COURSE STRUCTURE and DETAILED SYLLABUS

BA MULTIMEDIA

for

(4) FOUR YEARS UNDERGRADUATE PROGRAM

Applicable for the batches admitted from 2020-2021

ACHARYA NAGARJUNA UNIVERSITY, GUNTUR

Academic Regulations for 4-year BA MULTIMEDIA Program

(as per the CBCS, effective from the Academic Year 2020-2021)

Preamble:

ANU's Choice Based Credit System (CBCS) aims to provide comprehensive learning opportunities which take into account individual interests and abilities of the students. Apart from the compulsory core courses, the students can choose from the offered elective courses and also from approved online platforms like the MHRD's SWAYAM or MOOCs.

These regulations are subject to amendments as may be decided by the Academic Council / Committee of the University from time to time. Any or all such amendments will be effective from such date and to such batches of students (including those already in the middle of the program) as may be decided by the Academic Council / Committee.

1. Glossary of Terms

- 1.1. Program: An educational program leading to the award of a Degree in a discipline.
- 1.2. Course: Generally referred as a 'subject' offered under the degree program. Each course is identified by a unique course code and course title. A course may be designed to comprise lectures / studio / tutorials / laboratory work / field-work / outreach activities / project work / vocational training / seminars / term papers / assignments / presentations / self-study / internship / incubation / demo reel / industry visits etc., or a combination of some of these. All courses do not carry the same credits.
- **1.3.** Choice Based Credit System (CBCS): In addition to the compulsory core courses in a program, CBCS provides choice for students to select from a number of elective courses offered. The term credit refers to the weightage given to the course and is usually the number of periods per week allotted to it.
- **1.4. Re-admission**: When a student is detained in a course due to shortage of attendance or the student takes a break of study, the student has to take re-admission to continue the program.
- **1.5. Re-registration**: When a student has failed in a course due to low internal assessment marks, but has satisfactory attendance, the student can re-register to improve performance in internal assessment as well as external evaluation.
- **1.6. Re-appearance / supplementary examinations:** When a student has failed in a course and wishes to improve performance only in the end semester external examination he/she can register to reappear for the supplementary examination.
- **1.7. Minimum Total Credits (MTC):** These are minimum total credits to be secured by a student to be considered eligible for award of the degree. This may be different for different disciplines.

2. Program Structure

- **2.1.** Category of Courses: The program shall have a curriculum with syllabi consisting of courses as prescribed by the Board of Studies, and broadly categorized under:
 - 2.1.1. Compulsory Core (CC) are courses deemed to be the core learning required for the discipline. These courses are part of the compulsory requirement to complete the program of study. A core course cannot be substituted by any other course. A core course offered in this program may be treated as a Professional or Open Elective by other programs.
 - 2.1.2. Professional Elective (PE) or Discipline Specific Elective(DSE) are courses which are elective courses relevant to the discipline. An Elective course is generally a course that can be chosen from a pool of courses on offer. Every student shall be required to opt for the electives from the list of electives offered. Students can also opt for the electives on offer from any of the other Programs, besides his / her own discipline courses, or even do online courses subject to the respective Program specific regulations. PE means Professional Elective or Discipline Specific Elective.
 - 2.1.3. Open Electives (OE) or Generic Elective (GE) are chosen generally from an unrelated discipline / subject, with an intention to seek exposure / add generic proficiency. These may include Liberal Arts courses, Humanities and Social Science courses, etc. and essentially facilitate the student to do courses (including Core Courses or

Professional Electives) offered by other departments / programs / institutions or online. Open Electives may not be specified in the course structure and the University may approve and offer any Open Elective courses in any semester as an option for the students. OE means Open Elective or General Elective.

- 2.1.4. Ability Enhancement Compulsory Courses (AECC). These are mandatory courses based upon content that lead to general knowledge, ability and soft skills enhancement, such as, Environmental Studies, Communication Skills, Value Education, etc.
- 2.1.5. Skill Enhancement Courses (SEC): These courses may be chosen from a pool of courses designed to provide value-based and/or skill-based knowledge and should contain both theory and lab / hands-on / training / field work. The main purpose of these courses is to provide students life-skills in hands-on mode so as to increase their employability. The list provided under this category is suggestive in nature.
- 2.1.6. **Online Courses**: Students may be permitted, with the prior approval of the Department, to take online courses through SWAYAM or MOOCs or any other approved online facility, in lieu of the Electives (both PE and OE) offered in the University.
- 2.1.7. An Undergraduate Program consists of the following courses:

Program	Core	AECC	SEC	PE / DSE	OE / GE
4 year BA Multimedia	17	2	2	6	4

2.2. Credits:

- 2.2.1. Credits are indicative of the importance of the course. In the case of core courses 1 period of direct teaching
 Theory = 1 credit || for Tutorial / Studio / Practical 2 periods = 1 Credit || for Tutorial / Studio / Practical 1 1/2
 periods = 1 Credit
- **2.2.2.** In the case of other courses like the Electives and the AEC courses, the credits are based on their level of importance as decided by the Board of Studies and as described in their respective course structures.
- **2.3. Pre-requisites**: Some of the courses may have prerequisites (i.e. the student may be required to have registered and attended the course specified as a prerequisite.)

2.4. Types of Courses and Learning Sources

Types of Courses	Learning Sources
Compulsory Core (CC)	Parent Department (PD), PD, P
Professional Elective (PE)	PD / OD / Online
Ability Enhancement Compulsory Course (AECC)	PD / OD / Online / University
Open Elective (OE)	PD / OD / Online / University
Extension Activity (EA)	PD, OD, University

Note: PD = Parent Department; OD = Other Departments / Institutions / Universities

3. Duration of Program

- **3.1.** A student is normally expected to complete the Program in four academic years (8 Semesters) but in any case not more than 8 years (including break of study for personal reasons or suspension / detention due to disciplinary action, etc.)
- 3.2. Each semester shall normally consist of 90 working days (excluding end semester examination days).
- **3.3. Gap Year:** A student may be permitted to take a break of study for one academic year for starting an enterprise or for any personal or medical reason with prior approval. In exceptional cases, this may be extended to another year after an appraisal process approved by the State Govt. / University. In such cases also the student will be eligible for the award of First Class with Distinction/ other awards. Rules of re-admission will apply to such cases.

4. Registration for choice of Electives:

4.1. Each student shall be deemed to have registered for all the compulsory core and other mandatory (AEC) courses of every semester that he/she is admitted to / promoted to, on the payment of the requisite fees.

- 4.2. However, in the case of electives (as per the course structure), students shall submit their preferences from the list of electives on offer (including approved online courses), and after allotment of the elective course, register for elective courses of their choice both professional and open electives.
- 4.3. The information on the list of all the courses offered in every department specifying the course code, course title, credits, prerequisites, the timetable slots and the registration process with the time schedules will be made available on the University website. Every student is expected to go through the above information, consult the faculty members, understand the choices and select their choice of elective courses.
- 4.4. Every student shall submit their preferences from the list of electives on offer (including approved online courses), register / re-register as per the registration process and the schedule notified.
- 4.5. The departments shall put up the list of electives allotted to the students, using their (departments') discretion based on physical and other capacities, with first preference given to the students from the parent department and later, considering a first come first and/or SGPA basis for students from other departments. However, students who have registered for elective courses previously are allowed to re-register for courses in which they have failed.
- 4.6. In case none of the student's preferred choices is allotted, or even otherwise, the student may propose an alternative choice from among the available ones after due consultation with the respective faculty. In any case, the students shall register (which is effected only on their choice of elective being approved) for the courses within the given schedule / deadline.
- 4.6 After registering for a course, a student shall attend the classes, satisfy the attendance requirements, earn Internal Assessment marks and appear for the End Semester Examinations.
- 4.7 A student is permitted to cancel his/her registration for the elective courses, within two weeks of starting of the semester.
- 4.8 No elective course shall be commenced unless a minimum number of students are registered (this number may be different for different courses and Programs and may be decided by the Departments / College/ University every semester).

5. Attendance Requirements

- 5.1 A student has to put in a minimum of 75% of attendance, in aggregate of all the courses registered in the semester (excluding approved online elective courses) for becoming eligible to register for the end examinations and for acquiring credits in each semester.
- 5.2 Shortage of attendance in aggregate up to 10% (65% and above, and below 75%) in each semester may be condoned by the College Academic Committee on genuine and valid (including medical grounds), based on the student's representation with Specific evidence.
- 5.3 Condonation of shortage of attendance as stipulated above, shall not be automatic but on the merits of the case to the satisfaction of the College Academic Committee.
- 5.4 A stipulated fee shall be payable along with the application for condonation.
- 5.5 Shortage of attendance below 65% in aggregate (including medical grounds) shall in no case be condoned.
- 5.6 A student will not be promoted to the next semester unless the attendance requirement of the present semester is satisfied. In case of such detention the student is not eligible to take the End Examination of that semester and the course registration shall stand cancelled. The student shall seek re admission for that semester when offered next.

6. Assessment

- 6.1 **Distribution of Internal Assessment and End Exam Marks**: Performance in each course shall be evaluated as prescribed in the respective Program's course structure and syllabus. As a general pattern, 50% of the marks in a course are through internal assessment and 50% through end semester examinations. A few courses may have 100% of the assessment purely through internal assessment. The thesis, the internship courses and many of the studio courses are assessed through a jury and viva-voce for the end semester examination.
- 6.2 **Schedule for Internal Assessment**: The students shall diligently follow the given internal assessment schedule for the semester including submissions and tests.
- 6.3 The compiled cumulative internal assessment marks and attendance of the students will be displayed periodically at least twice during the Semester, for information to the students. 50% of the marks allotted for the internal assessment courses shall be submitted before the 12th week. All internal assessment marks have to be finalized and uploaded / submitted in the prescribed formation or before the last day of End Semester Examinations of the semester.

6.4 **Assessment for Online Courses:** In case of credits earned through approved online modes, the credits and grades shall be assigned by a committee consisting of Head of the Department or a teacher nominated by the HoD and a senior faculty member nominated by the Principal (in case the credits or grades are not included by the online course faculty).

7. Award of Letter Grades

7.1 The performance of a student will be reported using letter grades, each carrying certain points as detailed below:

S. No.	%	of marks		
	Minimum	Maximum	Letter Grade	Grade Points
1.	90.00	100.00	A+	10
2.	80.00	89.99	А	9
3.	70.00	79.99	В	8
4.	60.00	69.99	С	7
5.	50.00	59.99	D	6
6.	40.00	49.99	E	5
7.	00.00	0.00 39.99		0
8.	Shortage of attendance and hence prevented from writing end semester examination		SA	0
9.	Absent for End semester ex	Ab	0	

Example of assignment of letter grade and grade points for marks:

Course Title	Int. Marks	End Exam	Total	Grade	Grade point (GP)
Course X1	22	25	47	Е	5
Course X2	39	41	80	Α	9
Course X3	37	34	71	В	8
Course X4	29	30	59	D	6
Course X5	25	24	49	E	5

- 7.2. A student who earns at least an E grade in a course is declared to have successfully completed the course, and is deemed to have earned the credits assigned to that course. A course successfully completed cannot be repeated.
- 7.3. Students who fail to appear for end semester examinations will be marked as 'Ab' (Absent) and should register for supplementary examination by paying the prescribed fees.
- **8. Academic Requirements:** The following academic requirements have to be satisfied, in addition to the attendance requirements mentioned in clause 5.
 - 8.1 A student shall be deemed to have satisfied the academic requirements and earned the credits allotted to each subject/course, if the student secures not less than 40% marks in the semester end examination, and a minimum of 40% of marks in the sum total or aggregate of the Internal Assessment and Semester End Examination taken together; in terms of letter grades, this implies securing 'E' grade or above in that subject/ course.
 - 8.2 A student eligible to appear in the end semester examination for any course, but absent from it or failed (thereby failing to secure 'E' grade or above) may reappear for that course in the supplementary examination as and when conducted. In such cases, the internal marks obtained earlier for that course will be retained, and added to the marks obtained in the end semester supplementary examination for evaluating performance in that course.

9. Promotion between Semesters:

- 9.1. A student shall be promoted from odd to even semester if the minimum requirement of attendance as in clause 5 is fulfilled.
- 9.2. A student shall be promoted from even to odd semester, if the minimum requirement of attendance as in clause 5 is

fulfilled and as per the other requirements specified in the following table.

9.3. Table indicating promotion requirements from even to odd semesters:

From 2 nd sem. to 3 rd sem.	If the student does not have more than two backlog courses in the 1^{st} semester.
From 4 th sem. to 5 th sem.	Secured all the credits up to 2 nd semester and does not have more than two backlog courses in the 3 rd semester
From 6 th sem. to 7 th sem.	Secured all the credits up to 4 th semester and does not have more than two backlog courses in the 5 th semester

10. Re-admission and Re-registration

- 10.1 A student may be detained in a semester either due to shortage of attendance, or due to having more than the permissible number of backlog courses. Students detained due to shortage of attendance may be readmitted when the same semester is offered in the next academic year for fulfillment of academic requirements.
- 10.2 A student detained due to not having enough credits or having more than the permissible number of backlog courses, shall be promoted to the next academic semester only after fulfilling the requirements as per Table 9.3.
- 10.3 No grade allotments or SGPA/ CGPA calculations will be done for the entire semester in which the student has been detained.
- 10.4 The academic regulations under which a student has been first admitted shall be applicable in all cases of re-admission.
- 10.5 If a student fails in a Professional Elective or an Open Elective, the student may re-register for the same or register afresh for any other Professional Elective or Open Elective course respectively in the subsequent semesters. In case of re-registration in the same courses, attendance is not mandatory, whereas registration for any other elective course/s requires the student to attend the classes and fulfill the attendance requirements as per Clause 5.
- 10.6 A student who fails in any course may be permitted the option of re-registering in that subject only if the internal assessment marks are less than 30%, so as to enable him/her to improve/redo and resubmit the work for internal evaluation. In such cases of re-registration, the student's previous performance both in the internal evaluation and end evaluation in the particular subject/s shall stand cancelled and he/she shall be required to appear for the end semester evaluation again (end examination and /or external jury as the case may be).
- 10.7 The maximum number of courses a student may be permitted for 're-registration' in a semester, is limited to three. Re-registration of any course should be done within 7 days from the date of declaration of the relevant results. A stipulated fee shall be payable towards re registration in any subject.
- 10.8 The student may attend classes in the case of the re-registered courses, if the student wishes. However, the attendance requirement is not compulsory for such courses.

11. Grade Points, SGPA and CGPA Calculation

- **11.1.** After the results are declared, Grade Sheets will be issued to each student which will contain the list of courses registered during the semester and the performance in each with details of whether passing or failing, credits earned in that semester, promoted or not, letter grades, grade points, etc.
- 11.2. **Grade Points**: The grade points obtained in a subject multiplied by the credits for that subject will be the weighted grade points.

Weighted Grade Points (WGP) = CxGP

Where 'C' is the number of credits assigned for the subject and 'GP' is the Grade Point obtained as per the Table in clause 7.1 above.

11.3. **SGPA:** The sum of the weighted grade points divided by the total number of credits in a semester will give the Semester Grade Point Average (SGPA).

 $SGPA = \sum CiGPi/\sum Ci$ i = 1 to n

Where n is the number of courses the student registered for in the semester, 'C' is the number of credits allotted to each of the courses, and 'GP' is the grade-point obtained by the student in the respective courses.

An example follows:

Course Title	Credits (C)	Grade (GP)	Weighted Grade Points (WGP)
Course x 1	3	7	21
Course x 2	8	8	64
Course x 3	8	7	56
Course x 4	7	7	49
Course x 5	2	6	12
Course x 6	2	6	12
Total :	30		214
Semester Grade Point Average (SGPA) = Total WGP/ Total credits =			7.13

11.4. CGPA: The Cumulative Grade Point Average (CGPA) will be computed for every student as:

$$CGPA = \sum CiGPi/\sum Ci$$
 i = 1 to m

Where 'm' is the number of subjects registered for in all the semesters from the 1st semester onwards. 'C' is the number of credits allotted to each of the courses, and 'GP' is the grade-point obtained by the student in the respective courses.

- 11.5. The CGPA and SGPA will be rounded off to the second decimal place and recorded as such.
- 11.6. For the purpose of computation of the final CGPA, award of degree, award of the class as in clause 14, and other honours if any, including medals, the performance in the best MTC (Minimum Total Credits) only, as specified in Table in clause 12.2, will be taken into account.
- 12. **Eligibility for the Award of Degree**: A student shall be eligible for the award of the 4 Year B.A. Multimedia in the specific discipline into which he/she was admitted, if the following academic regulations are fulfilled:
 - 12.2. Has pursued the three years program of study for not less than three academic years and not more than six academic years, in case four years program of study for not less than four academic years and not more than eight academic years. Students who fail to fulfill all the academic requirements for the award of the degree within six academic years and eight academic years respectively, from the year of their admission, shall forfeit their seat in the program and their seat shall stand cancelled.
 - 12.3. Successfully secured the Minimum Total Credits required for the respective Programs.

Table:

S.No.	Name of the Program	Duration of the Program	Total Credits	Minimum Total Credits (MTC)
1	B.A. Multimedia	4 Years	208	184

- 12.4. Successfully secured "Satisfactory" grades in all the mandatory non-credit courses/ activity.
- 12.5. Has secured a minimum of 5.0 CGPA
- 12.6. No disciplinary action is pending against the student.
- 13. Withholding of the results: The results of a student may be withheld if:
 - 13.2. He/she has not cleared any dues to the University/Institution/Hostel.
 - 13.3. A case of disciplinary action against the student is pending disposal.

14. Classification of the Degree Awarded

After a student has satisfied the requirement prescribed for the completion of the program and is eligible for the award of the 4 year B.A. Multimedia in the Program to which he/she was admitted, he/she shall be placed in one of the three classes as

shown in the Table.

First Class with Distinction	8.0 and above of CGPA. For 4 Year Program: Should have passed the examination in all the courses of all the eight semesters within five years, which includes any authorized break of study of one year
First Class	Below 8.0 but not less than 7.0 of CGPA and
Second Class	Below 7.0 CGPA but not less than 6.0
Pass Class	Below 6.0 CGPA but not less than 5.0

15. Malpractice:

If a student indulges in malpractice in any of the examinations, he/she shall be liable for punitive action as prescribed by the University from time to time.

16. General

16.1 In case of any doubt or ambiguity in the interpretation of the academic regulations, the decision of the Vice-Chancellor is final.

17. Eligibility Criteria:

A student will be eligible to take his/her admission into BA he/she has satisfied the following norms:

- 17.1 He/she has successfully completed his/her course of study in Intermediate or 10+2 or Diploma or Polytechnic or equivalent.
- 17.2 He/she shall submit the equivalence certificate from the Board of Intermediate Studies for all the other qualifications except Intermediate or 10+2.

1. List of Internal Examiners

S#	Name	Qualification	Organization Name	Designation	Contact Number	Email
1	Ms. Sandhya	MFA	IACG Multimedia	Sr. Faculty	9182033048	sandhya@iacg.info
2	Mr. Praveen	MFA	IACG Multimedia	Sr. Faculty	8374610196	praveen@iacg.info
3	Mr. Vaasu	MSc Multimedia	IACG Multimedia	Sr. Faculty	6281678171	vaasu@iacg.info
4	Mr. Ch.Ravi Kumar	MSc Multimedia	IACG Multimedia	Sr. Faculty	9885215253	chravi@iacg.info
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2. List of External Examiners

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1	Mr. Chaitanya	MSc Multimedia	IACG Studios	Technical Director	9618013081	chaitanya@iacg.info
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3	Mr. Sridhar	MSc Multimedia	IACG Studios	Project Leader	9866834549	sridharv@iacg.info

4	Mr. Ramu	MSc Multimedia	IACG Multimedia	Sr. Faculty	9703037297	ramu@iacg.info
5	Ms. Sandhya	MFA	IACG Multimedia	Sr. Faculty	9182033048	sandhya@iacg.info
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9	Mr. M Suresh	МВА	IACG Multimedia	Sr. Faculty	9866550015	suresh@iacg.info
10	Mr. Madhu Babu	MFA	IACG Multimedia	Head of the Department	8977805888	madhu@iacg.info

3. List of Question Paper Setters

	5. List of Question Paper Setters							
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1	Mr. Satyanarayana	M Phil	IACG Multimedia	Principal	7674826174	satya@iacg.info		
2	Mr. NS Murthy	MSc Multimedia	Ramanaidu Film School	Principal	9849552220	nsmurthy@iacg.info		
3	Mr. Ravi Kumar	MSc Multimedia	IACG Multimedia	Sr. Faculty	8688021997	ravikumar@iacg.info		
4	Mr. Chaitanya	MSc Multimedia	IACG Multimedia	the Department	9618013081	chaitanya@iacg.info		
5	Mr. Vikram	MBA	IACG Multimedia	the Department	9963777110	vikram@iacg.info		
6	Mr. Vaasu	MSc Multimedia	IACG Multimedia	Sr. Faculty	6281678171	vaasu@iacg.info		
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9	Mr. Bala Kiran	MSc Multimedia	IACG Studios	Project Manager	9949558855	balakiran@iacg.info		
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4. List of Internal Evaluators

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4	Mr. Ravi Kumar	MSc Multimedia	IACG Multimedia	Sr. Faculty	8688021997	ravikumar@iacg.info
5	Ms. Sandhya	MFA	IACG Multimedia	Sr. Faculty	9182033048	sandhya@iacg.info
6	Mr. Praveen	MFA	IACG Multimedia	Sr. Faculty	8374610196	praveen@iacg.info
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4	Mr. Satish	MFA	JNAFAU	Assistant Professor	9247545332	drawtoonsindia @gmail.com
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ABBREVIATIONS

1	AECC	Ability Enhancement Compulsory Courses
2	SEC	Skill Enhancement Courses
3	GE	Generic Elective- Student can take subject thought in college or they can choose course from MOOCS
4	сс	Core Course
5	DSE	Discipline Specific Elective
6	вмм	BA Multimedia
7	MOOCS	Massive Open Online Courses

Course Structure

COURSE STRUCTURE

SEMESTER - I

Subject Code	Course Category	Name of the Subject	Hours per week Credi		Credits		Exam Duration	Internal Marks	External Marks	Total Marks		
Couc	Category		L	Р	Т	L	Р	Total	Duration	Widiks	IVIGINS	IVIGIRS
BMM1.01	AECC 1	English Communication	3	1		4		4	3 hours	50	50	100
BMM1.02	GE-1	Art & Craft	2	6		2	4	6	5 hours	50	50	100
BMM1.03	CC 1	Fundamentals of Drawing	2	6		2	4	6	5 hours	100	100	200
BMM1.04	CC 2	Design Elements	2	6		2	4	6	5 hours	100	100	200
		Total :						22		300	300	600

SEMESTER - II

Subject Code	Course Category	Name of the Subject	Hours per week Cred		its	Exam Duration	Internal Marks	External Marks	Total Marks			
Code	Category		L	Р	Т	L	Р	Total	Duration	IVIAIRS	IVIGINS	IVIAIRS
BMM2.01	AECC 2	Environmental Science	4			4		4	3 hours	50	50	100
BMM2.02	GE-2	Basic Photography	2	4		2	4	6	5 hours	50	50	100
BMM2.03	CC 3	Advanced Design Elements	2	6		2	4	6	5 hours	100	100	200
BMM2.04	CC 4	Digital Art	2	6		2	4	6	5 hours	100	100	200
		Total :						22		300	300	600

SEMESTER - III

Subject	Course	Name of the Subject	1	Hours per week			Cred	its	Exam	Internal	External	Total
Code	Category	•	L	Р	Т	L	Р	Total	Duration	Marks	Marks	Marks
BMM3.01	SEC 1	Film Art & Aesthetics	4			4		4	3 hours	50	50	100
BMM3.02	GE-3	Digital Sound Design	2	6		2	4	6	5 hours	50	50	100
BMM3.03	CC 5	Advanced Digital Art	2	6		2	4	6	5 hours	100	100	200
BMM3.04	CC 6	Introduction to Digital 3D	2	6		2	4	6	5 hours	100	100	200
BMM3.05	CC 7	Audio & Video Editing	2	6		2	4	6	5 hours	100	100	200
		Total :						28		400	400	800

Subject	Course	Name of the Subject		urs p week			Crec	lits	Exam	Internal	External	Total
Code	Category		L	Р	Т	L	Р	Total	Duration	Marks	Marks	Marks
BMM4.01	SEC 2	Analytical Skills	4			4		4	3 hours	50	50	100
BMM4.02	GE-4	Stop Motion Animation	2	6		2	4	6	3 hours	50	50	100
BMM4.03	CC 8	Modeling, Texturing and Shading	2	6		2	4	6	5 hours	100	100	200
BMM4.04	CC 9	Rigging and Animation	2	6		2	4	6	5 hours	100	100	200
BMM4.05	CC10	Motion Graphics	2	6		2	4	6	5 hours	100	100	200
Total :								28		400	400	800
Animation: Gaming: Film Making Art & Design Web Design	BMM g: BMM n: BMM	5.2.1, BMM5.2.2,BMM6.2 5.3.1, BMM5.3.2,BMM6.3 5.4.1, BMM5.4.2,BMM6.4 15.5.1, BMM5.5.2,BMM6.5 15.6.1, BMM5.6.2,BMM6.6	.1, B .1, E 5.1, E	MM MM BMM	6.3.2 6.4.2 16.5.2	,BM 2,BM 2,BM	M7.3 M7.4 1M7.	8.1, BMI 4.1, BMI 5.1, BM	M7.3.2 M7.4.2 M7.5.2			
SEMESTE	R - V		ء ت	ours p						1		
Subject	Course	Name of the Subject		week			Cred	lits	Exam	Internal	External	1
Code	Category	,	L	Р	Т	L	Р	Total	Duration	Marks		
BMM5.01	CC 11	3D Character	2				•	· · · · · ·			Marks	
		Modeling		6		2	4	6	5 hours	100	100	
BMM5.02	CC 12		2	6					5 hours	100		Mark
BMM5.02 BMM5.03	CC 12 SEC 3	Modeling				2	4	6			100	Mark 200
BMM5.03	SEC 3	Modeling Digital Sculpting Personality Development and	4	6	ctive	2 2 4	4	6 6 4	5 hours 3 hours	100	100	200 200
BMM5.03 Discipline El BMM5.1.1	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills	4	6	ctive	2 2 4	4	6 6 4	5 hours 3 hours	100	100	200 200
BMM5.03 Discipline E	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills Select any one of the follo	4	6	ctive	2 2 4	4	6 6 4	5 hours 3 hours	100	100	200 200
BMM5.03 Discipline El BMM5.1.1	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills Select any one of the follo	2 4 win	6 g ele	ctive	2 2 4	4 4 ed o	6 6 4 n your c	5 hours 3 hours	50	100 100 50	200 200 100
Discipline El BMM5.1.1 BMM5.2.1	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills Select any one of the follo 2D Compositing 2D Animation	4	6	ctive	2 2 4	4	6 6 4	5 hours 3 hours	100	100	200 200 100
Discipline El BMM5.1.1 BMM5.2.1 BMM5.3.1	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills Select any one of the follo 2D Compositing 2D Animation Game Design - I	2 4 win	6 g ele	ctive	2 2 4	4 4 ed o	6 6 4 n your c	5 hours 3 hours	50	100 100 50	200 200 100
Discipline El BMM5.1.1 BMM5.2.1 BMM5.3.1 BMM5.4.1	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills Select any one of the follo 2D Compositing 2D Animation Game Design - I Film Direction Basics	2 4 win	6 g ele	ctive	2 2 4	4 4 ed o	6 6 4 n your c	5 hours 3 hours	50	100 100 50	200 200
BMM5.03 Discipline El BMM5.1.1 BMM5.2.1 BMM5.3.1 BMM5.4.1 BMM5.5.1 BMM5.6.1	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills Select any one of the follo 2D Compositing 2D Animation Game Design - I Film Direction Basics Life study drawing	2 4 wwin	6 ele		2 2 4 4 bass 2	4 4 ed or	6 6 4 n your c	5 hours 3 hours liscipline) 5 hours	50	100 100 50	200 200 100
BMM5.03 Discipline El BMM5.1.1 BMM5.2.1 BMM5.3.1 BMM5.4.1 BMM5.5.1 BMM5.6.1	SEC 3	Modeling Digital Sculpting Personality Development and Communication Skills Select any one of the follo 2D Compositing 2D Animation Game Design - I Film Direction Basics Life study drawing HTML5 and CSS	2 4 wwin	6 ele		2 2 4 4 bass 2	4 4 ed or	6 6 4 n your c	5 hours 3 hours liscipline) 5 hours	50	100 100 50	200

