1

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 ethics-print and broadcasting-code of Ethics for AIR and Doordarshan. Official Secret Act, 1923, Press Ombudsman.

Module 2

Media Education – Objectives and Skills – Key Concepts, Media Scenario: Present Trends – Different Starting points for Media Education – Media Impact in Society – Social and Psychological impacts

Module 3

Indian Constitution-Salient features, Fundamental Rights and Directive Principles. Freedom ofPress & Parliamentary Privileges. Powers of President & Governor. Case studies with regard to Freedom of Speech & Expressions. Hierarchy of Courts, (Civil and Criminal), Cognizable & Non Cognizable cases, Anticipatory bail, Bailable& Non Bailable offences, defamation, sedition, types of writs.

Module 4

Press Legislations in India. The Press & Registration of Books Act of 1867. Drug & MagicRemedies (Objectionable Advertisement) Act of 1954 The Working Journalists and other Newspaper Employees (Conditions of Service & Miscellaneous Provisions) Act of 1955.Press Council Act of 1978-Cable Television Networks (Regulation) Act of 1995. Video and Audio piracy. Information Technology Bill.Cyber Laws-Censorship Guidelines-Press Accreditation Rules etc.

Module 5

The Cinematograph Act of 1952, Young persons (Harmful Publications) Act of 1956, Copyright Act. Of 1957, Contempt of Court Act, Consumer Protection Act. Right to Information Act 2005-Intellectual Property Right.

References:

- Rossi, Philip J. (1994) Mass Media and the Moral Imagination. Sheed & Ward,U.S.
- Srambickal, Jacob. Media Education in India.
- Pattyn, Bart (2001-12) Media Ethics. VS Verlagfür Sozialwissenschaften,
- Christmas, Clifford (1997) Communication Ethics and Universal Values. SAGE Publications.
- Ess, Charles (2009) Digital Media Ethics. Polity; 1 edition.
- Andrew Belsey and Ruth Chadwick (1992). Ethical issues in journalism and mass media. London, New York: Routledge
- J. S Mudholkar (1975). Press Laws. Kolkata: Eastern Law House
- Ursula Smartt (2006). Media Law for Journalists. London, Thousand Oaks, New Delhi: Sage Duncan Bloy (2006). Media Law. London, Thousand Oaks, New Delhi: Sage
- VenkatIyer (2000). Mass Media Laws And Regulations In India. New Delhi: Bahri Sons (India Research Press)
- Monroe Edwin Price, Stefaan G. Verhulst (2001). Broadcasting Reform in India: Media Law from a Global Perspective. Oxford: Oxford University Press
- Peter Lunt, Sonia Livingstone (2011).Media Regulation: Governance and the Interests of Citizens and Consumers. London, Thousand Oaks, New Delhi: Sage
- B. Manna (2006). Mass Media And Related Laws In India. Kolkata: Academic Publishers
- Monroe E. Price, StefaanG.Verhulst, Libby Morgan 2013). Routledge Handbook of Media Law. London, New York: Routledge
- Kaye Stearman (2012). Freedom of Information. New York: The Rosen Publishing
- Chris Reed (2004). Internet Law: Text and Materials. New York, Melbourne, Cape Town: Cambridge

21P2DGAP05: OBJECT ANIMATION AND PIXILATION

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

Different methods for creating animation are explored in this course.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Explain the different animation techniques such as drawn, cut-out and Stop Motion animation.
CO 2. Create a Cut-out animation
CO 3. Create a flipbook using drawings
CO 4. Create a Stop motion animation
CO 5. Experiment with pixilation, time-lapse, clay and sand animation

Module 1

Introduction to animation techniques – drawn, cut-out and stop motion.

Module 2

Creating a cut-out animation

Module 3

Creating a flip book using drawings

Module 4

Creating a stop motion animation- pixilation/ sand /time lapse/ clay

Module 5

Exploring other methods in animation

References:

1. Preston Blair **(**1994**),** *Cartoon Animation (Collector's Series)* Walter Foster Publishing.
2. Richard Williams (2009), *Animator's Survival kit*, Faber; Main - Revised Edition.
3. Ollie Johnston and Frank Thomas (1995), *Disney Animation - The Illusion of Life*, Disney Editions; Rev Sub edition.
4. John Halas Harold Whitaker, Tom Sito (2009), *Timing for Animation*, Focal Press; 2 edition.

