

# Study & Evaluation Scheme of

## Bachelor of Science in Animation & Vfx

[Applicable for Batch 2019-22]

[As per CBCS guidelines given by UGC]



<b>Approved in BOS</b>	<b>Approved in BOF</b>	<b>Approved in Academic Council</b>
03/30/2019	06/26/2019	07/13/2019

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**Study & Evaluation Scheme**  
**Study Summary**

Name of the Faculty	Faculty of Media Studies & Design
Name of the School	Quantum School of Media Studies & Design
Name of the Department	Department of Media Studies & design
Program Name	Bachelor of Science in Animation & Vfx
Duration	3 Years
Medium	English

**Evaluation Scheme**

Type of Papers	Internal Evaluation (%)	End Semester Evaluation (%)	Total (%)
Theory	40	60	100
Practical/ Dissertations/Project Report/ Viva-Voce	40	60	100
<i>Internal Evaluation Components (Theory Papers)</i>			
Sessional Examination I	50 Marks		
Sessional Examination II	50 Marks		
Assignment –I	25 Marks		
Assignment-II	25 Marks		
Attendance	50 Marks		
<i>Internal Evaluation Components (Practical Papers)</i>			
Quiz One	25 Marks		
Quiz Two	25 Marks		
Quiz Three	25 Marks		
Lab Records/ Mini Project	75 Marks		
Attendance	50 Marks		
<i>End Semester Evaluation (Practical Papers)</i>			
ESE Quiz	30 Marks		
ESE Practical Examination	50 Marks		
Viva- Voce	20 Marks		

## Structure of Question Paper (ESE Theory Paper)

The question paper will consist of 5 questions, one from each unit. Student has to Attempt all questions. All questions carry 20 marks each. Parts a) and b) of question Q1 to Q5 will be compulsory and each part carries 2 marks. Parts c), d) and e) of Q1 to Q5 Carry 8 marks each and the student may attempt any 2 parts.

**Important Note:**

1. *The purpose of examination should be to assess the Course Outcomes (CO) that will ultimately lead to attainment of Programme Outcomes (PO). A question paper must assess the following aspects of learning as planned for a specific course i.e Remember, Understand, Apply, Analyze, Evaluate & Create (reference to Bloom's Taxonomy). The standard of question paper will be based on mapped BL level complexity of the unit of the syllabus, which is the basis of CO attainment model adopted in the university.*

2. *Case Study / Caselet is essential in every question paper (wherever it is being taught as a part of pedagogy) for evaluating higher-order learning. Not all the courses might have case teaching method used as pedagogy.*

3. *There shall be continuous evaluation of the student and there will be a provision of real time reporting on QUMS. All the assignments will be evaluated through module available on ERP for time and access management of the class.*



## ***Program Structure – Bachelor of Science in Animation & VFX***

### ***Introduction***

Bachelor of Science Animation & VFX syllabus is broad and multidisciplinary consists of various subjects, it focuses on creative art and animating the characters for transmission of messages in meaningful and effective way. It is designed for production of various character in virtual format

Bachelor of Science Animation & VFX syllabus are designed in such a way that students grasp all the knowledge related to animation and Visual effects and enhancing employability and entrepreneurial ability of the graduates the Quantum University increase the practical content in the courses wherever necessary. The total number of credit hours in 6 semesters including Student programme will range from 150 to 160 for all the programmes.

The students would be required to record their observations in field and media-industries on daily basis and will prepare their project report based on these observations.

### **Experiential Learning Programme (ELP)/ Hands On Training (HOT)**

This program will be undertaken by the students preferably during the sixth semester for a total duration of 24 weeks with a weightage of 0+20 credit hours. The students will register for any of two modules, listed below, of 0+10 credit hours each.

- Animator
- Video editor
- Making of digital Short Film/Documentary
- Science of Video Editing
- Digital Media
- Content Development
- Voice over production
- Still Photography
- Graphics Designing
- Visual effects

**Curriculum (19-22) Version 2019.01**

Quantum School of Mass Media & Design  
 Bachelor of Science in Animation & Vfx- **PC: 05-3-03**

**BREAKUP OF COURSE**

Sr. No	CATEGORY	CREDITS
1	Foundation Core (FC)	8
2	Program Core (PC)	91
3	Program Electives (PE)	-
4	Open Electives (OE)	9
5	Project	12
6	Internship	-
7	Value Added Programs (VP)	10
8	General Proficiency (GP)	5
9	Passion Programs (PROPs)*	-
10	Disaster Management*	2*
<b>TOTAL NO. OF CREDITS (Without Minor)</b>		<b>135</b>
<b>TOTAL NO. OF CREDITS (With Minor)</b>		<b>144</b>

\*Non-CGPA Audit Course

**SEMESTER-WISE BREAKUP OF CREDITS**

Sr.No	CATEGORY	SEM 1	SEM 2	SEM 3	SEM 4	SEM 5	SEM 6	TOTAL
1	Foundation Core	4	4	-	-	-	-	8
2	Program Core	14	12	14	15	19	17	91
3	Program Electives					-	-	-
4	Open Electives		3	3	3			9
5	Projects	-	-	-	-	4	8	12
6	Internships	-	-	-	-	-		
5	VPs	-	2	2	-	4	2	10
6	GP	1	1	1	1	1	-	5
7	PROPs*							
10	Disaster Management*		2					2*
<b>TOTAL CREDITS</b>		<b>19</b>	<b>24</b>	<b>20</b>	<b>19</b>	<b>28</b>	<b>27</b>	<b>135</b>

\* Non-CGP Audit Course

Minimum Credit Requirements:

**B.Sc. Animation & VFX: 143 credits**

**SEMESTER 1**

Course Code	Category	Course Title	L	T	P	C	Version	Course Prerequisite
<b>JM3102</b>	FC	General Studies& Current Affairs	2	0	0	2	1.0	Nil
<b>AN3101</b>	PC	Basic of Sketching and Drawings	2	0	4	4	1.0	Nil
<b>AN3103</b>	PC	Introduction to Graphic designing	4	0	0	4	1.0	Nil
<b>AN3102</b>	PC	Preproduction Elements	4	0	0	4	1.0	Nil
<b>VP3114</b>	PC	Fundamental of Photography	0	0	4	2	1.0	Nil
<b>EG3103</b>	FC	English Communication	0	0	4	2	1.0	Nil
<b>GP3101</b>	GP	General Proficiency	0	0	0	1	1.0	Nil
		<b>TOTAL</b>	<b>12</b>	<b>0</b>	<b>12</b>	<b>19</b>		

**Contact hrs.: 24hrs**

**SEMESTER 2**

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
<b>CE3101</b>	FC	Disaster Management*	2	0	0	2*	1.0	Nil
<b>CY3205</b>	FC	Environmental Studies	2	0	0	2	1.0	Nil
<b>AN3201</b>	PC	2d Digital Animation (Flash)	2	0	4	4	1.0	Nil
<b>AN3202</b>	PC	Film Production	4	0	0	4	1.0	Nil
<b>GD3202</b>	PC	Advance Graphics Design for Animation	3	0	2	4	1.0	Nil
<b>AN3203</b>	PC	Introduction to Classical Animation	3	0	0	4	1.0	Nil
	OE	Open Elective I	3	0	0	3		
<b>VP3212</b>	VP	Audio Editing	0	0	4	2	1.0	Nil
<b>GP3201</b>	GP	General Proficiency	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	1.0	Nil
		<b>TOTAL</b>	<b>19</b>	<b>0</b>	<b>10</b>	<b>24</b>		

**Contact hrs.: 29hrs.**

**SEMESTER 3**

Course Code	Category	Course Title	L	T	P	C	Version	Course Prerequisite
<b>AN3301</b>	PC	3-D Modelling and 3-D Texturing	1	0	4	3	1.0	Nil
<b>AN3302</b>	PC	3-D Character Design	1	0	4	3	1.0	Nil
<b>AN3303</b>	PC	Print Media	2	0	0	2	1.0	Nil
<b>AN3304</b>	PC	Motion Graphics & Composite	1	0	4	3	1.0	Nil
<b>AN3305</b>	PC	Compositing for VFX	1	0	4	3	1.0	Nil
	OE	Open Elective II	3	0	0	3	1.0	Nil
<b>VP3315</b>	VP	Video Editing	0	0	4	2	1.0	Nil
<b>GP3301</b>	GP	General Proficiency	0	0	0	1	1.0	Nil
		<b>TOTAL</b>	<b>9</b>	<b>0</b>	<b>20</b>	<b>20</b>		

**Contact hrs.:29hrs.**



**SEMESTER 4**

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
<b>AN3401</b>	PC	3D Architectural Visualization	2	0	4	4	1.0	Nil
<b>AN3402</b>	PC	3D Shading, Lighting and Rendering	1	0	4	3	1.0	Nil
<b>AN3440</b>	PC	Tracking and Match Moving	0	0	4	2	1.0	Nil
<b>JM3403</b>	PC	Cinematography	3	0	0	3	1.0	Nil
<b>AN3404</b>	PC	FX & Simulation	1	0	4	3	1.0	Nil
	OE	Open Elective III	3	0	0	3	1.0	Nil
<b>GP3401</b>	GP	General Proficiency	0	0	0	1	1.0	Nil
<b>TOTAL</b>			<b>10</b>	<b>0</b>	<b>16</b>	<b>19</b>		

**Contact hrs.: 26hrs.**

All students are required to undergo 04 to 06 weeks' summer project after completion of 4<sup>th</sup> semester. Performance of this project will be evaluated and awarded in 5<sup>th</sup> semester.

**SEMESTER 5**

Course Code	Category	Course Title	L	T	P	C	Version	Course Prerequisite
AN3502	PC	3D Animation	2	0	4	4	1.0	Nil
AN3503	PC	Computer Aided 3D Dynamics	1	0	4	3	1.0	Nil
AN3504	PC	Computer Aided 3D Rigging	2	0	2	3	1.0	Nil
AN3505	PC	Voice Over & Sound Design	1	0	4	3	1.0	Nil
AN3506	PC	Lighting & Rendering for VFX	1	0	4	3	1.0	Nil
AN3507	PC	2D Game Art	1	0	4	3	1.0	Nil
VP3414	VP	Clay Modeling and Sculptures	0	0	4	2	1.0	Nil
VP3514	VP	Aesthetics in design	1	0	2	2	1.0	Nil
AN3570	PT	Summer project (Film Pre-Production)	0	0	8	4	1.0	Nil
GP3501	GP	General Proficiency	0	0	0	1	1.0	Nil
<b>TOTAL</b>			<b>9</b>	<b>0</b>	<b>36</b>	<b>28</b>		

**Contact hrs.: 45hrs.**

**SEMESTER 6**

Course Code	Category	COURSE TITLE	L	T	P	C	Version	Course Prerequisite
AN3601	PC	Advance Rigging	2	0	2	3	1.0	Nil
AN3602	PC	Acting for Animation	2	0	4	4	1.0	Nil
AN3603	PC	Character Animation	2	0	4	3	1.0	Nil
AN3604	PC	Facial & Lips Synchronization	1	0	4	3	1.0	Nil
AN3605	PC	Game Design & Development	1	0	6	4	1.0	Nil
VP3614	VP	Experimental printing	0	0	4	2	1.0	Nil
AN3670	PT	Major Project	0	0	16	8	1.0	Nil
<b>TOTAL</b>			<b>8</b>	<b>0</b>	<b>40</b>	<b>27</b>		

**Contact hrs.: 48hrs.**



### **B. Choice Based Credit System (CBCS)**

Choice Based Credit System (CBCS) is a versatile and flexible option for each student to achieve his target number of credits as specified by the UGC and adopted by our university.

The following is the course module designed for the B..Com program with specialization Honors and Banking and Insurance.

**Core competency:** Students will acquire core competency in Commerce and Finance and its allied areas.

#### **Program/Discipline Specific Elective Course (DSEC):**

**Skilled communicator:** The course curriculum incorporates basics and advanced training in order to make a graduate student capable of expressing the subject through technical writing as well as through oral presentation.

**Critical thinker and problem solver:** The course curriculum also includes components that can be helpful to graduate students to develop critical thinking ability by way of solving problems/numerical using basic & advance knowledge and concepts of Commerce and Finance

**Sense of inquiry:** It is expected that the course curriculum will develop an inquisitive characteristic among the students through appropriate questions, planning and reporting experimental investigation.

**Skilled project manager:** The course curriculum has been designed in such a manner as to enabling a graduate student to become a skilled project manager by acquiring knowledge about mathematical project management, writing, planning, study of ethical standards and rules and regulations pertaining to business and trade related projects operation.

**Ethical awareness/reasoning:** A graduate student requires understanding and developing ethical awareness/reasoning which the course curriculums adequately provide.

**Lifelong learner:** The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT technique and other available techniques/books/journals for personal academic growth as well as for increasing employability opportunity.

**Value Added Course (VAC):** A value added audit course is a non-credit course which is basically meant to enhance general ability of students in areas like soft skills, quantitative aptitude and reasoning ability - required for the overall development of a student and at the same time crucial for industry/corporate demands and requirements. The student possessing these skills will definitely develop acumen to perform well during the recruitment process of any premier organization and will have the desired confidence to face the interview. Moreover, these skills are also essential in day-to-day life of the corporate world. The aim is to nurture every student for making effective communication, developing aptitude and a general reasoning ability for a better performance, as desired in corporate world. There shall be four courses of Aptitude in Semester I, II, III & IV semesters and two courses of Soft Skills in III & IV Semesters and will carry no credit, however, it will be compulsory for every student to pass these courses with minimum 50% marks to be eligible for the certificate. These marks will not be included in the calculation of CGPI. Students have to specifically be registered in the specific course of the respective semesters.

**Skill Enhancement Course:** This course may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge.

**Generic/Open Elective Course (OE):** Open Elective is an interdisciplinary additional subject that is compulsory in a program. The score of Open Elective is counted in the overall aggregate marks under Choice Based Credit System (CBCS). Each Open Elective paper will be of 3 Credits in II, III and IV semesters. Each student has to take Open/Generic Electives from department other than the parent department. Core / Discipline Specific Electives will not be offered as Open Electives.

**Non-Credit CGPA :** This is a compulsory non credit CGPA course hat does not have any choice and will be of 3 credits. Each student of B.Com Program has to compulsorily pass the Environmental Studies and Disaster Management.

**C. Program Outcomes of B.Sc. Animation & VFX program:**

<b>PO-01</b>	Create Computer Graphics assets creation, Visual Effects, 3D and Graphic Design.
<b>PO-02</b>	Create a complex project to finish with smoothly in a result-oriented manner both individually and as a team.
<b>PO-03</b>	Demonstrate, communicate ideas, emotion and intent effectively in visual, oral and written forms.
<b>PO-04</b>	Apply thoughtful contributors to society.
<b>PO-05</b>	Analyze learning cycle, and become effective and efficient industry leaders with the quality of entrepreneurship.
<b>PO-06</b>	Evaluate the work collaboratively and effectively in diverse situations.
<b>PO-07</b>	Highly trained to demonstrate their knowledge, skill, dedication and work ethics required to be a successful member of a production team
<b>PO-08</b>	Demonstrate the industrial requirements.
<b>PO-09</b>	Demonstrate their acquired knowledge for the growth of social and ethical values in outdoor activities, such as service learning, internships and field work.
<b>PO-10</b>	Define the content for mentor the staff placed under them to produce desired results.

**D. Program Specific Outcomes:**

<b>PSO-1</b>	To create competence in the fields of Computer Graphics assets creation, Visual Effects, 3D animation and Graphic designing.
<b>PSO-2</b>	To help Acquire multiple skills that will enhance their employability in different segments of Animation, 3D and Entertainment industry
<b>PSO-3</b>	Understand the ongoing changing trends and keep them updated with the latest technology.
<b>PSO-4</b>	Understand the ongoing changing trends and keep them updated with the latest technology.
<b>PSO-5</b>	Inculcate adequate knowledge, skill, dedication and work ethics required for accomplishment of the assigned task.