Basics

DSE 2

Rigging - I

Game Programing

Advanced Painting

Film Cinematography

2 6

2 | 4

6

5 hours

100

BMM5.2.2

BMM5.3.2

BMM5.4.2

BMM5.5.2

100

200

	Web Scripting Language										
	Total :						28		450	450	900
R - VI											
Course Category	Name of the Subject		week					Exam Duration	Internal Marks	External Marks	Total Marks
CC 13	Scene Composition & Camera Layouts	2	6	•	2	4	6	5 hours	100	100	200
CC 14	3D Environment Design	2	6		2	4	6	5 hours	100	100	200
SEC 4	Management Information System	4			4		4	3 hours	50	50	100
ective – 3 (Select any one of the follo	wing	g ele	ctive	bas	ed or	your c	liscipline)			
	Matchmove										
	3D Animation										
	Game Development - I										
DSE 3	Screenwriting	2	6		2	4	6	5 hours	100	100	200
	Advanced Digital Sculpting	_			_			3 110 413		100	
	JavaScript Libraries- jQuery										
ective – 4 (Select any one of the follo	win	g ele	ctive	bas	ed or	your c	liscipline)			
	Dynamics - I										
	Rigging - II										
	Game Design - II										
DSE 4	Principles of Video Editing	2	6		2	4	6	5 hours	100	100	200
_	Character & Set Designing										
	Responsive front-end framework										
	Total :						28		450	450	900
VII	I				1			I	1		
Course Category	Name of the Subject	,	week	<u> </u>			ı	Exam Duration	Internal Marks	External Marks	Total Marks
SEC 5	Entrepreneurial Skills		F	<u>'</u>	-	Г		3 hours	50	50	100
CC 15	Project / Demo Reel /	4	9		4	6	6	20	200	200	400
ective – 5 (wine	مام م	ctive	has	ed or	L Nour c	l	<u> </u>		<u> </u>
CCUVE - 3 (Lighting for	- vv i i i į	P C16	CLIVE	Jas	eu UI	, your t	scipiiiie <i>j</i>			
	I I Ignting for	1									1
	Category CC 13 CC 14 SEC 4 Rective — 3 (ST) DSE 3 VII Course Category SEC 5 CC 15	Total: Course Category	Total: Course Category	Course Category	Course Category	Total: Course Category	Total: Course Category	Course Category	Language	Course Category	Total : 28

	1	Total :						26		450	450	900
BMM7.6.2		Digital Marketing				+						
BMM7.5.2	-	Visual Storytelling										
	-	Management										
BMM7.4.2	DSE - 6	FilmProduction	4	6	4		4	8	5 hours	100	100	200
BMM7.3.2		Game Development -II										
BMM7.2.2		Facial Animation										
BMM7.1.2		Dynamics - II										
Discipline El	ective – 6 (Select any one of the follo	win	g ele	tive b	se	d on	your	discipline)			
DIVIIVI7.U.1		Development										
BMM7.6.1	1	Dynamic Website										
BMM7.5.1	1	Concept Art										
BMM7.4.1	1	VFX for Film-makers										
BMM7.3.1		Game Art										
BMM7.2.1		Character Animation										

SEMESTER - VIII

Subject	Course	Name of the Subject	Hours per week		Credits			Exam Duration	Internal Marks	External	Total	
Code	Category		L	Р	Т	L	Р	Total		iviarks	Marks	Marks
BMM8.01	CC 16	Internship (12 weeks)					12	12	20 mins.	200	200	400
BMM8.02	CC 17	Final Project (Submission)					14	14	20 mins.	200	200	400
		Total :						26		400	400	800

Grand Total:	7	208	3150	3150	6300
Giana iotai .		200	3130	3130	0300

SEMESTER - I

BMM1.01 : ENGLISH	I COMMUNICAT	ION	
THEORY: L-3 P-1 hours / week		Marks	
Exam Duration: 3 hours	Internal: 50	External: 50	Total: 100

UNIT - I:

Introduction to English communication - Advantages & its importance in detail. - Vocabulary: One word substitutes, Words often confused, Synonyms and Antonyms, Foreign Phrases, Phrasal verbs, Idioms and Phrases, Homonyms and Homophones

UNIT - II:

Grammar: Tenses and Uses of Tenses, Spotting the errors in a sentence, Common errors in English, Articles, Prepositions. Prefix and Suffix, Adjectives, Collocations and Punctuation

UNIT - III:

Reading: Comprehension: Locating the topic sentence – main idea – subordinate idea, pick out definitions, factual information references and inferences.

UNIT - IV:

Writing: Paragraph writing, Précis writing, Summarizing, Note – making and note taking, letter writing, technical report writing, resume writing, business correspondence, email writing.

UNIT - V:

Speaking: Group Discussions, Role Plays, Debate, Presentation Skills

REF BOOKS:

"Skills Annexe – Functional English for Success", published by Orient BlackSwan, Hyderabad.

BMM1.02: Art & Craft				
THEORY: L-2 P-4 hours / week	Marks			
Exam Duration: 5 hours	Internal : 50	External : 50	Total : 100	

UNIT - I (Wall and Street Art)

THEORY:

Introduction to Materials and equipments: Ruler, Scissors, Glue clear-drying-Non-stick work board-Damp cloth, White/ brown hard card boards, cutting matte, glue gun, Corrugated Board- Mount Board-Colour Sheet-Tracing Sheet-OHP Sheet-Grinder set to smooth the foam boards-Foam boards (1, 2 & 3 mm) size, -Corn soup/ honey for blood making-Liquid latex thick-Task boards-Soldering iron rod-Velcro-Colour sprays as per Requirements-Wet & Dry leafs-3d Street Art-optical illusion-tricks the mind-Highlight a future event-Education of a public service message-Awareness of a charity- charity fundraising

PRACTICAL:

- 1. Create decorative wall art with frame and note down documentation.
- 2. Create leaf cutting art with framing
- 3. Draw street 3d art illusion with social cause.

UNIT – II (3D Cardboard Model)

THEORY: Three-dimensional objects-3D paper Modeling-Techniques-Construct-Complex Structure-Cuts-Folding of the paper-Origami-Wider range of Applications-Hobbyists and modelers-Education

PRACTICAL:

- 1. Make a miniature model of medieval house
- 2. Make a transport design

<u>UNIT – III (Soap Sculptures):</u>

THEORY: Three Dimensional-Skill to master-visualize-angles-block of stone-subtractive sculpture-strip away-layers-envision the final form-material-work with plan-remove layers-develop-shape and form-using the right tools-clay tools-dental tools-fine points-gouging edges-research-sketch-carve-

PRACTICAL:

- 1. Carve flower pattern from soap
- 2. Create three dimensional object by removing layers substrave sculpture

UNIT – IV (Cosplay):

THEORY: Cosplay Craft: Study on Materials for Makeup, Liquid Latex, Skin tone shading, using tissue papers in creepy skin makeup, Artificial blood making, Artificial scars, wounds, Scary faces, small prosthetics. Study on Materials of Fabric, Props, Weapon & Texture, Character study, Texture study, Tools, heat process for foam boards, working on fixing objects using adhesives, Paints study for metal, soft & hard looking objects, using waste materials for few props, understanding on stitching for different kind of fabrics.

PRACTICAL:

- 1. Choose a superhero or character from Comic's, Movie create costume design with documentation.
- 2. Create props or weapons of your favorite comic character/Movie.

UNIT - V (Amaravati art):

THEORY: Andhra amaravati art

Kondapalli-Bidriware-delicate silver Inlaying-Etikoppaka toys-Lacquer-Furniture-Tholu Bommalata-leather puppets-skin is used for the basic structure-decorate-designs and color-Kondapalli Toys-made of soft wood-Warangal Carpets-handspun wool and jute thread-Kalamkari work-painted with natural dyes-cotton or silk fabric-Bead Embroidery-Colorful beads-splendor of the cloth designs.

PRACTICAL:

- 1. Create two Thoulu bommalu from Indian mythology/folk stories to narrate a story
- 2. Design Male and Female kondapalli bommalu with hard cardboard material

REF BOOKS:

1. Arts & Crafts of India by Nicholas Barnard

BMM1.03: FUNDAMENTALS OF DRAWING				
PRACTICAL: L-2 P-6 hours / week	Marks			
Exam Duration: 10 hours	Internal : 100 External : 100 Total : 200			

<u>UNIT – I (Drawing: Basics, Perspective drawings and primitives in perspective):</u>

THEORY:

Introduction to Drawing - Advantages & its importance in detail.

Fundamentals of Drawing – Studying types of perspectives, horizon line, vanishing points, eye levels, point of view, cone of vision, Rotating objects in perspective - length comparison on rotation - amount of foreshortening based on point of view- Drawing all primitives in different regions of perspective - understanding surfaces and basic geometric shapes; breaking down complex shapes into simpler geometries.

PRACTICAL:

- 1. Draw the processing of cone of vision
- 2. Draw the shape and forms rotating & length comparison in perspective
- 3. Draw the processing of foreshortening on point of view
- 4. Draw the process of a still life.
- 5. One point, two point, three point and multi point perspective

<u>UNIT – II (Shading, Lighting and tonal values, live drawing):</u>

THEORY:

Introduction of Basic Light and shadow – Values(light values, dark values) – Contrast (low contrast, high contrast, full-value contrast) - Artificial light- Natural light- Direction from which the light is coming - Placement of the light source –Direct light - Light zones – highlight - Reflected light - Form Shadow(core shadow, contact shadow, cast shadow) - Identifying Textures – Nature presents many diverse textures (Smooth, Rough, Matte, Shiny, Glistening, Furry, Fuzzy, fluffy Hairy, Grassy).

PRACTICAL:

- 1. Draw the processing of low contrast, high contrast, full value contrast.
- 2. Draw the primitives on the foundation for adding light values and shadow values.
- 3. Draw the processing of core shadow, contact shadow, cast shadow
- 4. Draw the Nature presents many diverse textures.

<u>UNIT – III (Study of Anatomy):</u>

THEORY:

Introduction of Basic Anatomy – Basics of figure drawing, Line of action , Basic shape construction,, Simplification of human and animal forms – Basic skeleton system (male and female) – Relative proportions at various ages – Drawing Relative proportions of the adult figure – Drawing figure in pose drawing step by step (male and female)Skeleton formation, construction formation , muscle, out surface shading – Drawing the muscles of the body.

PRACTICAL:

1. Draw basic comparing head ratio in human body

- 2. Draw basic of human and animal forms
- 3. Draw the processing of male and female skeleton system
- 4. Draw the processing proportions of the adult figure in poses step by step (male and female) Skeleton formation, construction formation, muscle, out surface shading
- 5. Draw the processing proportions of the animal in poses step by step, Skeleton formation, construction formation, muscle, out surface shading

UNIT - IV (Pose Design):

THEORY:

What is good pose- Balancing, line of action(S- curve, C- curve), contour lines, Silhouette (Positive space, Negative space)must convoy the pose, foreshortening, Eye contact, Costumes and props, facial expressions, Secondary actions and follow through.

PRACTICAL:

- 1. Drawing the muscle profile of human body (colour shading) with Analyze documentation
- 2. Draw good pose with apply the balancing, line of action, contour line and silhouette

UNIT - V (Layout and Storyboarding):

THEORY:

Scene, shot, composition, rule of thirds, building of cinema sequence visual transitions –Camera Angles – Camera Movements Zoom, Pan, pan and zoom transitions –Transitions Fade in, Fade out Introduction to Layouts – Importance of Backgrounds in Animation – Layer separation in animation & Layout – Fielding.

PRACTICAL:

- 1. Costumes and props, facial expressions, Secondary actions and follow through with Analyse documentation.
- 2. Draw basic camera angle, shot, movement and composition
- 3. Draw focal length in camera

REF BOOKS:

- 1. Cartoon Animation by Preston Blair (ISBN:1560100842)
- 2. The art of the storyboard (storyboard for film, TV and animation): by John Hart (ISBN: 0240803299)

BMM1.04 : DESIGN ELEMENTS				
PRACTICAL: L-2 P-6 hours / week Marks				
Exam Duration: 5 hours Internal: 100 External: 100 Total: 200				

<u>UNIT – I (Introduction to vector & Basic Drawing):</u>

THEORY:

Introduction to Design Elements - Advantages & its importance in detail. Fundamentals and Design Principles - Understand the difference between Vector and Raster Graphics - Graphics Extensions - Introduction to illustrator - Predefined Shapes - Shape Builder - drawing modes - Draw with the Pen Tool - Anchor Points, Paths, Segments, Selections, Convert Points, Add/Delete Points - - Transparency - Appearance Palette - Join - Average - Guides - Measure - Color - Swatches - Gradients.

PRACTICAL:

- 1. Create custom colors, fill and stroke objects, create custom gradients.(Iconic Buildings)
- 2. Create Scenery using basic tools and colors (swatches and gradient).
- 3. Info graphic Designing

<u>UNIT - II (Vector Illustrations):</u>

THEORY:

Brushes – Calligraphic Brushes; Blob Brush; Width Tool; Art and Scatter Brushes - Patterns -Work with Multiple Layers - blend tools - Grouping - Group Selections - Gradient Mesh - Controlling Gradient Mesh - pathfinder - Getting Started with Effects.

PRACTICAL:

- 1. Create and Apply patterns for objects.
- 2. Use "Gradient Mesh Exercise" and fill one object with gradient mesh and the other with a custom gradient; create masks; apply effects
- 3. Create cast shadows and highlights, adjust transparency.
- 4. Create any illustration with Bushes and patterns
- 5. Create any model with a mesh tool.
- 6. Create masks and work with type.

<u>UNIT – III (Typography):</u>

THEORY:

Readability - scope of audience - usage of font - font categories -Type Tools - Character Palette - Glyphs Palette - Create Outlines - Work with Warp - Masking - Effects -

Graphic Styles - Warp - Symbols - perspective - 3D Effects.

PRACTICAL:

- 1. Practice with the pen and shape tools
- 2. Creating custom Shapes and editing as per the design
- 3. Creating Textures with Blending and patterns

UNIT – IV (Logo Designing):

THEORY:

Introduction of Golden Ratio and Techniques - Choosing the right typeface - Designing with simple shapes - Adding shine, texture, beveled edges, and transparency - Designing with negative space - Types of Logos - Choosing logo colors - Preparing final files

PRACTICAL:

- 1. Make Logos using shapes and text to express his/her creativity
- 2. Logo Creation using golden Ratio
- 3. Practice making concepts using Logo, Color and typography

UNIT - V (Product Branding Design):

THEORY:

Research - Setting up your document - Cover - Contents - About - Master logo - Secondary logo Logo variations - Logo usage - Typography - Color - Brand application - Designer contact Glossary - Finishing touches - Saving your file

PRACTICAL:

- 1. Create a unique style of your brand
- 2. Develop concept and Ideas for product branding Design.

REF BOOKS:

1. KARLINS-How to do everything with Illustrator CS

SEMESTER - II

BMM2.01: ENVIRONMENTAL SCIENCE				
THEORY: 4 Hours / Week Marks				
Exam Duration :3 hours Internal : 50 External : 50 Total : 100				

UNIT - I: Natural Resources:

THEORY:

Importance of learning Environmental Science, Definition, scope and importance. Need for public awareness. Brief description of; Forest resources: Use and over-exploitation. Deforestation timber extraction, mining, dams. Effect of deforestation environment and tribal people Water resources: Use and over-utilization. Effects of over utilisation of surface and groundwater. Floods, drought.Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources. Food resources: World food problems, Effects of modern agriculture; fertilizer, pesticide, salinity problems. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources.

UNIT - II : Ecosystems, Biodiversity and its conservation :

THEORY:

Concept of an ecosystem Structure and function of an ecosystem Producers, consumers and decomposers Food chains, food webs and ecological pyramids Characteristic features of the following ecosystems:- Forest ecosystem, Desert ecosystem, Aquatic ecosystem. Value of biodiversity: Consumptive use, productive use. Biodiversity in India. Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife Conflicts. Endangered and endemic species of India Conservation of biodiversity.

<u>UNIT - III : Environmental Pollution:</u>

THEORY:

Definition Causes, effects and control measures of :- a. Air pollution, b. Water pollution, c. Soil pollution, d. Noise pollution. Solid waste management; Measures for safe urban and industrial waste disposal, Role of individual in prevention of pollution, Disaster management: Drought, floods and cyclones

UNIT - IV : Social Issues and the Environment :

THEORY:

From Unsustainable to Sustainable development Water conservation, rain water harvesting, watershed management. Climate change, global warming, ozone layer depletion, Environment protection Act Wildlife Protection Act, Forest Conservation Act.

<u>Unit-V: Human Population and the Environment:</u>

THEORY:

Population explosion, impact on environment, family welfare Program, Environment and human health Women and Child Welfare Value Education Role of Information Technology in Environment and human health.

PRACTICAL: Field Trip

REF BOOKS:

1. Environmental Studies by Dr.M.Satyanarayana, Dr.M.V.R.K.Narasimhacharyulu, Dr.G. Rambabu and Dr.V.Viveka Vardhini, Published by Telugu Academy, Hyderabad.

2. Environmental Studies by R.C.Sharma, GurbirSangha, published by Kalyani Publishers.

BMM2.02:Basic Photography				
THEORY: L-2 P-4 hours / week Marks				
Exam Duration: 5 hours	Internal : 50	External : 50	Total : 100	

<u>UNIT – I (Concepts & Terminology):</u>

THEORY: Basics: How Your Camera Works, Digital Camera Sensors, Camera Exposure: Aperture, ISO & Shutter Speed, Camera Metering, Depth of Field, Camera Lenses: Focal Length & Aperture, White Balance, Camera Autofocus, Qualities of Digital Photos, Bit Depth, Understanding Sharpness, Image Noise, Dynamic Range, Advanced Concepts, Digital Camera Sensor Sizes: How Do These Influence Photography?, Understanding Diffraction: Pixel Size, Aperture and Airy Disks, Digital Cameras vs. The Human Eye, Hyper focal Distance

PRACTICAL:

- 1. Fruits photography
- 2. Food photography

<u>UNIT – II (Camera equipment & accessories):</u>

THEORY: Camera Types & Accessories, Compact vs. Digital SLR Cameras, Selecting & Using a Camera Tripod, Camera Flash, Light Quality & Appearance, Camera Flash, Flash Ratios & Exposure, Camera Lenses, Camera Lenses: Focal Length & Aperture, Using Wide Angle Lenses, Using Telephoto Lenses, Tilt/Shift Lenses: Using Shift Movements to Control Perspective, Using Tilt Movements to Control Depth of Field, Macro Lenses: Magnification, Depth of Field & Effective F-Stop, Macro Extension Tubes & Close-up Lenses, Lens Characteristics, Camera Lens Flare: What It Is and How to Reduce It, Camera Lens Quality: MTF, Resolution and Contrast, Camera Lens Filters, Polarizers, UV, ND & GND.

PRACTICAL:

- 1. Portrait lighting (using three point lighting)
- 2. Light painting Bulb mode

UNIT – III (Photo editing):

THEORY: Image Files, Bit Depth, JPEG & TIFF, RAW Files, Tones & Contrast, Histograms, Tones & Contrast, Luminosity & Color, Using the "Levels" Tool, Using the "Curves" Tool, Image Posterization, Sharpening, Noise & Detail, Sharpness, Sharpening Using the "Un-sharp Mask" Tool, Using Local Contrast Enhancement, Averaging Images to Reduce Noise, Image Resizing, Digital Image Interpolation, Resizing an Image for the Web & Email, Optimizing Digital Photo Enlargement, Photo Stitching & Digital Panoramas, Overview & Capture, Using Stitching Software, Image Projections, Improving Image Quality with Lens Corrections, Bring Old Photos Back to Life, Animated 3D Stereo Photos.

PRACTICAL:

1. Back lit photography

2. Sports Photography

<u>UNIT – IV (Color management & printing:):</u>

THEORY: A Background on Color Perception, Bit Depth, Digital Pixels: PPI, Dithering & Print Size, From Camera to Display to Print, Color Management, Color Spaces, Color Space Conversion, Gamma Correction & Digital Tones, Calibrate Your Monitor for Photography, Soft Proofing: Matching On-Screen Photos with Prints, Working Space Comparison: sRGB vs. Adobe RGB 1998.

PRACTICAL:

- 1. Daylight photography
- 2. Night light photography

UNIT - V (Photography techniques):

THEORY: Using Camera Shutter Speed Creatively, Reducing Camera Shake with Hand-Held Photos, Digital Exposure Techniques: Expose to the Right, Clipping & Noise, Subjects, Photography in Fog, Mist or Haze, Macro Photography, Intro & Common Obstacles in Night Photography, Photo Lighting, Portrait Lighting with One Light, Two Lights: Fill Light, Portrait Lights: Background, kickers, hair, rim, etc., Lighting Styles & Diagrams, Composition, The Rule of Thirds, Using Diagonals for Dynamic Photos, Negative Space - Sometimes Less is More, Image Stacking & Multiple Exposures, Using the High Dynamic Range (HDR), Extending Depth of Field Using Focus Stacking, F-Stop Stacking: Depth of Field & Corner Sharpness.

PRACTICAL:

- 1. Time slice photography
- 2. Time lapse photography

REF BOOKS:

Reference: Cambridge in color web site

BMM2.03 : ADVANCED DESIGN ELEMENTS				
PRACTICAL: L-2 P-6 hours / week Marks				
Exam Duration: 5 hours Internal: 100 External: 100 Total: 200				

UNIT - I (Creativity):

THEORY:

What are Design elements and its importance. What is Creativity – What is Creative Thinking – Intelligence – Personality –Research – Direct Advertising – Indirect Advertising – Development of Idea –Requirements of a Creative Person – Art of StoryTelling – Components of Layouts – Essentialities of Good Appeals – Types of Appeal – Slogans – Body Copy –Visual thinking.

<u>UNIT – II (Digital Art):</u>

THEORY:

Introduction - Drawing - Illustrations - Anchor Points & paths - Basic Shapes - Drawing Tools - Editing Tools - Alignments - Blending - Clip with Masks - Manage Colors & Gradients - Concepts of Mesh - Brushes & Patterns - Styles - Layers - Actions - Symbols - File Formats - Templates, give painting & tracing

PRACTICAL:

- 1.Design Planning
- 2.Branding
- 3. Different Branding Techniques
- 4.Illustration
- 5. Types of illustration
- 6. Styles and techniques

<u>UNIT – III (Image Manipulations):</u>

THEORY:

Introduction – Use of Color Modes – Managing Resolutions – Selections – Colors & Gradients – Working with Paths – Adjusting the tonal range – Retouching – Masks & Channels – Brushes – Painting & Editing – Blending Modes – Layer Styles – Creating Special Effects – Color separations – Web site Layouts – File Formats

PRACTICAL:

- 1. Image Retouching
- 2. Photo Manipulations
- 3. Clone yourself
- 4. Surrealistic images
- 5. UI Designing of Website

<u>UNIT - IV (Art & Design):</u>

THEORY:

Introduction to Digital Art Painting – Understanding the Concept – Visualizing the Art – Importance of Layers – Pencil Strokes – Brush Strokes – Adjusting Brushes – Types of Brushes – Understanding & Applying Colors – Retouching the Design

PRACTICAL:

- 1. Digital pen tablet usage
- 2.Brushes development
- 3. Digital Painting and Techniques

UNIT - V (Desktop Publishing):

THEORY:

Creating Documents – Usage of Graphics – Texts – Managing Graphics & Text as Objects – Importance of Color for Print – Types of Printers – Creating table of contents – Indexing Concepts – Color Management System – Color Separations – Publishing Concepts – File Formats

PRACTICAL:

- 1. Typography
- 2. Invitations
- 3. Magazine designing
- 4. Book Design and publishing techniques

BMM2.04 : DIGITAL ART			
PRACTICAL: L-2 P-6 hours / week Marks			
Exam Duration: 5 hours Internal: 100 External: 100 Total: 200			

UNIT - I (DIGITAL DRAWING):

THEORY:

Introduction of Digital Painting (install the Custom Brushes) – Basics of drawing in DP (the path to confident line – Drawing from the shoulder – Pen Pressure – Demonstrations (line gesture drawing- hybrid gesture drawing) – Refined Line – Simple Shading (Simplifying Light, Using Tone to Describe Form and Visual Hierarchy, Problem Solving with Tone) – Technical Drawing – Imaginary Subjects (nature sketching, detailing, linear design sketching, jewel thumbnail process & refining.) Rendering (Keyboard Commands, Shadow Shape, Illuminated Area, Reflected Light, Occlusion Shadows, Refining the Vase, light angle, light-type.)