21P2DGAP06: TRADITIONAL ANIMATION

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

This course concentrates on study and analysis of human and animal movement.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Make use of the skill of quick animation drawing for 2D character drawing
CO 2. Plan an animation using exposure sheets, timing and spacing
CO 3. Create gestures in character animation using the knowledge of human and animal gestures
CO 4. Apply the motion principles in animation shorts
CO 5. Analyse two-legged & four-Legged walk and run

Module 1

Introduction of the Animation Equipments: Line Tests (Cels/Sheets – Light Box – Peg Bar – Peg Holes –Field Charts – Camera [Studio Rostrum Camera]) – Introduction of the Basic Principles of Animation – Animation Methods: - Straight Ahead, Pose to Pose, Combination of Both.

Module 2

Animation Basics: - Planning an Animation: Timing – Slow-in/Slow-out - Line of Action – Path of Action – Key Drawings (Extremes and Breakdowns) – Maintaining Volume –Timing Ladder and Numbering of Animation Drawings – In Betweens – Clean-Up – Flipping Key Drawings - Using The Exposure Sheet (X Sheet) - Squash and Stretch: Anticipation – Action & Reaction - Wave Principle: Secondary Action – Follow through and overlapping action.

Module 3

Introduction to Acting – Pantomime - Acting Analysis – Acting Concepts – Actor vs. Animator – Discussion of the animation - Acting for Animators – Character Acting: Studies from movies - Motion Analysis - Basics of Animation Acting - Posing, Timing, and Staging - Voice Acting - Facial Expressions - Body Language.

Module 4

Pose, Anticipation, Delivery, Overshoot, Cushion and Settle in: - Gestures: Head, Hand and Shoulder - Surprise Reaction: Takes and Double Takes – Anticipation – Overlapping Actions.

Module 5

Animating Human Walk: Normal – Progressive, Cycle - Animating Character Run : Normal – Progressive, Cycle - Staging and Appeal, Exercises in fine-tuning animation – Movements Four Legged and Two Legged Animals.

References:

1. Ollie Johnston, Frank Thomas *The Illusion of Life: Disney Animation*
2. Richard Williams *The Animator's Survival Kit*
3. Harold Whitaker and John Halas *Timing for Animation*
4. Tony White *Animation from Pencils to Pixels: Classical Techniques for the Digital Animator*
5. Tony White *The Animator's Workbook: Step-By-Step Techniques of Drawn Animation*
6. Eadweard Muybridge *The Male and Female Figure in Motion*

21P2DGAP07: 3D ADVANCED STUDIES

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

Students learn to create 3D character models used for 3D Animation Films and 3d games. They learn particle effects, to fix bones and basic character animation using biped.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Identify the possibilities of Character Modeling
CO 2. Analyze inverse kinematics and forward kinematics
CO 3. Evaluate the role of constraints to control the bones
CO 4. Analyze the methods of Advanced rigging techniques
CO 5. Evaluate the basic concept and application of Dynamics

Module 1

Creating realistic character models and conceptual models**.**

Module 2

Rigging, Creating bone setup, Controllers IK and FK connections.

Module 3

Skinning, fixing gizmo of influential area.

Module 4

Advanced Rigging Techniques- Biped, Quadraped and Robotic

Module 5

Dynamics and other simulations, Different Particle systems.

References:

1. Autodesk (2007), *The Art of Maya: An Introduction to 3D Computer Graphics 4th Edition*; Sybex; 4th edition.
2. Tina O'Hailey (2013), *Rig it Right! Maya Animation Rigging Concepts* (Computers and People) 1st Edition; Focal Press; 1 edition.
3. David Rodriguez (2013), *Animation Methods - Rigging Made Easy: Rig your first 3D Character in Maya*; CreateSpace Independent Publishing Platform.
4. Todd Palamar (2009), *Maya Studio Projects: Dynamics*; Sybex.