**E. Program Educational Objectives (PEO's)**

<b>PEO-1</b>	<b>B.Sc. Animation, VFX &amp; 3D:</b> After completing graduation students will be equipped with creative and technical skills in various domains of Animation, 3D, VFX and multimedia. This will enable them to be employed globally.
<b>PEO-2</b>	<b>Animation:</b> This specialization offered to the students will enhance their knowledge in the field 3D Animation. Students will become an expert in specific domain of 3d Animation and will work in Films, Games and other animation related fields.
<b>PEO-3</b>	<b>Graphic Design:</b> This specialization offered to the students will enhance their knowledge in the field of 2D Animation & Graphic Design. Students will achieve expertise in the specific domain of Graphics Design, 2D animation and will be able to work in Films, Graphic design Companies and other animation related fields.

**F. Pedagogy & Unique practices adopted:**

“Pedagogy is the method and practice of teaching, especially for teaching an academic subject or theoretical concept”. In addition to conventional time-tested lecture method, the institute will emphasize on experiential learning:

*Role Play & Simulation:* Role- play and simulation are forms of experiential learning. Learners take on different roles, assuming a profile of a character or personality, and interact and participate in diverse and complex learning settings. Role-play and simulation function as learning tools for teams and groups or individuals as they "play" online or face-to-face. They alter the power ratios in teaching and learning relationships between students and educators, as students learn through their explorations and the viewpoints of the character or personality they are articulating in the environment. This student-centered space can enable learner-oriented assessment, where the design of the task is created for active student learning. Therefore, role-play& simulation exercises such as virtual share trading, marketing simulation etc. are being promoted for the practical-based experiential learning of our students.

*Video Based Learning (VBL)&Learning through Movies (LTM):* These days technology has taken a front seat and classrooms are well equipped with equipment and gadgets. Video-based learning has become an indispensable part of learning. Similarly, students can learn various concepts through movies. In fact, many teachers give examples from movies during their discourses. Making students learn few important theoretical concepts through VBL & LTM is a good idea and method. The learning becomes really interesting and easy as videos add life to concepts and make the learning engaging and effective. Therefore, our institute is promoting VBL& LTM, wherever possible.

*Field/Live Projects:* The students, who take up experiential projects in companies, where senior executives with a stake in teaching guide them, drive the learning. All students are encouraged to do some live project other their regular classes.

*Industrial Visits:* Industrial visit are essential to give students hand-on exposure and experience of how things and processes work in industries. Our institute organizes such visits to enhance students' exposure to practical learning and work out for a report of such a visit relating to their specific topic, course or even domain.

*MOOCs:* Students may earn credits by passing MOOCs as decided by the college. Graduate level programs may award Honors degree provided students earn pre-requisite credits through MOOCs. University allows students to undertake additional subjects/course(s) (In-house offered by the university through collaborative efforts or courses in the open domain by various internationally recognized universities) and to earn additional credits on successful completion of the same. Each course will be approved in advance by the University following the standard procedure of approval and will be granted credits as per the approval.



Keeping this in mind, University proposed and allowed a maximum of two credits to be allocated for each MOOC courses. In the pilot phase it is proposed that a student undertaking and successfully completing a MOOC course through only NPTEL could be given 2 credits for each MOOC course.

For smooth functioning and monitoring of the scheme the following shall be the guidelines for MOOC courses, Add-on courses carried out by the College from time to time.

- a) It will necessary for every student to take at least one MOOC Course throughout the programme.
- b) There shall be a MOOC co-ordination committee in the College with a faculty at the level of Professor heading the committee and all Heads of the Department being members of the Committee.
- c) The Committee will list out courses to be offered during the semester, which could be requested by the department or the students and after deliberating on all courses finalize a list of courses to be offered with 2 credits defined for each course and the mode of credit consideration of the student. The complete process shall be obtained by the College before end of June and end of December for Odd and Even semester respectively of the year in which the course is being offered. In case of MOOC course, the approval will be valid only for the semester on offer.
- d) Students will register for the course and the details of the students enrolling under the course along with the approval of the Vice Chancellor will be forwarded to the Examination department within fifteen days of start of the semester by the Coordinator MOOC through the Principal of the College.
- e) After completion of MOOC course, Student will submit the photo copy of Completion certificate of MOOC Course to the Examination cell as proof.
- f) Marks will be considered which is mentioned on Completion certificate of MOOC Course.
- g) College will consider the credits only in case a student fails to secure minimum required credits then the additional subject(s) shall be counted for calculating the minimum credits required for the award of degree.

*Special Guest Lectures (SGL) & Extra Mural Lectures (EML):* Some topics/concepts need extra attention and efforts as they either may be high in difficulty level or requires experts from specific industry/domain to make things/concepts clear for a better understanding from the perspective of the industry. Hence, to cater to the present needs of industry we organize such lectures, as part of lecture-series and invite prominent personalities from academia and industry from time to time to deliver their vital inputs and insights.

*Student Development Programs (SDP):* Harnessing and developing the right talent for the right industry an overall development of a student is required. Apart from the curriculum teaching various student development programs (training programs) relating to soft skills, interview skills, SAP, Advanced excel training etc. that may be required as per the need of the student and industry trends, are conducted across the whole program. Participation in such programs is solicited through volunteering and consensus.

*Industry Focused programmes:* Establishing collaborations with various industry partners to deliver the programme on sharing basis. The specific courses are to be delivered by industry experts to provide practice-based insight to the students.

*Special assistance program for slow learners & fast learners:* write the note how would you identify slow learners, develop the mechanism to correcting knowledge gap. Terms of advance topics what learning challenging it will be provided to the fast learners.

*Induction program:* Every year 3 weeks induction program is organized for 1st year students and senior students to make them familiarize with the entire academic environment of university including Curriculum, Classrooms, Labs, Faculty/ Staff members, Academic calendar and various activities.

*Mentoring scheme:* There is Mentor-Mentee system. One mentor lecture is provided per week in a class. Students can discuss their problems with mentor who is necessarily a teaching faculty. In this way, student's problems or issues can be identified and resolved.

*Competitive exam preparation:* Students are provided with one class in every week for GATE/ Competitive exams preparation.

*Extra-curricular Activities:* organizing & participation in extracurricular activities will be mandatory to help students develop confidence & face audience boldly. It brings out their leadership qualities along with planning & organizing skills.



Students undertake various cultural, sports and other competitive activities within and outside their campus. This helps them build their wholesome personality.

*Career & Personal Counseling:* - Identifies the problem of student as early as possible and gives time to discuss their problems individually as well as with the parents. Counseling enables the students to focus on behavior and feelings with a goal to facilitate positive change. Its major role lies in giving: Advice, Help, Support, Tips, Assistance, and Guidance.

*Participation in Flip Classes, Project based Learning(A2 Assignment), Workshops, Seminars & writing & Presenting Papers:* Departments plan to organize the Flip Classes, Project based Learning(A2 Assignment), workshops, Seminars & Guest lecturers time to time on their respective topics as per academic calendar. Students must have to attend these programs. This participation would be count in the marks of general Discipline & General Proficiency which is the part of course scheme as non-credit course.

*Formation of Student Clubs, Membership & Organizing & Participating events:* Every department has the departmental clubs with the specific club's name. The entire student's activity would be performed by the club. One faculty would be the coordinator of the student clubs & students would be the members with different responsibility.

*Capability Enhancement & Development Schemes:* The Institute has these schemes to enhance the capability and holistic development of the students. Following measures/ initiatives are taken up from time to time for the same: Career Counseling, Soft skill development, Remedial Coaching, Bridge Course, Language Lab, Yoga and Meditation, Personal Counseling

*Library Visit & Utilization of QLRC:* Students may visit the library from morning 10 AM to evening 8 PM. Library created its resources Database and provided Online Public Access Catalogue (OPAC) through which users can be accessed from any of the computer connected in the LAN can know the status of the book. Now we are in process to move from OPAC to KOHA.

**Detailed Syllabus (Semester wise /course wise)**

<b>JM3102</b>	<b>Title: General Studies &amp; Current Affairs</b>	<b>L T P C</b> <b>2 0 0 2</b>
<b>Version No.</b>	<b>1.1</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	This course intends to give basic general knowledge about Indian political system, economy, geography, and culture, and current affairs (national and international) which is essential and beneficial for a budding journalist.	
<b>Expected Outcome</b>	On completion of this course students should be able to know our political system, our culture and all current national and international issues.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Indian Political System</b>	6
Brief knowledge of the Constitution of India, Centre and its powers, Fundamental rights, President, Vice President, Prime Minister, Election Commission, Parliament houses-Upper House and Lower House, Panchayati Raj, Socio-economic and Political scenario of India.		
<b>Unit II</b>	<b>Indian Economy</b>	8
National Income, GDP & GNP, agriculture, industry and commerce, Budget and its terminology, Economy post COVID 19, World Bank		
<b>Unit III</b>	<b>Indian Geography and Culture</b>	6
States, Rivers and Dams, Agriculture, Forest reserves, Indian demography, Unity in diversity in India: religions, fairs and festivals, dances, languages.		
<b>Unit IV</b>	<b>Indian Constitution &amp; Panel Code</b>	6
Basic of CRPCc& IPC, Article 370, Defamation, CAA and NRC		
<b>Unit V Current Affairs</b>		
Awareness about current regional, national & international issues and events 12		
<b>Text Books</b>	1. Daily News Paper. 2. Competition Success Review (Monthly)	
<b>Reference Books</b>	1. Pratiyogita Darpan (Monthly) 2. Competition Wizard (Monthly) 3. National and Regional Newspaper, (Times of India, Hindustan Times, The Hindu, Indian 4. Express, Garhwal Post, The Economic Times) 5. Magazines (India Today, Frontline, Outlook, and Yojana) Manorama Year Book; Malayali Manorama	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	



**Course Outcome For JM3102**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Students will be able to aware with current scenario of society.	2	Emp
<b>CO2</b>	Students will be understand the contemporary issue and able to related the things	2	S
<b>CO3</b>	Students will be able to develop the opinion and create the new thought about it	2	S
<b>CO4</b>	Students will be able to collect lot of information.	3	Ent
<b>CO5</b>	Students will be able to inculcate the new perception about current scenario.	5	None

**CO-PO Mapping for JM3102**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes			Program Educational Outcomes	
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PSO 1	PS O2	PEO 1	PE O2	PE O3
CO 1	1	1	1	1	1	1	1	1	0	0	2	1	2	2	0
CO 2	1	0	0	0	1	0	2	0	0	0	1	0	2	3	3
CO 3	0	2	3	0	1	1	2	0	0	0	1	0	1	3	3
CO 4	2	0	1	0	0	1	0	0	0	0	0	0	3	3	3
CO 5	3	0	2	0	2	2	2	0	0	0	3	1	3	3	2
Avg	1.4	0.6	1.4	0.25	1	1	1.25	0.2	0	0	1.4	0.4	2.2	2.8	2.2

<b>AN3101</b>	<b>Title: Basic of Sketching and Drawing</b>	<b>L T P C</b> <b>2 0 4 4</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	This course is design to familiarize our students all the basics of Sketching and Drawing.	
<b>Expected Outcome</b>	On completion of the course students should be able to: undesratnd the strokes of sketch	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Writing with Strokes</b>	10
Lines in different grades o pencils HB +0.8b,Shading in pencil medium,Shading, shading in different angles of pencil strokes warms exercises, paper division, understanding basic geometric shapes.		
<b>Unit II</b>	<b>Textures and Shapes</b>	10
Formatting in different textures in pencil,Simple objects in drawing,Simple shapes of geometrical shapes, understanding different texture pencil shades.		
<b>Unit III</b>	<b>About Landscape</b>	9
Paper division & forming of sky land, stones ,deserts,Trees & plants, roadsides, riversPerspective in lines in landscapes, shading techniques for outdoor lighting.		
<b>Unit IV</b>	<b>Figure drawing &amp; Character design</b>	8
Different head shapes,Characters, character variations. Human anatomy parts like hand, legs, arms, eyes, drawing human anatomy parts, drawing quick sketches, gesture drawings.		
<b>Unit V</b>	<b>Sketching for Visuals</b>	10
Make a sketch for a commercial, sketching for short film poster, Sketching for Building		
<b>Text Books</b>	Drawing for the Absolute Beginner	
<b>Reference Books</b>	Figure drawing made easy (by Adityachari) Anatomy and drawing (by vector parad)	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For AN3101**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Students should be able to Implement the basics Drawing.	1	Emp
<b>CO2</b>	Students should be able to describe all types of pencils, life drawing, and environment study.	4	S
<b>CO3</b>	Students must be able to differentiate all different human poses, and drawing lines.	1	Ent
<b>CO4</b>	Students must be able to Describe the rules of animation, warm up exercise, imagination and memory drawing.	2	Ent
<b>CO5</b>	Students must be able to understand how to operate different traditional techniques of drawing different human anatomy parts.	6	S

**CO-PO Mapping for AN3101**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes			Program Educational Outcomes	
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2	PEO 1	PEO 2	PEO 3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	0	2	1	3	1	3	3	2	3	3	2	3
CO 3	0	2	2	0	2	1	2	1		2	0	0	2	3	1
CO 4	1	1	3	2	2	3	2	2	2	1	2	2	3	1	0
CO 5	3	1	1	3	1	3	2	3	1	1	3	2	0	2	2
Avg	1.8	1.8	2.2	1.4	2	2	2	1.8	2	2	2	2	2	2	1.6

<b>AN3103</b>	<b>Title: Introduction of Graphic designing</b>	<b>L T P C</b> <b>4 0 0 4</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	<b>Nil</b>	
<b>Objectives</b>	<b>The aim of this syllabus is to know our students about digital graphic designing.</b>	
<b>Expected Outcome</b>	<b>On completion of the course students should be able to : design different designing elements.</b>	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Design &amp; Graphics</b>	<b>8</b>
Basics of Sketching & Drawing, Elements and principles of design, Introduction to graphic elements. understanding of vector and raster graphics, pixels.		
<b>Unit II</b>	<b>Tools</b>	<b>9</b>
Introduction to interface, software workspace, tools and techniques; understanding symbols and layers, create some graphics using lines, libraries, pen tool brush tool, eraser tool. customizing default workspace.		
<b>Unit III</b>	<b>Visual Art</b>	<b>10</b>
Create visiting card on corel draw, design greeting card on photoshop, design kid's magazine on photoshop , photo manipulation, design a brochure on corel draw. understanding colors and its visual meaning.		
<b>Unit IV</b>	<b>Creating digital characters</b>	<b>10</b>
Design imaginary characters, creating character description, creating supporting characters.		
<b>Unit V</b>	<b>Introduction to digital environment</b>	<b>10</b>
Creating digital background painting, imagine the environment concept, create the synopsis, colour the objects and props. create different landscape natural elements like stones, rock, grasslands etc.		
<b>Text Books</b>	Designing Brand Identity	
<b>Reference Books</b>	Photoshop CS6 in simple steps (by Kogent learning solutions Inc. -dream tech press)	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For AN3103**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand the basic of concept of sketching and drawing.	1	Emp
<b>CO2</b>	Understand the tools and techniques, basic of interface and workspace	2	S
<b>CO3</b>	Create the visual art on various software's like Photoshop and coral draw.	1	S
<b>CO4</b>	Create the imaginary characters and their description for sketching and drawing.	2	Ent
<b>CO5</b>	Understand the basic concepts of digital painting and digital art.	3	Emp