PRACTICAL:

- 1. Draw the ten liner gesture and ten hybrid gesture
- 2. Draw the gesture drawing than apply the refines line
- 3. Draw still life drawing and apply the shading, light and tone for visual hierarchy
- 4. Sketch the linear design of shapes & forms
- 5. Sketch technical drawing of transportation and machine drawing
- 6. Draw rocks, trees and foliage

UNIT – II (Digital Perspective):

THEORY:

Perspective (perspective overview, freehand-cube, projecting, perspective-grid-viewpoint, 3point, simple sculpting, ellipses, measuring, conclusion, environments, organic shapes, 3D_and_conclusion,) - Rendering (Studying-value, Tone-checklist, Light-and-atmosphere, Local-value-and-texture, Reflectivity, Designing-a-value-pattern, Thumb-and-rough, line work-and-paths, block-in, Base-Render, Texture-Overlay, Making-Edits, Final-balancing,)

PRACTICAL:

- 1. Draw the liner design sketching of animal heads with detailing & write the step by step documentation.
- 2. Draw perspective grids in one, two & three point perspective, draw primitives in perspectives
- 3. Draw architectural buildings in perspectives and write step by step documentation
- 4. Draw sci fi buildings and environmental concept art in perspective & write the step by step documentation.

<u>UNIT - III (Digital Art Painting):</u>

THEORY:

Concept Art (Your Assignment, Written Research, Animal Warm-ups, Sketch Process, Refinement, Variations, applied shape, proportion, principles_of_design, iteration, putting it all together,) Design shape (Controlling Shape, Exaggeration, Straight Lines against Curves, Shape Simplification, Asymmetry, Repetition and Hierarchy, Shape Welding, Visual Flow,)

PRACTICAL:

- 1. Sketch detailed shield, armor and gun design with light and shades and write the step by step documentation
- 2. Draw the hybrid nature sketching with detailing
- 3. Draw character of sci fi robot

<u>UNIT - IV (Digital Art Painting in detail):</u>

THEORY:

Game Icons –(Intro and Visual Research, Creating Icons, Interface Design Experiments, Layer Styles Demo, final artwork) House Design (Thumbnail sketching, Refining the Design, Final Illustration, Building a Town, Moving forward- World Design – (Setting the Stage, Sketching the Key Art, Refining the Key Art, Pattern Design, Functional Details, Creatures, Landscape, Text and Design, Closing Thoughts)

PRACTICAL:

- 1. Design & draw game icons and layout
- 2. Design and draw fairy tale architecture
- 3. Create a world of fantasy island, fairy tale world, medieval world of art

<u>UNIT - V (Digital Painting Skills -World Design:</u>

THEORY:

World Design – (Setting the Stage, Sketching the Key Art, Refining the Key Art, Pattern Design, Functional Details, Creatures, Landscape, Text and Design, Closing Thoughts)

PRACTICAL:

1. Create a world of fantasy island, fairy tale world, medieval world of art

SEMESTER – III

BMM3.01: FILM ART & AESTHETICS				
THEORY: L-4 hours / week Marks				
Exam Duration: 3 hours Internal: 50 External: 50 Total: 100				

UNIT - I (The story and its development)

THEORY:

A Director's screen grammar - seeing with a movie maker's eye - shooting projects - Recognizing the superior screenplay

UNIT – II (Aesthetics and authorship)

THEORY:

Point of view - Subtext, Genre and Archetypes - Time, structure, and plot - Space, Stylized environments and Performances. - Form and Style.

<u>UNIT - III (Preproduction)</u>

THEORY:

Acting fundamentals - Directing actors - Acting improvisation exercises - Acting exercises with a text - Casting - Exploring the script - Actor and director prepare a scene - initial meetings with the cast - Rehearsals and Planning Coverage - Production Design - The pre-production meeting and deciding equipment.

UNIT - IV (production)

THEORY:

Developing a crew - Mise-en-Scene - Producing a shooting script - Before the camera rolls - Roll Camera - Location Sound - Continuity - Directing the actors - Directing the crew - Monitoring Progress

UNIT - V (Post production)

THEORY:

Preparing to Edit - Getting Started on the First Assembly - Editing Principles - Using Analysis and Feedback - Working with Music - Editing from Fine Cut to Sound Mix - Titles, Acknowledgements, and Promotional Material

REF BOOKS:

1. Directing_Film Techniques and Aesthetics by Michael Rabiger

BMM3.02: Digital Sound Design				
THEORY: L-2 P-4 hours / week Marks				
Exam Duration: 5 hours Internal: 50 External: 50 Total: 100				

<u>Unit – I (Introduction to Music):</u>

THEORY:

Music Basics - Rhythm— Pitch — Tempo - Scales — Beats - Types of Instruments - Chord - Time- Major & Minor Chord progression

Unit – II (About Audio):

THEORY:

Introduction to Audio - Advantages & its importance in detail. Introduction - Digital Audio Basics - Sampling - Amplitude - Pitch - Frequency - Audio Equalizers - Mono & Stereo - Audio Loops - Recording - Surround Sound Systems - Audio Monitoring - Different File Formats.

PRACTICAL:

1. Extracting loops from any music

<u>Unit – III (Audio Editing):</u>

THEORY:

Introduction to Fruity Loops - Software environment— Channel Rack — Pattern - Song — transport section: play, stop and record buttons for playback — Exporting File - Snap - Browser - Packs - Current Project - Plugin Database

PRACTICAL:

- 1. Pattern with loop
- 2. Create a Chord Pattern

<u>Unit – IV (Beats Creation):</u>

THEORY:

Basics - create a new Sampler - Step Sequencer - Other Controls - Piano Roll Basics - Tools (Draw Paint, Paint (Sequencer), Delete, Mute, Slice, Select, Zoom, Playback) - Arrangement

PRACTICAL:

- 1. Add beat to old song
- 2. Recreating beats & melody of any existing song

Unit – V (Composition & Mixing):

THEORY:

Introduction to Mixer - Inserts - Plugins - Automation - Edison - Importing music and Plugins - Export - Composing music for Logo Reveal

PRACTICAL:

- 1. Create a mixed track with 3 songs
- 2. Music for Logo Reveal

BMM3.03: ADVANCED DIGITAL ART				
PRACTICAL: L-2 P-6 hours / week Marks				
Exam Duration: 5 hours Internal: 100 External: 100 Total: 200				

UNIT - I (The Basics of Light and Color):

THEORY:

The Inseparability of Light and Color - The Science of Light - Local Colors - The Saturation Problem - Warm and Cool Colors - Shadows - Reflected Light and Ambient Occlusion - Painting Shiny Surfaces - Painting Subsurface Scattering - Painting Glowing Objects - Painting Water - Painting Decals and Tattoos

PRACTICAL:

- 1. Create an artwork with subsurface scatter look
- 2. Paint a lava lamp

UNIT - II (Cell Shading and Inking style):

THEORY:

Cell Shaded Art – Underdrawing - Tightening the Underdrawing - Refined Drawing - Final Line Art - Flat Colors - Two Tone Shading - Three Tone Shading - Highlights - Background - Texture Layers - Inked Art - Penciling - Refined Pencils - Inking Layer - Shadows and Lighting

PRACTICAL:

- 1.Create an Artwork using Cell shading style
- 2.Create an Artwork Inking style

<u>UNIT – III (Cutout Style):</u>

THEORY:

Choosing and Preparing your Sketch - Cutting Out the Shapes - Cleaning Up the Shape - Adding Simple Line Art - Shadows and Lightning - Markings and Textures

PRACTICAL:

1.Create two artworks using Cutout style

<u>UNIT – IV (Photorealistic Style):</u>

THEORY:

Rough Drawing - Refined Drawing - Final Drawing - Local Colors - Rough Shadow - Lights - Deep Shadows - Highlights - Photorealistic Markings - Secondary Light Source and reflected light. - Adding a Background - Adding Photo Textures- Integrating the Texture - Depth of Field

PRACTICAL:

1.Create two Photorealistic paintings

UNIT - V (Photorealistic Portrait):

THEORY:

Measuring face- Rough Drawing - Refined Drawing - Final Drawing - Local Colors - skin details- subsurface scatter look - skin folds - Rough Shadow - Lights - Deep Shadows - Highlights - Photorealistic Markings - Secondary Light Source and reflected light - hair coloring - hair details

PRACTICAL:

- 1.Create a Photorealistic portrait of old man
- 2.Create a Photorealistic portrait of child

BMM3.04: INTRODUCTION TO DIGITAL 3D				
PRACTICAL: L-2 P-6 hours / week Marks				
Exam Duration: 5 hours Internal: 100 External: 100 Total: 200				

<u>UNIT – I (3D Interface:</u>

THEORY:

Introduction to 3D UI, role of 3D applications in CGI - Interface- UnderstandingUI - Viewports - Menus - Attribute Editors - Outliner - Project Setup - File - Naming - Grouping - Hierarchy Workflows-Pipe lines of Production-Navigating workspace-Understanding the Channel Box-Hot Box.

<u>UNIT – II (Modeling & Texturing):</u>

THEORY:

Modeling: Creating NURBS model – NURBS Modeling Techniques-Curves EP,CV – Edit Curves – Surfaces-Converting to polygon.

Texturing: Introduction to materials -Understanding Hyper shade-Shading-Seamless Textures .

PRACTICAL:

- 1. Creating Prop models
- 2. Creating vehicle model by using curves

<u>UNIT – III (Inorganic Modeling & Texturing):</u>

THEORY:

Modeling – Creating Polygon model – Polygon Modeling Techniques – Topology in Polygon modeling Mesh–Edit Mesh. Making process of inorganic models & textures in CG-Modeling various types of props for interior and exterior.

Texturing: Material Explorer-Creating Basic shading networks—Mappings- PSD network-Understanding UV texture editor- Unwrapping UV of prop using UV Texture editor.

PRACTICAL:

- 1. Creating model and unwrapping of Interior
- 2. Creating robots or Mechanical objects

<u>UNIT – IV (Lighting & Rendering):</u>

THEORY:

Lighting concepts-Introduction to lights and Arnold lights-understanding of attributes-Light Intensity -Reflection rules and shaders—Depth of Field —Rendering process — Rendering a single frame-Light Moods-Day lighting- Night Lighting -Exploring Paint Effects features-Image Based Lighting for a 3D Object-IPR rendering — Software renderer

PRACTICAL:

1. lighting Interior scene (day/ night)

UNIT - V (Rigging & Animation):

THEORY:

Introduction to Rigging & Animation- Advantages & its importance in detail.Concepts Of Parenting And Grouping—Understanding Joints — Editing Joints — Deformers — Basic Rigging A Character—Basic Skinning — Bind Skin — Painting Skin Weights — Using Component Editor-History Of Animation—Principles Of Animation — Animation Techniques — KeyFrame Animation — Motion Path Animation-Importance of pose design-Animating Cartoon Characters

PRACTICAL:

1. Create Mechanical rigging.

- 2. Ball bounce animation
- 3. Cartoon character animation

REF BOOKS:

1.Maya Bible Learning Outcome: Understanding 3D environment/jargon pertaining to creation of set models & props using modeling, texturing & lighting.

BMM3.05: AUDIO & VIDEO EDITING				
PRACTICAL: L-2 P-6 hours / week Marks				
Exam Duration: 5 hours Internal: 100 External: 100 Total: 200				

UNIT - I (About Audio & Video):

THEORY:

Introduction to Audio & Video Editing Techniques- Advantages & its importance in detail.Introduction — Digital Audio Basics — Sampling — Amplitude - Pitch — Frequency — Audio Equalizers — Mono & Stereo - Audio Loops — Recording — Surround Sound Systems — ADSR — Voice-overs — Encoders & Decoders — Audio Monitoring — Video Conversions — PAL & NTSC — Different File Formats.

PRACTICAL:

- 1. Extracting loops from any music
- 2. Recording the narration of a short moral story

UNIT – II (Audio Editing):

THEORY:

Working with Audio Files – Recording & Playback – Processing Functions – Editing Concepts – Audio Tools – Producing for Multimedia and the Web – MIDI – Echo Effects – Pitch Effects – Graphic Dynamics – Chorus – Reverberation – Exporting File Formats.

PRACTICAL:

- 1. Making seamless audio mashup
- 2.Processing& Mixing the RAW sound Effects

UNIT - III (About Video Editing):

THEORY:

Introduction to Video – Transmissions – Video Standards – About Offline Editing – Linear & Non – Linear Editing – Video File Formats – HD & SD – Interlaced – Progressive

PRACTICAL:

- 1.Subclipping& Reviewing
- 2.Promo Cut

UNIT – IV (Types of Editing):

THEORY:

Introduction to types of Cuts & Transitions – Editing Techniques – Software file formats – Camera Angles.

PRACTICAL:

- 3. Video Mashup
- 4. Narrative Editing

UNIT - V (Color Correction & Titles):

THEORY:

Title Designing - Superimposing - Adding Motion - Applying Video Effects - Applying Audio Effects

PRACTICAL:

5. Dual Role Editing

REF BOOKS:

- 1. P.FISHER: Instant Sound Forge.
- 2. BAKER Adobe Premiere Pro Bible.

SEMESTER - IV

BMM4.01: ANALYTICAL SKILLS			
THEORY: L-4 hours / week	Marks		
Exam Duration: 3 hours	Internal :50	External : 50	Total : 100

UNIT - I :(ANOLOGY)

Instrument and Measurement, Quantity and Unit, Study and Topic, Individual and Group, Word and Synonym, Word and Antonym, Product and Raw Material, Individual and Class.

UNIT - II :(CODING-DECODING)

Letter Coding, Number Coding, Number To Letter Coding, Letter To Number Coding, Matrix Coding, Substitution, Mixed Letter Coding, Mixed Number Coding.

UNIT – III:(LOGICAL REASONING)

Blood Relations, Direction Sense Test, Venn Diagrams, Syllogisms, Logical Sequence of Words, Alphabet Test, Number-Ranking and Time Sequence Test.

<u>UNIT – IV:(PUZZLES AND MATHEMATICAL OPERATIONS)</u>

Classification Type Questions, Seating/placing Arrangements, Comparison Type Questions, Sequential Order Of Things, Selection Based On Given Conditions, Questions Involving Family Members And Their Relationship, Their Professions, their Preferences Etc. Jumbled Up Problems, Bodmas Rule.

UNIT - V:(NON-VERBAL REASONING)

Paper Cutting, Paper Folding, Cubes And Dice.

BMM4.02: Stop Motion Animation			
THEORY: L-2 P-4 hours / week	Marks		
Exam Duration :3 hours	Internal : 50	External : 50	Total : 100

UNIT - I (Story):

THEORY: Narrate a story and do the rough storyboarding.

PRACTICAL: Create a storyboard

UNIT - II (Clay Modeling):

THEORY: Creating cartoon characters or animals or assets using clay or paper.

PRACTICAL: Need to create a model like (character, animal or Asset)

UNIT - III (Armature for Clay Animation):

THEORY: Creating an armature using soft aluminium wire, which should be animatable.

PRACTICAL: Create a armature for a character (Bi - Ped or Quadruped)

UNIT - IV (Camera & Setup):

THEORY: How to set up a camera - which is fixed to one direction - Number of clicks needed for 1 sec video.

PRACTICAL: Need to create a video of created set with different camera angles

<u>UNIT - V (Animation):</u>

THEORY: Need to animate the character or Object as per the story.

PRACTICAL: Need to shoot a the story

REF BOOKS:

1. The Art of the Storyboard: A Filmmaker's Introduction

BMM4.03: MODELING, TEXTURING AND SHADING			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

UNIT – I (In-Organic Modeling):

THEORY: Creating NURBS model — NURBS Modeling Techniques-Curves EP,CV — Edit Curves — Surfaces-Converting to polygon. Creating Polygon model — Polygon Modeling Techniques —Topology in Polygon modeling Mesh—Edit Mesh. Making process of inorganic models & textures in CG-Modeling various types of props for interior and exterior.

PRACTICAL:

1. Creating a Fire Extinguisher.

UNIT – II (Modeling and UV Unwrapping):

THEORY: Rules of modeling - Prop anatomy - Topology - Loop flow tech for complex shapes - do's and don't of UV Unwrap.

PRACTICAL:

2. Gun Model Unwrapping and Import, Export.

3. Complex Model Unwrapping and Import, Export.

UNIT - III (Texturing):

THEORY: Creating textures- storytelling through textures Materials- UV Layout

Texture maps,- Bump maps

PRACTICAL:

4. Prop Model, Unwrapping Texturing, Import, Export

UNIT – IV (PBR Texturing):

THEORY: Absorption and Scattering, Diffuse - Specular- Reflection-Energy Conservation, Metals-Non-Metals, Electric and dielectric materials bidirectional reflectance distribution function (BRDF)

PRACTICAL: 6. Weapon Model, Texturing(Unwrapping)Import, Export

UNIT - V (Shading and Rendering):

THEORY:

Material Explorer-Shading networks – Mappings - PSD network - UV texture editor- Unwrapping UV of propusing UV Texture editor. basic lighting concepts & Arnold lights -Rendering process – Rendering a single frame-IPR rendering – Software renderer-Arnold render.

PRACTICAL:

7.Interior rendering

8.Exterior rendering

9. Prop shading and rendering

BMM4.04: RIGGING AND ANIMATION			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

UNIT - I (Basics of Rigging):

THEORY:

Introduction to Rigging & Animation- Advantages & its importance in detail.Concepts Of Parenting And Grouping – Understanding Constraints – Working With Connection Editor – Writing Expressions – Concept Of Set Driven Key – Understanding Joints – Editing Joints – Deformers – Basic Rigging A Ball – Adding Controllers to Ball Rig

PRACTICAL:

- 1. Rigging using Constraints
- 2. Ball Rig
- 3.

UNIT – II (Basic Cartoon/Prop Skinning):

THEORY:

Introduction To Basic Skinning – Bind Skin – Painting Skin Weights – Editing Skin Weights Using Component Editor – Mirroring Skin Weights – Bind Pose – Using Flexors For Rigid Bind – Detaching Skin

PRACTICAL:

- 1. Cartoon full character Rigging
- 2. Skinning of character with (Painting Skin Weights and Component Editor)

UNIT – III (Animation):

THEORY:

History Of Animation – Principles Of Animation - Animation Techniques – KeyFrame Animation – Motion Path Animation - Flow Path Objects - Ghosting - Using Playblast - - Setting KeyFrames - Graph Editor - Tangents -Animation Curve Behaviors – Dope Sheet – Creating Basic Ball Bounce Animation

PRACTICAL:

- 1. Pendulum Animation
- 2. Ball Bounce Animation
- 3. Obstacle course

UNIT – IV (Pose design):

THEORY:

Importance of pose design - Studying Cartoon Poses - Blocking - Line of Action - S- Curve, C-Curve - Weights - Posing Cartoon Characters

PRACTICAL:

- 1. Pose a character with pose design principles in 12 different poses
- 2. Pose two characters to convey a story line in different blocking
- 3. Pose ten dynamic poses

UNIT - V (Character Animation):

Push - Pull - Throw -Lift - Reverse Flip Jump-Front- Flip Jump-Boxing Punches

PRACTICAL:

- 1. Cartoon Animation walk cycle
- 2. Animate a character to demonstrate push and pull

REF BOOKS:

- 1. Cartoon animation
- 2. Illusion of life

BMM4.05: MOTION GRAPHICS			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External: 100	Total : 200

UNIT – I (Introduction & Exploring Motion Graphics):

THEORY:

Introduction to Motion Graphics - Interface - Workspaces - Project Management - Projects vs Compositions - The Timeline - Importing - Masks & Shapes - Type Tools - Adjustment Layers -Effects - Presets - Frame rate & Time stretch - animation presets - Keyframes - Animation Parameters – RAM Preview – Rendering – Parenting – Track Mattes – Motion Blur

PRACTICAL:

1. Lyrical Video Song

UNIT – II (Basic to Advanced Animation):

THEORY:

Keyframe Basics - Timeline Work Area - Anchor Point - Graph Editor - Speed vs Value Graphs -

panning and zooming time – editing graph curves – easing animations – Motion Sketch – Auto-Orient – Motion Blur – Time-Reverse Keyframes – Hold Keyframes

PRACTICAL:

2.Icon Animations

3.UI Intro Animation

UNIT – III (Animating in 3D Space)

THEORY:

Enabling Layer to 3D – Moving layers in 3D Space – Layers Stack in 3D – 3D rotation and orientation – 3D motion paths – multiple views – camera settings – customizing 3D views – camera track and orbit tools – moving animating cameras – layer and camera auto-orientation – 3D lights – Fast Previews

PRACTICAL:

4.Title Animation in 3D

5.3D Presentation (Corporate/Explainer)

UNIT – IV (Basic Compositing):

THEORY:

Motion Tracking — Painting — Clone — Color & Keying — Importing Photoshop Files — Exporting to PSD, JPG & PNG — Adding Sunset — Keying a Background — Add a burst of light — Adding a rippled reflection **PRACTICAL:**

6.Adding Random elements by Keying Footage

7. Compositing with Planar Tracking

UNIT - V (Simulation & Effects):

THEORY:

Simulation Particle Effects - Futuristic HUD - Smoke Trails - 3D Title - Time Freeze Effects

PRACTICAL:

8. Simulating Smoke FX

9. Making HUD

10. Compositing 3D Title in footage

SEMESTER - V

BMM5.01: 3D CHARACTER MODELING			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100 External : 100 Total : 200		

UNIT - I (Character Designing):

THEORY:

Story for character (5W 1H) - Concept Art - Illustration - Texture - Fabric - Character Turnaround - Character Mood board - Anatomy

PRACTICAL:

- 1. Cartoon Character Design
- 2. Hybrid Character Design

UNIT – II (Cartoon Modeling):

THEORY:

Cartoon Features - Eyes - Nose - Head Ratio - Color Scheme -Unwrapping- Character Pose - Three point Lighting - Cartoon Texturing.

PRACTICAL:

- 1. Cartoon Bi Ped Character Modeling
- 2. Cartoon QuadruPed Character Modeling

UNIT - III (BiPed Modeling):

THEORY:

Realistic & Semi Realistic Features - Eyes - Nose - Head Ratio - Color Scheme - Unwrapping- Character Pose - Three point Lighting - Realistic & Semi Realistic Texturing - Difference between Male & Female.

PRACTICAL:

- 1. Bi Ped Male Character Modeling
- 2. Bi Ped Female Character Modeling

UNIT - IV (QuadruPed Modeling):

THEORY:

Realistic & Semi Realistic Features - Eyes - Nose - Proportions - Color Scheme - Unwrapping-Character Pose - Three point Lighting - Realistic & Semi Realistic Texturing - Model with Wings,

PRACTICAL:

- 1. Quadruped Character Modeling
- 2. Bird / Dinosaurs Modeling

UNIT - V (Hybrid Modeling):

THEORY:

Hybrid Features - Eyes - Nose - Proportions - Color Scheme - Character Pose - Three point Lighting - Texturing - Model with Wings - Combining Multiple Anatomy

- 1. Bi Ped Hybrid Character Modeling
- 2. Quadruped Hybrid Character Modeling

BMM5.02: DIGITAL SCULPTING			
PRACTICAL: L-2 P-6 hours / week	ırs / week Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

UNIT - I (Sculpting):

THEORY:

Working on digital sculpting - Working on Hard & Soft Sculpting - How to sculpt hair in digital - Working on Maps.

PRACTICAL:

- 1. Sculpting a Face
- 2. Sculpting a Trunk of tree

UNIT – II (Character Sculpting):

THEORY:

Creation of Character using Sculpting - Giving age Details - Working on Texturizing - Sculpting skin Details

PRACTICAL:

- 1. Character Sculpting
- 2. Portrait Sculpting

UNIT - III (Hard Surface Sculpting):

THEORY:

Creation of Rock Texture using Sculpting - Giving age Details - Working on Texturizing - Sculpting Hard Surface Details,

PRACTICAL:

- 1. Rock Modeling
- 2. Tree Modeling

UNIT - IV (Processing Scan Data):

THEORY:

Working on 3D Scan Data - Cleaning Up - Projection - Integration to 3D Platforms - Photogrammetry.

PRACTICAL:

- 1. Recreate a tree using Images
- 2. Recreate a character using Images

<u>UNIT - V (Retopology) :</u>

THEORY:

Recreating High Mesh to Low Mesh - Transferring high detail model texture on low detail model texture - Working on proper mesh flow.

1. Low poly model using high detail model.

BMM5.03:				
PERSONALITY DEVELOPMENT AND COMMUNICATION SKILLS				
THEORY: L-4 hours / week Marks				
Exam Duration: 3 hours	Internal : 50	External : 50	Total : 100	

UNIT – I :IMPORTANCE OF ATTITUDE

Building A Positive Attitude - Total Quality - People-- People With Character, Integrity, Good Values, And A Positive Attitude - Your Attitude Contributes To Success - Acres Of Diamonds - David And Goliath - A Holistic Approach - Factors That Determine Our Attitude - environment - Experience - Education - The Benefits Of A Positive Attitude - The Consequences Of A Negative Attitude - Steps To Building A Positive Attitude

UNIT -II : SUCCESS & MOTIVATION

Winning Strategies - Motivating Yourself And Others Everyday - What Is Success? - How Do We Define Success? - Some Obstacles To Success (Real Or Imagined) - Every Success Story Is Also A Story Of Great Failure - If You Think - The Greatest Gift - Life Is Full Of Choices And Compromises - Qualities That Make A Person Successful - Preparation Leads To Confidence - What Is The Difference Between Inspiration And Motivation? -motivation--how Does It Work? —external Motivation - Incentive Motivation - Different Things Motivate Different People - The Four Stages From Motivation To Demotivation

UNIT - III : SELF-ESTEEM & INTERPERSONAL SKILLS

Building Positive Self-esteem And Image - Building A Pleasing Personality - Self-esteem Is Our Self-concept - Some Advantages Of High Self-esteem -positive Self-esteem - Negative Self-esteem - Our Greatest Strength Can Become Our Greatest Weakness- What Are Some Factors That Prevent Building And Maintaining Positive Relationships? - The Difference Between Ego And Pride - What Is The Difference Between Selfishness AndSelf--interest?

UNIT - IV: SUBCONSCIOUS MIND AND HABITS & GOAL-SETTING

Forming Positive Habits And Character - Setting And Achieving Your Goals - Visualization - Form Good Habits - How Do We Form Habits ? - Conditioning - How Do We Get Conditioned ? - The Gigo Principle - The Conscious And Subconscious Mind - How Do We Get Programmed ? - Nature Abhors A Vacuum - Resistance To Change - Forming Positive Habits -21-day Formula To Form Positive Habits - Keep Your Eyes Upon The Goal - Why Are Goals Important? - Dreams - Why Don't More People Set Goals? - Goals Must Be Balanced - Goals Should Be Consistent With Our Values

UNIT - V: VALUES AND VISION 223

Doing The Right Thing For The Right Reason- How Do We Judge Our Value System? - How Does Our Value System Change? - What We Do For A Living Versus What We Do With A Living - There Are Two Kinds Of Tragedies In Life - The Midas Touch - What Is Our Greatest Commitment? - Ethics -

Benchmarks - Ethics And Legality - Purpose Of Life - Where Do We Learn Our Values From? - Winning Is An Event; Being A Winner Is A Spirit - Changing Values--today's Values

REFERENCE BOOK:

You Can Win by Shiv Khera

DISCIPLINE ELECTIVE SUITE - I

<u>Students need to select any one of the following electives based on the discipline.</u>

1. 2D Compositing (or) 2. 2D Animation (or) 3.Game Design - I (or) 4.Direction Basics (or) 5.Life

Study Drawing (or) 6.Graphic Designing - I

BMM5.1.1: 2D COMPOSITING			
PRACTICAL: L-2 P-6 hours / week	rs / week Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

<u>UNIT - I (Intro to Rotoscope):</u>

THEORY:

What Is Rotoscoping in VFX? How Does VFX Rotoscoping Work? Rotoscoping Professional Tips. How to Create Separate Shapes. Speeding Roto by Tracking. How Does Stereoscopic Roto Work? Stereoscopic Rotoproces.