21P2DGAP08: CG FOUNDATION

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

This course is designed to help texturing artist and compositing artist to master professional studio techniques—including custom typographic treatments and special photographic effects—in Adobe Photoshop.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Construct the specialization of digital Matte Painting foundation where they can perform their best.
CO 2. Develop precision, control and fluency within compositing work environments.
CO 3. Develop a vocabulary and visual language for CGI
CO 4. Build an understanding of graphic design principles in applied practice.
CO 5. Classify Industry standard graphic- visual effects toolsets and plug-ins

Module 1

Introduction to raster images – Image resolution - RGB, CMYK Indexed colour modes and their applications, Basic drawing in Photoshop – Using airbrush, pencil, paint brush tools.

Module 2

Concept of layers in Photoshop – Transparency and blending modes – creative use of layers and blending modes.

Module 3

Using the selection tools, using the path tool to create selections – Type tools in Photoshop. Introduction – Bitmap Painting and Vector Drawing, colours, colour variability and gradients, file types, formats, resolution and size.

Module 4

Channels – using alpha channels to save selections – Colour correction in Photoshop – adjusting hue, saturation and value of images. Paint packages – Photoshop, painter. Selections and masks, custom brushes, working with layers.

Module 5

Creation of Textures for Unwrapping and Digital Painting

References:

1. Adobe Creative Team (2012), *Adobe Photoshop CS6 Classroom in a Book*, Adobe Press; 1 edition.
2. Ben Willmore & Dan Ablan (2009), *Adobe Photoshop CS Studio Techniques* , Adobe Press; 1 edition.
3. Adobe Creative Team (2012), *Adobe Illustrator Classroom in a Book*, Adobe Press; 1 edition.
4. Luanne Seymour Cohen (2004), *Adobe Illustrator CS Creative Studio*, Adobe Press.

21P3DGAP09: 3D ANIMATION

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

Students are introduced to advanced 3D animation techniques.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Compare the role and developments of 3D arts in past and present cultures throughout the world.
CO 2. Demonstrate 3D art applications, aesthetic judgment, and to increase visualizing power and critical thinking skills.
CO 3. Categorize the developments in the techniques of 3D Animation and its importance in Media and modern Architectural concepts.
CO 4. Evaluate the impact of the industrial revolution and its influence in 3D graphics.
CO 5. Invent new concepts and designs through advanced 3D Technology.

Module 1

Introduction to basic 3D animation

Module 2

Basic walk cycle, run cycle, Push/Pull, Jump

Module 3

Advanced Character Animation using Animation principles

Module 4

Advanced Facial Animation techniques

Module 5

Acting sequence,2-character interaction scenes

References:

1. Keith Osborn (2015), *Cartoon Character Animation with Maya: Mastering the Art of Exaggerated Animation*; Fairchild Books.
2. Jason Osipa (2010), *Stop Staring: Facial Modeling and Animation Done* Right 3rd Edition; Sybex.
3. Jae-jin Choi (2004), *Maya Character Animatio*n, 2nd Edition.
4. Andy Beane (2012), *3D Animation Essentials* 1st Edition.

21P3DGAP10: COMPOSITING

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

This course trains students in to combine multiple elements such as photographs, videos, 3d objects to create an integrated output.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Build the area of specialization in post-production where they can perform their best.
CO 2. Build precision, control and fluency within post production work environments.
CO 3. Develop an understanding of motion graphic design principles in applied practice.
CO 4. Identify Industry standard motion graphic- visual effects toolsets and plug-ins
CO 5. Summarize various visual effects requirements

Module 1

Exploring the Transform Properties, Key framing. Interpolation Techniques Layer Compositing

Module 2

Masking, Rotoscoping and Painting FX

Module 3

Keying, Stabilizing & Tracking, Chroma key, Particles

Module 4

3D Compositing and FX, Audio Editing, Time Remapping

Module 5

Title Graphics and Using the Render Queue, Mixing

References:

1. Doug Kelly, *Digital Compositing In Depth: The Only Guide to Post Production for Visual Effects in Film*
2. Lee Lanier (2015), *Compositing Visual Effects in After Effects: Essential Techniques*, Focal Press.
3. Mark Christiansen (2013), *Adobe After Effects CC Visual Effects and Compositing Studio Techniques*, Adobe Press; 1 edition.
4. Jon Gress (2014), *Visual Effects and Compositing*, New Riders; 1 edition.,

21P3DGAP11: FILM EDITING

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVE

Students learn different film editing techniques.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Explain video formats and principles.
CO 2. Develop techniques editors use to construct stories.
CO 3. Apply professional style color correction.
CO 4. Evaluate working knowledge of non-linear editing software.
CO 5. Create digital video projects, identify items for improvement, and implement changes.

Module 1

Basic Editing Terminologies, NLE editing

Module 2

Editing Principles

Module 3

Transitions, Effects, Contrast

Module 4

Exploring Time Controls and Audio, Parallelism, Symbolism

Module 5

Simultaneity, Leit motiff, Formats, Render and Export

References:

1. Sergei Eisenstein (1969), *Film Form And Film Sense* , Harcourt; Edition Unstated edition.
2. Robert M. Goodman (2002), *Patrick McGrath, Editing Digital Video : The Complete Creative and Technical Guide*, McGraw-Hill Education TAB; 1 edition.
3. Adobe Creative Team (2013), *Adobe Premiere Pro CC Classroom in a Book*, Adobe Press; 1 edition
4. Michael Hughes (2012) , *Digital Filmmaking for Beginners A Practical Guide to Video Production*, McGraw-Hill Education TAB; 1 edition.

21P3DGAPJ1: RESEARCH METHODOLOGIES

90 Hours (5 hrs/week) **Credit – 4**

OBJECTIVES

Research is an important part of the Animation programme's activity. Animation welcomes research applications to contribute to the development of an innovative Animation Research environment. Research is seen as a conduit for ideas that is complementary to the exploration of ideas through process and practice. The programme's research strategy aims to engage with a more philosophical approach towards understanding the role of communication and film theory and practice in culture and society, and the ways in which filmmakers, artists and designers work.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Develop deep and wide insights in design research.

CO 2. Classify and apply quantitative and qualitative research techniques for designing animation film content.

CO 3. Demonstrate knowledge of all processes involved in design research while evaluating descriptive and prescriptive research methods.

CO 4. Interpret, develop and design Research Methodology for various design research needs in animation film making.

CO 5. Outline and create design research documents in the form of project reports

Module 1

Introduction to research: What and Why; Current issues with research and the need for a research methodology; Major facets of research. Introduction to RM – a research methodology-its main components, and examples to explain the components.

Module 2

Types of design research, determining type of research to be persuaded. Starting research: Clarification of requirements: Identifying research topics, carrying out literature search, consolidating the topic into research questions and hypotheses, and developing a research plan.

Module 3

Types of descriptive study; Processes for carrying out descriptive studies for Developing an understanding a facet of design and its influences; Introduction to associated descriptive study real-time and retrospective research methods for data collection such as protocol analysis, questionnaire surveys, interviews. Introduction to quantitative and qualitative data analysis methods.

Module 4

Types of prescriptive study; Processes for developing design support and associated Prescriptive study research methods; Types of support evaluation; Processes for evaluating a design support, and associated evaluation study research methods; Types and structures of research documentation; Approaches and guidelines for documenting and reporting research process and outcomes

Module 5

Project: Research Paper

References:

1. Blessing, L.T.M.(2009), and Chakrabarti, A. DRM, a Design Research Methodology, Springer.
2. Blessing,L.T.M.,andChakrabarti,A.DRM:ADesignResearchMethodology,in
3. International Conference on The Science of Design (2002) –The Scientific Challenge for the 21st Century, INSA, Lyon, France, 15-16,.
4. Blessing, L.T.M, Chakrabarti, A.(1995), and Wallace, K.M. A Design Research Methodology, Proceedings of the International Conf. in Engineering Design, Prague, Vol.1, pp50-55.
5. Blessing ,L.T.M.,Chakrabarti A.and Wallace (1998), K.M.An Overview of Design Studies in Relation to a Design Research Methodology, Designers: the Key to Successful Product Development, Frankenberger & Badke-Schaub (Eds.), Springer-Verlag.
6. Chakrabarti.A.(2009) A Course of Teaching DRM-a Methodology for Design Research, Special Issue on Design Pedagogy, Dan Frey, Bill Binmingham and Clive Dym (Eds.), AIEDAM,