**CO-PO Mapping for AN3103**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes			Program Educational Outcomes	
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PS O1	PS O2	PE O1		PE O2
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	0	2	1	3	1	3	3	2	3	3	2	3
CO 3	0	2	2	0	2	1	2	1		2	0	0	2	3	1
CO 4	1	1	3	2	2	3	2	2	2	1	2	2	3	1	0
CO 5	3	1	1	3	1	3	2	3	1	1	3	2	0	2	2
Avg	1.8	1.8	2.2	1.4	2	2	2	1.8	2	2	2	2	2	2	1.6

<b>AN3102</b>	<b>Title: Preproduction elements</b>	<b>L T P C</b> <b>4 0 0 4</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	The aim of this course is to introduce our students with all the basics of Preproduction.	
<b>Expected Outcome</b>	Student should know about pre production skills	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Basic cinematic techniques</b>	11
Introduction to Film, camera angles, movements, transitions, zoom in zoom out, Pan, Dolly shot, tilt shot. importance of storyboarding.		
<b>Unit II</b>	<b>Composition techniques</b>	9
Camera height, 180 degree rule, rule of third, birds eye view, Staging, Interior and exterior framing. different types of shots, understanding editing.		
<b>Unit III</b>	<b>Techniques of Perspective</b>	10
One point, two point, three point perspective, POV shot, POV projectile, dynamic angles, low angle and high angle shots, human form in perspective. human form in perspective, drawing different architectural designs.		
<b>Unit IV</b>	<b>Editing Techniques</b>	10
Cut to next shot, cut zoom in, cut zoom out, reveal frame, camera snap, photo to scene, montage sequence, cross cut, impact flash. understand time lapse.		
<b>Unit V</b>	<b>Elements of storyboarding</b>	9
Staging, layout, transitions, storyboard notations: BG, CS, ECS, MS, MCS, LS, WS, EWS, dialogue, action, frames, camera movement arrows, creating storyboard for a story.		
<b>Text Books</b>	The Ultimate Pre Production Checklist for Film & Video	
<b>Reference Books</b>	The art of layout and storyboarding (by Mark t byrne). Prepare to board! (by Nancy Beiman)	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For AN3102**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Students will able to Understand the process of film making and script writing.	2	Emp
<b>CO2</b>	Students will be able to Create the imaginary characters and layout for programs	2	S
<b>CO3</b>	Students will able to Relate with the visual and technical requirements of production	6	S
<b>CO4</b>	Students will able to Understand the process of audio recording and voice over techniques	6	Ent
<b>CO5</b>	Students will able to describe the multiple characters and their description	2	None

**CO-PO Mapping for AN3102**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	0	2	1	3	1	3	3	2	3	3	2	3
CO 3	0	2	2	0	2	1	2	1		2	0	0	2	3	1
CO 4	1	1	3	2	2	3	2	2	2	1	2	2	3	1	0
CO 5	3	1	1	3	1	3	2	3	1	1	3	2	0	2	2
Avg	1.8	1.8	2.2	1.4	2	2	2	1.8	2	2	2	2	2	2	1.6

<b>VP3114</b>	<b>Title: Fundamentals of Photography</b>	<b>L T P C</b> <b>0 0 4 2</b>
<b>Version No.</b>	<b>1.1</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	The aim of this course to provide knowledge about the Photography and photo editing for a professional.	
<b>Expected Outcome</b>	On completion of the course student should be able to click creative photographs with the natural and artificial lights and also learn the advance photo editing techniques.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Introduction to photography</b>	6
What is photography, camera works & its parts, role and importance of photography Lab- students have to make a pin hole on the principle of camera.		
<b>Unit II</b>	<b>Camera</b>	7
Camera, SLRs, DSLRs, TLR, exposure, aperture, shutter-speed, iso, depth of field, accessories. Lab- practical on manual camera settings.		
<b>Unit III</b>	<b>Composition &amp; lighting</b>	6
Composition of photographs (view point, arrangement) rule of thirds, rule of diagonals, hard light & soft light, Lab- practical on lighting and composition.		
<b>Unit IV</b>	<b>Photo Editing</b>	6
Basics of editing fundamentals, color correction, details reading, Lab- Photoshop		
<b>Unit V</b>	<b>Lights &amp; Combination</b>	
Use of lights and their combination, artificial lights, natural lights, how to use reflectors. Lab- Light based Practical in still studio.		
<b>Text Books</b>	1. The Beginners' photography Guide by Jess Ross	
<b>Reference Books</b>		
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	



**Course Outcome For VP3114**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Student should able to memorize about concept of photography and its process, camera parts and features	4	None
<b>CO2</b>	Student should able to understand about the types of camera and lenses and their modes	3	S
<b>CO3</b>	Student should able to memorize about composition and framing of the shot and lighting setup in photography	3	S
<b>CO4</b>	Student should able to understand the basic concept of photo editing and color correction	3	Ent
<b>CO5</b>	Student should able to understand about the combination of lights and use of diffusers and reflectors	3	Emp

**CO-PO Mapping for VP3114**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0))										Program Specific Outcomes		Program Educational Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	0	2	1	3	1	3	3	2	3	3	2	3
CO 3	0	2	2	0	2	1	2	1		2	0	0	2	3	1
CO 4	1	1	3	2	2	3	2	2	2	1	2	2	3	1	0
CO 5	3	1	1	3	1	3	2	3	1	1	3	2	0	2	2
Avg	1.8	1.8	2.2	1.4	2	2	2	1.8	2	2	2	2	2	2	1.6

<b>EG3103</b>	<b>Title: English Communication</b>	<b>LT PC</b> <b>0 0 4 2</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	To make students communicate effectively in English.	
<b>Expected Outcome</b>	The students will be able to effectively comprehend, converse and write in English in an interview setting	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of Hours (Per Unit)</b>
<b>Unit I (2 Hrs)</b>	<b>Essential Grammar</b>	2
Modal Verbs for request, probability; Parts of Speech, and use of Tenses in simulated interview environment		
<b>Unit II (8 Hrs)</b>	<b>Communication Skills</b>	8
<ul style="list-style-type: none"> <li>• Self-Introduction</li> <li>• Listening Skills</li> <li>• Just a Minute</li> <li>• Volte Face</li> <li>• Debate</li> <li>• Group Discussion</li> <li>• Presentation</li> <li>• Face-Off</li> <li>• Extempore</li> <li>• Role Play</li> </ul>		
<b>Unit III (2 Hrs)</b>	<b>Reading Skills</b>	2
News Paper Reading, Passage Reading, Success Stories		
<b>Unit IV (8Hrs)</b>	<b>Self Management Skills</b>	8
<ul style="list-style-type: none"> <li>• Goal Setting, SWOT Analysis, Self Motivation</li> <li>• Body Language: Gestures, Posture, Physical Appearance, Facial Expression</li> <li>• Soft Skills: Leadership Skills, Team Work</li> <li>• Interpersonal Skills: Image Building, Interpersonal Distance, Signature Personality</li> </ul>		
<b>Unit V (2Hrs)</b>	<b>Writing Skills</b>	2
Email Etiquettes, correspondence, Writing Letters, Invitation, Applications, Projects Writing		
<b>Text Books</b>	1.Wren & Martin, English Grammar and composition, S. Chand Publication .	
<b>Reference Books</b>	1. Ramaswamy, Practical English Grammar, Sura CollegeofCompetition. 2. Sandeep Kumar Jain, Basic Concepts of English Grammar, NotionPress.	
<b>Mode of Evaluation</b>	Internal and External Examinations	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For EG3103**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Student will be able to understand the soft skills and the initial attitudes	4	none
<b>CO2</b>	Students will be able to understand the inter personal and intrapersonal skill	3	S
<b>CO3</b>	Students will be able to apply the formal gesture and communication skills	3	S
<b>CO4</b>	Students will be able to apply all formal behaviors .	3	Ent
<b>CO5</b>	Students will be able to understand the basic of body language .	3	Emp

**CO-PO Mapping for EG3103**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	2	1	1	1	1	1	1	0	0	1	1	2	0	2	3
CO 2	2	0	2	0	2	2	3	3	1	3	2	3	3	2	2
CO 3	0	3	2	3	3	2	0	3	2	2	3	1	2	0	3
CO 4	2	3	3	3	3	3	2	2	3	2	1	2	3	3	1
CO 5	3	2	3	3	1	1	3	3	3	3	3	1	3	3	0
Avg	1.8	1.8	2.2	2	2	1.8	1.8	2.2	1.8	2.2	2	1.8	2.2	2	1.8

**SEMESTER II**

<b>CE3101</b>	<b>Title: Disaster Management</b>	<b>L T PC</b> <b>2 0 0 2</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	<b>Total No. of Hours: 24</b>
<b>Objectives</b>	The course is intended to provide a general concept in the dimensions of disasters caused by nature beyond the human control as well as the disasters and environmental hazards induced by human activities with emphasis on disaster preparedness, response and recovery.	
<b>Expected Outcome</b>	Enhance the knowledge by providing existing models in risk reduction strategies to prevent major casualties during disaster.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit: 1</b>	<b>Introduction on Disaster</b>	5
Different Types of Disaster : A) Natural Disaster: such as Flood, Cyclone, Earthquakes, Landslides etc B) Man-made Disaster: such as Fire, Industrial Pollution, Nuclear Disaster, Biological Disasters, Accidents (Air, Sea, Rail and Road), Structural failures(Building and Bridge), War and Terrorism etc. Causes, effects and practical examples for all disasters.		
<b>Unit II</b>	<b>Risk and Vulnerability Analysis</b>	4
Risk: Its concept and analysis 2. Risk Reduction 3. Vulnerability: Its concept and analysis 4. Strategic Development for Vulnerability Reduction		
<b>Unit III</b>	<b>Disaster Preparedness</b>	5
Disaster Preparedness: Concept and Nature, Disaster Preparedness Plan Prediction, Early Warnings and Safety Measures of Disaster. Role of Information, Education, Communication, and Training, . Role of Government, International and NGO Bodies. . Role of IT in Disaster Preparedness. Role of Engineers on Disaster Management.		
<b>Unit IV</b>	<b>Disaster Response</b>	5
Introduction Disaster Response Plan Communication, Participation, and Activation of Emergency Preparedness Plan Search, Rescue, Evacuation and Logistic Management Role of Government, International and NGO Bodies Psychological Response and Management (Trauma, Stress, Rumor and Panic). Relief and Recovery Medical Health Response to Different Disasters		
<b>Unit V</b>	<b>Rehabilitation, Reconstruction and Recovery</b>	5
Reconstruction and Rehabilitation as a Means of Development. Damage Assessment Post Disaster effects and Remedial Measures. Creation of Long-term Job Opportunities and Livelihood Options, Disaster Resistant House Construction Sanitation and Hygiene Education and Awareness, Dealing with Victims' Psychology, Long-term Counter Disaster Planning Role of Educational Institute.		
<b>Text Books</b>	1. Bhattacharya, Disaster Science and Management, McGraw Hill Education Pvt. Ltd.	
<b>Reference Books</b>	1. Dr. Mrinalini Pandey, Disaster Management, Wiley India Pvt. Ltd. 2. Jagbir Singh, Disaster Management: Future Challenges and Opportunities, KW Publishers Pvt. Ltd.	
<b>Mode of Evaluation</b>	Internal and External Examinations	
<b>Recommendation by Board of Studies on</b>	5/13/2020	
<b>Date of approval by the Academic Council</b>	9/13/2020	

**Course Outcome for CE3101**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Em)/ Skill(S)/ Entrepreneurship (En)/ None (Use, for more than one)
<b>CO1</b>	To learn about the disasters caused by nature and human activities and its types.	1	Em
<b>CO2</b>	To understand the concept of risk and vulnerability analysis.	2	Em
<b>CO3</b>	To understand about the disaster preparedness.	3	Em
<b>CO4</b>	To understand the concept of disaster response.	2	Em
<b>CO5</b>	To understand about the rehabilitation, reconstruction and recovery for disaster management.	3	Em

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0))											Program Specific Outcomes		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PSO1	PSO2	PSO3
CO 1	2	3	2	1	2	_	2	3	2	_	2	3	2	2
CO 2	2	3	2	1	2	2	2	3	2	_	3	2	2	2
CO 3	2	2	2	2	2	1	2	3	2	2	3	1	2	2
CO 4	2	3	2	_	2	2	2	3	2	2	2	1	2	2
CO 5	2	2	2	2	2	1	2	3	2	2	3	2	2	2
Avg	2	2.6	2	1.2	2	1.2	2	3	2	1.2	2.6	1.8	2	2

<b>CY3205</b>	<b>Title:Environmental Studies</b>	<b>LTPC</b> 2 002
<b>VersionNo.</b>	<b>1.0</b>	
<b>CoursePrerequisites</b>	Nil	
<b>Objectives</b>	The aim is to develop inquiring minds and curiosity about science and the natural world. It will help students to think analytically, critically and creatively to solve problems, judge arguments and make decisions in scientific and other contexts. Making students aware how to protect the Environment.	
<b>Expected Outcome</b>	Safeguarding the Environment and also develop awareness to the Society not to further deteriorate it and also safeguard it	
<b>UnitNo.</b>	<b>UnitTitle</b>	<b>No.ofhours( perUnit)</b>
<b>UnitI</b>	<b>IntroductiontoEnvironmentalStudies&amp;Ecosystems</b>	5
Introduction to Environmental Studies, Scope and Importance, Need for public awareness. What is an ecosystem? Structure and Function of Ecosystem. Case studies of the different ecosystems like forest, grassland, desert and aquatic ecosystems.		
<b>UnitII</b>	<b>Natural Resources</b>	6
Renewable and Non-renewable Resources, Land resources and land-use change; Land degradation, soil erosion and desertification. Deforestation: Causes and impacts. Water: Use and over-exploitation of surface and groundwater, floods, droughts, conflict over water (international & inter-state). Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs and case studies.		
<b>UnitIII</b>	<b>Media &amp; Environmental Disaster</b>	6
Levels of biological diversity: genetic, species and ecosystem diversity; Biogeographic zones of India; Biodiversity patterns and global biodiversity hotspots. India as a mega-biodiversity nation; Endangered and endemic species of India. Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.		
<b>UnitIV</b>	<b>Environmental Pollution</b>	5
Types, causes, effects and controls; Air, water, soil and noise pollution. Nuclear hazards and human health risks. Solid waste management: Control measures of urban and industrial waste.		
<b>TextBooks</b>	1. P. C. Joshi & Namita Joshi A Text Book of Environmental Science, A.P.H. Pub. New Delhi. 2. Dr B. S. Chauhan Environmental Studies, Laxmi Publication.	
<b>ReferenceBooks</b>	1. Anubha Kaushik & C. P. Kaushik Environmental Studies, New Age International. 2. Mishra D. D., fundamental concept in environmental studies, S Chand & Company 3. N. Arumugam, Environment Studies (UCG syllabus), Saras publication. 4. Mahua Basu, Fundamental of Environment studies, Cambridge university press.	
<b>Mode of Evaluation</b>	Internal and External Examination	
<b>Recommendation by Board of Studies on</b>	15/06/2020	
<b>Date of approval by the Academic Council</b>	13/09/2020	

**Course Outcome For CY3205**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/Entrepreneurship (Ent)/ None (Use, formore than One)
<b>CO1</b>	Understand the nature of Environmental studies & Ecosystem.	2	Emp
<b>CO2</b>	Student will understand the natural resources, i.e. Renewable & non-renewable resources.	2	S
<b>CO3</b>	Understand the level of biological diversity & conservation.	2	S
<b>CO4</b>	Students will be able to understand the types of environmental pollution.	3	Ent
<b>CO5</b>	Students will be able to understand the concept of sustainability & sustainable development.	5	None