PRACTICAL:

- 1. Do Character Roto and create alpha mattes.
- 2. Do Animal Roto and create alpha mattes.

<u>UNIT – II (Paint (wire and rig removal)):</u>

THEORY:

Introduction of Paint, Difference between rotoscoping and roto paint, How to use specialized paint tools, Advanced Clean Plate Techniques.

PRACTICAL:

- 1. Remove wires using paint Techniques.
- 2. Remove character and create clean plates using paint Techniques.

UNIT – III (Keying And Compositing):

THEORY:

Why Are Blue and Green Screens Common for Compositing, When to use green screen, when to use blue screen, How to manage grain and noise. Pre-processing the clip for the keying. How spill suppression works, Tracking marker removal techniques.

PRACTICAL:

- 1. Extract green matte and create foreground alpha matte and compositing with different backgrounds.
- 2. Extract green matte and create foreground alpha matte and compositing with different backgrounds.

<u>UNIT – IV (Motion Tracking):</u>

THEORY:

Motion tracking overview, Difference between Single point tracking and two point tracking, Corner pin tracking process, Planer tracking techniques, footage stabilization process.

PRACTICAL:

- 1.Do sky replacement by using tracking techniques.
- 2.Do Hoarding replacement by using tracking techniques.

UNIT - V (Camera Projections):

THEORY:

Where we use camera projections. Exploring the Necessary Projection Frames and Geometry, Preparing the Clean Patch, Projecting the Clean Patch, How to apply Colour Matching throughout the Shot.

PRACTICAL:

- 1.Do rig removal using paint and projection techniques.
- 2. Remove character using paint and projection techniques.

BMM5.2.1: 2D ANIMATION			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

UNIT - I:

THEORY:

Design - Understanding appeal and design- Comparing body types - Understanding silhouette - Creating gesture drawing - Staging - Story And Layout - Comparing storyboard style - Understanding shot composition- Demonstrating lighting Understating the 180-degree line - Technical Issues Understanding X-sheets (dope sheets)Comparing frame rates Creating sweat notes and preparation Animated Physics Understanding arcs Squash, stretch, and volume Comparing timing and spacing

PRACTICAL:

Design - Staging - Story and Layout - knowing Technical Issues - Animated Physics

UNIT - II:

THEORY:

Anticipation, Overshoot and Settle - Using anticipating, overshoot, and settle - Breaking and loosening joints Leading action - Drag. Overlap, and follow - Through - Understanding primary and secondary action - Using overlap and follow - through - Applying lines of action, reversals, and S-curves - Moving holds and idles - Walks and Runs - Understanding walk and run cycles - Creating eccentric walks - Animal locomotion - Dialogue -Finding dialogue accents - Creating dialogue through body movement - Creating stock mouth shapes - Using complementary shapes

PRACTICAL:

1. Anticipation - Overshoot and Settle- Drag – Overlap and follow – Through - Walks and Runs - Dialogue

UNIT - III:

THEORY:

Thumbnails, Acting, and Animating - Creating thumbnails - Comparing straight — ahead and pose-to-pose animating - Adding breakdowns for looseness - Principles of Animation - The first law of motion - The second law of motion - The third law of motion - Using slow in and slow out - Arcs and smooth motion - Understanding overlap and follow—through - Animating overlap and follow-through - Understanding squash and stretch - Animation squash and stretch - Squashing and stretching characters - Understanding weight - Understanding anticipation - Animation anticipation and weight

1.Thumbnails, Acting, and Animating - Principles of Animation - The second law of motion 3. The third law of motion

UNIT - IV:

THEORY:

Animating Characters - Internal vs. external forces - Bringing characters to life - Animating blinks - Animating changes in eye direction - Animating head turns - Creating a strong line of action - Creating strong silhouettes - Pose-to-pose animation; Blocking - Pose-to-pose Animation- Finalizing - Animating Walks - A walk in four poses - Motion of the head and body - Walk cycles and backgrounds - Skeleton motion and walking - Animating a walk; Contact position - Animating a walk; The feet - Animating a walk; the body - Animating a walk; The legs - Animating a walk; the upper body and arms - Animating a walk; the head - Animating a walk; Squash and stretch

PRACTICAL:

1.Animating Characters - Animating Walks - Contact position - Pose-to-pose Animation- 16 Animating Runs – Facial animation and Dialogue - Assigning mouth shapes

UNIT - V:

THEORY:

Animating Runs - A run in four poses - Animating a run; First pose - Animating a run: Second pose Animating a run: Third pose - Animating a run: Fourth pose - Animating a run: Upper body - Facial animation and Dialogue - The basics of dialogue animation - Reading track and assigning mouth shapes - Phonemes and lip-syncing - Animating dialogue: Animating the body - Animating dialogue: Assigning mouth shapes - Animating dialogue: Finalizing

PRACTICAL:

1. Morphing - Final Project (Group)

Books Recommended: Cartoon Animation by Preston Blair,

BMM5.3.1: GAME DESIGN - I			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

UNIT - I (INTRODUCTION TO GAME DESIGN)

What is Game Design and what is a game?, Explaining how it plays a major role in the game industry, establishing the core of game design and the types of design, working with teams, brainstorming, and understanding the types of design. Basics of documentation

Conventional games Versus Video Games.

PRACTICAL:

- 1. Draw a game pipeline and explain it
- 2. List the types of design and what role they play
- 3. Explain based on your understanding how conventional games are different from video games

UNIT - II (Games, history and story?)

THEORY:

History of Games - Stories and Concepts - Plots, engines and interactivity in games - Evolution of games and the impact stories have on them - IP, Sequels and Genres. - Major Genres and Extras

PRACTICAL:

- 1. Write a 4 page story
- 2. Design a board game without the use of a dice.
- 3. Create a story chart

<u>UNIT – III (Game Design theory and economics)</u>

THEORY:

Business and Game Design - Different Business model - Retail models digital vs non-digital, - How many steps to move - Chance and skill.

PRACTICAL:

- 1. Take a test, check how much it would require to develop your game and document it.
- 2. Draw up a comparison chart showcasing which platform is selling better.
- 3. Explain the crash of 1983.

<u>UNIT – IV (Understanding Comics and Games)</u>

THEORY:

Narratology and ludology- What is fun? - mainframe games, evolution of pinball - Describing a scene in a game - Bringing life and finding the balance

PRACTICAL:

- 1. Play and write 4 game reviews (each game must be from a from a different era)
- 2. Create your own character
- 3. What are MUD's and MMO's? Can they be used to create something new in detail?

UNIT - V(Basis of Game Design)

THEORY:

Major genres - understanding players - Game worlds

BMM5.4.1: FILM DIRECTION BASICS			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

UNIT I – SCREEN GRAMMAR- 1:

Image, Distance & Volume; Shot Matching –Matching Look, Position & Movement; Importance of Heads, Line of Interest & The Triangle Principle; Opposed Glances – Two Players & Groups; Alternating Centre of Interest, Body Rapports for Two Player Dialogue Sequence and Different Positions of Actors

- 1. Short Sizes & Types
- 2. Dialogue sequence between two persons.
- 3. Deep Staging: Static, shifting Depth of field.

UNIT II – SCREEN GRAMMAR 2:

The Triangle Principle & Its Six Variations; One and Two Player Dialogue Sequence Coverage; External Reverse Angles vs. Internal Reverse Angles; Common Visual Axis; Emphasis by Composition; Camera Distance, Height & Actor's Position; Coverage formulas for Three Player Dialogue Sequence; Choosing Two Dominant Lines of Interest Over Many; Covering Four or More Players Sequence

PRACTICAL:

- 1. Script Staging: Parallel Staging and key frames
- 2. Shooting 2 characters to demonstrate Axis Jump.
- 3. Shooting of 3 moving characters to demonstrate the change of imaginary line

UNIT III – SCREEN GRAMMAR 3:

The Nature of Screen Motion; Rules for Screen Direction; Neutral Direction Shots; Matching Exits and Entries; Inclusive and Non-Inclusive Cutaways; Contrasting Motion and Its Four Variations; The Importance of Cutting On Movement; Using Master Shots to Cover Screen Motion; Camera Movements – Understanding Various Equipment for Camera Movement; Rules & Exceptions

PRACTICAL:

- 1. Silent Continuity: Without dialog, Single location with single Character [1to3 mints]
- 2. Dialogue coverage sequence between persons with moving camera.
- 3. Track: Start on, Reveal, End on.

UNIT IV – SCREEN GRAMMAR 4:

Covering Action Sequence; Understanding the Rudiments of Stunt & Action Sequences; Mapping the Mise-en-Scene of Action; Breakdown of Dramatic Blocks; Arriving at Shot Breakdown; Coverage with Single Camera vs. Multiple Cameras; Case Study I: *Crop Duster Sequence in North by Northwest* (1959); Case Study II – *Opening Chase Sequence in Mad Max* (1979): Case Study III – *Climax Chase Sequence in Mad Max II* (1981)

PRACTICAL:

- 1. Short Film: Without dialog, Single location with two Character, Natural Light [1to3 mints]
- 2. Case Study of an Action Sequence.
- 3. Mise-en-scene(Long Take)

UNIT V - FILM FORM & STYLE:

Principles of Film Form: Form vs. Content and Meaning, Form and Spectator, Narrative, Non Narrative and Anti Narrative Film Forms, Unity vs. Systematic Disunity; Film Style as a System: Components of Film style, Directors Style, Film Style, Genre Style, Spectator and Style; Mise en Scene: Settings, Composition, Lighting, Figure Movement & Expression; Film Form & Organizational Structure.

PRACTICAL:

- 1. Analysis of an AD Film.
- 2. Sound Analysis and Creating Sound Script
- 3. Form and Style Breakdown analysis of the Short Film screened.

REFERENCE BOOKS:

- Daniel Arijon, Grammar of the Film Language, Silman-James Press, 1991
- Stephen D. Katz, Film Directing: Cinematic Motions, Michael Wiese Productions, 2004

- Roy Thompson, Grammar of the Shot, Focal Press, 2000
- Stephen D. Katz, Film Directing Shot by Shot, Focal Press, 2000
- Bordwell and Thompson, 'Film Art: An Introduction' by, Ninth Edition, McGraw Hill, 2009.

BMM5.5.1: LIFE STUDY DRAWING			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		

<u>UNIT - I:</u>

THEORY: Single Object Drawing-Fundamentals- Technique- Design- Perspective

PRACTICAL:

Single Object Drawing

UNIT - II:

THEORY: Multiple Object Drawing- Forms-Proportions- Shading- Comparing Technique

PRACTICAL:

Multiple Object Drawing

UNIT - III:

THEORY: Stable Subject- Blocking- Horizon lines Vanishing point- Lighting- Rendering

PRACTICAL:

Stable Subject

UNIT - IV:

THEORY: Live model in different poses (Figure Drawing).- Quick Gestures- Anatomy- Hands Feet-Dynamic Pose

PRACTICAL:

Live model in different poses

UNIT - V:

THEORY: Exterior Landscape- Blocking Frame- Observation- Draw and measure- Use your arm, not your hand

PRACTICAL:

Exterior or Nature Landscape

BMM5.6.1: HTML5 and CSS			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200

Unit – I:

Electronic publishing - lists and their types - nested lists - table handling- Working with Hyperlinks, Images and Multimedia- Frames: Frameset definition – frame definition – nested framesets.

- 1. Designing of web page-Working with Tables.
- 2. Working with Background, Text and Font properties.

3. Practicing use of multimedia components (Image, Video & Sound) in HTML documents.

Unit – II:

Pseudo-elements – defining Styles – elements of styles – linking a stylesheet to a HTML document – inline styles – External style sheets – internal Style sheets – Multiple Styles – Web page Designing.

PRACTICAL:

- 4. Designing with cascading style sheet-Internal style sheet.
- 5. Designing with cascading style sheet-External style sheet.

Unit – III:

Concept of CSS -Creating Style Sheet - CSS Properties - CSS Styling(Background-Text FormatControlling Fonts) - Working with block elements and objects -Working with Lists and Tables.

PRACTICAL:

6. Working with Positioning and Block properties in CSS..

Unit – IV:

CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align, Pseudo class, Navigation Bar, Image Sprites, Attribute sector) -CSS Color - Creating page Layout and Site Designs using Class and ID.

PRACTICAL:

- 7. Designing of webpage-Working with Divisions.
- 8. Designing a website using blocks and CSS.

Unit – V:

Forms and form elements- Creating the Web Site - Saving the site -Working on the web site - Creating web site structure - Creating Titles for web pages -Themes - Div - SPAN- table - frames.

PRACTICAL:

- 9. Designing a responsive (device independent) website layout.
- 10. Creating Images Gallery using CSS.
- 11. Design a home page with CSS styles & Add Hyperlinks.

BOOKS RECOMMENDED:

- Raj kamal ,internet and web technologies , tata Mcgraw Hill(2007)
- Joel sklar, principles of web design, Thomson(2007)
- Web Design All-in-One For Dummies by John Wiley & Sons
- Beginning HTML5 and CSS3 For Dummies by Chris Minnick and Ed Tittel
- Beginning Responsive Web Design with HTML5 and CSS3by Jonathan Fielding

BMM5.1.2: 3D LIGHTING & COMPOSITING			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite: BMM5.1.1: 2D Compositing			

<u>UNIT – I (Interior Lighting):</u>

THEORY:

Lighting Fundamentals - Properties of lights - Real world lights - Software lights - Light attributes - Types of shadows in real world - Types of shadows in software - Scene scale - Camera attributes - software lighting - Scene setup - Creating key light - Dealing with key light color, brightness and speculars - Creating fill lights — Dealing with fill lights color, brightness and speculars - Creating bounce lights — Dealing with bounce light color, brightness and speculars — Creating rim lights - software render settings - Mental ray render settings.

PRACTICAL:

- 1. Do interior day lighting using a software renderer.
- 2. Do interior day lighting using a mental ray renderer.
- 3. Do interior night lighting using a software renderer.
- 4. Do interior night lighting using a mental ray renderer.

<u>UNIT – II (Texturing):</u>

THEORY:

Hypershade Connections – Materials – Material properties - Material attributes - Shading networks – Connecting Textures - Editing textures - Texture maps.

PRACTICAL:

- 5. Do Texturing for an interior set.
- 6. Do Texturing for an exterior set..

<u>UNIT – III (Interior Lighting using Indirect Lighting):</u>

THEORY:

Indirect lighting techniques – Global illumination & Final gather – Caustics – Global samples and Local samples – Render Layers and Passes – Creating mattes – Ambient Occlusion.

PRACTICAL:

- 7. Do interior day lighting using Global illumination and Final gather techniques.
- 8. Do interior night lighting using Global illumination and Final gather techniques.

UNIT – IV (Exterior Lighting):

THEORY:

Scene setup - Creating sun light - Dealing with sun light color, brightness and speculars - Creating skylight — Dealing with sky light color, brightness and speculars - Creating bounce lights — Dealing with bounce light color, brightness and speculars - Indirect lighting - Physical sun and sky - software render settings - Mental ray render settings.

PRACTICAL:

- 9. Do exterior day or night lighting using a software renderer.
- 10. Do exterior day or night lighting using a mental ray renderer.
- 11. Do exterior day or night lighting using Indirect lighting techniques.

UNIT - V (Compositing):

THEORY:

Compositing Render layers and passes – Color grading – Dealing with mattes – Using ambient occlusion – Blending modes – Zdepth.

- 12. Composite Interior daylight scene.
- 13. Composite Interior night light scene.
- 14. Composite Exterior daylight scene.
- 15. Composite Exterior night light scene.

BMM5.2.2: RIGGING - I			
PRACTICAL: L-2 P-6 hours / week		Marks	
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite: BMM5.2.1: 2D Animation			

UNIT - I

THEORY:

Introduction to Rigging - Introduction to joint - Introduction to IK handles- Introduction to constraint -Introduction to deformer - Introduction to Hypershade Utilities Nodes - Introduction to Connection Editor .

PRACTICAL:

- 1. Gear Rig
- 2. Pendulum Rig

UNIT - II

THEORY:

IK handle Ik - Spline handle - Remove joint - reroot skeleton - Disconnect Joint - Mirror joint - orient joint - joint labelling - Set Prefered Angle - Assume Prefered Angle - Bouncing ball setup - Stretch and Squash with Lattice - Cluster on curve.

PRACTICAL:

- 1. CycleChain Rig
- 2. Bouncing Ball rig with stretch and squash.

UNIT - III

THEORY:

Sampler info node - Multiply divide node - Condition Node - Curve info - A+- Average Node - Inverse matrix Node - Reverse node - Set range node - Stencil - Single Switch - quad switch - Triple Switch - Remap value - surface luminance

PRACTICAL:

- 1. Tyre Rig with all directions
- 2. Car Rig with Suspension

UNIT - IV

THEORY:

Point Constraints - Aim Constraints - Orient Constraints - Scale Constraints - Parent Constraints - Geometry Constraints - Normal Constraints - Tangent Constraints - Point on Poly Constraints -

PRACTICAL:

- 1. Piston Rig
- 2. Mechanical Robot Rig

<u>UNIT - V</u>

THEORY:

Bind Skin - Smooth Bind - Interactive bind - Rigid bind - Detach Skin - Go to Bind pose - Edit Smooth Skin - Edit Rigged Skin - Add Influence - Remove influence - Set Max Influence - Paint Skin Weight .

- 1. Hand rig
- 2. Leg rig
- 3. Spine rig

Books Recommended:

1. Art of rigging vol 1 and 2

BMM5.3.2: GAME PROGRAMING				
PRACTICAL: L-2 P-6 hours / week	Marks			
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200			
Prerequisite : BMM5.3.1 : Game Design - I				

<u>UNIT - I (INTRODUCTION):</u>

Understand the nature of .Net application development and build C# applications - JIT Compilers - Introduction to Project and Solution in Studio - program structure - Entry point method - Main - Compiling and Building Projects - Keywords - Declaration of variables and Data Types - Operators - Reference Type and Value Type - Implicit and Explicit Casting - Constant - Operators (arithmetic, relational, logical, bitwise and assignment operators).

PRACTICAL:

- 1. a. Create a C# Console application. Submit .cs file with screenshot of output.
 - b. Within the Main() method in this application, create variables of the correct data type for the information related to a course, using the information presented below, and accepting input from a user of your application.

Student Information

First	Last	Birthdate	Address Line	Address	City	State/Province	Zip/Postal	Country
Name	Name		1	Line 2				

Teacher Information

First	Last	Birthdate	Address	Address Line	City	State	Zip/Postal	Country
Name	Name		Line 1	2				

Degree Information

Degree Name		Credits Required	
Course Inform	nation		
Course Name	Credits	Duration in Weeks	Teacher

- c. Once you have the variables created, use assignment statements to assign values to the variables and use the Console. WriteLine() method to output the values to the console window..
- **2.** Create a C# Console application to demonstrate the working of Binary Arithmetic Operators, Unary Operators and Assignment operators. Submit .cs file with screenshot of output.
- **3.** Create a C# Console application to demonstrate the working of Relational, Logical and Conditional(ternary) Operators. Submit .cs file with screenshot of output.
- **4.** Write Program on Following Topics: submit .cs file with screenshot of output.
 - a. Implicit Type Conversion and Explicit Type Casting.
 - b. Swap two numbers using the third variable.
 - c. Area Of Rectangle
 - d. Area Of Circle
 - e. calculate (a+b)*(a+b)

UNIT - II (CONTROL STRUCTURES AND LOOPING):

Decision making and Branching (if else, goto, switch case), Looping (while(), do...while(), for loop, for each, break and continue)

PRACTICAL:

- **5.** Write a program for the following:
 - a. Take input of 5 subjects. Then calculate % & total marks & grade them according to following

```
if (90 to 100)%, grade A
if (80 to 89)%, grade B
if (70 to 79)%, grade C
if (60 to 69)%, grade D
if (40 to 59)%, grade E
if (less than 40)%, grade F
```

- b. Take input of a number and check whether it is positive, negative or zero.
- 6. Create a C# Console applications using if else statement to
 - a. Check the user entered value is an even number or odd.
 - b. Find the largest of four numbers.
 - c. Nested for Loop to Print Pattern:

Note: Submit .cs file with screenshot of output.

- 7. Create a C# Console applications using switch case statement to:
 - a. Design a simple calculator.
 - b. Find the given alphabet is vowel or not with grouped cases.

Note: Submit .cs file with screenshot of output.

- **8.** Create a C# Console applications to the following:
 - a. Print numbers from 1 to 100 using do while loop.
 - b. Compute sum of first n natural numbers using for loop.
 - c. Take input as a number from the user and print the day of the week using the switch case.
 - d. Take input from the user and find whether the number is odd or even using a switch case.
 - e. Nested for Loop to Print Pattern:

1 22 333

4444

55555

Note: Submit .cs file with screenshot of output.

- **9.** Create a C# Console application for coffee purchasing, users should be able to reorder again and again and finally present a Total bill using switch, goto and break statements with do-While. Submit .cs file with screenshot of output.
- **10.** Write a program for the following:
 - a. input salary of employee and calculate basic salary according to following

salary below 10000; hra:5%,ta:3%,da:2%

salary between10000 to 30000; hra:10%,ta:5%,da:3%

salary above 30000; hra:20%,ta:10%,da:8%

b.Take input of a year and check whether it is leap year or not.

<u>UNIT - III (FUNCTIONS/METHODS AND ARRAYS)</u>:

Working with Arrays - Arrays (single and multi-dimension), character array, strings and standard library.

- Working with Methods - Pass by value and by reference and out parameters - Exception Handling -Enum -

PRACTICAL:

- **11.** Write a program for the following
 - a. Make a function to calculate simple interest.
 - b. Make a function to calculate the factorial of a number using a recursive function.
- 12. Create a C# Console application to:
 - a. print the array values using for loop.
 - b. print the array values using foreach loop.
 - c. Traversing an array of gender using foreach loop.
 - d. Computes the sum of elements in a List using foreach loop with List (Collection).

Note: Submit .cs file with screenshot of output.

- **13.** Create a C# Console application for Tic Tac Toe game using Arrays, Conditional statements, loops and methods. Submit .cs file with screenshot of output.
- 14. Write a program for the following:
 - a. Define a 2D array, take user input and print the array.
 - b. Create an enum of the number of week days and print the first to end days of week. Print total number of days available in enum.

<u>UNIT - IV (OOPS - Concepts)</u>:

Introduction to OOPS and its principles - class - object - component - Encapsulation - Data Abstraction - Define Constructor - Type of Constructor - Define Property and their Types - Defining Derived Classes - The Memory Allocation with New Keyword - "this" keyword.

PRACTICAL:

- **15.** Create a C# Console application to Demonstrate Employee Class with employee Id number, Employee Name, Salary and address. Submit .cs file with screenshot of output.
- **16.** Create a C# Console application to Demonstrate Students Class, input the serial number , name , marks and calculate the TOTAL, AVERAGE. Submit .cs file with screenshot of output.
- 17. Create a C# Console application to create an Employee Class and Calculate Allowances based on the Salary. (salary/Allowance/ hra/ provident fund, Gross salary/ net Salary. Submit .cs file with screenshot of output.
- **18.** Create a C# Console application using Class Constructor and Destructor, input and showing the result. Submit .cs file with screenshot of output.

UNIT - V (Inheritance):

Single Inheritance - Making a Private Member Inheritable - Multilevel Inheritance - Multiple Inheritance - Hierarchical Inheritance - Hybrid Inheritance - Virtual base classes - Abstract classes - Event Driven Programming - Delegate, Event and its association - Synchronous and asynchronous operation with delegate - User Defined events and delegates - Multicasting with Delegates - Anonymous methods -Polymorphism-dynamic binding, method overriding, abstract classes and methods.

- **19.** WAP in any of the Arithmetic operators (+ , -,/,*) using Polymorphism in C#. Submit .cs file with screenshot of output.
- **20.** WAP showing Compile Time Polymorphism and Run Time Polymorphism. Submit .cs file with screenshot of output.
- 21. C# program to illustrate the concept of inheritance showing different types of a laptop with all the details are constant and cannot be changed. Name, Price, Processor, Ram and Hard drive should be defined in base class as constant. Submit .cs file with screenshot of output.

BMM5.4.2: CINEMATOGRAPHY BASICS					
PRACTICAL: L-2 P-6 hours / week Marks					
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200		
Prerequisite: BMM5.4.1: Film Direction Basics					

UNIT I – CAMERAS & FORMATS:

Image Formation, Pinhole, Lenses, Lens Aberrations, Single Lens Reflex ,TLR, Film, CCD & CMOS, Digital Still Camera And Digital Motion Picture Camera,Formats (Digital & Motion Picture),Shutter Speed Effect (Motion Blur & Arresting Motion), shot sizes and types

PRACTICAL:

- 1. Depth of Field
- 2. Same size image with different focal length
- **3.** 9 Basic shots from Extreme Long Shot to Extreme Close-up composed and shot on a Digital Still Camera

UNIT II – COMPOSITION:

Simplicity, The Rule Of The Thirds, Lines, Balance, Framing, Mergers, Golden Section, Subject Of Emphasis, Depth, Light, Diagonal, Cropping, Viewpoint, Forms, Masses, Movement, Colour And Monochrome, Colour Symbolism, Gradation Of Brightness And Scale

PRACTICAL:

- 1. Zoom in and Zoom out shots
- 2. Coverage, Spatial Continuity, Open And Closed Framing
- 3. Color Wheel

UNIT III – LIGHTING:

What Is Light, Visible Spectrum (Electromagnetic Radiation), Artificial And Natural Light, Candle, Flames And The Sun, Tungsten And Tungsten Halogen Lamps, HMI & Fluorescent Light, Lighting Quality, Hard And Soft Light, Importance Of Colour Temperature, Reference To Genre (Film Noir), Sun Path And Its Significance, High Key And Low Key Lighting, Renaissance, Chiaroscuro, Silhouette & Notan, 3-Point Lighting, Key, Fill & Backlight (Effect Light)

PRACTICAL:

- 1. Matching Artificial to a natural light
- 2. Over the shoulder and POV shot at low key lighting
- 3. 3-point lighting

UNIT IV – EXPOSURE:

Exposure Meaning, Film And Digital Media, Incident And Reflected Light, Exposure Meters, Units To Measure Light, Concept Of 18% Grey, Under And Over Exposure, Ansel Adams And The Grey

Scale, Grey Scale Application In Film And Video, 18% Grey And IRE Units, Sensitometry, Significance Of DI Suite.