21P3DGAPJ2: 2D DIGITAL ANIMATION PROJECT

Credit – 7

OBJECTIVE

Students are introduced to 2D Animation softwares with which they learn the production techniques like animation, colouring, keyframe, tweening.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Apply Basic Tools and Interface of the Digital Software
CO 2. Create Symbols
CO 3. Create Tween Animation and Masking
CO 4. Create Gestures in Character Animation Digitally
CO 5. Create Two & Four Legged Animation

Module 1

Basic Tools, Interface, Panels, Timeline, Tweening, Guide Layer, Masking, Symbols - Creating a Character in Symbols.

Module 2

Phonetics – Standard Mouth Shapes - Dialogue Animation – The Sound Track - Phrasing – Accents – Attitudes – Recoding of Dialogues and Voice-Over –Marking in X Sheets – Synchronizing Sound. - Dialogue Animation of Humanoid Characters.

Module 3

Human Characters – Animating Walks and Runs - Drop Jump – Jump - Mass and Weight - Animation of Four Legged and Two Legged Animals: Normal and Stylized Movements of animals |Bird Flight / Movements in Different Stages - Movements of Reptiles - Animating Insects and Fishes.

Module 4

Animating Special Effects: - Sky, Lightening, Rainfall, Snow, Water Drops, Water Ripples, Waves, Smokes, Fire, Explosions Etc.

Module 5

Project: Creation of a Classical 2D animation short animation film with sound synchronization.

References:

1. Barry Kelly, Tim Jones, David Wolfe, Allan Rosson (2007), *Foundation Flash Cartoon Animation*, Apress; 2007 edition.
2. Chris Jackson (2010), *Flash Cinematic Techniques: Enhancing Animated Shorts and Interactive Storytelling* , Focal Press; 1 edition.
3. Preston Blair **(**1994**),** *Cartoon Animation (Collector's Series)* Walter Foster Publishing.
4. Richard Williams (2009), *Animator's Survival kit*, Faber; Main - Revised Edition.

21P4DGAPJ3: 3D ANIMATION PROJECT

(ANIMATION SHORT MOVIE)

Credit – 7

OBJECTIVES

Students develop an innovative body of work making use of the skills and knowledge acquired during the previous courses. This guided project culminates in a final presentation accompanied by a written component.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Create Concept with Story, Script and Character Development.
CO 2. Create Storyboard with Animatics
CO 3. Create Character, Props, BG Modeling
CO 4. Create Rigging, Animation and Rendering.
CO 5. Create Final Compositing Video with Audio

- Working closely with the professor, students define specific production goals to explore or complete an animation project of their choosing. Emphasis is on the conceptual, aesthetic and technical processes. Students are encouraged to share their specific areas of expertise while producing individually directed projects.

- They will be experiencing the 3D Animation Film Production techniques which involves all three sectors, i.e., Pre-Production, Production and Post-Production.

21P4DGAP12: POST PRODUCTION

72 Hours (4 hrs/week) **Credit – 4**

OBJECTIVES

Students develop a skill to combine CG and Live shots in order to create a Film scene, were both virtual characters are introduced along with real characters. They master in visual effects which is a processes by which imagery is created and/or manipulated outside the context of a live action shot. Visual effects involve the integration of live-action footage and generated imagery to create environments which look realistic, but would be dangerous, expensive, impractical, or simply impossible to capture on film.

They will be using Matte paintings and stills: digital or traditional paintings or photographs which serve as background plates for keyed and rotoscoped elements.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Discover the area of specialization in post-production where they can perform their best.
CO 2. Build precision, control and fluency within post production work environments.
CO 3. Develop a vocabulary and visual language for film post production
CO 4. Demonstrate an understanding of post-production principles in applied practice.

Project submission according to the instructions and deadline given by the instructor.