**CO-PO Mapping for CY3205**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0))										Program Specific Outcomes	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO1	PSO2
CO 1	2	1	2	0	0	0	2	1	0	0	1	1
CO 2	2	1	2	3	1	1	2	2	1	1	3	2
CO 3	2	2	1	1	1	2	1	1	3	2	0	3
CO 4	1	1	1	1	2	0	2	1	2	1	1	1
CO 5	1	1	1	3	3	2	3	3	2	1	3	3
Avg	1.6	1.2	1.5	1.6	1.4	1.25	2	1.6	1.6	1	1.6	2

<b>AN3201</b>	<b>Title:2d digital animation</b>	<b>L T P C</b> <b>2 0 4 4</b>
<b>Version No.</b>	1.0	
<b>Course Prerequisites</b>	Nil	
<b>Objective</b>	This subject aims to make student understand the 2d animation process.	
<b>Expected Outcome</b>	On completion of this course, the student should be able to create various animations in 2d.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of Hrs</b>
<b>Unit I</b>	<b>Workspace overview</b>	10
Interface of Animate Panels ( property inspector, library panel, movie explorer, history panel, color panel, timeline.		
<b>Unit II</b>	<b>Using stage and tools panels</b>	10
Selecting and deselecting objects on the stage, tool box, overview, creating graphic objects on stage.different features on stage of the interface.		
<b>Unit III</b>	<b>Working with flash document</b>	11
About flash files, working with project, importing art work into flash, working with PSD files, PSD file import, working with libraries and its item, layer system.		
<b>Unit IV</b>	<b>Drawing basics</b>	10
About vector and bitmap images, flash drawing techniques, overlapping shapes, drawing with pen tool, brush tool, pencil tool, symbols, instances. Traditional drawing and sketching,		
<b>Unit V</b>	<b>Creating Animation</b>	9
Animation basics, creating motion, creating key frames, timeline effects, frame rate, frame by frame animation, creating key frames, onion skinning.creating human walk, animal walk, create bouncing ball.		
<b>Text Books</b>	Animation survival kit	
<b>Reference Books</b>	Adobe flash professional CS classroom in a book (by adobe creative team) Adobe press Adobe flash CS6 in simple steps (by Kogent learning solutions Inc. -dream tech press)	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommended by Board of Studied on</b>	11-06-2019	
<b>Date of Approval by the Academic Council on</b>	13/07/2019	



**Course Outcome For AN3201**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand the workspace of flash software with proficiency and work on any version of the software if needed.	4	none
<b>CO2</b>	Understand the use of stage and different panels.	3	S
<b>CO3</b>	Understand the working in flash documents in the animation software.	3	S
<b>CO4</b>	Understand the basics of vector and raster graphics, different format of flash and Photoshop files.	3	Ent
<b>CO5</b>	Understand, implement and apply the artistic skills in a way that contributes to the global development of the animation industry.	3	Emp

**CO-PO Mapping for AN3201**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2		2		2	1	3	1	3	3	2	3	3	2	3
CO 3	2	2	0	0	2	0	0	1	3	2	0	1	2	3	1
CO 4	2	2	3	2	2	3	2	2	2	1	2	2	3	0	2
CO 5	3	1		3	1	2	2	3	1	1	3	3		2	2
Avg	2.4	2	2	1.75	2	1.6	1.6	1.8	2.2	2	2	2.4	2.5	1.8	2

<b>AN3202</b>	<b>Title: Film Production</b>	<b>L T P C</b> <b>4 0 0 4</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	The course will help the student to understand the concept of Film Production.	
<b>Expected Outcome</b>	On completion of the course student will understand the Film Production techniques and will be able to create their own short film.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Language of cinema</b>	11
Shot, Scene, Deep focus, Continuity Editing, Montage, Focus on Sound and Color: Diegetic and Non Diegetic Sound, Screen Sound; Sync Sound; the use of Color as a stylistic Element. movie format and resolution.		
<b>Unit II</b>	<b>Types of Cinema</b>	12
Third Cinema, Non fiction cinema, Early cinema, development of classical Hollywood cinema. Studio era, parallel cinema,		
<b>Unit III</b>	<b>Indian Cinema</b>	13
Early Cinema and the Studio Era, 1950s - Cinema and the Nation (Guru Dutt, Raj Kapoor, Mehboob), 1970s - The Rise of the Angry Man, Globalization and Indian Cinema.		
<b>Unit IV</b>	<b>Production techniques-I</b>	12
Writing Script, Understanding Concept, Character description and designing, Storyboarding techniques, Understanding Shots types, designing a short film on paper.		
<b>Text Books</b>	1. Keval J. Kumar, Mass communication in India, Jaico.	
<b>Reference Books</b>	1. Renu Saran, History of Indian cinema, Kindle edition 2. Sarkar N.N. Dvesigning Print Communication, Sagar Publishers	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For AN3202**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Student will be able to understand the language of cinema	2	S
<b>CO2</b>	Students will able to understand the concept of reporting and the beats in reporting ; Political, Crime, Sports etc.	2	S
<b>CO3</b>	Students will able to understand the work functions of news room and its operations.	2	S
<b>CO4</b>	Understand the process of editing in print media; newspapers , magazines etc.	2	Ent
<b>CO5</b>	Understand & Investigate the facts from various sources and able to prepare questions for a specific interview; rewrite news stories from newspapers on national and international issues.	5	Emp

**CO-PO Mapping for AN3202**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	PO 2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	1	2	3	2	1	2	2	3	2	3	1	2	2
CO 2	2		2	0		1	3		3		2	3	3	1	2
CO 3	2	2	0	0	2	1	0	3	2	2	0	0	3	3	1
CO 4	2	1	3		2	3	2	2	1	2	2	2	3	0	2
CO 5	3	1		3	1	2	2	3	2	1	3	3	0	3	3
Avg	2.4	1.75	1.5	1.25	2	1.8	1.6	2.5	2	2	1.8	2.2	2	1.8	2

<b>GD3202</b>	<b>Title: Advance graphic Design for Animation</b>	<b>L T P C</b> <b>3 0 2 4</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	<b>Nil</b>	
<b>Objectives</b>	<b>This Subject is designed to introduce students about advanced graphic designing technique</b>	
<b>Expected Outcome</b>	<b>On completion of this course student should be able to create more complex graphic designs.</b>	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Introduction to illustrator</b>	<b>11</b>
Introduction of illustrator software, interaction with interface, workspace, how to import or export files in illustrator, understanding vector art, advantages over raster graphics.traditional drawing practice of design elements.		
<b>Unit II</b>	<b>Creating vector art forms (Photoshop/illustrator)</b>	<b>9</b>
Create characters, backgrounds, environments, design vehicles in vector form, Create different art works in photoshop, sketching all the characters on paper.		
<b>Unit III</b>	<b>Digital concept art (Photoshop/illustrator)</b>	<b>9</b>
Create a hybrid character, design a cartoon character, both with background origin story.		
<b>Unit IV</b>	<b>Color theory</b>	<b>10</b>
Cropping images, prepare cutout of some images, colour adjustment of some images, colour adjustment of images, converting coloured images into black and white, placing different background for the images.		
<b>Unit V</b>	<b>Digital design assignments assignments</b>	<b>8</b>
Creating vector art characters, vector art backgrounds, 1 digital painting-portrait, 1 props design, 1 digital landscape design, traditional drawing of different geometric shapes		
<b>Text Books</b>	Animated Storytelling	
<b>Reference Books</b>	Photoshop CS6 in simple steps (by Kogent learning solutions Inc. -dream tech press)	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	

<b>Date of approval by the Academic Council</b>	13/07/2019
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**Course Outcome ForGD3202**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the classical animation using traditional methods.	2	Emp
<b>CO2</b>	Create 2d animation drawings with character expressions.	2	S
<b>CO3</b>	Understand & apply design tools and create sketches.	1	S
<b>CO4</b>	Understand the graphic designers drawing Tools.	6	Ent
<b>CO5</b>	Analyze the composition technique and create poster layouts.	2	Emp

**CO-PO Mapping for GD3202**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	PO 6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	0	2	2	2	3	3	2	3	3	2	3	3	2	3
CO 3	2	3	2	0	2	3	0	1	0	2	0	0	2	3	1
CO 4	2	2	3	2	2	1	2	2	2	3	2	2	2	1	0
CO 5	3	1	0	3	1	2	3	3	3	1	3	3	2	2	3
Avg	2.4	1.8	2	1.8	2	2.2	1.8	2	2	2.4	2	2.2	2.2	2	1.8



<b>AN3203</b>	<b>Title: Introduction to classical animation</b>	<b>L T P C</b> <b>3 0 0 4</b>
<b>Version No.</b>	1.0	

<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	The aim of this course to provide knowledge of classical 2d animation	
<b>Expected Outcome</b>	On completion of the course students should be able to : Draw and understand 2d animation.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Basic of 2d animation</b>	10
Flip book introduction, animator's drawing tools, difference between 2d and 3d animation, stop motion techniques, clay animation. History of classical animation, importance of 2d artist.		
<b>Unit II</b>	<b>2d animation drawing</b>	10
Types of pencils, beginning life drawing, still life, environment study, observational drawing, using geometric shapes, human anatomy study, basic proportions of male and female anatomy.		
<b>Unit III</b>	<b>Understanding poses</b>	9
Drawing quick sketches, exaggerating different human poses in action, drawing lines, circles, zig zag lines. Drawing quick gesture drawings, animal and human poses and gestures.		
<b>Unit IV</b>	<b>Animation</b>	8
Rule of animation, warm up exercises, drawing from memory, observation and imagination, creating animation character, Character expressions. Walk cycle.		
<b>Unit V</b>	<b>Drawing assignments</b>	10
Create 5 pages of figure drawing, 5 pages of quick poses, draw 5 pages of eyes, hands, arms and foot construction.		
<b>Text Books</b>	Animation survival kit	
<b>Reference Books</b>	The everything drawing book: from basic shapes to people and animal ( by-Helen south).	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome for AN3203**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand the classical animation to different poses	2	Emp
<b>CO2</b>	Create the 2d animation drawings with character expressions	2	S
<b>CO3</b>	Understand & apply principles of animation for frame by frame animation.	2	S
<b>CO4</b>	Understand the animator's drawing tools in Character designing.	3	Ent
<b>CO5</b>	Understand human anatomy study and create different figure drawings.	5	None

**CO-PO Mapping for AN3203**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2		1	1	2	1	2	2	3	1	2	0	3	2	3
CO 3	0	2	1		2	3	2	2		2	2	0	1	3	1
CO 4	2	2	3	2	3	3	2	3	3	1	2	2	3	3	3
CO 5	3	2	1	3	1	0	3	2	1	3	3	3		2	2
Avg	2	2.25	1.8	2	2.2	1.8	2	2.2	2.25	2	2.4	1.6	2.25	2.4	2.2



<b>VP3212</b>	<b>Title: Audio Editing</b>	<b>L T P C</b> <b>0 0 4 2</b>
<b>Version No.</b>	1.0	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	This course is designed to introduce the Audio-video editing yo the students	
<b>Expected Outcome</b>	On completion of the course students should be able to: understand and create editing projects.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Introduction to Editing</b>	11
Introduction to premier pro software, workflow, adding footage, frame rates, aspect ratio, all types of panels, compression.Introduction audition, Audio Clip, Manipulating audio, Auto trim/crop, mute, DC offset, resample, reverse, smooth/enhance, Fade in/out, insert silence, bit depth converter etc.		
<b>Unit II</b>	<b>Digital audio principle</b>	9
Understanding audio formats, audio output, progressive Vs interlaced, Understanding various digital audio formats like .WAV, .AIFF, .MP3, .swf, .WMA etc.		
<b>Unit III</b>	<b>Basic audio editing</b>	8
Rough editing, Overlay edit, Layers, Ripple edit, Razor tool, Understanding all tools on toolbox for editing clips, Moving edited clip. Event tool: move, split, slip and trim multiple events, create fades, apply ASR (attack/sustain/release), etc. Understanding script editor window. Spectrum analysis tools, scrub tool etc., statistics tool (Max, RMS, DC offset, zero crossings), sampler tool etc.		
<b>Unit IV</b>	<b>The art of audio editing</b>	10
Fixing, matching, types of job availability, pacing, When and how to apply, estalishing the portfolio, creating narration content. Audio editing: workflow, real time editing, event based editing, waveform volume and pan envelopes. Edit, record, encode and master digital audio, editing audio by drag and drop options, cross fading audio tracks, balancing sound levels, creating smooth fades etc. Understanding Multichannel audio recording, synchronize audio and video		
<b>Unit V</b>	<b>Creating audio effects</b>	10
Applying various types of audio transitions, blur, noise, speeding the audio, various audio effects.		
<b>Text Books</b>	Digital Audio Editing: Correcting and Enhancing Audio in Pro Tools, Logic Pro, Cubase, and Studio One	
<b>Reference Books</b>	Adobe premiere pro CS6 classroom in a book (by adobe creative team) Adobe press	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	

<b>Date of approval by the Academic Council</b>	13/07/2019
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**Course Outcome For VP3212**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the audition software	2	Emp
<b>CO2</b>	Create various digital audio formats.	2	S
<b>CO3</b>	Apply the Editing Tools.	2	S
<b>CO4</b>	Create the Editing Work flow.	3	Ent
<b>CO5</b>	Create final output audio.	5	None

**CO-PO Mapping for VP3212**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	PO 6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	0	2	2	2	1	3	0	3	3	2	3	3	1	3
CO 3	1	2	1	0	3	1	2	3	2	2	1	2	2	3	1
CO 4	2	3	3	3	0	3	2	3	2	0	2	2	3	2	2
CO 5	1	1	1	3	1	2	3	3		1	3	3	1	2	1
Avg	1.8	1.8	2	2	1.8	1.8	2.2	2.2	2.2	1.8	2.2	2.6	2.2	2	1.8

## Second year

### Semester-3

<b>AN3301</b>	<b>Title:3-D Modelling&amp;3-D Texturing</b>	<b>L T P C</b> <b>1-0-4-3</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Pre requisites</b>		
<b>Objectives</b>	Study of this subject will familiarize the students with the Modellingand texturing in3d	
<b>Expected Outcome</b>	On completion of the course student should be able to: Develop a 3d model, Texture it and understand the importance of lighting.	
<b>Unit No.</b>	<b>UnitTitle</b>	<b>No.ofhours (perUnit)</b>
<b>Unit I</b>	<b>Introduction to Maya</b>	14
The Maya Interface, Viewports, Selecting Objects, Transforming Objects, Connecting Objects, Managing Files. Maya Preference		
<b>Unit II</b>	<b>Mismodeling</b>	08
Creating the NURBS Curves in Maya,Modellingusing NURBS, NURBS Patches in Maya. Surface Editing tools.		
<b>Unit III</b>	<b>Polygonal Modeling</b>	08
Creating Polygonal Surfaces, Modifying Polygonal Surfaces, Modellingusing Polygonal Method. Deformers for modeling		
<b>Unit IV</b>	<b>Lighting</b>	05
The Importance of Lighting, Types of Lights, Shadows, Lighting Effects, Lighting a Scene. Basic Exterior & interior lighting		
<b>Unit V</b>	<b>Creating Textures</b>	10
Shaders, Creating and Editing Shaders, The Hypershade, Textures, Bump and Displacement Mapping, Placing Textures, mapping a Car Using Multiple Textures, Map for game Asset.		
<b>Text Books</b>	Maya@ataGlancebyGeorgeMaestri	
<b>Reference Books</b>	Introducing Maya 2017by DariushDerakhshani	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome ForAN3301**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand 3d views and user interface of maya.	2	Emp
<b>CO2</b>	Create 3d basic objects using NURBS tools.	2	S
<b>CO3</b>	Create 3d basic objects using polygon tools.	2	S
<b>CO4</b>	Understand importance of lighting.	3	S
<b>CO5</b>	Understand basic of texturing.	5	None