PRACTICAL:

- 1. Under and Over Exposure, HDR imaging
- 2. A story told with 25 to 30 sequential Still Photograph Images edited to a length of 1-3 minutes with the use of sound and music; but, without the aid of any dialogue or textual explanation.
- 3. 3 different images of the same object shot on a digital camera with 3 different exposures for final evaluation

UNIT V - CAMERAS, FORMATS & TECHNIQUES:

Digital Cameras: Arii Alexa, SI-2k, Genesis, Red One, Scarlet Motion Control Camera; Digital Formats: S-35, Super 16 And Compatible Ratio; Image Size, Sensor Size, Field Of Coverage; Recording On Chip Vs. Recording On Tape; Raw File And Compression Techniques: Aperture & F. Stops, Depth of Field, Lens & Focal Length; Anamorphic Video, Frame Rate & Video Standards, Video On Your Computer, Pixel Aspect Ratio; Monitors & View Finders,

PRACTICAL:

- 1. Analysis report of a given AD Film.
- 2. Need to create a TV Show using 3 Cameras.
- 3. Need to create a Cinematic Mood of Lights (Magic hour, Dream Scene,.....etc)

REFERENCES:

- 1. Ralph Jacobson, Manual of Photography, Focal Press, 2000,
- 2. Peterward, Picture composition, Focal Press, 2003
- 3. Joseph Mascelli, 5C's of cinematography, Silman James Press, 1998
- 4. Paul Wheeler, Digital Cinematography, Focal Press, 2002

BMM5.5.2:Advanced PAINTING					
PRACTICAL: L-2 P-6 hours / week	Marks				
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200		
Prerequisite: BMM5.5.1: Life study drawing					

UNIT - I (Color Theory)

THEORY: Color Harmonies-Complementary-Analogous-Triad-Split-Complementary-Rectangle (tetradic)-Square

PRACTICAL:

Color Harmonies

UNIT - II (Mediums of Painting - I)

THEORY: WatercolourAnd Poster Colour Paints Medium Brief- Mixing Colours-Values And Shades

PRACTICAL:

Watercolour And Poster Colour Artworks

UNIT - III (Mediums of Painting - II)

THEORY: Oil And Acrylic Paints-Medium Brief- Mixing Colours-Values And Shades

PRACTICAL:

Oil And Acrylic Colour Artworks

UNIT - IV (Digital Painting)

THEORY: Intro To Digital Painting-Line Drawing-Gesture Drawing-Hybrid Gesture Drawing(basic Shade)

PRACTICAL:

Digital Painting Art work

UNIT - V (Lighting& Shading)

THEORY: Lighting And Rendering-Highlights And Shadows-Reflections And Occlusions-Detail Renders

PRACTICAL:

Artwork With Fine Render In Digital.

BMM5.6.2: Web Scripting Language					
PRACTICAL: L-2 P-6 hours / week Marks					
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200		
Prerequisite: BMM5.6.1: HTML5 and CSS					

<u>Unit – I(Concept of Scripting Language):</u>

What is Scripting Language? - Advantages of Scripting Language - Limitations of Scripting Language & Development Tools - Enabling Scripting Language in Browsers - Syntax, Comments & Placement in HTML File.

<u>Unit – II(Types and Objects - Errors & Exceptions Handling):</u>

Working with arrays - Working with Numbers & Strings - Working with dates - Understanding objects - Syntax Errors, Runtime Errors & Logical Errors - The try...catch...finally Statement - The throw Statement - The onerror() Method.

PRACTICAL:

- 1. Controlling the HTML Page Objects.
- 2. Defining errors for different events.

<u>Unit – III(Working with Events and Event Listeners):</u>

Working with onClick and onLoad events - Working with onBlur and onFocus events - Working with timers - JavaScript - Dialog Boxes - Alert Dialog Box - Confirmation Dialog Box and Prompt Dialog Box.

PRACTICAL:

- 3. Pop Dialog boxes.
- 4. Randomize an image from an array.

<u>Unit – IV(Form Validations):</u>

Accessing form elements - Preventing a form being submitted(Basic Form Validation - Data Format Validation) - Hiding and showing form sections - UI Enhancement.

5. HTML Form Validation.

<u>Unit – V(Animation - Multimedia):</u>

Manual Animation - Automated Animation - Rollover with a Mouse Event - Controlling Multimedia - Creating Elements - Drawing Shapes using Canvas - Page Printing.

PRACTICAL:

- 6. Creating Web Animations.
- 7. Creating HTML Elements in a Webpage.

BOOKS RECOMMENDED:

- Learning JavaScript: A Hands-On Guide to the Fundamentals of Modern JavaScript by Tim Wright
- JavaScript for Absolute Beginners by Terry McNavage
- Advanced Javascript by Chuck Easttom
- Expert JavaScript by Mark E. Daggett

SEMESTER - VI

BMM6.01: SCENE COMPOSITION & CAMERA LAYOUTS				
PRACTICAL: L-2 P-6 hours / week	Marks			
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200	

UNIT - I (Pre-visualization)

THEORY:

Visual plan-essential resources-five types of pre-visualization-photography-storyboards-animatics-shot lists-storyboards-storyboard softwares

UNIT - II (Camera Shot Types and Movements)

THEORY:

Types of camera shot sizes-Extreme wide shot-longshot/wide shot-full shot-Medium long shot/medium wide shot-cowboy shot-Medium shot-close upExtreme close up-types of Camera shot framing-single shot-two shot-three shot-over the shoulder shot-Point of view shot-camera shot focus-rack focus/focus pull-shallow focus-deep focus-tilt/shift-camera shot angles-eye level shot-low angle shot-high angle shot-hip level shot-knee level shot-ground level shot-shoulder level shot-dutch angle shot-bird's eye view shot/over head shot-aerial shot/helicopter shot-Types of camera movement-static/fixed shot-dolly shot-zoom shot-dolly zoom shot-pan shot-tilt shot-whip pan shot-whip tilt shot-tracking shot-crab shot-arc shot-Types of camera mechanism-sticks/tripod-slider shot-handheld shot-steadicam shot-gimbal shot-crane shot-job shot-drone shot-wire shot.

PRACTICAL:

- 1. Create a two persons conversational camera blocking using 3D application
- 2. Create a Three persons conversational camera blocking using 3D application

UNIT - III (Composition)

THEORY:

Telling a story-How to show-Deeper meaning-Grab your attendance-rules of composition-Tell two stories at once-flesh out your character's-Composition-Placement-arrangement-visual elements-where you put it-why

is composition is important-Shape the viewers experience-composition and design-Elements of design-organization-elements of design-line-shape-color-value-texture-form and space-principles of design-balance-contrast-emphasis-movement-pattern-rhythm and unity-rules of composition-the rule of thirds-balance and symmetry-leading lines-eye level framing-depth of field-deep space composition

PRACTICAL:

- 3. Create a composition to show importance of one subject
- 4. Create a composition to show importance of two subjects in order

UNIT - IV (Camera blocking in 3D Application)

THEORY:

storyboarding time tested process-storyboard panels-visual look of the story-storyboard artist-who understands film language-shot descriptions - camera direction - voice over - cohesive visual-narrative description

PRACTICAL:

- 5. Create a visual story without moving objects/characters and without moving cameras
- 6. Create a visual story without moving objects/characters and with moving cameras

Unit-V (Animating for Animatics)

THEORY:

Animatics - Storyboard vs animatics-Why use animatics - animatics in live action-Animatics in animation-Animatic collaboration. Rough draft of the project-Plan for vfx in live action

PRACTICAL:

7. Create animatics for a story with needed characters and environments(2 Minutes)

BMM6.02 : 3D ENVIRONMENT DESIGN					
PRACTICAL: L-2 P-6 hours / week	Marks				
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200				

UNIT – I (Introduction to Game engine)

THEORY:

Introduction to 3D Environment Design- Advantages & its importance in detail. What is Game engine - Project Browser - Game Mode Templates - Project Settings - Creating our First Project - Editor interface - Orthographic Views - View Modes - Navigating a Scene - Working with Content - The Anatomy of a project - Play testing a Level - Working with Assets: Unreal Units - Importing Unreal character into , Compare object height with character - Exporting mesh from UE4.

PRACTICAL:

- 1. Create any set and import from 3d application with proper proportions.
- 2. Creating a basic level prototype with any concept using geometry brushes.
 - a) Full Project.
- b) Best view render shot of the set.

UNIT – II (Art of Shading and Texturing)

THEORY:

Static Meshes - Geometry Brushes - Physically Based Rendering (PBR) - Material Editor - Material Nodes - Vertex Paint - Lighting Basics - Decals - Types of Lights - Light Properties - Light Mobility settings - Interior reflections color grading - Mood Setting - Using LUT to change our scene color - Post Process Volume - Video Texture.

- 1) Create an interior set using Geometry Brushes and given assets with proper texturing, lighting with Post Process effects.
 - a) Full Project. b) Best view render shot of the set.
- 2) Create an outdoor sports ground set with proper texturing, lighting, animated textures, decals.
 - a) Full Project. b) Best view render shot of the set.

UNIT – III (Environment Building and Animations)

THEORY:

Introduction to Terrain - Brushes and techniques to achieve your goals - Terrain shader - Landscape Mode - Height Maps - Sculpt Tools - Creating Landscape Material - Painting Landscape Materials - Using Foliage to add some trees - Planning of modular environments and evaluating them in a game engine - CameraShake - Character Animation.

PRACTICAL:

- 1. Create an Exterior Environment set using Assets and foliage with proper texturing and lighting. Submission:
 - a) Full Project. b) Best view render shot of the set.
- 2. Create an exterior environment with a cave and import custom Characters and Animations, Change the main character and add another characters in the set.
 - a) Full Project. b) Best view render shot of the set.

UNIT – IV (Matinee)

THEORY:

Add Level Sequence - Add Master Sequence - Add Matinee - Creating a Matinee Sequence - Play Matinee - Particle system anatomy - Sprite emitters - GPU sprite emitters - Mesh particle emitters - Ribbon particle emitters - Beam particle emitters - Distractible Mesh.

PRACTICAL:

- 1. Create an interior scene with proper texturing, lighting and postprocess with cutscenes for a created scene.
- 2. Create an interior/exterior scene and add any four different particle effects in the scene.

UNIT - V (Interactions & Composure)

THEORY:

Introduction To Blueprints - What is Blueprints (Visual Scripting)? - Types of Blueprints - Level Blueprint - Blueprint Class - Trigger Actors - Triggering Events - Variable - Data types - Operators - Branch(if) node - Timeline(Animation) node - Composure.

PRACTICAL:

- 1) a) Do a Blueprint code for all the arithmetic operators execute at a time.
 - c) Do a Blueprint code for incrementing the value with one continues.
 - b) Do a Blueprint code to print Odd- Even numbers.
 - d) Do a Blueprint code for play cinematics when the player overall the trigger.
 - e) Do a Blueprint code for light will turn on and off within different intervals.
- a) Move objects from one place to another place continuously using vector data type.
 - b) Rotate the object continuously using Blueprints.
- 3) Create an interior scene with interactive doors(open and close) with rotation animation and Lights switch on and off.
- Compose a green mat shot with in the created environment/set with cinematics.

REF BOOKS:

Learning Unreal Engine

By: Joanna Lee

Print ISBN-13: 978-1-78439-815-6 Web ISBN-13: 978-1-78439-596-4

U4MM19B7.13ST: MANAGEMENT INFORMATION SYSTEM					
THEORY: L-4 hours / week	Marks				
Exam Duration: 3 hours	Internal : 50 External : 50 Total : 100				

<u>UNIT - I(Organizations and Management):</u>

THEORY:

Information Systems in Global Business Today, information systems transforming business, New in Management Information Systems, Globalization Challenges and Opportunities, Strategic Business Objectives of Information Systems, Global E-business and Collaboration, business processes, Collaborati, Social business, Business Benefits of Collaboration and Social Business, Organization, Features of Organization,

<u>UNIT - II(Ethical and Social Issues in Information System):</u>

THEORY:

Thinking About Ethical, Social, and Political Issues, Five Moral Dimensions of the Information Age, Key Technology Trends that Raise Ethical Issues, Ethical Decisions, Some Real-World Ethical Dilem, Information Right: Privacy and Freedom in the Internet Age, Property Rights.

<u>UNIT - III(Information Technology Infrastructure):</u>

THEORY:

IT Infrastructure and Emerging Technologies, Foundations of Business Intelligence: Databases and Information Management, Telecommunications, the Internet, and Wireless Technology, Securing Information Systems.

UNIT - IV(Key System Applications for the Digital Age) :

THEORY:

Achieving Operational Excellence and Customer Intimacy: Enterprise Applications, E-Commerce: Digital Markets, Digital Goods, Managing Knowledge, Enhancing Decision Making.

Unit-V(Building and Managing Systems):

THEORY: Building Information Systems, Managing Projects, Managing Global Systems.

DISCIPLINE ELECTIVE SUITE – III

Students need to select any one of the following electives based on the discipline.

1. Matchmove (or) 2. 3D Animation (or) 3.Game Development - I (or) 4.Screenwriting (or) 5.Digital Sculpting (or) 6.Layout Design

BMM6.1.1: MATCHMOVE					
PRACTICAL: L-2 P-6 hours / week Marks					
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200		
Prerequisite: BMM5.1.2: 3D Lighting & Compositing					

<u>UNIT – I (Basics of Match moving):</u>

THEORY:

What is a match move? Basic overview of what match moving is and how it fits into a typical visual effects pipeline. Understanding the Match moving Process Match moving in the Production Pipeline

PRACTICAL:

- 1. Shoot Easy camera moment (dolly and free moving) shots.
- 2. Shoot typical camera moment (motion Blur) shots.

UNIT – II (Introducing Photogrammetry and Cameras):

THEORY:

Introducing Photogrammetry. Understanding How Match moving Programs Work, Identify 2D features in the image sequence. How Film Cameras Works, Film Back Format, Lens Distortion

PRACTICAL:

- 1. Do Matchmove for Dolly shots.
- 2. Do Matchmove for Dolly shots.

<u>UNIT – III (2D Tracking process):</u>

THEORY:

Understanding the 2D Tracking Process Exploring the Anatomy of a 2D Track Track Placement: Making Every Track Count Getting Tracks to Stick Hints for Effective 2D Tracking Handling Plate Issues Optimizing the Plate for 2D Tracking

PRACTICAL:

- 1. DO Matchmove for Free moving shot.
- 2. DO Matchmove for Free moving shot.

<u>UNIT – IV (3D Calibration Process and Set fitting and placing CG object):</u>

THEORY:

Understanding "Good" Calibration, Using survey data - Calibrating Your Cameras Evaluating the Solution, Determining Camera Moves, Setting Up a Coordinate System. Fitting the Camera, Checking the Matchmove Fitting the Set, Checking the Cone test, Enhancing Match moves, Match moving for Compositing.

- 1. Do camera track and integrated cg object.
- 2. Do camera track and integrated cg object.

UNIT - V (Object tracking and body tracking):

THEORY:

Object detection is simply about identifying and locating all known objects in a scene. Object tracking is about locking onto a particular moving object(s) in real-time. Matchmove artists are responsible for creating 3D cameras and other motion files that adopt the same movements as the original background plate. This enables the live action to seamlessly interact with the CG elements.

PRACTICAL:

- 1. Do camera track and match cg object using object tracking.
- 2. Match Cg character using body tracking.

BMM6.2.1: 3D ANIMATION					
PRACTICAL: L-2 P-6 hours / week	Marks				
Exam Duration: 5 hours	Internal: 100	External : 100	Total : 200		
Prerequisite :BMM5.2.2 : Rigging - I					

UNIT - I:

THEORY:

History of Animation - 12 Principles of Animation and Animation tools - Understanding the user interface of animation sets in .

PRACTICAL:

Coin Roll with Slow in slow out, Rubber Ball Bounce in place,

UNIT - II:

THEORY:

Timing and spacing for animation - Step mode/ linear work flow of animation - understanding the Graph editor - PlayBlast - Spline tangent - Linear tangent - Auto tangent - clamped tangent - step tangent - Break tangent - unity tangent - Free tangent - lock tangent - weight tangent - non weight tangent

PRACTICAL:

Ball Bounce Forward, Iron Ball falling on ground

UNIT - III:

THEORY:

Pre infinity cycle - post infinity cycle - simplify curve - Euler filter - resample curve - Create editable motion trail - create turntable - Ghost/unghost selected - create animation snapshot - create animated sweep - Camera - Camera and aim - Camera aim and up - Stereo Camera

PRACTICAL:

Ballon Falling on Ground - Pendulum swing

UNIT - IV:

THEORY:

Cluster - Curve warp - Delta mush - Tension - Lattice - wrap - shrink wrap - wire - wrinkle - pose from deformation - Nonlinear Bend - Flare - sine - Squash - twist - Wave- Sculpt - Jiggle - Attach to motion path - Follow motion path - Set Motion Path

PRACTICAL:

Ball with Tail - Chain Swing Animation.

UNIT - V:

THEORY:

SetDriven Keys - Anim layers - Dope Sheet - Pose Editor - Redirect - Creating MASH Network - Mash Utilities - introduction to Storyboard -understanding the essential of Animatic

PRACTICAL:

Ball Story, Pendulum Story

REF BOOKS:

Survival Kit by RichyardWillams, Illusion of Life by olliejohnston and Frank thomson.

BMM6.3.1: GAME DEVELOPMENT - I					
PRACTICAL: L-2 P-6 hours / week	Marks				
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200		
Prerequisite :BMM5.3.2 : Game Programming					

<u>UNIT - I (Introduction To Game Engines):</u>

Understand the nature of Engine Concepts, Development Tools, Introducing Unity, Unity Interface/Layout and Creating Scenes/Transitions and Manipulation of Objects, Meshes and Geometry, Import assets into a project, including meshes, textures, and audio.

UNIT – II (2D DEVELOPMENT TOOLS):

2D Game Tools, Orthographic & Perspective Camera, Adding and Importing Sprites, Gameplay in 2D, Sprites, Sprite Creator, Sprite Editor, Sprite Editor: Edit Outline, Sprite Packer, Sorting Group, 9-slicing Sprites, Sprite Masks, Sprite Atlas, Tilemap, Tile Assets, Creating Tiles, Creating Tilemaps, Tilemap Palette, Painting Tilemaps.

PRACTICAL:

Create a game prototype for a 2D platformer, character, coins, pick ups, enemies should be placed in the level.

<u>UNIT – III (PHYSICS IN UNITY) :</u>

Physics Overview, Rigidbody overview, Joints, Character Controllers, Physics Debug Visualization, Character Controller, Character Joint, Configurable Joint, Constant Force, Fixed Joint, Hinge Joint, Mesh Collider, Rigidbody, Sphere Collider, Spring Joint, Cloth, Wheel Collider, Physic Material, Effectors 2D, Area Effector 2D, Buoyancy Effector 2D, Point Effector 2D, Platform Effector 2D, Surface Effector 2D.

PRACTICAL:

1. Make sense using 2d Physics. Compulsory use instantiation, collision and at least 2 effectors and joints.

<u>UNIT – IV (INTRODUCTION TO UNITY SCRIPTING) :</u>

Creating and attaching scripts, Anatomy of Method, Input Basics, Understanding Playerprefs, Player movement, Enemy generation, Working with Events, Object pooling, Random generation of objects, Input

with keyboard, Coroutines, Delegates and events, Taking input from mobiles, Taking accelerometer input, Detecting collision, Destroying objects, Collisionvs Trigger, Tags, layers, prefabs.

PRACTICAL:

- 1. Create the bullets and fire from any GameObject or camera using OBJECT POOLING.
 - a) Array or List: Use any of these.
 - b) At Least create 25 bullets and fire with controlled Keyboard input.
 - c) Rigidbody must be attached.
 - d) Use SetActive false or true for the reuse of the bullets.
 - e) Destroy the bullets either by Timer or Colliders.
- 2. With a visual theme and General items, Specific items and item list (means Power-ups, keys, doors, coins, pick ups, enemies, game mechanic (double jump, triple jump).
 - a) Make a rough layout of the entire level. The layout should show only the path the player follows ignoring other details (like building, steps, roads, forest etc)
 - b) Make a detailed layout.
 - c) Build the initial layout using other softwares.
 - d) Play the level.
 - e) With the Camera attached to the basic gameobject and with the keyboard control : up /down/left/right move around the Whole layout.
 - f) Photoshop, Gimp, Flash can be used for the Sprite creation.
 - ** GDD (Game Design Development) is a must.

UNIT - V (HUD SYSTEM AND PUBLISHING) :

Canvas, Rect Transform, Anchors, Text, Images, Buttons, Slider, Scroll bar, Input Fields, Dropdown, Toggles, Canvas Render Modes, Adding functionality to GUI objects, Setting UI for different screen resolutions, Asset Store Publisher, Adding Keywords to Assets, Asset Store Publisher Administration, Asset Store FAQ, Asset Store Publishing Guide, Deprecate Asset Guide.

PRACTICAL:

- 1.Create a small 2D game with a single level and neat HUD system and User Interface(Like Main Menu, Pause Menu, Options, Music, Game Over screen) for full game.
- 2. Make a 2D Brick Game with score and Pause Button to pause the game if needed.
- a) Bounce the Ball with the 2D physics materials attached and even with the wall around also.
- b) Make the paddle with Rigidbody2D and move in x direction only with the help of the Keyboard input.
- c) Clamp the position of the paddle within the Screen.
- d) Game must start once the player clicks the SpaceBar.
- e) Score must be added till we break all the bricks.
- * Assets can be created using PHOTOSHOP/GIMP/FLASH/ILLUSTRATOR...etc.

BMM6.4.1: SCREENWRITING				
PRACTICAL: L-2 P-6 hours / week	Marks			
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200	
Prerequisite : BMM5.4.2: Direction Basics				

<u>UNIT I – FUNDAMENTALS OF SCREENPLAY WRITING:</u>

Understanding the Storytelling Process in Cinema; Pre-Verbal Qualities of Cinema; The Four Modalities of Storytelling in Cinema; Conceiving the Premise & Theme; Binding Elements of the Screenplay – Unifying Central Concern, Focus on Plot, Focus on Mood, Focus on Character, Focus on Ideas & Focus on Style; The Three Unities According to Aristotle; Types of Plot

PRACTICAL:

- 1. Analysis report of a given Scene.
- 2. Review of a given Film.
- 3. Reconstruction of a Screenplay

<u>UNIT II – CHARACTER DEVELOPMENT:</u>

Character vs. Dramatic Conflict; Character vs. Audience; Dramatic Tension vs. Audience Knowledge; The Dynamics of Hope vs. Fear; Active Protagonist vs. Passive Protagonist; The Seven Major Conflicts; Protagonist vs. The Foil Character; Protagonist vs. The Antagonist; Internal Conflict vs. External Conflict; Developing Character: Three Aspects of Character, The Heroic Character, The Heroic character and His Two Journeys

PRACTICAL:

- 1. Developing a Character (Biography).
- 2. Write a scene that can create Dramatic Tension with mentioned Conflict.
- 3. Introducing The Antagonist or Protagonist.

<u>UNIT III – SCREENPLAY STRUCTURE:</u>

The Three Acts Division, Premise & Opening, Conflict & Objective; Plot Points; Foreground Story vs. Background Story; Subtext as Background Story; The Classic Plot; Number of Obstacles; Progressive Movement & Dramatic Irony; Preparation, Aftermath, Planting & Pay off; Activity, Action & The Dramatic Scene

PRACTICAL:

- 1. Structure analysis of a given Script.
- 2. Adopting Scriptwriting Method I of Syd Field / Robert Mckee / Blake Snyder....
- 3. Adopting Scriptwriting Method I of Syd Field / Robert Mckee / Blake Snyder....

UNIT IV – THE PROCESS OF WRITING:

Writing Act I: Tools of Exposition, Exposition & Conflict, Hints, Partial Revelations & Mysteries, Exposition vs. Humor; Writing Act II: Main Tension; Writing Act III: The Culmination of Main Tension in a New Tension, 5 Important Landmarks of The Screenplay, The Link between Act I and Act II, The Structure of Act III; Writing Dialogue; Screenplay Writing Format

PRACTICAL:

- 1. Reconstruction of a story with plot points.
- 2. Screenplay writing a scene using all 3 Act's
- 3. Shooting & Submitting a Genre or Message Oriented Short Film

UNIT V - INFLUENCES OF FILM SOUND & ART AESTHETIC:

German Expressionism: Subjectivity of the Image, Architecture, Distortion, Non Realism of the Filmic Image; Alternatives to the Continuity System: Discontinuity, Abstract, Avant-Garde, &

Experimental Films. Fundamentals of Film Sound: Acoustic Properties, Sound Blend, Dimensions of Film Sound: Rhythm, Fidelity, Diegetic and Non Diegetic Sound; Sound Design: Reading a Script for Sound, Creating Sound Patterns, Creating Sound Perspective; Sound Diegesis: Sound and the Off Screen Space, Invisible and Visible Sounds

PRACTICAL:

- 1. Screen Analysis Non-Linear Genre Conventions.
- 2. Adaptation of a short story (from a Novel / News / Real Life Incidence)
- 3. Writing a sound Script.

REFERENCES:

- Syd Field, The Foundations of Screenwriting, Delta Book, 2005
- David Howard & Edward Mabely, The Tools of Screenwriting, St. Martins, 1993
- Michael Halperin Writing the Second Act: Building Conflict & Tension In Your Film Script, Michael Wiese Productions, 2000
- Drew Yanno The Third Act: Writing a Great Ending to Your Screenplay, Continuum, 2006

BMM6.5.1: Advanced Digital Sculpting			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200
Prerequisite: BMM5.5.2: Advanced Painting			

UNIT - I (Manual Portrait Sculpting)

THEORY:

Face anatomy Study - Eyes - Nose - Lips - Ears - Full Head - Skin details

PRACTICAL:

- 1. Eyes Sculpting
- 2. Nose Sculpting
- 3. Portrait Sculpting

UNIT – II (Digital Portrait Sculpting)

THEORY:

Face anatomy Study - Eyes - Nose - Lips - Ears - Full Head - Skin details - Texturing - Maps

PRACTICAL:

- 1. Portrait Sculpting
- 2. Portrait Texturing

UNIT – III (Manual Miniature Sculpting)

THEORY:

Anatomy Study of full body - Rig for Miniature Sculpting - Body Sculpting - Character Sculpting

PRACTICAL:

- 1. Body Sculpting
- 2. Character Sculpting

UNIT – IV (Digital Bi - Ped Sculpting)

THEORY:

Bi - Ped Anatomy Study of full body - Hand Sculpting - Body Sculpting - Character Sculpting

PRACTICAL:

- 1. Bi Ped Character (male) Sculpting
- 2. Bi Ped Character (female) Sculpting

UNIT - V (Digital Quadruped Sculpting)

THEORY:

QuadrupedAnatomy Study of full body - Animal Leg Sculpting - Body Sculpting - Hybrid Character Sculpting

PRACTICAL:

- 1. Quadruped Sculpting
- 2. Hybrid Sculpting

BMM6.6.1: JavaScript Libraries- jQuery			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal: 100	External : 100	Total : 200
Prerequisite: BMM5.6.2: Web Scripting Language			

Unit – I(jQuery Events):

jQuery Basics - jQuery event-handling features - Binding and unbinding events -Event-helper features - Using the jQuery event object.