21P4DGAPJ4: PORTFOLIO

36 Hours (2 hrs/week) **Credit – 2**

OBJECTIVES

Provides an opportunity to prepare a professional portfolio and exhibit student works at the end of the program with proper guidance from the department. Students get to showcase their ability as an artist in their discipline. The employers want to know how skilled a graduating student is, and this is an opportunity to exhibit their talents and area of specialisation. Each student should work individually and combine their final portfolio works under the guidance of supervising faculty.

COURSE OUTCOMES

At the end of the programme, the students will be able to:

CO 1. Show their ability as an artist in their discipline.
CO 2. Analyse and identify the current learning needs.
CO 3. Create Effective documentation of the planning, process and outcomes of a single course.
CO 4. Create an effective Blog or Site to reflect practice and professional development.
CO 5. Create Specialised Animation Styles, interactive elements and production techniques for a production-oriented output.

21P4DGAIN1: INTERNSHIP

Duration: 1 Month **Credit – 2**

OBJECTIVE:

To acquire practical industry-based experience. Internship is on the job training to assimilate professionalism in one's career. The students will have to undergo an Internship at a TV Studio/Channel/Animation Studio for a fortnight during the fourth semester. The students would prepare individual reports after the Internship and the same should be attested by the organization underwhich the student did the internship. A faculty member will monitor the students during the internship. The assessment will be based on the comprehensive report submitted by each student within a month of completion of internship.

COURSE OUTCOMES

Students will:

CO 1. Function efficiently on live projects in the industry.
CO 2. Inspect and Interact effectively with animation industry professionals and collaborate with other individuals and as members of a team
CO 3. Solve challenges in the industry with confidence.
CO 4. Analyse and create animation designs for effective communication.

21P4DGACV1: COMPREHENSIVE VIVA-VOCE

Credit – 2

OBJECTIVES

Comprehensive Viva will be a part of the programme and the external assessment will be held at the end of fourth semester. Students will be able to review and evaluate the overall work done by the student in four Semesters of Programme.

COURSE OUTCOMES

CO 1. Examine the level of application and understanding from the content and practice gathered during the masters programme.

CO 2. Assess the overall works done by the student in the four Semesters of the Programme.

Guidelines for Comprehensive Viva

- The viva shall cover all courses including electives chosen.
- The External Evaluation will be conducted by an expert /a panel of experts appointed by the College and as per the schedule issued by College.
- The examiner(s) will evaluate the knowledge level and skills acquired by the students during all semesters of MA DIGITAL ANIMATION programme.
- The grades shall be awarded based on the answers, communication skills and presentation skills.

MODEL QUESTION PAPER

Reg. No .....

M. A. DEGREE END SEMESTER EXAMINATION - MARCH 20….

SEMESTER 1

COURSE: 21P1DGAT01 HISTORY OF ANIMATION

Time: Three Hours Total weight: 30

Section A

(Answer any 8 questions. Each question carries a weight of 1)

1. What do you mean by CG?
2. Disney's 101 Dalmatians was based on which technique?
3. Which was the first feature film to use digital image processing?
4. Who created Betty Boop? In which studio?
5. Write the first name of Fleischer studios? Mention two characters created there.
6. What is 3D markerless systems?
7. Name any two inspirational animated feature films.
8. What was Zoetrope?
9. Name the artist who is known as the 'Father of Manga'.
10. What is a Peg layer?

Section B

(Answer any 6 questions. Each question carries a weight of 2)

11. What is Vector Graphics? Explain.
12. What is Oscilloscope? Explain.
13. Brief the peculiarities of European animation.
14. Write a short note on Norman McLaren.
15. What is Pixilation? Explain with examples.
16. What is wire removal? Explain.
17. Discuss Matte Painting and its advantages.
18. What is the scope of animation in India?

Section C

(Answer any 2 questions. Each question carries a weight of 5)

19. How has computer graphics revolutionized the world of animation? Elaborate.
20. Write on the contributions of Walt Disney studios with suitable examples.
21. Analyse the importance of animation as an entertainment medium.
22. Discuss the experimental animations from the National Film Board of Canada.