**CO-PO Mapping for AN3301**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	PO 3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	2	1	3	1	3	3	2	3	3	2	3
CO 3	1	2	0	0	2	0	0	1	0	2	0	0	2	3	3
CO 4	2	2	3	2	2	3	2	2	2	1	2	2	3	0	0
CO 5	3	0	1	3	1	2	3	3	2	1	3	3	0	2	2
Avg	2.2	1.8	1.8	2	2	1.6	1.8	1.8	1.8	2	2	2.2	2	1.8	2

<b>AN3302</b>	<b>Title:3D-Character Design</b>	<b>LTPC 1-0-4-3</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Pre requisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with how to form a character in 3d	
<b>Expected Outcome</b>	Oncompletion of the course student should be able to: Develop 3d Character with the knowledge of rigging for animation in Maya.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours(per Uni)</b>
<b>Unit I</b>	<b>Fundamental of character design</b>	6
Character Development, Understand and design, the different character styles and character types, Develop the specifics and attribute of character, Draw the 2d character for 3d modeling		
<b>Unit II</b>	<b>Modelling and Texturing the character</b>	10
Simple Character with Polygons, Modellingwith Polygon Tools, Working with Symmetry, Using Image Planes, Sculpting the Character, Develop the easy way to working with 3d Application.		
<b>Unit III</b>	<b>Modelling and Texturing the character using sub division</b>	9
Concepts of Modellingwith Subdivision Surfaces, Subdivision Surfaces Levels, Refining Surface Components, Techniques for Texturing Subdivision Surfaces, Designing and Modelling a Character with Subdivision Surfaces,Create a low poly character for gaming pipeline.		
<b>Unit IV</b>	<b>Designing a Humanoid</b>	10
Modellingthe Head, Human Anatomy for Modelers, Methods and Tools,Modelling the Humanoid Torso and Limbs, Shaping and Refining the Torso and Limbs, The Anatomy of the Face, Study the human head and anatomy		
<b>Unit V</b>	<b>Deformations and Rigging</b>	10
Deformers, Blend Shapes, Skeletons and Rigging, Creating Skeleton. Draw the required blend shape before creating in 3d application.		
<b>Textbooks</b>	Maya@ataGlancebyGeorgeMaestri	
<b>Reference Books</b>	Beginners Guide To Character Creation In Maya by Jahirul Amin	
<b>Mode of Evaluation</b>	Internal and External Assessment	

<b>Recommendation by Board of Studies on</b>	11-06-2019
<b>Date of approval by the Academic Council</b>	13/07/2019

**Course Outcome For AN3302**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand character design fundamental.	2	Emp
<b>CO2</b>	Create 3d character using polygon tools.	2	S
<b>CO3</b>	Create concept 3d character using surface tools.	2	S
<b>CO4</b>	Understand human anatomy and create 3d human model.	3	Ent
<b>CO5</b>	Understand basic rigging.	5	Ent

**CO-PO Mapping for AN3302**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related- 0))										Program Specific Outcomes		Program Educational Outcomes		
	P O1	PO 2	P O3	PO 4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	2	3	3	2	2	3	2	3	0	2	3
CO 3	2	3	3	0	3	0	3	3	3	0	1	1	2	3	3
CO 4	0	2	0	3	2	3	0	2	2	3	2	2	3	0	3
CO 5	3	0	3	3	0	2	3	0	0	3	3	3	1	3	2
Avg	2	2	2.2	2.2	2	2	2	1.8	1.8	2.4	2.2	2.4	1.6	2	2.6

<b>AN3303</b>	<b>Title:Print Media</b>	<b>LTP C</b> <b>2-0-0-2</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	To make students aware of the various aspects of news	
<b>ExpectedOutcome</b>	Students will learn the different aspects of news content and presentation skills.	
<b>Unit No.</b>	<b>UnitTitle</b>	<b>No.ofhours(perUnit)</b>
<b>Unit I</b>	<b>Introduction of News</b>	8
News, Meaning&Definition, Elements & Types of News, News Value, Selection of news, News Sources, Objective of News		
<b>UnitII</b>	<b>Challenges before Media</b>	8
Challenges before print media, Comparison between online media & print media, Criteria for good news, Pattern of writing of news		
<b>UnitIII</b>	<b>Presentation</b>	8
Use of Illustrations in Newspaper, Design, Cartoons, Line Diagrams ,Style of Presentation of Newspaper & Magazine, Editorial Page , Page 3 Case Study		
<b>UnitIV</b>	<b>Pagination &amp; Layout</b>	8
Practical Layout of Newspaper &Magazine, Creation of Newspaper &Magazine on Quark Express &InDesign		
<b>UnitV</b>	<b>Designing of page</b>	8
Designing of Page of Newspaper Magazines		
<b>Textbooks</b>	Handbook of Print Media: Technologies and Production Methods	
<b>Reference Books</b>		
<b>ModeofEvaluation</b>	InternalandExternal Assessment	
<b>RecommendationbyBoardofStudieson</b>	11-06-2019	

<b>Date of approval by the Academic Council</b>	13/07/2019
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**Course Outcome For AN3303**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Student should able to remember about definition of news & memorize it.	2	Emp
<b>CO2</b>	Student should able to analyze structure of news & also about types of news	2	S
<b>CO3</b>	Student should able to memorize about responsibilities of reporter	2	S
<b>CO4</b>	Student should able to understand about lead & inverted Pyramid style	3	Ent
<b>CO5</b>	Student should able to design newspaper and magazine	5	None

**CO-PO Mapping for AN3303**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	0	0	1	0	0
CO 3	1	3	0	2	3	0	3	0	3	0	1	2	2	3	3
CO 4	0	2	1	3	2	3	1	3	2	3	2	2	3	3	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	3	2
Avg	1.8	2.2	1.8	2.2	2	2	2.2	1.8	2.2	2	1.8	2	2	2.2	2



<b>AN3304</b>	<b>Title: Motion Graphics&amp; Compositing</b>	<b>L T P C</b> <b>1-0-4-3</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with art of Motion graphics and that it is pieces of animation or digital footage which create the illusion of motion or rotation, and are usually combined with audio for use in multimedia projects.	
<b>Expected Outcome</b>	On completion of the course student should be able to: Create motion graphics with the use of a digital software such as after effects.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Introduction</b>	9
Workflow and Interface, Composition, Viewport and Timeline, Animation and Transform Properties, Shape Layer, Masks and Effects, working with layer option in the timeline panel.		
<b>Unit II</b>	<b>Animation Principles and Types of Key frames and Graph Editors</b>	10
Principles of Animation, Types of Key frames, and Graph Editors, Speed Graph & Value Graph for motion graph		
<b>Unit III</b>	<b>Shape Modifiers from A to Z</b>	9
Merge Path, Offset Path, Pucker& Bloat, Round Corner, Trim Path, Wiggle Path, ZigZag, Repeater and Wiggler, expression		
<b>Unit IV</b>	<b>Text Animation</b>	9
Understanding different types of text animation and animation techniques ,Working with walk cycle animation in After effects.		
<b>Unit V</b>	<b>Modern Data Visualization and Practice with Real projects</b>	8
Animation Techniques, Morphing Animation, Lettering Animation and Real Projects ,Effects Animation		
<b>Text Books</b>	Animated Storytelling by Liz Blazer is an excellent resource on general animation. This book talks about the basics of motion graphics and how animation works from the viewer's perspective.	
<b>Reference Books</b>	<ol style="list-style-type: none"> <li>1. Disney Animation: The Illusion of Life Book by Frank Thomas and Ollie Johnston</li> <li>2. The Animator's Survival kit by Richard Williams</li> </ol>	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	11-06-2019

<b>Date of approval by the Academic Council</b>	13/07/2019	
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**Course Outcome For AN3304**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the basics of Composite.	2	Emp
<b>CO2</b>	Understand the use of types of key frames and graph editors.	2	S
<b>CO3</b>	Create different text animation.	2	S
<b>CO4</b>	Understand different principles of animation	3	Ent
<b>CO5</b>	Create motion graphics projects.	5	None

**CO-PO Mapping for AN3304**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	PO 2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	3	0	3	2	2	3	0	0	1	0	0
CO 3	1	0	0	2	3	3	3	3	1	0	1	2	2	2	3
CO 4	2	2	2	0	0	3	1	3	2	3	2	1	1	3	2
CO 5	3	2	3	3	2	3	3	2	2	1	3	3	3	3	2
Avg	2.2	1.8	2	2	2.2	2.2	2.2	2.4	1.8	2	1.8	1.8	1.8	2	1.8



<b>AN3305</b>	<b>Title: Compositing for VFX</b>	<b>L T P C</b> <b>1-0-4-3</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	This course is designed to help student learn and understand Visual Effects Compositing using a digital software. I.e. After Effects	
<b>Expected Outcome</b>	On the completion of the course students will be able to understand Visual effects and the art of compositing.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Introduction to After Effects</b>	9
Creating a new composition, Video Formats, Nesting and Pre-composing, layer effects		
<b>Unit II</b>	<b>Understanding Graph Editor</b>	9
Types of Graph Editors, Text layers, Shape layer		
<b>Unit III</b>	<b>Rotoscopy</b>	9
Masking and Rotoscoping, Track Matte, Chroma Key and Wire removal expressions		
<b>Unit IV</b>	<b>Introduction to Mocha</b>	9
Tracking, Mocha, Expressions and Time remapping		
<b>Unit V</b>	<b>Compositing</b>	10
Color correction, Multi pass compositing, particles and 3d layers and camera, Camera Animation.		
<b>Text Books</b>	1. Adobe After Effects CS5 Visual Effects and Compositing studio techniques by Mark Christiansen	
<b>Reference Books</b>	1. After Effects Apprentice by Chris and Trish Meyer 2. Creating Motion Graphics with After Effects, 5th edition by Chris Meyer	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For AN3305**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand user interface of after effect.	2	Emp
<b>CO2</b>	Understand graph editor.	2	S
<b>CO3</b>	Apply Track Matte and remove chroma key.	2	S
<b>CO4</b>	Apply tracking on video footage.	3	Ent
<b>CO5</b>	Create motion graphics projects.	5	Emp

**CO-PO Mapping for AN3305**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	PO 2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	2	2	2	3	0	3	3	1	0
CO 3	1	3	1	2	3	0	3	1	0	0	3	2	2	3	3
CO 4	2	2	3	3	2	3	1	3	2	3	2	2	0	3	3
CO 5	3	1	0	1	2	3	3	1	3	3	3	1	3	3	3
Avg	2.2	2.2	1.8	2.2	2	2	2	1.8	1.8	2.4	2.2	2.2	2	2.4	2.2

<b>VP3315</b>	<b>Title: Video Editing</b>	<b>L T P C</b> <b>0-0-4-2</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	This course is design to familiarize our students all the basics of Video editing .	
<b>Expected Outcome</b>	On completion of the course students should be able to: understand to video editing	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Intro to Editing Theory</b>	9
Introduction to the history of film editing, the manipulation of editing, introduction to the editor as storyteller, understanding the narrative structure., Study about pre-production		
<b>Unit II</b>	<b>Intro to Premiere Pro Cs6</b>	9
Screening of Examples, The Premiere Pro CS -6 interface, features and functions, how to import and organize footage basic editing techniques, Learn about Footage File extension.		
<b>Unit III</b>	<b>Editing Exercise -Lab-1</b>	9
Intro & Masking Technique, Practicing/Reviewing skills, New Editing make slow motion technique" Work on Documentary of Place projects, Interview and Film a classmate telling a story for 10 minutes or talking about camera Composition		
<b>Unit IV</b>	<b>Editing Exercise-Lab-2</b>	6
"Motion Tracking &Technique,Intro making ,Working on Documentary projects, Linear Editing & nonlinear Editing		
<b>Unit V</b>	<b>Editing Exercise-Lab-3</b>	6
Color Editing, how to change whole feet age change color, audio input & audio editing, Broadcast setting		
<b>Text Books</b>	Adobe Premiere 6.0: Classroom .Link( <a href="https://www.amazon.in/Adobe-Premiere-6-0-ClassroomBook/dp/0201710188/ref=sr_1_38?dchild=1&amp;keywords=Adobe+editing+book+6+book&amp;qid=1601795878&amp;sr=8-38">https://www.amazon.in/Adobe-Premiere-6-0-ClassroomBook/dp/0201710188/ref=sr_1_38?dchild=1&amp;keywords=Adobe+editing+book+6+book&amp;qid=1601795878&amp;sr=8-38</a> )-Adobe Creative Team (Author)	
<b>Reference Books</b>	E book , YouTube Chanel	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	



**Course Outcome For VP3315**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand the workspace of premier pro software with proficiency	2	Emp
<b>CO2</b>	Understand the use of workspace and different panels.	2	S
<b>CO3</b>	Understand the working in premier pro documents in the animation software	2	S
<b>CO4</b>	Write the different formats of audio and video files.	3	Ent
<b>CO5</b>	Understand, implement and apply the artistic skills in a way that contributes to the global development of the animation industry.	5	None

**CO-PO Mapping for VP3315**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related- 0))										Program Specific Outcomes		Program Educational Outcomes		
	PO 1	P O2	P O3	PO 4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	0	0	1	0	0
CO 3	1	3	3	2	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	1	3	3	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	1	2
Avg	2.2	2	2.4	1.8	2	2.2	2.2	1.8	1.6	2.2	1.8	1.8	2	1.8	2

## Semester-4

<b>AN3401</b>	<b>Title:3d Architectural Visualization</b>	<b>L T P C</b> <b>2-0-4-4</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the Role of Architectural Visualization in 3d	
<b>Expected Outcome</b>	On completion of the course students should be able to: Develop understanding of different architectural models	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>DrawingBasics</b>	
·Drawing instruments, equipment's and materials their use, care & maintenance, safety precautions. Code of practice for general and architectural drawings. · Importance of lettering and figures sizes, proportion etc., Perspectives and Design Fundamentals, units and measurements		
<b>Unit II</b>	<b>ArchitectureDesign</b>	
Rendering &Presentation, Principal of Planning, Method of Drawing, Rules &regulation, General Information and table, Rules of Architecture in Designing and approach of planning, Building types, Zoning Regulation. Digital Imaging, Application& usages of Digital Image, Image Mapping, Viewing Animation		
<b>Unit III</b>	<b>3DsMax</b>	
Introduction & Applications of 3Ds Max, UCS Co-ordination System, Shortcut keys, Function keys. understanding floor plans and drawings		
<b>Unit IV</b>	<b>Modeling</b>	
Introduction of Modeling, Features of Modeling., Modifiers – Bend Modifier, Extrude, and Surface vertex weld Modifier, Scene – Built a 3D environment with material, light and cameras. Units setup and measurement in 3d		
<b>Unit V</b>	<b>Texturing &amp; Lighting</b>	
Different types of Texture, render to texture tool, Various scene elements into texture, Lighting, Uses of Lighting, Types of light Categories of lighting situation. Render elements, post processing.		
<b>Text Books</b>	1. Autodesk 3ds Max for Beginners A Comprehensive Guide	
<b>Reference Books</b>	2. Autodesk 3ds Max Bible	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	



<b>Date of approval by the Academic Council</b>	13/07/2019
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**Course Outcome ForAN3401**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand drawings tools and create blueprints.	2	Emp
<b>CO2</b>	Understand blueprints and create 3d architectures buildings	2	S
<b>CO3</b>	Understand 3ds max interface, coordinate system and remember shortcuts keys.	2	S
<b>CO4</b>	Create 3d objects and apply materials, light and cameras in 3d scenes.	3	Ent
<b>CO5</b>	Create textures and apply photorealistic light.	5	None