PRACTICAL:

1. Controlling HTML Elements.

Unit – II(Animations and Effects):

Introduction to jQuery Animations - Hiding and showing elements -JQuery Effect Methods (animate, fadeIn, fadeOut, fadeto, hide(speed, [callback]), show(speed, [callback]), slideDown(speed, [callback]), slideToggle(speed, [callback]), slideUp(speed, [callback]), stop([clearQueue, goto End]), toggle() and toggle(switch) - UI Library Based Effects.

PRACTICAL:

2. Creating Effects in HTML Page.

<u>Unit – III(Widgets):</u>

Accordion, Autocomplete - Datepicker, Dialog - Progressbar, Select menu - Slider, Tabs - Tooltip.

PRACTICAL:

3. Creating a website with different jQuery widgets.

Unit – IV(DOM):

Content Manipulation - DOM Element Replacement - Removing DOM Elements - Inserting DOM elements - DOM Manipulation Methods (after, append, before, clone, empty, html, insertBefore, remove, replaceWith, replaceAll and text).

<u>Unit – V(HTML5 Video Gallery with jQuery):</u>

Adding and linking thumbnail buttons - Designing the layout - Adding jQuery and JavaScript - Including video information in the thumbnail links - Styling the thumbnails with CSS rules - Creating a DIV container to hold the video player code - Setting up click events for the thumbnails - Incorporating the FancyBox lightbox plugin.

PRACTICAL:

4. Creating a Video Gallery.

BOOKS RECOMMENDED:

- Jquery for Designers: Beginner's Guide by Natalie MacLees
- Learning jQuery Fourth Edition by Jonathan Chaffer

DISCIPLINE ELECTIVE SUITE – IV

Students need to select any one of the following electives based on the discipline.

1. Dynamics (or) 2. Rigging - II (or) 3.Game Design - II (or) 4.Principles of Editing (or) 5.Character & Set Designing (or) 6.Graphic Designing - II

BMM6.1.2: DYNAMICS - I			
PRACTICAL: L-2 P-6 hours / week		Marks	_
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite : BMM6.1.2 : Matchmove			

UNIT – I (INTRODUCTION TO DYNAMICS):

THEORY:

What can we do with Dynamics - Explaining about Dynamics Menu Set - Discussing Particle Systems present - Introduction to nParticles, Emitters and nucleus - Explaining about attributes of nParticles, Emitters and nucleus - Working With Particle Colliders-Discussing about nParticletool, instance, SoftBodies, Goals, particle collision event editor, Sprite Wizard. And Creating nCache for the Particle

PRACTICAL:

- 1. Creating a Water Fountain By Using nParticles
- 2. Creating Rainfall by using nParticles
- 3. Creating Particle disintegration Effect

UNIT - II (FIELDS):

THEORY:

Introduction to Fields - Types of fields Present in and Their Uses - Deep Explanation about every field and its attributes - Explaining every field with an example

PRACTICAL:

- 1. Creating a vacuum cleaner effect by using fields
- 2. Creating SnowFall by using Fields

UNIT - III (FLUIDS):

THEORY:

Introduction to Fluids-Discussing about types of Containers and their usages-Types of emitters and their attributes-Fluid Container and its properties-Deep Discussion about types of grids and their importance-discussion about shading and opacity graphs and bringing variation on fluid shapes overall look and feel-And Creating Cache for Fluids

PRACTICAL:

- 1. Creating Smoke effect by using Fluids
- 2. Creating Burning tyre effect by using Fluids

UNIT - IV (MEL & EXPRESSIONS):

THEORY:

Introduction to MEL-Importance of MEL while working in -Discussion about few MEL Commands and its Flags-Explaining about Create-Edit and Query commands-Difference Between MEL and Particle Expressions-Controlling various types of elements by using expressions-Getting understanded to use Creation- Runtime Before and Runtime After Expressions in -Controlling Collisions, Emittions ,Rotations,Colors Etc..

PRACTICAL:

- 1. Creating a Bouncing Ball By using MEL
- 2. Controlling Particle Collisions, Secondary Emission of Particles and controlling its color while colliding with different objects by using Expression

UNIT - V (NCLOTH):

THEORY:

Introduction to nCloth-Knowing the importance of Collisions attributes-Dynamic Properties-Force Fields-Wind Fields-Pressure and Quality Settings- Discussing about Every attribute and its importance-knowing various methods of using nCloth-And Creating nCache for nCloth

PRACTICAL:

- 1. Creating a Glass Break effect by using nCloth
- 2. Disintegration Effect by using nCloth

BMM6.2.2: RIGGING - II			
PRACTICAL: L-2 P-6 hours / week		Marks	
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite: BMM6.2.1: 3D Animation			

<u>UNIT - I:</u>

THEORY:

Reference study and skeletal setup.Introduction to stretchy, - IK-FK deformation spine control.Build the spine rig. - Build the stretchy IK-FK leg rig with advance knee control. - Add-in bendy deformation control and twist setup for the leg.Build the stretchy IK-FK arm rig with advanced elbow control. - Add-in bendy deformation control and twist setup for the arm. - Finalize and complete the body rig. - Start skinning and paint weight.- Finalize paint weight and polish the deformation with corrective shapes.

PRACTICAL:

Character Rig with FK and IK Setup

<u>UNIT - II:</u>

THEORY:

Build the control rig - Skinning and paint weight - Add-in secondary deformation joint for twist and volume preservation - Add-in corrective shapes. - dd-in bone. Skeletal sliding deformation binding and weight painting.

PRACTICAL:

Animal Rig with Stretch and Squash

UNIT - III:

THEORY:

Build the control rig - Skinning and paint weight - Add-in secondary deformation joint for twist and volume preservation - Add-in corrective shapes. - dd-in bone. Skeletal sliding deformation binding and weight painting.

PRACTICAL: Bird Rig with Feather Controllers.

UNIT - IV:

THEORY:

Start skeletal setup for the head and face. Add in-extra set of skeletal controls for cartoon deformation. - The Eye Setup - The Mouth Setup - Facial Blendshapes - The Brow Setup. Fine tuning the brow rig and deformation. - The Tongue & Teeth Setup - Adding details.

PRACTICAL: Facial Rig Setup with on Face Controllers - Facial Rig Setup with separate GUI Controllers

<u>UNIT - V</u>

THEORY:

Rigging cloth and ornaments - accessories - props - Technical animation - Cloth simulations

PRACTICAL: Rigging Cloth and ornaments Cloth simulation

REF BOOKS: Art of Rigging Vol-02

BMM6.3.2: GAME DESIGN - II			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200
Prerequisite: BMM5.3.1: Game Design - I			

UNIT - I (Introduction to Visual storytelling and Narrative design)

THEORY:

Types of stories, - designing your own visual novel - Designing Narrative characters for games.

PRACTICAL:

- 1. Create your own visual novel
- 2. Write establish your story through a documentation
- 3. Design and explain your characters through a documentation (Not more than 5 pages)

<u>UNIT – II (Psychology and Game Design)</u>

THEORY:

Bartles theory - how does and why is psychology important in gaming - MDA , hierarchy of needs, magic circle, domains of play and game pleasure, addiction pathways, doubling and halving - FADT

UNIT - III (Core Mechanics)

THEORY:

Theory and Concepts - progression, tactical and social - The Design curve

PRACTICAL:

- 1. Document 1 of the scoring systems in tetris, indicate which condition causes the play field to change the scoring system by how much.
- 2. Are there any global mechanics in a game? What mechanic governs the way the game changes from mode to mode.
- 3. Using a RTS of your choice Write a paper describing its resources, sources, drains, convertors, production mechanisms that are not sources and traders.

UNIT - IV (Balancing and Level Design)

THEORY:

Balancing and Understanding Feedback - Playtest and Rapid Prototype - What's fair and What's Not Principles of level design - Layouts and the Process

PRACTICAL:

- 1. Create a level layout in such a way that even if the player has to backtrack they will not know it without careful observation.
- **2.** Draw up the different types of game iterations and explain them.
- **3.** Explain the types of feedback

UNIT - V (Game Design The Experience)

THEORY:

Types of play - Natural fun theory -Digital Image and Asset Creation - Gameplay - World of online Gaming - The Perfect user experience

PRACTICAL:

- 4. Create a HCD.(Of your choice or your own)
- **5.** Create a GDD.(Of your choice or your own)
- **6.** Create a art Document to support your documents

BMM6.4.2: Principles of Video Editing			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200
Prerequisite: BMM5.4.2: Cinematography Basics			

UNIT I - SILENT CINEMA:

The Birth of Film Editing; Classical Editing & Continuity System; Rules of Film Continuity; Space and Time Continuum; Principle of Film Ellipsis; Russian Montages; Image Juxtaposition, Dialectical

Editing, Types of Montages, Kuleshov Experiment; Continuity Editing: Devices & Techniques, Matching Time and Space between Shots, and Preserving Screen Continuity.

PRACTICAL:

- 1. Analysis of visual components of a given film.
- 2. A TV Live Show using 3 Cameras Setup.
- 3. BUILDING CONTINUITY: 15 to 20 random shots have to be put in the right order of continuity

UNIT II – EXPANSION OF FILM EDITING

Early Experiments in Film Editing; Alfred Hitchcock, Dramatic Time and Space, Parallel Action and Cutting on Motion, the Sound Cut, Influence of Popular Arts; Theatre, Music, Radio, the Vaudeville Show, Influence of MTV Style; The Music Video, Multi layered Images, Self Reflexivity, Non Continuity, Meta Techniques, Film Editing and Pace; External & Internal Rhythms, Film Tempo, Editing Sound; Sound & the Image, and The Sound Edit.

PRACTICAL:

- 1. Dramatic Scene composition of a shot from Indoor to Outdoor using proper lights, Track & Trolley.
- 2. Creating a Montage for a given song with alternative content.
- 3. Shooting a dramatic scene using Sync sound.

<u>UNIT III – EDITING GENRES, SONGS & DOCUMENTARY</u>

Editing Action Sequences: Movement, Cross Cutting, Pacing Action, Rules and Conventions & Psychological Aspects of Action Scenes; Editing Comedy Sequences, Verbal and Physical Comedy, Principle of Repetition, Anticipation, Contradiction, Surprise, Rule of Three; Editing Dialogue Sequences; Editing Songs: Editing Documentary

PRACTICAL:

- 1. Creating a Gag.
- 2. Composition of an Action sequence.
- 3. Shooting & Submitting a Directorial Song.

UNIT IV – WIDESCREEN EDITING:

Editing Widescreen & Aesthetics of the Rectangular Frame, Widescreen Image, the Anamorphic Process, Cinemascope Compositions, Pan & Scan, and Letterboxing

PRACTICAL:

- 1. Dramatic Scene composition of a shot in a moving Car or Bike.
- 2. Dramatising a romantic scene in slow motion using a high speed camera.
- 3. Mise-en-Scene (Long Take).

REFERENCES:

Karel Reisz & Gavin Miller, Techniques of Film Editing, Focal Press, 1989

- Ken Dancyger, The Technique of Film & Video Editing: History Theory and Practice, Focal Press.
- Walter Murch, Inthe Blink of an Eye: A Perspective on Film Editing, Silman James Press. 2001

BMM6.5.2: CHARACTER & SET DESIGNING			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200
Prerequisite: BMM6.5.1: Advanced Digital Sculpting			

UNIT - I:

THEORY:

Character Anatomy And Type - Using and Understanding Basic Shapes in Design - Costumes and Attires - To Use Reference(mood sheet) - Your Thumbnails - Drapery

PRACTICAL:

Character Design

<u>UNIT – II:</u>

THEORY:

Presentation - Turnarounds - Addon Assets - Secondary Assets (weapons)

PRACTICAL:

1. Character Design With Turnarounds

UNIT - III:

THEORY:

Single Asset Design - Principles Of Design -Blocking - Adding Details

PRACTICAL:

1. Single Asset Design

UNIT - IV:

THEORY: Multiple Asset Design - Blocking - Comparing And Aligning - Adding Details

PRACTICAL:

1. Multiple Asset Design

UNIT - V:

THEORY:

Composing - Gathering Assets -Composing And Aligning - Lighting And Rendering

PRACTICAL:

1. Set Design

BMM6.6.2: Responsive front-end framework			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200
Prerequisite :BMM6.6.1 : JavaScript Libraries- jQuery			

<u>Unit – I(Introduction to Bootstrap):</u>

Introduction to Bootstrap - Creating Basic Template - Understanding containers.

<u>Unit – II(Working with the Bootstrap Grid):</u>

Understanding Bootstrap containers - Working with rows and Creating columns - Using multiple column classes - Resetting columns and Offsetting columns -Nesting columns - Customizing column order with push and pull.

PRACTICAL:

1. Develop a simple Responsive web layout using a grid system.

<u>Unit – III(Exploring Bootstrap CSS Classes):</u>

Styling headings and body copy - Analyzing inline text styles -Modifying - alignment, transformation, and abbreviations - Using block quotes - Working with list styles, Bootstrap buttons - Exploring table styles and Adding image classes - Understanding Bootstrap helper classes - Using responsive utilities.

PRACTICAL:

- 2. Create a responsive blog.
- 3. Multi page theme with a carousel, a photo gallery page using lightbox.

<u>Unit – IV(Styling Forms):</u>

Creating a basic form - Formatting radio and checkbox controls - Using inline forms - Styling a horizontal form - Using validation styles - Using input groups - Using miscellaneous styles and sizing - Using icons - Modal form.

PRACTICAL:

- 4. Create a Landing page for a social network type site.
- 5. Create a Checkout form using form controls. Each required form group has a validation state that can be triggered by attempting to submit the form without completing it.
- 6. Multi page theme with a carousel, a photo gallery page using lightbox.

<u>Unit – V(Javascript Components):</u>

Creating a dropdown - Using button groups - Understanding the Bootstrap navigation component - Adding content to the navbar - Collapsing your navigation - Using breadcrumbs and pagination styles - Media Components - Content Containers & Styling list groups - Working with panels - Using wells - Glyphicons - Dropdowns - Progress Bar - Alerts - CAROUSEL- Scrollspy.

- 7. Multi page theme with a carousel, a photo gallery page using lightbox.
- 8. Create a portfolio web page with Scrollspy.
- 9. Create a responsive E-Commerce website.
- 10. Create a restaurant website.

SEMESTER - VII

BMM7.01: ENTREPRENEURIAL SKILLS			
THEORY: L-4 hours / week	/ week Marks		
Exam Duration: 3 hours	Internal : 50 External : 50 Total : 100		

<u>UNIT-I: (Principles for Becoming Oversubscribed)</u>

THEORY:

Demand and Supply Set the Price - Separate Yourself from the Market - The Four Drivers for a Market Imbalance: Innovation, Relationships, Convenience and Price - The Story of the two Bidders - Some People Miss Out - Profits, Losses or Wages? - Principle - Separate Yourself from the Market - How to Create Your Own Market - You Don't Need Everyone - Famous for a Few - Principle - The Four Drivers for a Market Imbalance: Innovation, Relationships, Convenience and Price - Driver - Innovation - Driver - Relationship - Driver # - Convenience - Driver - Price

<u>UNIT - II : (Buying Environments Create Buyers)</u>

THEORY:

It's OK to be Different - Value is Created in the Ecosystem -Nothing Beats Being Positively Remarkable

People Don't Buy What Others Want to Sell. They Buy What Others Want to Buy - Turn Your Clients Into Celebrities - People Don't Buy What They Need — They Buy What They Want - Principle - It's OK to be Different - The Power of Philosophy - It's Ok to Fail - It's Ok to say "No" - It's Ok to Make People Wait - It's Ok to Buck the Trend - Principle - Value is Created in the Ecosystem-. Give Away Ideas — Charge for Implementation - It's Easier to Climb Small Stairs Than to Jump Big Walls - Innovate — But Don't Mess with a Winning Formula - Principle - Nothing Beats Being Positively Remarkable - Replace Your Marketing Budget with a Remarkable Budget - Build a Remarkably Trusted Personal Brand

<u>UNIT - III : (The Campaign Driven Enterprise Method: Turning Principles into Strategy)</u> THEORY:

Campaign Planning: Know Your Capacity, who It's for and When you can Deliver It - Build Up to Being Oversubscribed

- It Begins with a Happy Customer Who's Your Market? Clients versus Customers Getting a Grip on Reality
- The Real Number Your Schedule for Becoming Oversubscribed Create a Campaign Theme Create a Campaign Timeline Phase Build Up to Being Oversubscribed The Power of Signalling Naming Your Terms
- Don't Ask for the Sale Ask for the Signal Transparency There's One of Me and Lots of You Think Mobile and Media First Educate and Entertain The -Hour Rule Brains Don't Know it's Digital

<u>UNIT - IV : (Release When Oversubscribed)</u>

THEORY:

Remarkable Delivery - Celebrate and Innovate

Oversubscribe Your Capacity-Measuring Interest - Selection Process - Managing Energy - Staged Release - Special Editions-. Price Rises and Time Limits-Sales Conversations vs. Chit-Chats - Set Your Targets and Stay Firm - Phase - Remarkable Delivery - Positively Remarkable Delivery - The Remarkable Audit - Energy Up, Down or Sideways - From Now On, You're Also an IT Business - Phase - Celebrate and Innovate - Stories, Numbers and Insights - Tell Your Stories - So Many Great Hidden Stories - The Truth is in the Results - The Debrief - Time to Party and Rest

<u>UNIT - V : (You, Your Team and the Crazy Times We Live In)</u> THEORY:

It's Time to Paddle - Struggle, Lifestyle or Performance? - The CDE Team

It's Time to Paddle - Struggle, Lifestyle or Performance? - Lifestyle First Then Performance - The CDE Team - When to Recruit Your Team - Creating Culture from the Beginning - The Roles of a Core CDE Team - You're Ready. Let's Go! - One Last Thing: The Chapter I Wrestled With

REFERENCE BOOK:

The Oversubscribed By Daniel Priestly

BMM7.02: Project / Demo Reel / Seminar			
THEORY: L-4 hours / week	Marks		
Exam Duration: 20 Mins.	Internal : 200 External : 200 Total : 400		

The student must complete an individual-project/ a Demo Reel to showcase the skills he excelled. During the final Viva-voce, the student must explain the learning outcome of the work he created using documentation and a presentation as a seminar.

DISCIPLINE ELECTIVE SUITE – V

Students need to select any one of the following electives based on the discipline.

1. Lighting for Compositing (or) 2. Character Animation (or) 3. Game Art (or) 4.VFx for Film-makers (or) 5. Concept Art (or) 6. Advertising Operations

BMM7.1.1: LIGHTING FOR COMPOSITING			
PRACTICAL: L-2 P-6 hours / week	PRACTICAL: L-2 P-6 hours / week Marks		
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite : BMM6.1.1 : Matchmove			

<u>UNIT – I (CG integration techniques):</u>

THEORY:

Scene setup – Matching Perspective – Proportions – Studying footage – Matching key light – Matching fill light – Matching bounce light – Creating rim lights – Controlling shadows.

PRACTICAL:

- 1. Do CG in live using software renderer.
- 2. Do CG in live using a mental ray renderer.

<u>UNIT – II (Compositing):</u>

THEORY:

3d compositing - Compositing Render layers - Compositing render passes - Grading - Using mattes - Using ambient occlusion - Blending modes - Zdepth.

PRACTICAL:

- 1. Do compositing with IBL software renders.
- 2. Do compositing with IBL mental ray renders.

<u>UNIT – III (Look Development):</u>

THEORY:

Hypershade - Shading networks – Texturing - Color map – Dealing with bump, normal and displacement maps – Using specular, sss, reflection and refraction maps – Dealing with roughness maps.

PRACTICAL:

- 1. Do Texturing and Shading for a Car.
- 2. Do Texturing and Shading for a Tree.
- 3. Do Texturing and Shading for a building.

<u>UNIT – IV (Advancing CG integration techniques):</u>

THEORY:

Types of render engines - Primary and Secondary bounces - Controlling noise - Sampling methods - Render Layers - Render passes - Render settings.

PRACTICAL:

- 1. Do CG in live using Arnold renderer.
- 2. Do CG in live using Vray renderer.
- 3. Do CG in live using Redshift renderer.

UNIT - V (Advancing Compositing Techniques):

THEORY

Compositing Techniques - Compositing 8 bit, 16 bit and 32 bit images - Compositing EXR - Compositing multi EXR - Dealing with different color spaces.

PRACTICAL:

- 1. Do compositing for a CG integration shot.
- 2. Do relight for a shot.

BMM7.2.1 : CHARACTER ANIMATION			
PRACTICAL: L-2 P-6 hours / week Marks			
Exam Duration: 5 hours	Internal : 100 External : 100 Total : 200		
Prerequisite: BMM6.2.2: Rigging - II			

UNIT - I:

THEORY:

Principles of Animation Stretch & squash - Anticipation - Staging - Straight Ahead and Pose to Pose - Timing and Spacing - Understanding the wave - Follow through and overlapping - Secondary actions

PRACTICAL:

- 1. Bi-Ped Walk Cycle
- 2. QuadruPed Walk Cycle

UNIT - II:

THEORY:

Understanding the Contact pose - Down pose - Passing Pose - Up pose - understanding the weight shift of Hip and Chest - Swing the Hands -importance of animation the Clavicle - Head accents - understanding the cycle of animation - Advance Arcs and Path of Action - Walk-through: Blocking to Final.

PRACTICAL:

- 1. Bi-Ped Run Cycle
- 2. QuadruPed Run Cycle

UNIT - III:

THEORY:

Body Mechanics - Personality and Logic - Weight shift - Arcs - Gravity - Balance -use of Antic to get force - Shoot and Settle technique - Stretching the body - Distance covered by the force - Physics of motion - Body Arcs -Secondary actions to jump

PRACTICAL:

- 1. Bi-Ped Jump forward
- 2. quadruPed Jump Forward

UNIT - IV:

THEORY:

Advance Body Mechanics - Pushing an object from one place to another place - Standing and Pushing - Push while walk - Timing for push - Spacing for push - Force applied to push - Low weight Push

PRACTICAL:

- 1. Bi-Ped Push Heavy Object
- 2. quadruPed Push Heavy Object

UNIT - V:

THEORY:

Planning for Animation - Lifting weights - Strength of Character - Less weight vs Heavy Weight - Gravity of weight - Balance of body -Timing - Spacing - Arcs - Pose to Pose.

PRACTICAL:

- 1. Bi-Ped Lift Heavy Object
- 2. QuadruPed Lift Heavy Object

REF BOOKS:

Survival Kit by RichyardWillams, Illusion of Life by olliejohnston and Frank thomson.

BMM7.3.1: GAME ART			
PRACTICAL: L-2 P-6 hours / week	rs / week Marks		
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite: BMM6.3.2: Game Design - II			

UNIT - I (Game Character Modelling):

THEORY:

Character Modelling – Low Poly Modelling – LOD Modelling – Poly Budget Modelling – Understanding & Maintaining Looping system – Proportions – Low Poly – High Poly – Refinement

PRACTICAL:

- 1. Bi ped Modeling High Poly, Bi ped Modeling Low Poly
- 2. Quadruped Modeling, LOD of a character Model

<u>UNIT – II (Game Texturing):</u>

THEORY:

Game Texturing -Texturing techniques - Texture Limits - Texture optimization - UV Unwrapping - Introduction to shaders.

PRACTICAL:

- 1. Character Modeling Texturing
- 2. Weapon Modeling Texturing
- 3. Set Model Texturing

<u>UNIT – III (Animation: Animation for Games):</u>

THEORY:

Fundamentals of Game Animation – Exporting Animations, Using Animation trees in UDK/Unity, Optimized animation for games, Progressive Animations.

PRACTICAL:

Character Walk Cycle, kick, Punch & Jump

<u>UNIT - IV (Game In - Organic Modelling):</u>

THEORY:

Set Modelling – Vehicle Modelling – Prop Modelling – Mechanical Modelling – Understanding & Maintaining Edge system – Proportions – Low Poly – High Poly – Refinement

PRACTICAL:

- 1. Weapon Modeling
- 2. Prob. Modeling
- 3. LOD of a weapon Model

UNIT - V (Game engine VFX):

THEORY:

Types of Game Engines - Import and Export of 3D Models into Game Engine - Light Baking - Particle System.

PRACTICAL:

Create a game Layout

BMM7.4.1: VFX FOR FILM-MAKERS			
PRACTICAL: L-2 P-6 hours / week Marks			
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite: BMM6.4.2: Principles of Video Editing			

UNIT I - (Planar Tracking and painting)

THEORY: Tracking techniques - One point tracking - Two point tracking - Four point tracking - Planar tracking - Paint techniques - Background plate preparation

PRACTICAL:

- 1. Need to shoot and replace Car No. Plats & hoarding
- 2. Need to Shoot and replace Need to do clean plats & rig removals

UNIT II - (MATCHMOVE)

THEORY: Camera angles - Framing - Scaled images - Speed - Depth of field - Length of shots - Complexity - Flexibility and Time on a Live-Action Set - Flexibility in Post - The Actual Shot Requirements - Breaking It Down to the Simplest Requirements - Review Other Films and Alternative Techniques - Shooting nodal pan shots - Shooting zoom shots - Rolling shutter - Motion blur

PRACTICAL:

1. Need to place a 3D object in a shot

2. Need to create 3D illusion using 3D Projection textures

UNIT II - (HDRI and Survey data)

THEORY: 8 bit, 16 bit, 32 bit images - Shooting high dynamic range images - Editing high dynamic range images - Taking survey data - Understanding of natural Lights, shadows, reflections.....etc.

PRACTICAL:

- 1. Need to shoot and blend 3D objects in a shot using an HDRI rig.
- 2. Need to place a 3d car on a moving road.

UNIT IV: (CG Integration)

THEORY: Camera settings - Perspective - Understanding Background plate - Creating key, fill, bounce and rim lights - Render layers - Passes - Rendering

PRACTICAL:

- 1. Need to make a Gag with CG object Interaction
- 2. Need to make a Gag with CG Character Interaction.

UNIT V - (Compositing)

THEORY: 3d compositing - Chroma Keying, Compositing Render layers – Compositing render passes – Grading – Using mattes – Using ambient occlusion – Blending modes – Zdepth.

PRACTICAL:

- 1. Shooting and Compositing a Live Character in a CG Environment.
- 2. Presenting a VFX Short Film.