**CO-PO Mapping for AN3401**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	1	2	2	3	0	2	3	2	2	3	0	0	1	0	0
CO 3	2	3	3	1	3	1	3	1	0	1	2	2	2	3	1
CO 4	2	2	1	3	2	3	3	3	2	0	1	1	3	0	3
CO 5	3	1	3	1	3	1	3	2	3	3	2	3	2	3	2
Avg	2.2	2.2	2.4	1.6	2.2	1.8	2.6	2	1.8	2	1.6	1.8	2	1.6	1.6

<b>AN3402</b>	<b>Title:3DShading, Lighting &amp; Rendering</b>	<b>L T P C 1-0-4-3</b>
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<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the Shading, Lighting & Rendering in 3d	
<b>Expected Outcome</b>	On completion of the course student should be able to: Develop a 3d model, with texture, shading and lighting.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Maya Modeling overview</b>	6
Creating primitive objects, Moving Objects in the 3D Space, Maya View Tools, Layouts, Saved Layouts, Channel Box and Manipulators, Grouping and Parenting, Polygonal modeling, NURBS Modelling.outliner, hypergraph		
<b>Unit II</b>	<b>Rendering Overview</b>	10
What is rendering, How Maya renders, Shader Networks, Shading Groups, Materials, Lights, Maya architecture, Nodes and Attributes, Hyper Graph, IPR (Interactive Photo realistic Rendering)Concepts of UDIM		
<b>Unit III</b>	<b>Lighting</b>	10
Type of lights – usage of each, techniques for each, Light Linking, New linking to Objects (and sets) workflow, Reason for light linking – matching live footage lighting, Light attributes – What you’re adjusting and why – show manipulators, Light Fog, Intensity Curves, 3 point light system		
<b>Unit IV</b>	<b>Shadows</b>	8
Depth map, What, When and Why to use, Reuse / Share depth maps, Ray traced, What, When and why to use Shadow Techniques (For realism and Optimization), Adding hard or soft shadows to a scene, Shafts of Light – light fog, Trouble – shooting section for shadow problems, rendering layer		
<b>Unit V</b>	<b>Shading</b>	10
Arnold for Maya material overview   Opaque materials: diffuse and reflections   Transmissive materials pt1: refractions and caustics   Transmissive materials pt2: sub-surface scattering   Mixing materials, shellac, varnishes and rust   Self illumination   Alterations: anisotropy, bump, normal and displacement, Arnold AO, Map baking		
<b>Text Books</b>	Autodesk Maya A Comprehensive Guide	
<b>Reference Books</b>	Maya at glance	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	

<b>Date of approval by the Academic Council</b>	13/07/2019
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**Course Outcome ForAN3402**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand Maya interface and create 3d objects.	2	Emp
<b>CO2</b>	Understand the texture and render 3d objects.	2	S
<b>CO3</b>	Apply lights in 3d scene and create photo realistic graphics for national and international cinema.	2	S
<b>CO4</b>	Understand shadows type and apply in 3d scenes.	3	Ent
<b>CO5</b>	Create objects like glass, metal, etc.	5	None

**CO-PO Mapping for AN3402**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	PO 2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	0	0	1	0	0
CO 3	1	3	3	2	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	1	3	3	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	1	2
Avg	2.2	2	2.4	1.8	2	2.2	2.2	1.8	1.6	2.2	1.8	1.8	2	1.8	2

<b>AN3440</b>	Title: <b>Tracking and Match Moving</b>	<b>L T P C</b> <b>0-0-4-2</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the Camera Tracking And Match Moving	
<b>Expected Outcome</b>	On completion of the course student should be able to: Track any Object From live footage and add 3d object in the scene	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Tracking overview</b>	6
Fundamental of Tracking And Match Moving and industry uses, Explains 2d and 3d tracking, explains camera tracking, Motion blur, Camera Rig, Tracker Point		
<b>Unit II</b>	<b>2D Tracking</b>	10
Understanding the 2D Tracking Process, Track Placement: Making Every Track Count, Exploring the Anatomy of a 2D Track, Automatic Tracking, camera handling and adding track points		
<b>Unit III</b>	<b>Using Mocha/After effect</b>	10
Mocha Basics, Workspace, tracking in Mocha, Applying Tracking Data, Fine-Tune the track, stabilizing footage, <b>Working with scan data</b>		
<b>Unit IV</b>	<b>The Basics of Match moving</b>	8
Understanding the Basic Technique, Analyzing the Movement, Creating the Proxy Object Exploring a Typical Match move, Importance of Match move / Motion Tracking, Tracking in nuke		
<b>Unit V</b>	<b>Using PFTrack</b>	10
PFTrack Basics, Workspace, camera tracking in PfTrack, Object Tracking ,Solving , <b>Exporting distorted plate</b>		
<b>Text Books</b>	Match moving: The Invisible Art of Camera Tracking, 2nd Edition	
<b>Reference Books</b>	Match moving: The Invisible Art of Camera Tracking, 2nd Edition	

<b>Mode of Evaluation</b>	Internal and External Assessment
<b>Recommendation by Board of Studies on</b>	11-06-2019
<b>Date of approval by the Academic Council</b>	13/07/2019

**Course Outcome For AN3440**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the fundamentals of tracking and match moving.	2	Emp
<b>CO2</b>	Understand the Track 2d objects and replace objects form live action footage	2	S
<b>CO3</b>	Understand the Mocha tools and apply tracking data in after effect.	2	S
<b>CO4</b>	Understand the match moving and learn how to do it.	3	Ent
<b>CO5</b>	Understand the PFTrack, track camera movements and place 3d object in live action footage	5	None

**CO-PO Mapping for AN3440**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10	PSO 1	PSO 2	PEO 1	PEO 2	PEO3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	3
CO 2	2	2	2	3	0	2	3	2	2	3	3	0	0	0	0
CO 3	1	2	3	0	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	3	1	3	2	3	1	3	2	3	3	1	3	3	3
CO 5	3	0	3	1	2	0	3	2	2	1	3	3	2	1	2

Avg	2.2	2	2.4	1.4	2	1.6	2.2	1.8	1.6	2.2	2.4	1.8	1.8	1.8	2.2
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<b>JM3403</b>	<b>Title: Cinematography</b>	<b>L T P C</b> <b>3-0-0-3</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	The course will help the student to understand the concept of Cinematography	
<b>Expected Outcome</b>	On completion of the course student will understand the cinematography techniques and will be able to create their own short film and cinematic videos	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Language of cinema</b>	9
Shot, Scene, Melodrama, Deep focus, Continuity Editing, Montage, Focus on Sound and Color correction and balance, Screen Sound; Sync Sound; the use of Color as a stylistic Element		
<b>Unit II</b>	<b>Types of Cinema</b>	9
Fiction Cinema, Non-fiction cinema, Early cinema, development of classical Hollywood cinema, Rise of south cinema.		
<b>Unit III</b>	<b>Indian Cinema</b>	9
Early Cinema and the Studio Era, 1950s - Cinema and the Nation (Guru Dutt, Raj Kapoor, Mehboob), 1970s - The Rise of the Angry Man, Globalization and Indian Cinema		
<b>Unit IV</b>	<b>Production techniques-I</b>	8
Writing Script, Understanding Concept, Character description and designing, Storyboarding techniques, Understanding Shots types, Types of shots and camera angles.		
<b>Unit V</b>	<b>Production techniques-II</b>	9
Responsibility of the cinematographer, Refining the story, Cinematography tools and techniques.		
<b>Text Books</b>	1. Keval J. Kumar, Mass communication in India, Jaico Publishing house.	

<b>Reference Books</b>	1. Renu Saran, History of Indian cinema, Kindle edition 2. Five C's of cinematography by Joseph Rogers, MM Mukhi & sons
<b>Mode of Evaluation</b>	Internal and External Assessment
<b>Recommendation by Board of Studies on</b>	11-06-2019
<b>Date of approval by the Academic Council</b>	13/07/2019

**Course Outcome For JM3403**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the language of cinema and the primary knowledge of making	2	Emp
<b>CO2</b>	Understand the sequence for a film	2	S
<b>CO3</b>	Understand the history of early stage cinema in India and the most important changes in Indian cinema and its culture.	2	S
<b>CO4</b>	Write script and screenplay for the film and documentaries.	3	Ent
<b>CO5</b>	Understand the roles and responsibilities of the cinematographer and its tool and techniques.	5	None

**CO-PO Mapping for JM3403**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	PO 2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	2	3	3	0	3	2	1	2	2	1	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	1	2	3	2	0	1	0	0
CO 3	3	1	3	2	3	2	3	0	2	1	0	1	3	2	3

CO 4	2	1	1	3	2	3	1	3	2	3	3	2	3	3	3
CO 5	3	1	3	3	1	0	3	2	2	1	1	3	2	2	1
Avg	2.4	1.6	2.4	2.2	1.8	1.8	2.2	1.6	2	1.8	1.8	1.8	2.2	1.8	1.8

<b>AN3404</b>	<b>Title:FX &amp; Simulation</b>	<b>L T P C</b> <b>1-0-4-3</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the FX & Simulation	
<b>Expected Outcome</b>	On completion of the course student should be able to: create Fluids, Particles, hair, fur	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Understanding FX &amp; Simulation/ Particle System</b>	6
Understanding FX & Simulation, INTRODUCTION, create particles, create emitters, Modify the render attributes of particles, collide particles, Use the Hardware Renderer, Apply different types of fields and pre-defined effects, particles properties		
<b>Unit II</b>	<b>Introduction to nParticles</b>	10
<ul style="list-style-type: none"> <li>• Create nParticles</li> <li>• Collide nParticles with geometry</li> <li>• Simulate liquids</li> <li>• Work with the Maya Nucleus solver</li> <li>• Use the force fields, Introduction to soft bodies simulation</li> </ul>		
<b>Unit III</b>	<b>Introduction to Fluids</b>	10



<ul style="list-style-type: none"> <li>• Learn about various types of fluids in Maya</li> <li>• Apply the dynamic and non-dynamic fluid effects</li> <li>• Modify the fluid components</li> <li>• Paint in the fluid containers</li> <li>• Add ocean and pond effects to your scene</li> <li>• Connect Maya fields to a container, Maya mesh</li> </ul>		
<b>Unit IV</b>	<b>Introduction to nHair</b>	8
<ul style="list-style-type: none"> <li>• Apply nHair to objects</li> <li>• Simulate nHair</li> <li>• Paint textures on nHair, Ai Shading network for hairs</li> </ul>		
<b>Unit V</b>	<b>Introduction to Bifrost/ Bullet Physics</b>	10
<ul style="list-style-type: none"> <li>• Understand the fundamental concept of Bifrost</li> <li>• Create and optimize Bifrost fluids</li> <li>• Add collider to Bifrost fluids</li> <li>• Add mesh to Bifrost particles</li> <li>• Work with rigid and soft bodies</li> <li>• Create a soft body</li> <li>• Create constraints, Rendering attributes of particles</li> </ul>		
<b>Text Books</b>	Matchmoving_The_Invisible_Art_of_Camera_Tracking_2005_Sybex	
<b>Reference Books</b>	Matchmoving_The_Invisible_Art_of_Camera_Tracking_2005_Sybex	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome ForAN3404**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand fx and simulation principle and use particle system to create simulation.	2	Emp
<b>CO2</b>	Understand nParticles and create fluid	2	S
<b>CO3</b>	Create ocean, pond etc.	2	S
<b>CO4</b>	Apply nHair to objects and simulate nhair.	3	Ent
<b>CO5</b>	Understand rigid body, soft body and create realistic simulation, which allow him to work for animation and visual effects studios, film companies, game design companies globally.	5	None

**CO-PO Mapping for AN3404**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	PO 2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	1	1	0	2	2	2	2	2	3	3	2	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	3	0	1	0	0
CO 3	1	3	3	2	2	0	1	0	0	1	0	2	2	3	3
CO 4	1	1	1	3	3	3	1	2	2	3	1	2	3	2	3
CO 5	3	1	3	3	2	3	3	2	3	0	3	2	2	1	2
Avg	2	1.6	2	2.2	1.8	2	2	1.6	1.8	2	2	1.6	2	1.6	2

**THIRD YEAR**

**SEMESTER 5**

<b>AN3502</b>	<b>Title:3D Animation</b>	<b>L T P C</b> <b>2-0-4-4</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>		
<b>Objectives</b>	Study of this subject will familiarize the students with 3D animation.	
<b>Expected Outcome</b>	On completion of the course students should be able to: Add animation to 3d objects.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Basic Of 3d Animation</b>	
Brief about animation principles, Animation tools in 3D, "Applying classical 2D animation techniques i.e; Stretch squash for 3D character". Bridging the gap between 2d and 3d Animation		
<b>Unit II</b>	<b>Playback Controls</b>	
Creating the illusion of weight, Overview of Maya's playback controls, Exploring Maya's animation preferences. Details about graph editor, Bouncing Ball Exercise, Body language., Acting for Animation to understood weight		
<b>Unit III</b>	<b>Graph Editor</b>	
Animating object along a motion path, Utilizing the trax-editor to blend animation clips. Controlling attributes with set driven keys, Setup animation clip for game animation		
<b>Unit IV</b>	<b>Constrains</b>	
Animating with constraints, Previewing animations in real-time with play blasts, Introduction to scene animation and key framing, dope sheet. Camera Animation		
<b>Unit V</b>	<b>Animation</b>	
Animal walk& run cycles, snakes and birds. Biped Character walk cycles, Biped Character run cycles, pushing and pulling objects. Facial animation and lip-sync. Nonlinear Animation with trax editor. Working with character sets and clips. character interactions. Loop animation Clip for game		
<b>Text Books</b>	1. Mastering Autodesk Maya 2017 by Eric Keller.	
<b>Reference Books</b>	2. Introducing Maya 2017 by DariushDerakhshani.	
<b>Mode of Evaluation</b>	Internal and External Assessment	

<b>Recommendation by Board of Studies on</b>	11-06-2019
<b>Date of approval by the Academic Council</b>	13/07/2019

**Course Outcome ForAN3502**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand basic of 3d animaiton.	2	Emp
<b>CO2</b>	Understand playback controls in maya.	2	S
<b>CO3</b>	Understand and create graph editor.	2	S
<b>CO4</b>	Create animation Constrains in maya.	3	Ent
<b>CO5</b>	Understand and create animation tools.	5	None

**CO-PO Mapping for AN3502**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	0	0	1	0	0
CO 3	1	3	3	2	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	2	3	3	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	1	2
Avg	2.2	2	2.4	1.8	2	2.2	2.2	1.8	1.6	2.2	1.8	2	2	1.8	2



<b>AN3503</b>	<b>Title: Computer Aided 3D Dynamics</b>	<b>L T P C</b> <b>1-0-4-3</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the FX & Simulation	
<b>Expected Outcome</b>	On completion of the course student should be able to: Create Fluids, Particles.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Understanding FX &amp; Simulation/ Particle System</b>	9
Understanding FX & Simulation, INTRODUCTION, create particles, create emitters, Modify the render attributes of particles, collide particles, Use the Hardware Renderer, Apply different types of fields and pre-defined effects		
<b>Unit II</b>	<b>Introduction to nParticles</b>	10
• Create nParticles • Collide nParticles with geometry • Simulate liquids • Work with the Maya Nucleus solver • Use the force fields		
<b>Unit III</b>	<b>Introduction to Fluids</b>	10
• Learn about various types of fluids in Maya • Apply the dynamic and non-dynamic fluid effects • Modify the fluid components • Paint in the fluid containers • Add ocean and pond effects to your scene • Connect Maya fields to a container		
<b>Unit IV</b>	<b>Introduction to nHair</b>	7
• Apply nHair to objects • Simulate nHair • Paint textures on nHair		
<b>Unit V</b>	<b>Introduction to Bifrost/ Bullet Physics</b>	10
• Understand the fundamental concept of Bifrost • Create and optimize Bifrost fluids • Add collider to Bifrost fluids • Add mesh to Bifrost particles • Work with rigid and soft bodies • Create a soft body • Create constraints		
<b>Text Books</b>	Autodesk Maya A Comprehensive Guide by <i>Sham Tickoo</i>	
<b>Reference Books</b>	Advanced Maya Texturing and Lighting by John Wiley	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For AN3503**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand fx and simulation principle and use particle system to create simulation.	2	Emp
<b>CO2</b>	Understand nParticles and create fluid	2	S
<b>CO3</b>	Create ocean, pond etc.	2	S
<b>CO4</b>	Apply nHair to objects and simulate nhair.	3	Ent
<b>CO5</b>	Understand rigid body, soft body and create realistic simulation, which allow him to work for animation and visual effects studios, film companies, game design companies globally.	5	None