REFERENCES:

VES handbook

BMM7.5.1: CONCEPT ART			
PRACTICAL: L-2 P-6 hours / week Marks			
Exam Duration: 5 hours	Internal : 100 External : 100 Total : 200		
Prerequisite: BMM6.5.2: Character & Set Designing			

UNIT – I:

THEORY: Intro/basics To Concept Art-Gather Narration Or Brief-Creating Moodboard-Thumbnailing- Colour Perspective-Values

PRACTICAL:

Gray Concept Art

<u>UNIT – II:</u>

THEORY: Colouring-Creating Mood-Colour Values

PRACTICAL:

Colour Concept Art

UNIT - III:

THEORY: Matt Painting-Collecting Images-Composing-Colour Correction- Final Look

PRACTICAL:

Matt Painting

UNIT - IV:

THEORY: Paint Over Images-Image Information- Realistic Render Techniques

PRACTICAL:

Paint Over Images

UNIT - V:

THEORY:Illustrations - Narratives- Presentations

PRACTICAL:

Illustration

BMM7.6.1: Dynamic Website Development			
PRACTICAL: L-2 P-6 hours / week Marks			
Exam Duration: 5 hours	Internal : 100 External : 100 Total : 200		
Prerequisite :BMM6.6.2 : Responsive front-end framework			

Unit – I((Introduction to PHP)):

What is PHP? - Install a web server - Configuring PHP - PHP Syntax & Comments in PHP - PHP echo and print Statements.

<u>Unit – II(Exploring Data Types):</u>

Variables & Variables Scope (Local, Global & Static) - Data Types (String, Integer, Float, Boolean, Array, Object, NULL & Resource) - String Functions - Operators.

PRACTICAL:

- 1. Working with Variables.
- 2. Preparing the Database with web server configuration.

<u>Unit – III(Control Structures):</u>

If statements & Else and elseif statements - Logical operators - Switch statements - While loops, For loops & Foreach loops - Continue & Break - User Defined Functions.

PRACTICAL:

- 3. Developing Conditional Statements.
- 4. Basic Dynamic Website Development.

<u>Unit – IV(Building Web Pages with PHP):</u>

Using GET values & Encoding GET values - Encoding for HTML - Including and requiring files - Modifying headers & Page redirection - Building forms & Detecting form submissions - Single-page form processing - Validating form values - Displaying validation errors & Custom validation functions - Connecting to MySQL with PHP - Retrieving data from MySQL - Working with retrieved data - Creating records with PHP - Updating and deleting records with PHP - SQL injection - Escaping strings for MySQL.

PRACTICAL:

5. Create a database table to store user accounts.

Unit – V(Building a Content Management System (CMS)):

Blueprinting the application - Building the CMS database - Establishing your work area - Creating and styling the first page - Making page assets reusable - Connecting the application to the database - Working with Master / Details Page.

PRACTICAL:

- 6. Dynamic Website Development with Master / Details Page.
- 7. Build a Complete Registration and Login System using PHP.

BOOKS RECOMMENDED:

- Programming PHP by Kevin Tatroe, Peter MacIntyre, Rasmus Lerdorf
- PHP Programming with MySQL: The Web Technologies Series by Don Gosselin, Diana Kokoska, Robert Easterbrooks

DISCIPLINE ELECTIVE SUITE – VI

Students need to select any one of the following electives based on the discipline.

1. Dynamics - II (or) 2. Facial Animation (or) 3. Game Development - II (or) 4. Production Management (or) 5. Visual Storytelling (or) 6. Design for Publishing

BMM7.1.2 : DYNAMICS - II			
PRACTICAL: L-2 P-6 hours / week Marks			
Exam Duration: 5 hours	Internal : 100 External : 100 Total : 200		
Prerequisite: BMM6.1.2: Dynamics - I			

<u>UNIT – I (Introduction to Rigid Bodies):</u>

THEORY:

Introduction to Rigid Bodies-Knowing the types of rigid Bodies-Knowing the types of Rigid Constraints and working with them-Introduction to Bullet Physics-Difference Between 's Legacy Rigid Bodies and Bullet Rigid System -Discussing the properties of bullet rigid properties-Controlling Rigid Bodie collisions depends upon their shapes-and Baking Geometry and Export into alembic.

PRACTICAL:

- 1. Creating Wall Break Effect By Using Rigid Bodies
- 2. Building Destruction fx By using Bullet Physics

UNIT – II (INTRODUCTION TO MASH):

THEORY:

Introduction to Mash-Importance of Mash in Vfx-Working With various nodes present in mash utilities-Ways of using multiple nodes to Create a Scene- Working with Mash Newly introduced Collision Bodies -Creating Small Scale and Large Scale environments -Clouds Etc

PRACTICAL:

- 1. Create a Text Animation by using Mash
- 2. Creating a Small Environment by using Mash

<u>UNIT - III (Boss and Bifrost):</u>

THEORY:

Introduction to Boss- Working with Boss-Discussing about different types of wave solvers and wave influencers-Ways of using Frequency Spectrums and Directional Spectrum in **Boss Spectral Wave** Node -Controlling Various Types of Influencers on Boss-Generating Foam on Sea Water on Boss-Ways of using Boss Solver to create various types of scenes-The Processes of Exporting Geometry.

Introduction to Bifrost

PRACTICAL:

- 1. Creating a Moving River water By using Boss
- 2. Creating a Ocean With Ship By Using Boss

<u>UNIT - IV (Introduction to Procedural Dynamics):</u>

THEORY:

Introduction To Houdini-Intro to proceduralism and Houdini's interface- vs Houdini- transition and differences-Intro to Houdini contexts-Intro to vex and pointvops-Discussing Various Types of nodes and its usages - An in-depth look at modular design-Start modeling first elements of the environment-Creating generic tools to help us build the various elements needed for the environment-An in-depth look at Terrain tools in Houdini.

PRACTICAL:

- 1. Creating A Set Model By using Houdini Procedural Modeling
- 2. Creating a Character By Using Houdini Procedural Modeling

UNIT - V (HOUDINI Fx):

THEORY:

Deeper look at the various fx to be created and how to plan for the various assignment-Intro to pops-An introduction to Designing FX-Timing & Layering-Intro to Dops and smoke solver-Create various FX elements using POPs

PRACTICAL:

- 1. Create a Smoke by Using Houdini Pyro Fx,
- 2. Create a Fire fx By Using Houdini Pyro.

BMM7.2.2: FACIAL ANIMATION			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite: BMM7.2.1: Character Animation			

<u>UNIT - I:</u>

THEORY:

Introduction to facial animation/acting - posing expressions - Eye Blinks - Facial Features - Understanding the GUI - Animating the Iris, Pupil and Cornea - Animating Eyes and Eye Blink.

PRACTICAL:

- 1. Expression Sheet 30
- 2. Eye Blinks

UNIT - II:

THEORY:

Acting for Animators- Principles of Acting - Personality and Logic. - Generating Ideas for Acting - Pantomime - The Language of Films - Expressions and Mood - Understanding the story - Understanding the Pupil Movement -Eye Lids and overlapping action .

PRACTICAL:

- 1. Eye Blink with eyebrows
- 2. Neutral to expression breathing,

UNIT - III:

THEORY:

Change of Expression - Animators as Actor -Fluidity of Cheeks - Use of Tounge -understanding the timing of eyes ,eye lashes and eye brows Offset - The flow of muscle movement in the face. Head Stretch and squash from top and bottom. Animating the poly hair.

PRACTICAL:

- 1. Multiple expression Happy to sad
- 2. Sad to Angry, Smile to Shock

UNIT - IV:

THEORY:

Intro of Lip-sync. - Voice characterization - Ideas for Lip-sync - Principle of Lip-sync - Phrasing - Understanding the Trax Editor - Mixing the voices - Creating Animation Clip- Review of Facial Acting & Lip-sync

PRACTICAL:

- 1. Lip sync
- 2. Lip sync with Expression

UNIT - V:

THEORY:

Facial Acting and lip sync - Story-boarding (Visualize a Story, Concept) - understanding the Detail Animatic-Integrating multi-character animation- Taking control in animation- Final improvement, polish and completion.

PRACTICAL:

- 1. Single Character Acting
- 2. Dual Character Acting

REF BOOKS:

Survival Kit by RichyardWillams ,Illusion of Life by olliejohnston and Frank thomson.

BMM7.3.2: Game Development - II			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite : BMM6.3.1 : Game Development - I			

<u>UNIT – I (3D DEVELOPMENT TOOLS):</u>

Built-in-3D Objects, Importing Models, Textures, Shaders, Lights, Cameras, Working with Layers, Rigidbodies, Colliders, adding reflection probes, HDRP, 3D Physics Reference, Box Collider, Capsule Collider.

PRACTICAL:

1. Create a prototype level using "Roller Ball" with basic primitive objects and standard assets from the unity library.

UNIT - II (OPEN LEVEL DESIGNING):

Terrain Generation, Texturing Terrain, Environment Effects, Generating Trees and Grass, Skyboxes, Audio Basics, Importing Audio Clips, Video Player, Postprocess, Timeline - Creating cinematics.

PRACTICAL:

1. Create the island - Sun, sea and sand.

UNIT - III (ANIMATIONS AND EFFECTS):

First person Controller, Particle System Controls, Particle System Modules, Default Module, Emission Module, Shape Modules, Velocity Modules, Animation Basics, Animation Tools, State Machine, Animator controller, Transition b/w animations, Controlling animations through script.

PRACTICAL:

- 1.Import a 3D Character and apply all animations to that by Animator Controller with keyboard events.
- 2. Make an arcade complete space shooter game with the alien or asteroids or enemy etc coming from the opposite direction.
- a) space shooter must be controlled by the Keyboard inputs and must be clamped within the screen.
- b) Space bar can be used for the Shooting down enemies.
- c) Shots or bullets must instantiate from the shooter position.
- d) Enemies must fall down randomly and irregularly(IEnumerater and StartCoroutine())
- e) Score must be updated once the enemies are hit.
- f) If Space shooter is hit Thrice

<u>UNIT - IV (ADVANCED UNITY SCRIPTING) :</u>

Working with Events, Shooting mechanism, Controlling 3D player using Keyboard input, Raycasting, Pickups, Health, Inventory system, switching cameras to different angles, Attach camera to the player, Collision Detection, Restart method, scoring, Storing game data, Displaying the splash screens, Adding the Lives option for Player, Damage System, Collision detection, VR using Unity3D, Input for Oculus, User Interaction in VR, WorldSpace UI.

PRACTICAL:

- 1. Create a basic game, Using Keyboard inputs, make a character move and rotate destroying Enemy characters, generating the Score. Basic GameObjects can be used.
 - Make separate folders for each component like (Script/Scene/Sprite/Prefabs/Material/Models etc).
 - Material needs to be added.
 - Make Character's speed Tweakable. (just making it Public).
 - Make UI(Menu/Play/QUIT/INFO etc).
 - Use UI Text for the Score.
 - Use Game Over window when the game gets over.

UNIT - V (AI AND PUBLISHING) :

Navmeshes, Traveling to a Goal Location, Obstacle Generation by Prefabs, Instance Creation, crowds, animated characters, vehicles, Pathfinding through Waypoints, Build Settings, Asset Store Publisher, Adding Keywords to Assets, Asset Store Publisher Administration, Asset Store FAQ, Asset Store Publishing Guide, Deprecate Asset Guide.

PRACTICAL:

 Create a game prototype using first person, Generate Navmesh, player should move on click, and enemy should follow player. Submit unity file containing all gaming assets.
 Using Mouse Control (MouseX, MouseY inputs), a character must be able to Rotate and move.

Using Bullet rigid body the character must be able to fire in Controlled manner in facing direction and has to shoot the random Targets for the Score to win the Game.

- a) First Person Shooter OR from camera, player can shoot.
- b) Use Raycast to check the boollsOnGround(whether the Character is on the Ground or not).
- c) Aim or Reticle must be used . Use ViewportToTheWorld to make the Aim sit fixed in the middle of the Screen.
- d) Random Targets will have random hit points score (like 1,2,3,5, 10 etc) and Score must be updated with random points. Use Text UI to show the Score.
- e) Game over window must be shown with the HIGH Score.

IMPORTANT: MENU UI is compulsory.

- * Required assets will be provided.
- ** GDD (Game Design Development) is a must.

BMM7.4.2: Film Production Management			
PRACTICAL: L-2 P-6 hours / week	Marks		
Exam Duration: 5 hours	Internal: 100 External: 100 Total: 200		
Prerequisite :BMM7.4.1 : VFX for Film-makers			

UNIT I - THE FEATURE FILM & THE TELEVISION PROJECT:

The Script Development Process; Pre-production Planning; The Hollywood Assembly Line vs. The Bollywood Assembly Line & The South Indian Variation; the Four Stages of Production & the Feedback System; the Responsibilities of the Production Manager; Preparing for Production and the Script Breakdown Process

PRACTICAL:

- 1. Shot breakdown based on the given Script.
- 2. Preparing for Production Scheduling.

<u>UNIT II - SCHEDULING, BUDGETING, LOCATIONS & CREW:</u>

Constructing the Master Production Board; Evolving Shooting Schedule & Factors of Shooting Schedule; Low Budget Production vs. High Budget Production; the Budgeting Process: Coordinating Budget Requirements, Flexibility of Construction, Arriving at a Realistic Evaluation, Estimating Foreign Shoots & the Updating Process, Scouting & Managing Locations; Dealing with Film Commissions; Organizing Cast & Crew

PRACTICAL:

- 1. Budgeting the Production. .
- 2. Preparing Master Production Board.

<u>UNIT III - MARKETING, DISTRIBUTION & EXHIBITIONW</u>

The Business of Film Production-II (Marketing & Advertising): Marketing & Advertising Budget, Research, Surveys & Marketing Strategies; the Business of Film Production-III (Distribution & Exhibition): Evolution of the Distribution & Exhibition Sectors, Distribution Zones & Profit Sharing, The Expanding Industry & The Problem of Week Generic Differentiation, The Intervention of the State & The Emergence of New Markets

PRACTICAL:

- 1. Surveys & Marketing Strategies of the Project..
- 2. Preparing Business Plan.

UNIT IV - PRE-PRODUCTION FOR VFX:

THEORY:

Lock the CG shooting script, Finalize the budget, Involve key department heads, Break down the script(Props, Prosthetics, Special Rigs, Organic & Inorganic Models), Storyboard of all the shot listed scenes, 3D Animatics of the critical shots, Scout the relevant footages & photos of the locations, Get permits and insurance, Schedule shoot days with the VFX Supervisor, Perform a tech scout and Arrange for equipment rentals.

PRACTICAL:

- 1. Need to get Storyboarding of a Scene.
- 2. Need to get 3D Animatics of Action sequences.

REFERENCES:

- Bastian Cleve Film Production Management, Focal Press, 2000
- Ralph S. Singleton Film Scheduling, Lone Eagle Publishing Company, 1991
- Ralph S. Singleton Film Budgeting, Lone Eagle Publishing Company, 1991
- Eve Light Honthaner The Complete Film Production Handbook, Focal Press, 2001

BMM7.5.2: VISUAL STORYTELLING					
PRACTICAL: L-2 P-6 hours / week	Marks				
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200		
Prerequisite : BMM7.5.1 : Concept Art					

<u>UNIT - I (Camera BLOCKING & STAGING) :</u>

THEORY: Blocking Camera's view with Multiple Angles - Rules of Perspective, Realistic Field of View - Gaps in Coverage - Resolution and Lens Selection

PRACTICAL:

Fix Multiple Cameras in scene and get a proper view from top - showing all cameras placements in a Scene.

<u>UNIT – II (Concept Art):</u>

THEORY: Empathise of the Concept - Define the Concept - Ideating Visualizing Camera view - Rough Sketching - character - BG - Colouring

PRACTICAL:

Need to tell a story through a concept art - 2 Concepts

<u>UNIT - III (Stop Motion):</u>

THEORY: Fixing a Camera view - Photo Story - Clay Modeling - Basic Rig Setup with Wire - Expressions using clay - Lighting for the Scene - Working on BG

PRACTICAL:

Tell a story using Stop Motion - 8 to 10 Seconds clip.

<u>UNIT - IV (Story Through 2D & 3D Animatics)</u>:

THEORYBlocking Camera's view with Multiple Angles in 3D - Realistic Field of View - Gaps in Coverage - Resolution and Lens Selection - FIlm Gate - Safe Frames - Dialogues - Timing

PRACTICAL: Need to do 2D & 3D Animatics for a story.

UNIT - V (Story Through Illustrations):

THEORY: Blocking a Camera view - Rough Sketching - Details - character - BG - Light Information - Expressions.

PRACTICAL:

Need to tell a story through a Illustration - 2 high detail Illustrations

BMM7.6.2: Digital Marketing					
PRACTICAL: L-2 P-6 hours / week	Marks				
Exam Duration: 5 hours	Internal : 100	External : 100	Total : 200		
Prerequisite: BMM7.6.1: Dynamic Website Development					

UNIT - I:

Search Engine Optimization (SEO) - Online Ads (PPC/CPM) - Email Marketing - Social Media - Conversion Optimization - Data Analysis.

PRACTICAL:

1. Optimizing the Webpages.

UNIT - II:

Search Engine Marketing (SEO, PPC) - The Authority Algo - SEO Ranking Factors - Code (No Tables, Semantic Code & Description) - Specific Code (Meta Keywords, Title & Description) - Content (Keywords, title, URL, h1).

PRACTICAL:

- 2. Creating PPC Ads and defining Key Words
- 3. Generating ROI reports.

UNIT – III:

Links (Popular / Authoritative sites) - Social Media (Shares, Likes, Comments, Followers and Links) - POST Method (People, Objectives, Strategy & December 2019), Introduction to Adobe Animate - Animations - Creating Flash Banners - Basics of Action Scripting.

PRACTICAL:

- 4. Create a Banner Animation for a product.
- 5. Creating Interactive Product Presentation.
- 6. Creating Interactive Images slideshow.

UNIT - IV:

Goals of PPC - SEO vs PPC - SEM Platforms for PPC (Google AdWords & Bing Ads) - Elements Unique to PPC (Hierarchy ofAdWords & Bing Ads accounts: Business Account Campaign AdGroup Keywords) - Measuring PPC Success.ROI (return on investment) = [(Payback - Investment)/Investment)]*100 - ROI tools (Google analytics, Google webmasters tools, Basic google search, Google adwords, Social media monitoring tools, Sentiment analysis tools).

PRACTICAL:

- 7. Creating PPC Ads and defining Key Words
- 8. Generating ROI reports.

UNIT - V:

Web Hosting Basics - Types of Hosting Packages - Registering domains - Defining Name Servers - Using Control Panel - Creating Emails in Cpanel - Using FTP Client o Maintaining a Website.

BOOKS RECOMMENDED:

- Performance Marketing with Google Analytics: Strategies and Techniques for Maximizing Online ROI by John Wiley and Sons
- Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation by Damian Ryan
- The Art of SEO: Mastering Search Engine Optimization by Eric Enge, Stephan Spencer, Rand Fishkin, Jessie Stricchiola
- Pay-Per- Click Search Engine Marketing: An Hour a Day by David Szetela, Joseph Kerschbaum

SEMESTER – VIII

U4MM19B8.01EP: INTERNSHIP					
INTERNSHIP: 12 weeks	Marks				
	Internal : 150	External : 200	Total : 350		

A student should approach the production houses for the INTERNSHIP program related to his/her selected discipline; must work for at least 8 weeks and get the internship certification from the respective companies. The role of his/her individual contribution towards the project done during the internship must be presented* to the jury.

* Due to confidentiality and norms of the companies, they may not allow students to showcase their output, done. In such cases, a student should submit his/her reference outputs, which is similar to the internship-project.

U4MM19B8.02EP: FINAL PROJECT					
PRACTICAL: Submission	Marks				
Presentation & Viva Duration : 20 Mins	Internal : 150	External : 200	Total : 350		

The student must complete a team-project in association with his/her co-students of the other discipline. During the final Viva-voce, the role of his/her individual contribution towards the project must be presented to the jury.

MODEL QUESTION PAPERS

Code No: BMM1.01

BA Multimedia

I Semester Regular Examination, Month - Year

English Communication

Time: 3 hours Max. Marks: 50

Answer any FIVE questions All questions carry equal marks.

- 1) Answer any ONE of the following:
 - a) What is the situation on which the simple humorous story, A Tea Party, based?
 - b) What is the general Indian point of view that goes hand in hand with the spirit of nonviolence?
 - c) What was the incident that happened early in his career that proved that Sachin had immense physical stamina as well as the ability to bear pain, both necessary qualities in a sportsperson?
- 2) Write five idioms and form sentences with each.
- 3) Write a Letter to the Manager of a Bank in your city applying for a student Loan of Rs.3 lakh for your sister, who has been admitted to an undergraduate Law programmer. Ask what the bank's rate of interest on student loan is what documents are required and how long the process will take.
- 4) Write a precis of the following passage, condensing wherever possible without altering the meaning. (Please rewrite the following passage into 1/3rd of the size and also title it.)

It is physically impossible for a well-educated or brave man to make money the chief object of his thoughts, just as it is for him to make his dinner the principal object of them. All healthy people like their dinners, but their dinner is not the main object of their lives. So all healthy minded people like making money—ought to like it and enjoy the sensation of winning it; it is something better than money. A good soldier, for instance, mainly wishes to do his fighting well. He is glad of his pay—very properly so, and justly grumbles when you keep him ten years without it—still his main notion of life is to win battles, not to be paid for winning them. So of clergyman's object is essentially to baptize and preach, not to be paid for preaching. So of doctors. They like fees no doubt, -- out to like them; yet if they are b rave and well educated, the entire object of their lives is a not fee. They, on the whole, desire to cure the sick, and, if they are good doctors, and the choice were fairly put to them, would rather cure their patient and

lose their fee than kill him and get it. And so with all the other brave and rightly trained men; their work is first, their fee second – very important always, but still second.

5) Choose the appropriate form of the phrasal verbs given below and rewrite the sentences.

Passed away, do without, look forward to, called off, made up, carried away, catch up, run out, put up with, keep up

a)	Avoid smoking in danger zones. Fires easily in such areas.							
b)	I see my childhood friends again.							
c)	I am afraid, we have of pineapple juice. Will an orange juice do?							
d)	Your website has helped me a lot to the good work.							
e)	A friend of mine has her birthday party.							
f)	His mother can't the terrible behavior of her teenage son							
	anymore.							
g)	As an excuse for trespassing the traffic rules at the signals she							
	a whole story.							
h)	I got by her eagerness.							
i)	I just cannot my laptop. I always keep it with me.							
j)	Mary was very sad because her father last month.							

- 6) Write a paragraph of about five or six sentences about TECHNOLOGY.
- 7) Answer the following
 - a) Give suitable one word substitutes for the following:
 - i. A study of a man.
 - ii. Knowledge of everything.
 - iii. One who can speak two languages?
 - iv. One who can make an official examination of accounts?
 - v. The shortened form of a word or phrase.

b)	Fill in the	blanks in	the	sentences,	adding	the	prefixes	and	suffixes	given
	below to th									

Un-, in-, re-, pre-, -ment, -y, -ful, -less,-im,-ic
i. You are _____ about how to get to the station, aren't you? (clue)
ii. We helped the people_____ the town after the earthquake.
(build)
iii. I like _____ vegetables.(leaf)
iv. Sunil is very _____ about the match.(Optimist)
v. Fold the cloth _____ .(length)

- 8. Unjumble the following and rewrite proper sentences.
 - a) Passed /Paul / easily / the exam
 - b) Ann / very well / French / doesn't speak
 - c) a lot of work / did / I yesterday
 - d) London / do you know / well
 - e) we / enjoyed /very much/ the party
 - f) The/ball/is/Rohan/with/playing.
 - g) Your/the/in/do/evening/watch? /television/parents.
 - h) Yesterday/ended/elimination/round/state/archers/top boys/girls.
 - i) Perfect/man/practice/makes.
 - j) Look forward/to/I/from/hearing/you.

Code No: BMM1.02

BA Multimedia

I Semester Regular Examination, Month - Year

Art & Craft

Time: 5 hours Max. Marks: 50

Answer any one

1. Create eco-friendly paper tote bags and paint with social messages.

Or

2. Create a 2d landscape wall art with color sheets.

Code No: BMM1.03

BA Multimedia

I Semester Regular Examination, Month - Year

Fundamentals of Drawing

Time: 5 hours Max. Marks: 50

Answer any one of the following.

1. Draw a **Flower-vase (still life)** with lighting & shading using grey scale values with proper proportions.

(Note: Use various pencils of 2B, 4B or 6B)

OR

2. Draw a two-point perspective 'interior study room' by following all perspective rules.

Code No: BMM1.04

Time: 5 hours

BA Multimedia I Semester Regular Examination, Month - Year

Design Elements

Answer any one of the following.

1. Create a minimal 'VECTOR PORTRAIT' of the given reference.



Submission guidelines

- a) Document & output size: A4, Use the CMYK color mode
- b) Submit the file in .Ai and .jpeg file formats
- c) Create a folder with HALLTICKET NO. save the submission files in this folder with the following naming-convention HALTICKETNO_Qno.psd and HALTICKETNO_Qno.jpeg.

Or

Max. Marks: 50

2. Create the branding materials of a farming company named 'Green Thumb'. (i.e. Product branding which includes logo, business card, flyer, letterhead and brochure cover).

Note: More weightage will be given for the detailing.

Submission guidelines

- a) Document & output size: A4, Use the CMYK color mode
- b) Submit the file in .Ai and .jpeg file formats
- c) Create a folder with HALLTICKET NO. save the submission files in this folder with the following naming-convention HALTICKETNO_Qno.psd and HALTICKETNO_Qno.jpeg.

Code No: BMM2.01

BA Multimedia

II Semester Regular Examination, Month - Year

Environmental Science

Time: 3 hours Max. Marks: 50

Answer any FIVE questions All questions carry equal marks.

- 1. What is the meaning of environment and briefly describe the components of environment with deforestation rate?
- 2. Explain the multidisciplinary nature and Scope of environmental studies?
- 3. What is an ecosystem and explain the parts and types of ecosystem?
- 4. What is disaster management? Explain the steps involved in disaster management?
- 5. Define the word environmental pollution? Explain briefly about different types of pollution?
- 6. What do you mean by Natural resources and how to conserve the natural resources?
- 7. What is the definition for Biodiversity and explain its Types, Threats and Benefits?
- 8. What do you mean by environmental ethics? How can you increase environmental education and awareness?

Code No: BMM2.02

BA Multimedia

II Semester Regular Examination, Month - Year

Basic Photography

Time: 3 hours Max. Marks: 50

Answer any FIVE questions All questions carry equal marks.

- 1. Write about Basic Types of Camera Lenses in detail.
- 2. What is the importance of exposure triangle in photography? Explain in detail?
- 3. What are the different types of composition in photography? Explain in detail.
- 4. Explain about shutter speed and aperture and ISO in detail.
- 5. What is soft box light for in photography? Explain about Different types of soft boxes in detail.
- 6. How do you set strobe lights for photography? Explain about strobe lights importance in studio photography.
- 7. What does a honeycomb filter do? What is a snoot used for in photography? What are color gels in photography?
- 8. What is camera metering? How to understand metering modes in photography explain in detail.

Code No: BMM2.03

BA Multimedia

II Semester Regular Examination, Month - Year

Advanced Design Elements

Time: 3 hours Max. Marks: 50

Answer any FIVE questions All questions carry equal marks.

1. Create the branding materials of a pharmaceutical company named 'Co-Vaccine'. (i.e. Product branding which includes logo, business card, letterhead and web banner).

Or

2. Change the background for given source image and retouch it, use images from the given references

Submission guidelines

- a) Document & output size: A4, Use the RGB color mode
- b) Submit the file in .psd and .jpeg file formats
- c) Create a folder with HALLTICKET NO. save the submission files in this folder with the following naming-convention HALTICKETNO_Qno.psd and HALTICKETNO_Qno.jpeg.

Code No: BMM2.04

BA Multimedia

II Semester Regular Examination, Month - Year

Digital Art

Time: 3 hours Max. Marks: 50

Answer any FIVE questions All questions carry equal marks.

1. Draw a **modern conceptual house** in grayscale digital painting.

Or

2. Draw and paint in Grayscale a Castle built over a rocky mountain.

Code No: BMM3.01

BA Multimedia

III Semester Regular Examination, Month - Year

Film Art & Aesthetics

Time: 3 hours Max. Marks: 50

Answer any Five

- 1. Develop a short story based on the following line: A cop finds a blind man(alive) and strong man whose dead body lying on the floor(both) in a locked room.
- 2. Briefly explain the form and style of any Hollywood movie of your choice.
- 3. Mention acting improvising exercises, such as flying blind, solo no words......
- 4. Give step by step procedure from script writing to post production.
- 5. What is mise-en-scene, explain the elements of mise-en-scene
- 6. Mention all types of sounds used in the film and explain the significance of sync sound and sound effects in the film.
- 7. What is Subtext? Explain its significance and give example from any movie scene.
- 8. Explain in detail the five elements of the story.

Code No: BMM3.02

BA Multimedia

III Semester Regular Examination, Month - Year

Digital Sound Design

Time: 3 hours Max. Marks: 50

Answer any one

1. Compose your own music track for one minute, using patterns.

Or

2. Pick any 1 song from given options and Recreate Beats and Melody.

Submission quidelines

- a) Note Submit your files in below mentioned file formats
- b) a). Zip Fruity Loops source file (.flp) & linked external tracks that are used in the composition
- c) b). Mp3
- d) Create a folder with HALLTICKET NO. save the submission files in this folder with the following naming-convention Example HALTICKETNO_Qno.flp and HALTICKETNO_Qno.mp3.

Code No: BMM3.03

BA Multimedia

III Semester Regular Examination, Month - Year

Advanced Digital Art

Time: 5 hours Max. Marks: 50

Answer any one

1. Artworks usiCreate ng Cutout style landscape using warm colours by the guidance of colour wheel

Or

2. Create a realistic style human dynamic poses male/female painting

Submission guidelines

a)

b) Create a folder with HALLTICKET NO. save the submission files in this folder with the following naming-convention HALTICKETNO_Qno.psd and HALTICKETNO_Qno.jpeg.

Code No: BMM3.04

BA Multimedia

III Semester Regular Examination, Month - Year

Introduction to Digital 3D

Time: 5 hours Max. Marks: 50

Answer any one

1. Create a Cannon model and unwrap the model, apply shading and basic lighting to it. Look and feel has to be noticed.

Or

2. Create an interior set model, shading and light same camera angle has to be placed.

Submission quidelines

- a) Proper Unwrap has to be done for Q.no 1 and Q.no 2.
- b) Out linear has to be properly maintained
- c) 2 views of render has to take for the Q.no 1 and Q.no 2 with HD 1080
- d) The Complete Project file has to zip it and upload in the submission folder.

Code No: BMM3.05

BA Multimedia

III Semester Regular Examination, Month - Year

Audio & Video Editing

Time: 5 hours Max. Marks: 50

Answer any one

1. Make a trailer-cut of 1 Minute.

- a. Check the provided Input folder.
- b. Choose the footage that you wanted to do a trailer cut.
- c. Review the entire footage and check the total duration.
- d. Trailer must convey the highlights of the full version by adding required titles.

Submission:

- a. Output Duration: 1 1.30 min.
- b. Output Dimension: 1920x1080
- c. Output Format: MP4
- d. Submission must include the following...
 - i. Final edit video
 - ii. Short brief of each highlight in the notepad.

-- or --

2. Make a promo audio mashup in Sound Forge.

- a. Check the provided input & reference and listen to the total input.
- b. You have to separate each track yourself.
- c. You can shuffle the tracks for the mashup.
- d. You must begin the mashup by containing the middle lines of each track first.
- e. Then you can keep the starting lines if you find them by following with middle lines then you can jump to another track.
- f. Mashup must include every track from given input.
- g. You can use provided transitions.

Submission:

e. Output Duration: 5-7 minutes.

f. Output Format: MP3

Code No: BMM4.01

BA Multimedia IV Semester Regular Examination, Month - Year

Analytical Skills

Time: 5 hours Max. Marks: 50

Answer any Five

- 1. Write in detail about Analogy.
- 2. Elucidate measuring instrument in analogy.
- 3. Explain about coding and decoding.
- 4. Write about matrix coding.
- 5. Elucidate mixed number coding.
- 6. Explain in detail about blood relations.
- 7. Write about comparison type questions.
- 8. Write in detail about non verbal reasoning.

Code No: BMM4.02

BA Multimedia IV Semester Regular Examination, Month - Year

Stop Motion Animation

Time: 5 hours Max. Marks: 50

Answer any one

1. Telling a story on life of an animator

Or

2. Telling a story of daily labour

Submission guidelines:

1. Need to submit a video clip

Process:

The first step to develop the art of Storytelling is to find good stories. You will come across many different kinds of stories, but it is suggested to start with simple tales with simple elements.

Code No: BMM4.03

BA Multimedia

IV Semester Regular Examination, Month - Year

Modeling, Texturing and Shading

Time: 5 hours Max. Marks: 50

Answer any one

1. Create a modern bed room with props.

Or

2. Create a Sofa model and Texture with shading.

Submission quidelines

- a) Outliner, 3 different angles, Resolution:1080 X 960 File type: .Ma Q.no.1.
- b) Playblast .mov , Resolution: 1080 X 960 , File type : .Ma ,Q.no.2.

Code No: BMM4.04

BA Multimedia

IV Semester Regular Examination, Month - Year

Rigging and Animation

Time: 5 hours Max. Marks: 50

Answer any one

3. Create the Leg rigging with proper naming in outliner.

Or

4. Create a 24Frames Female Walk Cycle using Merry or Luna Character.

Submission quidelines

- c) Outliner, 3 different poses, Resolution:1080 X 960 File type: .Ma Q.no.1.
- d) Playblast .mov , Resolution: 1080 X 960 , File type : .Ma ,Q.no.2.

Code No: BMM4.05

BA Multimedia

IV Semester Regular Examination, Month - Year

Motion Graphics

Time: 5 hours Max. Marks: 50

Answer any one

1. Create a 2.5D Map Navigation Animation with Camera Movement in AE.

Or

2. Create a Motion Graphic Lyrical Video.

Submission guidelines

Code No: BMM5.01

BA Multimedia

V Semester Regular Examination, Month - Year

3D Character Modeling

Time: 5 hours Max. Marks: 50

Answer any one

1. Create the following model in accordance with the given reference.

or

2. Texture the following given character.

Code No: BMM5.02

BA Multimedia V Semester Regular Examination, Month - Year

Digital Sculpting

Time: 5 hours Max. Marks: 50

Answer any one

1. Sculpt the given Arm in the same pose.

Or

2. Sculpt the given chair.

Submission guidelines

Submit images in following views

1. Front and back view 2. Perspective view 3. Top view

Code No: BMM5.03

BA Multimedia

V Semester Regular Examination, Month - Year

Personality Development and Communication Skills

Time: 5 hours Max. Marks: 50

Answer any one

- 1. Elucidate the importance of attitude.
- 2. Describe a positive attitude.
- 3. Define success. Write about winning strategies for success.
- 4. Differentiate inspiration and motivation in detail.
- 5. Elucidate goal setting.
- 6. Write the importance of goal setting.
- 7. Define commitment. Write about your greatest commitment.
- 8. Write in detail about tragedies in life.

Code No: BMM5.1.1

BA Multimedia

V Semester Regular Examination, Month - Year

2D Compositing

Time: 5 hours Max. Marks: 50

Answer any one

1. Extract green matte and create foreground alpha matte and compositing with given background.

Or

2. Do Hoarding replacement by using given inputs.

Submission guidelines

- a) Final output must be HD1080p.
- b) Submit with breakdowns and the format should be .mp4 or .mov.

Code No: BMM5.2.1

BA Multimedia

V Semester Regular Examination, Month - Year

2D Animation

Time: 5 hours Max. Marks: 50

Answer any one

1. Animate a Biped walk cycle(profile).

Or

2. Animate a Quadruped walk cycle(profile).

Submission guidelines

- a) 1920*1080, 25 fps (Classical method/Hybrid method/Symbol method)
- b) FLA, SWF/MP4

Code No: BMM5.3.1

BA Multimedia

V Semester Regular Examination, Month - Year

Game Design - I

Time: 5 hours Max. Marks: 50

Answer any one

1. Write about MDA, The Door Problem and Notes on Formal Abstract Design tools.

Or

2. Create Full 14 Page detailed GDD about a Game where the main character has to save the world from an evil empire.

Submission guidelines

- a) Explain what is MDA and give its conclusion, in your own style explain the door problem and how it works with designers, write in detail about formal abstract design tools and why they are important. Export in PDF format
- b) Make sure to follow the proper template. Make sure to create a pipeline and user interface, Each page must be numbered.

Code No: BMM5.4.1

BA Multimedia

V Semester Regular Examination, Month - Year

Film Direction Basics

Time: 5 hours Max. Marks: 50

Answer any one

1) Silent continuity: without dialog, single location with two characters (1to3mins).

Or

2) Mise-en-scene (long take) minimum with 3 characters 1 to 2 mins length

Submission guidelines

- a) Submit in MOV format
- b) Duration 1 to 3 mins

Code No: BMM5.5.1

BA Multimedia

V Semester Regular Examination, Month - Year

Life study drawing

Time: 5 hours Max. Marks: 50

Answer any one

1. Draw 3 sets of Cubes(10each) in a single point perspective, Two point Perspective and Three point Perspective.

0r

2. Draw 3 sets of primitives (2 cube, 2 cone, 2 cylinder, 2 sphere), in a single point perspective, Two point Perspective and Three point Perspective, keep all 8 objects in a respective perspective system.

Submission guidelines

- Draw Manually on a single page, 10 or 8 "perfect" shapes in respective point perspectives. Can use rulers, but no any other tricks. Draw "through" these shapes as well. The construction lines should be clean and visible. Your cubes or shapes do not need to all be in the same system-- feel free to rotate them around and try different angles.
- Should only use Eraser & Pencils.
- Can use Scale for perspective grids or rulers, but for the actual shapes, it should be only free hand drawing.

Code No: BMM5.6.1

BA Multimedia

V Semester Regular Examination, Month - Year

HTML5 and CSS

Time: 5 hours Max. Marks: 50

Answer any one

1) Create any 2 web layouts using tables.

0r

2) Design a Restaurant Website with at least 4 pages using CSS.

Submission guidelines

a) Submit the entire project folder.

Code No: BMM5.1.2

BA Multimedia

V Semester Regular Examination, Month - Year

3D Lighting & Compositing

Time: 5 hours Max. Marks: 50

Answer any one

1) Do interior night lighting using a software renderer.

0r

2) Do exterior day or night lighting using a software renderer.

Submission guidelines

Submit hd1080 rendered image and the format should be .jpg.

Code No: BMM5.2.2

BA Multimedia

V Semester Regular Examination, Month - Year

Rigging - I

Time: 5 hours Max. Marks: 50

Answer any one

1) Create a Car Rig with Suspension.

0r

2) Create a Mechanical Robot Rig.

Submission guidelines

- a) Outliner, 3 different poses, Resolution:1080 X 960 File type : .Ma Q.no.1.
- b) Playblast .mov , Resolution: 1080 X 960 , File type : .Ma ,Q.no.2.

Code No: BMM5.3.2

BA Multimedia

V Semester Regular Examination, Month - Year

Game Programing

Time: 5 hours Max. Marks: 50

Answer any one

- 1) Write a program to demonstrate the output results of the followings:
 - Using For loop and do while loop and while Loop Write a mathematical Tables for any integer.
 - Show the Algorithm and flowchart for showing addition of Two numbers.
 - Writer a program using nested if else to check: whether a given number is greater than 80 AND is Even or Odd.
 - Do the following Pattern using Nested FOR LOOP..

*

**

• Write different programs showing I). Single Inheritance II). Multilevel Inheritance III). Hierarchical Inheritance.

Or

- 2) Write a program to demonstrate the output results of the followings:
 - Using control statements " if , else , if else , switch. break ,continue : write a simple program using all of them.
 - Make a flowchart and write a program for For Loop.
 - Explain with a program example when, how and why we need to use Abstract class.
 - Write a program showing the method overriding and abstract overriding.

Code No: BMM5.4.2

BA Multimedia

V Semester Regular Examination, Month - Year

Film Cinematography Basics

Time: 5 hours Max. Marks: 50

Answer any one

 $1. \ \ \text{Set up lighting for interview program}$

Or

- 2. Shoot the following shots
 - A. POV shot.
 - B. Over the shoulder shot.
 - C. Low angle shot.
 - D. Shot with focus shift back and forth.
 - E. Shot revealing the character.
 - F. 30secs Follow shot of a person.

Submission guidelines

a) story, dialogues, editing not required, just shots

Code No: BMM5.5.2

BA Multimedia

V Semester Regular Examination, Month - Year

Advanced Painting

Time: 5 hours Max. Marks: 50

Answer any one

1. Do manual painting of the Landscape as per the given reference.

Or

2. Do digital Art of the Landscape as per the given reference.

Submission guidelines for Manual Painting:

- a) Should bring your own material based on your choices.
- b) Use Universal canvas of 18" x 24" size, suitable for acrylic painting or

Can use 300gsm students' quality paper of Half Imperial 15" x 22" for water colors.

Submission guidelines for Digital Painting:

- a) Should maintain proper layer structure with naming convention.
- b) The "page" size should be 1600 x 1200 pixels @ 144dp.
- c) Should submit Final JPEG along with PSD file.

Code No: BMM5.6.2

BA Multimedia

V Semester Regular Examination, Month - Year

Web Scripting Language

Time: 5 hours Max. Marks: 50

Answer any one

1) Write a JavaScript Validation with regular expression for form.

or

- 2) Do the following
 - a) Write a JavaScript program that accepts two integers and displays the larger.
 - b) Write a JavaScript for loop that will iterate from 0 to 15. For each iteration, it will check if the current number is odd or even, and display a message to the screen. Sample Output:

"0 is even"

"1 is odd"

"2 is even"

Code No: BMM6.01

BA Multimedia

VI Semester Regular Examination, Month - Year

Scene Composition & Camera Layouts

Time: 5 hours Max. Marks: 50

Answer any one

1. Create a Three persons conversational camera blocking using 3D application.

or

2. Create a composition to show the importance of two subjects in order.

Code No: BMM6.02

BA Multimedia

VI Semester Regular Examination, Month - Year

3D Environment Design

Time: 5 hours Max. Marks: 50

Answer any one

1. Create an Interior Set using BSPs, do set dressing with proper scaling, texturing, and lighting with at least 3 unique interactions.

Submission Guidelines:

- Submit the walk-through of the scene game play in .mp4 format.
- Name your files using the following naming-convention: **HALLTICKETID_Qno.mov** and **HALLTICKETID_Qno.ma**.

Or

2. Create a Marble Maze ball game with huddles and collectables. The game should have at least 2 levels.

Submission Guidelines:

- Submit a package of the project and the game play video.
- Name your files using the following naming-convention: **HALLTICKETID_Qno.mov** and **HALLTICKETID_Qno.ma**

Code No: BMM6.03

BA Multimedia

VI Semester Regular Examination, Month - Year

Management Information System

Time: 5 hours Max. Marks: 50

Answer any five

- 1. Define MIS, What are the characteristics of MIS? Explain the relevance of MIS to organizations.
- 2. Which are different decision-making models on individual and organizational level and explain.
- 3. Explaining different systems development life cycles with its stages. What is its use to develop MIS?
- 4. Explain the ethical and social issues in the information system.
- 5. Write the practical implementation of following

Supply chain management

SDLC Models

Customer relationship management

Database Types

- 6. List and briefly describe the key system applications in the information system. Explain each system with an example.
- 7. What do you mean by information architecture and information technology infrastructure? Why are they important concerns for managers?
- 8. Why are information systems essential in business today? Describe the trends in the global business environment that have made information systems so important.

Code No: BMM6.1.1

BA Multimedia

VI Semester Regular Examination, Month - Year

Matchmove

Time: 5 hours Max. Marks: 50

Answer any one

1. Do matchmove apply checker map and cones for shot_01.

Or

2. Do matchmove integrate cg text apply checker map and cones for shot_02.

Submission guidelines

- a) Final output must be HD1080p.
- b) Submit with breakdowns and the format should be .mp4 or .mov.

Code No: BMM6.2.1

BA Multimedia

VI Semester Regular Examination, Month - Year

3D Animation

Time: 5 hours Max. Marks: 50

Answer any one

- 1) Create an Attitude walk cycle for a given character.
- 2) Create a climb Animation using given video reference.

Submission quidelines

- a) Frames required: not more than 100 frames.
- b) Frame rate should be 24 fps.
- c) Add camera(resolution:1920x1080), should maintain resolution gate and safe action.
- d) need camera angle playblast and it should be .mov format.
- e) Naming of the file should be "IACG_Sam_v01", for both Maya and Playblast.
- f) Follow reference playblast and do start animate the character, as per given reference.

Code No: BMM6.3.1

BA Multimedia

VI Semester Regular Examination, Month - Year

Game Development - I

Time: 5 hours Max. Marks: 50

Answer any one

- 1) Create a simple game prototype for a 2D platformer with coins, pick ups, obstacles should be placed in the level.
- 2) Create a small 2D game with a single level and neat HUD system with User Interface(Like Main Menu, Pause Menu, Options, Music, Game Over screen).

Submission guidelines

- a) Final output must be HD1080p.
- b) Submit the game package file.

Code No: BMM6.5.1

BA Multimedia

VI Semester Regular Examination, Month - Year

Advanced Digital Sculpting

Time: 5 hours Max. Marks: 50

Answer any one

1. Sculpt the given old man face.

Or

2. Sculpt the given Skull.

Submission guidelines

- a) Submit images in following views
- b) 1. Front and back view 2. Perspective view 3. Top view

Code No: BMM6.6.1

BA Multimedia

VI Semester Regular Examination, Month - Year

JavaScript Libraries- jQuery

Time: 5 hours Max. Marks: 50

Answer any one

1) Create a 4 pages webpage, in the gallery page create a slideshow using J-Query.

Or

2) Build a Password Strength Check for registration page.

Submission guidelines

a) Submit the project file as zip.

Code No: BMM6.1.2

BA Multimedia

VI Semester Regular Examination, Month - Year

Dynamics - I

Time: 5 hours Max. Marks: 50

Answer any one

1. Creating Rainfall by using nParticles.

Or

2. Creating Smoke effects by using Fluids.

Submission guidelines

a) Submit the proper playblast of the scene file and .ma project file.

Code No: BMM6.2.2

BA Multimedia

VI Semester Regular Examination, Month - Year

Rigging - II

Time: 5 hours Max. Marks: 50

Answer any one

1. Animal Rig with Stretch and Squash.

Or

2. Character Rig with FK and IK Setup.

Submission quidelines

- a) Outliner, 3 different poses, Resolution:1080 X 960 File type : .Ma Q.no.1.
- b) Playblast .mov , Resolution: 1080 X 960 , File type : .Ma ,Q.no.2.

Code No: BMM6.3.2

BA Multimedia

VI Semester Regular Examination, Month - Year

Game Design - II

Time: 5 hours Max. Marks: 50

Answer any one

1. Design and explain your characters through a documentation (Not more than 5 pages).

Or

2. Create a visual novel based crime genre.

Code No: BMM6.4.2

BA Multimedia

VI Semester Regular Examination, Month - Year

Principles of Video Editing

Time: 5 hours Max. Marks: 50

Answer any one

1. Edit given shots in linear.

Or

2. Analyse the editing style of given movie

Code No: BMM6.5.2

BA Multimedia

VI Semester Regular Examination, Month - Year

Character & Set Designing

Time: 5 hours Max. Marks: 50

Answer any one

- 1. Design a Hero character, with below mentioned inputs.
 - a. Name of the character
 - b. Which era (Time Period)
 - c. Height of the character
 - d. Kind of weapon he uses
 - e. Defining physical characteristics (Hair style, Eye color, moles, etc.)
 - f. Nature of the character
 - g. Which Location (Forest, Desert or Mountains)

or

- 2. Design a Villain character, with below mentioned inputs.
 - a. Name of the character
 - b. Which era (Time Period)
 - c. Height of the character
 - d. Kind of weapon he uses
 - e. Defining physical characteristics (scars, blemishes, moles, etc.)
 - f. Nature of the character
 - g. Which Location (Forest, Desert or Mountains)

Code No: BMM6.6.2

BA Multimedia

VI Semester Regular Examination, Month - Year

Responsive front-end framework

Time: 5 hours Max. Marks: 50

Answer any one

1. Create a Landing page for a social network type site.

or

2. Create a portfolio web page with Scrollspy.

Code No: BMM7.01

BA Multimedia

VII Semester Regular Examination, Month - Year

Entrepreneurial Skills

Time: 5 hours Max. Marks: 50

Answer any one

- 1. How do you know if starting a business is right for you? Explain.
- 2. Why do small businesses owned by entrepreneurs fail? Explain.
- 3. Explain the role of leadership brings success to a company?
- 4. Define entrepreneurship and its need and significance? Differentiate between Entrepreneur and manager?
- 5. What is a business plan? Explain the elements of a business plan?
- 6. Explain in detail about Angel investors and Venture capital.
- 7. Explain three major financial statements in business?
- 8. How do you best exemplify the entrepreneurial spirit?

Code No: BMM7.1.1

BA Multimedia

VII Semester Regular Examination, Month - Year

Lighting for Compositing

Time: 5 hours Max. Marks: 50

Answer any one

1. Do CG live using software renderer.

or

2. Do compositing with IBL software renders.

Code No: BMM7.2.1

BA Multimedia

VII Semester Regular Examination, Month - Year

Character Animation

Time: 5 hours Max. Marks: 50

Answer any one

1. Bi-Ped Walk Cycle

or

2. QuadruPed Walk Cycle

Code No: BMM7.3.1

BA Multimedia

VII Semester Regular Examination, Month - Year

Game Art

Time: 5 hours Max. Marks: 50

Answer any one

1. Model a weapon with three different lods and unwrap the model in accordance with the given reference

Or

2. Create texture and shading for the given set

Submission quidelines

- a) Submit Low Poly, High Poly file, render image
- b) High Poly file render image
- c) Outliner has to be completely Organized and proper naming.

Submission Guidelines:

- Submit complete project folder.
- Submit unwrap images along with textures images both in project files.
- Resolution should be HD 1080.
- Name your files using the following naming-convention
- HALLTICKET_ID_Num_Q_no.

Code No: BMM7.4.1

BA Multimedia

VII Semester Regular Examination, Month - Year

VFX for Film-makers

Time: 5 hours Max. Marks: 50

Answer any one

1. Place a 3d car on a moving road footage.

or

2. Make a Gag with CG object Interaction

Code No: BMM7.5.1

BA Multimedia

VII Semester Regular Examination, Month - Year

Concept Art

Time: 5 hours Max. Marks: 50

Answer any one

1. Create an environment Gray Concept Art.

or

2. Do Matt Painting for the given character with a sci-fi theme.

Code No: BMM7.6.1

BA Multimedia

VII Semester Regular Examination, Month - Year

Dynamic Website Development

Time: 5 hours Max. Marks: 50

Answer any one

3. Create a database table to store user accounts.

or

4. Build a Complete Registration and Login System using PHP.

Code No: BMM7.1.2

BA Multimedia

VII Semester Regular Examination, Month - Year

Dynamics - II

Time: 5 hours Max. Marks: 50

Answer any one

1. Building Destruction fx By using Bullet Physics.

or

2. Create an Ocean With a Ship By Using a Boss.

Code No: BMM7.2.2

BA Multimedia

VII Semester Regular Examination, Month - Year

Facial Animation

Time: 5 hours Max. Marks: 50

Answer any one

1. Create animation with Eye Blink with eyebrows.

or

2. Create animation Neutral to expression breathing

Code No: BMM7.3.2

BA Multimedia

VII Semester Regular Examination, Month - Year

Game Development -II

Time: 5 hours Max. Marks: 50

Answer any one

1.Create a "Roller Ball" fully playable game in Unity 3D.

Game play: Controll main ball (rigidbody component attached) with the Keyboard Inputs. Try to hit and destroy the hanging objects (at least 10 hanging objects) to Score more. When score reaches to some limit, game over scene appears with high score and game over text.

- a). Use basic primitive game objects and standard assets form the unity library(if needed).
- b). Create 3 different SCENES a) Menu b) GamePlay c). Game Over Scene.
- c).UI system with atleast Play Info Quit buttons.(Make sure it works).
- d). Camera must follow the main ball.

Compulsory make a). Game Design Document b). wire frame.

- 2. Create a basic level prototype,Import a 3D character and apply Idle / Run / Jump animations to that by Animator Controller with keyboard events.
 - a) use Standard Assets from Unity OR b) Maximo characters
 - c) UI system with atleast "Play" "Info" "Quit" buttons.(Make sure it works).

Compulsory make a). Game Design Document b). wire frame.

Code No: BMM7.4.2

BA Multimedia

VII Semester Regular Examination, Month - Year

Production Management

Time: 5 hours Max. Marks: 50

Answer any one

1. Write the budgeting template for production.

Or

2. Draw a storyboard for any existing ad.

Code No: BMM7.5.2

BA Multimedia

VII Semester Regular Examination, Month - Year

Visual Storytelling

Time: 5 hours Max. Marks: 50

Answer any one

1. Tell a story using Stop Motion - 8 to 10 Seconds clip.

or

2. Need to do 2D & 3D Animatics for a story.

Code No: BMM7.6.2

BA Multimedia

VII Semester Regular Examination, Month - Year

Digital Marketing

Time: 5 hours Max. Marks: 50

Answer any one

1. Create a Banner Animation for a website.

or

2. Creating Interactive Product Presentation.