**CO-PO Mapping for AN3503**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	2	3	3	0	3	2	3	2	2	1	3	1	0	2	2
CO 2	2	2	2	1	0	3	3	3	1	3	0	3	1	0	0
CO 3	1	0	3	2	3	1	1	0	0	1	3	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	1	3	3	0
CO 5	3	3	3	2	2	0	3	2	2	1	3	3	2	1	2
Avg	2	1.8	2.4	1.6	2	1.8	2.2	2	1.4	1.8	2.4	2	1.6	1.8	1.4



<b>AN3504</b>	<b>Title: Computer Aided 3D Rigging</b>	<b>L T P C</b> 2-0-2-3
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>		
<b>Objectives</b>	Study of this subject will familiarize the students with Rigging techniques	
<b>Expected Outcome</b>	On completion of the course students should be able to: Rig any object.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Joints, IK/FK, handles/controls, constraints</b>	
Introduction to bone system/Joints and IK handles, creating bone system and maintaining naming conventions,		
<b>Unit II</b>	<b>Skinning</b>	
Skinning types, import and export of skin weights, IK and FK basics, IK and FK switch		
<b>Unit III</b>	<b>Blend shapes</b>	
Blend Shape, Blend Shape Attributes,		
<b>Unit IV</b>	<b>Deformers</b>	
Introduction to Deformers, Introduction to constrains and implementation to rig. Maintaining proper hierarchy, grouping and creating controls, rigging the characters, Use of deformers in rigging process		
<b>Unit V</b>	<b>Rigging a Character</b>	
create a bone structure, The parent-child relationship, KINEMATICS, Rig Character .		
<b>Text Books</b>	1. Mastering Autodesk Maya 2017 by Eric Keller.  *Latest editions of all the suggested books are recommended.	
<b>Reference Books</b>	2. Introducing Maya 2017 by DariushDerakhshani.  *Latest editions of all the suggested books are recommended.	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome ForAN3504**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand Joints, IK/FK, handles/controls, constraints in maya.	2	Emp
<b>CO2</b>	Understand and create Skinning in maya.	2	S
<b>CO3</b>	Create Blend shapes in maya.	2	S
<b>CO4</b>	Understand and create Deformers in maya.	3	Ent
<b>CO5</b>	Create a rigging character in maya.	5	None

**CO-PO Mapping for AN3504**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	0	2	1	3	1	0	1	2	0
CO 3	0	3	0	2	3	1	3	1	0	1	2	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	1	3	0	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	1	2
Avg	2	2	1.8	1.8	2	2.2	1.6	2	1.4	2.2	2.4	1.8	2	1.6	2



<b>VP3414</b>	<b>Title:Clay Modelling and Sculptures</b>	<b>L T P C</b> <b>0 0 4 2</b>
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the rule of clay modeling.	
<b>Expected Outcome</b>	On completion of course the student should be able to create clay models using different sculpting techniques.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Basics of Drawing and Sketching</b>	6
Understanding poses through sketches, human muscle study 3D objects, Lighting and Shading.		
<b>Unit II</b>	<b>Types of Modelling</b>	4
Different types of sculpting techniques, usage of different types of clay.		
<b>Unit III</b>	<b>Understanding tools and Techniques</b>	4
Tools required, wire framing, armature clay modeling, converting character sketch into wireframe.		
<b>Unit IV</b>	<b>Assignment- I</b>	4
Create a human hand using clay techniques(first draw the sketch).		
<b>Unit V</b>	<b>Assignment- II</b>	6
Create character design with the help of clay.		
<b>Text Books</b>	1. Beginner guide to sculpting character in clay– 3D total publishing	
<b>Reference Books</b>	2. Beginner guide to sculpting character in clay– 3D total publishing	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome For VP3414**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand the planning and drawing concept for clay	2	Emp
<b>CO2</b>	Understand the types of clay and sculpture	2	S
<b>CO3</b>	Understand the sculpturing tools and techniques	2	S
<b>CO4</b>	Create human hand using clay techniques	3	Ent
<b>CO5</b>	Create character design with the help of clay	5	None

**CO-PO Mapping for VP3414**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	3	3	2	1	1	2	1	3	1	3	2	3
CO 2	2	2	2	3	2	2	3	2	2	3	3	0	1	1	0
CO 3	1	3	3	2	3	2	0	3	0	1	0	2	2	3	3
CO 4	1	1	3	0	2	3	1	3	2	3	3	3	3	3	0
CO 5	3	1	3	1	1	1	3	2	1	2	3	3	2	1	3
Avg	2	2	2.8	1.8	2.2	2	1.6	2.2	1.4	2	2.4	1.8	2.2	2	1.8

<b>AN3505</b>	<b>Title: Voice Over and Sound Design</b>	<b>L T P C</b> 1-0-4-3
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>		
<b>Objectives</b>	Study of this subject will enable the student to record and design the voice over and sounds.	
<b>Expected Outcome</b>	On completion of the course students should be able to create different sound design and multi track mixing.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Introduction to audition</b>	6
Introduction to audition software, workflow, frame rates, aspect ratio, all types of panels, compression, Audio Clip, Manipulating audio, Auto trim/crop, mute, DC offset, resample, reverse, smooth/enhance, Fade in/out, insert silence, bit depth converter etc. understanding vocal system, vocal process.		
<b>Unit II</b>	<b>Audio format</b>	10
Understanding audio formats, audio output, progressive Vs interlaced, Understanding various digital audio formats like .WAV, .AIFF, .MP3, .swf, .WMA etc.		
<b>Unit III</b>	<b>Understanding tools</b>	6
Rough editing, overlay edit, Layers, Ripple edit, Razor tool, understanding all tools on toolbox for editing clips, Moving edited clip. Event tool: move, split, slip and trim multiple events, create fades, apply ASR (attack/sustain/release), etc. Understanding script editor window. Spectrum analysis tools, scrub tool etc., statistics tool (Max, RMS, DC offset, zero crossings), sampler tool etc.		
<b>Unit IV</b>	<b>Waveform and multitrack</b>	10
Fixing, matching, types of job availability, pacing, When and how to apply, establishing the portfolio, creating narration content. Audio editing: workflow, real time editing, event based editing, waveform volume and pan envelopes. Edit, record, encode and master digital audio, editing audio by drag and drop options, cross fading audio tracks, balancing sound levels, creating smooth fades etc. Understanding Multichannel audio recording, synchronize audio and video		
<b>Unit V</b>	<b>Sound design</b>	10
Applying various types of audio transitions, blur, noise, speeding the audio, various audio effects. adding multiple tracks, adjusting track time, musical instrument file processing		
<b>Text Books</b>	1. Adobe Soundbooth CS5	
<b>Reference Books</b>	2. Electronic Music and Sound Design – by Alessandro Cipriani & Maurizio Giri.	

<b>Mode of Evaluation</b>	Internal and External Assessment
<b>Recommendation by Board of Studies on</b>	07- 06- 2022
<b>Date of approval by the Academic Council</b>	20- 10 - 2022

**Course Outcome ForAN3505**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the human vocal system, its components, and the vocal process	2	Emp
<b>CO2</b>	Understand the practical regimen of vocal warm-ups and maintenance.	2	S
<b>CO3</b>	Create a simple vocal warm up routine.	2	S
<b>CO4</b>	Analyze the texts for vocal performance.	3	Ent
<b>CO5</b>	Understand the Interpret & record vocal performances demonstrating variations in pitch, volume, rate, and vocal quality.	5	None

**CO-PO Mapping for AN3505**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	0	0	1	0	0
CO 3	1	3	3	2	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	1	3	3	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	1	2



Avg	2.2	2	2.4	1.8	2	2.2	2.2	1.8	1.6	2.2	1.8	1.8	2	1.8	2
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<b>AN3506</b>	<b>Title:Lighting &amp; Rendering for VFX</b>	<b>L T P C</b> 1-0-4-3
<b>Version No.</b>	<b>1.0</b>	
<b>Course Prerequisites</b>		
<b>Objectives</b>	Study of this subject will familiarize the students with Lighting & Rendering for VFX techniques.	
<b>Expected Outcome</b>	On completion of the course students should be able to create realistic 3d scenes for vfx movies.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	Introduction to lighting	6
Lighting basic, Type of light, three-point lighting, Explain Lighting Techniques Lighting Attribute		
<b>Unit II</b>	<b>Maya Light / Arnold Light</b>	10
Introduction to Maya light, light type, rendering options, render Setting		
<b>Unit III</b>	<b>Shadow casting</b>	6
Shadow Preview, Depth Map Shadows, Ray Trace shadows. Shadow pass		
<b>Unit IV</b>	<b>Image Based Lighting</b>	10
Image Based Lighting with HDRI, three-point lighting setup, creating realistic glass objects, Creating HDRI image.		
<b>Unit V</b>	<b>Lighting a scene for VFX</b>	10
Render Layers and Render Passes, Arnold materials, Advance lighting techniques, Arnold rendering		
<b>Text Books</b>	1. Advanced Maya Texturing and Lighting	
<b>Reference Books</b>	2. Lighting for Product Photography The Digital Photographer's Step-By-Step Guide to Sculpting with Light	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	

<b>Date of approval by the Academic Council</b>	13/07/2019
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**Course Outcome For AN3506**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the lighting basic and lighting techniques.	2	Emp
<b>CO2</b>	Understand the Maya light and Arnold lights.	2	S
<b>CO3</b>	Create shadow and apply to 3d scenes.	2	S
<b>CO4</b>	Create image-based lighting.	3	Ent
<b>CO5</b>	Create the realistic 3d scene for live action movies.	5	None

**CO-PO Mapping for AN3506**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	3	0	3	2	2	3	0	0	1	0	0
CO 3	1	0	0	2	3	3	3	3	1	0	1	2	2	2	3
CO 4	2	2	2	0	0	3	1	3	2	3	2	1	1	3	2
CO 5	3	2	3	3	2	3	3	2	2	1	3	3	3	3	2
Avg	2.2	1.8	2	2	2.2	2.2	2.2	2.4	1.8	2	1.8	1.8	1.8	2	1.8

<b>AN3507</b>	<b>Title: 2D Game Art</b>	<b>L T P C</b> <b>1 0 4 3</b>
<b>Version No.</b>	<b>1.1</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the Role of Game art and design.	
<b>Expected Outcome</b>	On completion of the course students should be able to: Develop understanding of Game design and art involved in creating a game.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Basics of game art</b>	5
Definition & Meaning of game art, Importance of concept art, figure drawing and creature anatomy. Color concept for game environment		
<b>Unit II</b>	<b>Digital Art</b>	8
Understanding of Photoshop, Understanding of vector and raster art, character design variation, different color modes. Color theory		
<b>Unit III</b>	<b>Preproduction process</b>	9
1) Script writing 2) Storyboarding for game. 3) Character design development. 4) Game play		
<b>Unit IV</b>	<b>Post production process</b>	7
a. Audio recording/FX Sound creation b. Animatic recording c. Final voice over recording.		
<b>Unit V</b>	<b>Project Assignment</b>	6
Creating the entire preproduction including script, storyboard variation, character design variation.		
<b>Text Books</b>	Andrew Loomis : Figure Drawing for all its worth.	
<b>Reference Books</b>	Figure Drawing: Design and invention.	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	



**Course Outcome ForAN3507**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand the workspace of Photoshop software with proficiency and work on any version of the software if needed.	2	Emp
<b>CO2</b>	Understand the use of Concept art and digital painting.	2	S
<b>CO3</b>	Understand the importance of figure drawing in the 2d design software.	2	S
<b>CO4</b>	Understand the basics of vector and raster graphics, different formats of Photoshop files.	3	Ent
<b>CO5</b>	Understand, Implement and apply the artistic skills in a way that contributes to the global development of the animation industry.	5	None

**CO-PO Mapping for AN3507**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	2	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	0	2	1	3	1	3	3	2	3	3	2	3
CO 3	0	2	2	0	2	1	2	1		2	0	0	2	3	1
CO 4	1	1	3	2	2	3	2	2	2	1	2	2	3	1	0
CO 5	3	1	1	3	1	3	2	3	1	1	3	2	0	2	2
Avg	1.8	1.8	2.2	1.4	2	2	2	1.8	2	2	2	2	2	2	1.6

<b>VP3514</b>	<b>Title: Aesthetics in Design</b>	<b>L T P C</b> <b>1 0 22</b>
<b>Version No.</b>	<b>1.1</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the Role of design Aesthetics.	
<b>Expected Outcome</b>	On completion of the course students should be able to: implement the core principles of design into any products.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Defining Aesthetics</b>	5
Definition & Meaning of Aesthetics, Role of balance, color, movement, pattern, scale, shape and visual weight.		
<b>Unit II</b>	<b>Implementing the Design</b>	8
Understanding and implementing lines, colors, spacing on websites and apps, adding context.		
<b>Unit III</b>	<b>Principles of Design</b>	9
Contrast, balance, emphasis, proportion, hierarchy, repetition, rhythm, pattern, white space, movement, variety, and unity		
<b>Unit IV</b>	<b>Typography</b>	7
Using different types of fonts and understanding its implementation, Using typography in different mediums using as print media, electronic media.		
<b>Unit V</b>	<b>Project Assignment</b>	6
Creating the entire product design for print media and electronic media.		
<b>Text Books</b>	Andrew Loomis : Figure Drawing for all its worth.	
<b>Reference Books</b>	Figure Drawing: Design and invention.	
<b>Mode of Evaluation</b>	Internal and External Assessment	

<b>Recommendation by Board of Studies on</b>	11-06-2019
<b>Date of approval by the Academic Council</b>	13/07/2019

**Course Outcome For VP3514**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand & design the graphics in vector graphics for different mediums of designing.	2	Emp
<b>CO2</b>	Create the vector art forms, Create different art works in Photoshop. The student will also be able to make a newcomer understand the basics much proficiently.	2	S
<b>CO3</b>	Understand relate with proportion, movement and balance.	2	S
<b>CO4</b>	Understand the qualities of any product design along with visual elements.	3	Ent
<b>CO5</b>	Understand & implement the graphic designing skills using various software skills on a national and international level in the graphic design industry.	5	None

**CO-PO Mapping for VP3514**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	3
CO 2	2	2	2	3	0	2	3	2	2	3	3	0	0	0	0

CO 3	1	2	3	0	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	3	1	3	2	3	1	3	2	3	3	1	3	3	3
CO 5	3	0	3	1	2	0	3	2	2	1	3	3	2	1	2
Avg	2.2	2	2.4	1.4	2	1.6	2.2	1.8	1.6	2.2	2.4	1.8	1.8	1.8	2.2

### Semester-6

<b>AN3601</b>	<b>Title: ADVANCE RIGGING</b>	<b>L T P C</b> <b>2 0 2 3</b>
<b>Version No.</b>	<b>1.1</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the Role of design Aesthetics.	
<b>Expected Outcome</b>	On completion of the course students should be able to: implement the core principles of design into any products.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Defining Rigging</b>	5
Intro to Rigging, Parenting, Grouping, Renaming, Rigging Tools, IK & FK, Animation Tools, IK Solver – SC & RP solvers, LRA- Local rotation Axis, Constraints, Cluster Deformers, Ik Spline Solver, Before Start rigging in Maya What to do/don't with Geometry or any object,		
<b>Unit II</b>	<b>Implementing rigging</b>	8
Menu, Rigging Tools, Naming Conversion, Deformers - Uses of deformers, Lattice, wrap, cluster Alignment of pivot points, Colorizing the Controls, Locking Extra Attributes, Parenting, Managing Layers and Introduction to Joints. Parenting, Renaming, Constraints, MAYA expression		
<b>Unit III</b>	<b>Features of rigging -1</b>	9
Set Driven Keys, Adding Attributes, Grouping Parenting, Renaming, Constraints Set Driven Keys, Adding Attributes -Finger Controls Parenting, Renaming, Constraints, Set Driven Keys, Adding Attributes, Control locking Clean-Up, Locking and freezing Attributes, Layers, Final Hierarchy and Skin Tools. Cleanup Rig File.		
<b>Unit IV</b>	<b>Features of rigging-2</b>	7
Joint Setup, mirrors setup, Rotate Order IK setup for leg, Fk setup for leg, IK-FK with one setup, IK FK Blending, how to create Foot Control Spine setup, Hand control and Setup, Game Character Rig		

<b>Unit V</b>	<b>Project Assignment</b>	6
Low poly Character Skin , Mirror Skin		
<b>Text Books</b>	Andrew Loomis : Figure Drawing for all its worth.	
<b>Reference Books</b>	Figure Drawing: Design and invention.	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of approval by the Academic Council</b>	13/07/2019	

**Course Outcome ForAN3601**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand the Introduction to Rigging Tool	2	Emp
<b>CO2</b>	Apply Joint, Deformers and constrain	2	S
<b>CO3</b>	Create the set Driven key for rigging process	2	S
<b>CO4</b>	Create the Rig setup	3	Ent
<b>CO5</b>	Understand & apply the Skinning for Rigging	5	None

**CO-PO Mapping for AN3601**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	0	0	1	0	0

CO 3	1	3	3	2	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	1	3	3	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	1	2
Avg	2.2	2	2.4	1.8	2	2.2	2.2	1.8	1.6	2.2	1.8	1.8	2	1.8	2

<b>AN3603</b>	<b>Title: Character Animation</b>	<b>L T P C</b> <b>2 0 4 3</b>
<b>Version No.</b>	<b>1.1</b>	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	Study of this subject will familiarize the students with the Role of design Aesthetics.	
<b>Expected Outcome</b>	On completion of the course students should be able to: implement the core principles of design into any products.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>		5
Introduction acting for animator, Body language, character attitude, character interaction, Live Acting for Students		
<b>Unit II</b>		8
Character Description, background story Method Acting		
<b>Unit III</b>		9
Acting for weight pull and push, Acting for dialog animation, About Facial Expression.		
<b>Unit IV</b>		7
Stage acting, Storyboard and script, Screen Play.		
<b>Unit V</b>		6

Animation principles brief, with examples, Students Act with Animation principle.	
<b>Text Books</b>	Andrew Loomis : Figure Drawing for all its worth.
<b>Reference Books</b>	Figure Drawing: Design and invention.
<b>Mode of Evaluation</b>	Internal and External Assessment
<b>Recommendation by Board of Studies on</b>	11-06-2019
<b>Date of approval by the Academic Council</b>	13/07/2019

**Course Outcome ForAN3603**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand & apply the principles of Animation	2	Emp
<b>CO2</b>	Create About Character Description	2	S
<b>CO3</b>	Apply Acting for dialog animation	2	S
<b>CO4</b>	Understand the Screen play	3	Ent
<b>CO5</b>	Apply How to use Animation principle	5	None

**CO-PO Mapping for AN3603**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )	Program Specific Outcomes	Program Educational Outcomes



	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	2	2	2	3	0	2	3	2	2	3	0	0	1	0	0
CO 3	1	3	3	2	3	1	3	0	0	1	0	2	2	3	3
CO 4	2	1	1	3	2	3	1	3	2	3	3	1	3	3	3
CO 5	3	1	3	1	2	3	3	2	2	1	3	3	2	1	2
Avg	2.2	2	2.4	1.8	2	2.2	2.2	1.8	1.6	2.2	1.8	1.8	2	1.8	2





<b>AN3604</b>	<b>Title:Facial &amp; Lips Synchronization</b>	<b>L T P C</b> <b>1 0 4 3</b>
<b>Version No.</b>	1.0	
<b>Course Prerequisites</b>	Nil	
<b>Objective</b>	This subject aims to make student understand the 2d animation process.	
<b>Expected Outcome</b>	On completion of this course, the student should be able to create various animations in 2d.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of Hrs.</b>
<b>Unit I</b>	<b>Facial animation</b>	10
What is facial animation, Blend shape, Facial Rig test, Key Frames, Extremes, Breakdowns, Sketch for Expression		
<b>Unit II</b>	<b>Expressions</b>	10
What are the 21 facial expressions? expression sheet, Different type of eye blink & eye movement, X-sheet for Expression		
<b>Unit III</b>	<b>Character expressions</b>	11
Expression with dialog. Emotion and expression, Biped character expression. Animation layer for expression, How to export/Import Expression,		
<b>Unit IV</b>	<b>Expression sheets</b>	10
Twelve Rules for Expression, Rhythm & Timing, Character animation with act and expression, make an expression sheet for Character		
<b>Unit V</b>	<b>Assignments</b>	9
Biped character Acting with expression. Animation file for Game		
<b>Text Books</b>	Animation survival kit	
<b>Reference Books</b>	Adobe flash professional CS classroom in a book (by adobe creative team) Adobe press Adobe flash CS6 in simple steps (by Kogent learning solutions Inc. -dream tech press)	
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommended by Board of Studied on</b>	11-06-2019	
<b>Date of Approval by the Academic Council on</b>	13/07/2019	

**Course Outcome For AN3604**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Students will able to Interpret the basic structure of TV script	2	Emp
<b>CO2</b>	Create Learn about Expression sheet	2	S
<b>CO3</b>	Create Expression with dialog animation	2	S
<b>CO4</b>	Understand Rhythm and timing for expression	3	Ent
<b>CO5</b>	understand Expression for Biped Character	5	None

**CO-PO Mapping for AN3604**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	2	1	1	1	1	1	1	0	0	1	1	2	0	2	3
CO 2	2	0	2	0	2	2	3	3	1	3	2	3	3	2	2
CO 3	0	3	2	3	3	2	0	3	2	2	3	1	2	0	3
CO 4	2	3	3	3	3	3	2	2	3	2	1	2	3	3	2
CO 5	3	2	3	3	1	1	3	3	3	3	3	1	3	3	0
Avg	1.8	1.8	2.2	2	2	1.8	1.8	2.2	1.8	2.2	2	1.8	2.2	2	2

<b>AN3605</b>	<b>Title:</b> Game Design & Development	<b>LTP C</b> 1-0-6-4
<b>VersionNo.</b>	<b>1.0</b>	
<b>CoursePrerequisites</b>		
<b>Objectives</b>	StudyofthissubjectwillfamiliarizewithGamedesignanddevelopment.	
<b>ExpectedOutcome</b>	On completion of the course students should be able to design basicgames.	
<b>UnitNo.</b>	<b>UnitTitle</b>	<b>No. ofhours(perUnit)</b>
<b>UnitI</b>	<b>GameEngines</b>	8
EngineConcepts,DevelopmentTools,IntroducingUnity,IDEBasics,UnityConcepts,Sprites		
<b>UnitII</b>	<b>IntroductiontoScripting</b>	10
C#LanguageConcepts,CreatingScripts,C#CodingFundamentals,GameLoopsandFunctions		
<b>UnitIII</b>	<b>SimpleMovementandInput</b>	8
SimpleMovement,SimpleRotationandScaling,EasyInputHandlinginUnity,		
<b>UnitIV</b>	<b>PhysicsConcepts</b>	10
RigidbodyComponents,UnityColliders,PhysicsMaterials,ScriptingCollisionEvents		
<b>UnitV</b>	<b>Animation</b>	10
SimpleUnityAnimation,AnimatorStates,ScriptingAnimations,AnimationsandColliders		
<b>TextBooks</b>	1.Beginning3DGameDevelopmentwithUnityAll-in-one,multi-platformgamedevelopment	
<b>ReferenceBooks</b>	2. C#GameProgrammingCookbookforUnity3D 3. LearningC#byDevelopingGameswithUnity3DBeginner'sGuide.	
<b>ModeofEvaluation</b>	InternalandExternalAssessment	
<b>Recommendation byBoardofStudieson</b>	07- 06- 2022	
<b>Date of approval by theAcademicCouncil</b>	13/07/2019	

**Course Outcome For AN3605**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand game design & development.	2	Emp
<b>CO2</b>	Understand and learn coding for unity 3D.	2	S
<b>CO3</b>	Understand object movement and input	2	S
<b>CO4</b>	Create Physics Concepts for games.	3	Ent
<b>CO5</b>	Create animation in unity 3D	5	None

**CO-PO Mapping for AN3605**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	2	1	1	2	2	0	1	0	2	3	3	2	2	2	3
CO 2	2	3	1	3	2	2	3	2	0	2	3	0	3	3	3
CO 3	1	0	2	0	3	3	3	3	2	2	2	3	2	0	2
CO 4	3	3	3	3	3	3	2	2	3	3	0	2	2	3	2
CO 5	3	3	3	3	0	3	2	3	3	3	3	3	3	1	2
Avg	2.2	2	2	2.2	2	2.2	2.2	2	2	2.6	2.2	2	2.4	1.8	2.4



<b>VP3614</b>	<b>Title: Experimental Printing</b>	<b>L T P C</b> <b>2-0-4-2</b>
<b>Version No.</b>	1.0	
<b>Course Prerequisites</b>	Nil	
<b>Objectives</b>	<p>To impart practical knowledge about Experimental Printing. This course is designed to introduce the basics Designs and Graphics for Print Media-techniques to the students.</p> <ol style="list-style-type: none"> <li>1. To make the students aware about the basics designs and graphics for Print Media.</li> <li>2. To make the students understand the type composition and printing method.</li> <li>3. To provide hands on training on DTP software – Corel Draw and QuarkXpress.</li> </ol>	
<b>Expected Outcome</b>	On completion of the course students should be able to: understand and create photo editing and will understand the elements and designing of newspaper.	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of hours (per Unit)</b>
<b>Unit I</b>	<b>Basics Designs for Print Media</b>	4
Aesthetics of design; Elements and Principles of design; Typeface families; Principles of good typography		
<b>Unit II</b>	<b>Basics of Graphics for Print Media</b>	5
Meaning and Concept; Importance of Graphics; Recent Developments in the field of Graphics.		
<b>Unit III</b>	<b>Type Composition and Printing Method</b>	9
Type composition; DTP and use of computer software; Printing methods- letterpress, Cylinder, Rotary, Gravure, Screen, Offset.		
<b>Unit IV</b>	<b>DTP Software's</b>	3
Corel Draw (tool palette , How to work on work environment, color palette, how to import and export file), Quark Express(tool palette , How to work on work environment, color palette, document layout palette, how to import and export file).		
<b>Unit V</b>	<b>Practice of Designing</b>	5
Designing a layout of leaflet and letter head, Design a poster on current issue, Designing of cover page of a magazine, Designing a front page of newspaper.		
<b>Text Books</b>	M V Kamath- Modern Journalism, Vikas Publishing House, NewDelhi. Publications M K Joseph- Basic Source Material for News Writing, Anmol Publications. Sarkar, N.N. Principles of Art and Production, Oxford University Press.	
<b>Reference Books</b>		
<b>Mode of Evaluation</b>	Internal and External Assessment	
<b>Recommendation by Board of Studies on</b>	11-06-2019	
<b>Date of Approval by the Academic Council on</b>	13/07/2019	

**Course Outcome For VP3614**

Unit-wise Course Outcome	Descriptions	BL Level	Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)
<b>CO1</b>	Understand the history of printing in India	2	Emp
<b>CO2</b>	Understand the elements and principles of design.	2	S
<b>CO3</b>	Understand & design the layout and composition for graphics	2	S
<b>CO4</b>	Analyze the Techniques of News Editing	3	Ent
<b>CO5</b>	Understand the basic of Photoshop	5	None

**CO-PO Mapping for VP3614**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	2	1	1	2	2	0	1	0	2	1	1	2	2	2	3
CO 2	2	3	1	3	2	2	3	2	0	2	3	0	3	3	0
CO 3	1	0	2	0	3	2	3	3	2	2	2	3	0	0	3
CO 4	2	3	2	3	3	3	2	2	3	3	0	2	2	3	2
CO 5	3	3	3	3	0	3	2	3	3	3	3	3	3	1	2
Avg	2	2	1.8	2.2	2	2	2.2	2	2	2.2	1.8	2	2	1.8	2

<b>AN3602</b>	<b>Title:ACTING FOR ANIMATION</b>	<b>L T P C 2 0 4 4</b>
<b>Version No.</b>	1.0	
<b>Course Prerequisites</b>	Nil	
<b>Objective</b>	This subject aims to make student understand the use of acting for animation	
<b>Expected Outcome</b>	On completion of this course, the student should be able to understand the importance of acting in animation	
<b>Unit No.</b>	<b>Unit Title</b>	<b>No. of Hrs</b>
<b>Unit I</b>	<b>Introduction</b>	4
Introduction acting for animator, Body language, character attitude, character interaction		
<b>Unit II</b>	<b>Understanding acting</b>	4
Character Description, background story Method Acting		
<b>Unit III</b>	<b>Weight through acting</b>	4
Acting for weight pull and push, Acting for dialog animation		
<b>Unit IV</b>	<b>Stage acting</b>	2
Stage acting, Storyboard and script		
<b>Unit V</b>	<b>Principals of animation</b>	2
Animation principles brief, with examples		
<b>Text Books</b>	Acting for animator's	
<b>Reference Books</b>	Acting for animator's	



<b>Mode of Evaluation</b>	Internal and External Assessment
<b>Recommended by Board of Studied on</b>	05-04-2018
<b>Date of Approval by the Academic Council on</b>	11-06-2018

**Course Outcome ForAN3602**

<b>Unit-wise Course Outcome</b>	<b>Descriptions</b>	<b>BL Level</b>	<b>Employability (Emp)/ Skill(S)/ Entrepreneurship (Ent)/ None (Use , for more than One)</b>
<b>CO1</b>	Understand & apply the principles of Animation	2	Emp
<b>CO2</b>	Create the Animation Basic exercise	2	S
<b>CO3</b>	Understand Brief About 3dAnimation	2	S
<b>CO4</b>	Create the Biped Animation	3	Ent
<b>CO5</b>	Understand & analyze the Nonlinear Animation	5	None

**CO-PO Mapping for AN3602**

Course Outcomes	Program Outcomes (Course Articulation Matrix (Highly Mapped- 3, Moderate- 2, Low-1, Not related-0 )										Program Specific Outcomes		Program Educational Outcomes		
	P O1	P O2	P O3	P O4	P O5	P O6	P O7	P O8	P O9	PO 10	PS O1	PS O2	PE O1	PE O2	PE O3
CO 1	3	3	3	0	3	2	1	2	2	3	3	3	2	2	2
CO 2	1	2	2	3	0	2	3	2	2	3	0	0	1	0	3
CO 3	2	3	3	1	3	1	3	1	0	1	2	2	2	2	1
CO 4	2	2	1	3	2	3	3	3	2	2	2	1	3	3	3
CO 5	3	1	3	1	3	1	3	2	3	3	2	3	2	3	2
Avg	2.2	2.2	2.4	1.6	2.2	1.8	2.6	2	1.8	2.4	1.8	1.8	2	2	2.2

