

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD.



CIRCULAR NO.SU/SCIENCE & TECHNOLOGY STUDIES/SYLL./B.VOC./78/2022.

It is hereby informed to all concerned that, on the recommendation of Ad-hoc Board in Vocational Studies and Dean, Faculty of Science & Technology the Hon'ble Vice-Chancellor has **accepted the curriculum of following B.Voc. Courses under Choice Based Credit and Grading System** in his emergency powers under Section-12 [7] of the Maharashtra Public Universities Act, 2016 on behalf of the Academic Council as appended herewith:

Sr.No.	Course Name	Semester
1	B.Voc in Software Development	(I & II)
2	B.Voc in Medical Laboratory Technology	(I & II)
3	B.Voc in Multimedia & Animation- Structure & syllabus [New]	(Sem-I to VI)
4	B.Voc in Multimedia & Animation [old]	(Sem-V&VI)
5	B.Voc in Organic Agriculture	(Sem-V & VI)
6	B.Voc in Bioproducts Technician	(Sem-I to VI)
7	M.Voc in Food Processing Technology	(Sem-I to IV)

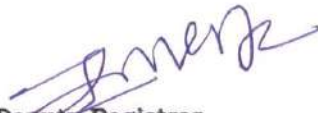
This is effective from the **Academic Year 2020-21 and 2021-22** and onwards. This curriculum is also available on the University website www.bamu.ac.in.

All concerned are requested to note the contents of the circular and bring notice to the students, teachers and staff for their information and necessary action.

University campus,
Aurangabad-431 004.
Ref. No.SU/B.voc./Curri./2021-22

Date: 20.01.2022

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**Deputy Registrar,
Academic [Syllabus]
Section.**

Copy forwarded with compliments to :-
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- 1] **The Principal All Affiliated Concerned Colleges, Dr.Babasaheb Ambedkar Marathwada University, Aurangabad.**
 - 2] **The Director, University Network & Information Centre, UNIC, with a request to upload the curriculum along with this Circular on University Website.**
- Copy to :-**
- 1] The Director, Board of Examinations & Evaluation, Dr.BAMU, A'bad
 - 2] **The Concerned Section, Examination Branch,**
 - 3] The Section Officer, [Eligibility Unit].
 - 4] **The Programmer [Computer Unit-1] Examinations, section, Dr.BAMU, A'bad**
 - 5] **The Programmer [Computer Unit-2] Examinations, section, Dr.BAMU, A'bad**
 - 6] The In-charge, [E-Suvidha Kendra],
 - 7] The B.Voc Section, Dr.BAMU,A'bad
 - 8] The Public Relation Officer,
 - 9] The Record Keeper,

**DR. BABASAHEB AMBEDKAR
MARATHWADA UNIVERSITY
AURANGABAD**



SYLLABUS OF
BACHELOR OF VOCATIONAL

IN

**B.Vov in - Multimedia &
Animation [New]
SEMESTER-I & VI**

Choice Based Credit System

Effective form the Academic Year

2020-21 and 2021-22 & Onwards

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Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (MS)
Uniform Pattern for Bachelor of Vocation (B.VOC) Program

Faculty of Science and Technology,
Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
(W.E.F Academic Year 2021-22)

B.Voc in Multimedia & Animation (New Sem-I to VI)



Approved								SEMESTER - I	
Sr. No.	Subject Code	Title of the Subject	Contact Hours Per Week		Evaluation Scheme (marks)		Credit		
			L	P	CIA	SEE			
General Academic Components									
1	BVMA-111	Functional English	4	0	20	80	4		
2	BVMA-112	History of Animation	4	0	20	80	4		
3	BVMA-113	Script Writer	4	0	20	80	4		
Skill Development Components									
4	BVMA-114	Graphic Designer	4	0	20	80	4		
5	BVMA-115	Designing of Character	4	0	20	80	4		
6	BVMA-116	LAB: Based on Graphic Designer	0	6	25	25	3		
7	BVMA-117	LAB: Based on Designing of Character	0	6	25	25	3		
8	BVMA-118	Programming in Python	4 Lectures/ 100 hrs. Industrial Certification		20	80	4		
Total					170	530	30		

Revised

[Signature]
25/11/21

SEMESTER - II							
Sr. No.	Subject Code	Title of the Subject	Contact Hours Per Week		Evaluation Scheme (marks)		Credit
			L	P	CIA	SEE	
General Academic Components							
1	BVMA-121	Computer Skills	4	0	20	80	4
2	BVMA-122	Camera Operator	4	0	20	80	4
3	BVMA-123	Image Editor	4	0	20	80	4
Skill Development Components							
4	BVMA-124	Vector Artist	4	0	20	80	4
5	BVMA-125	2D Animation	4	0	20	80	4
6	BVMA-126	LAB: Based on Vector Artist	0	6	25	25	3
7	BVMA-127	LAB: Based on 2D Animation	0	6	25	25	3
8	BVMA-128	Storyboard Artist	4 Lectures/ 100 hrs. Industrial Certification		20	80	4
Total					170	530	30

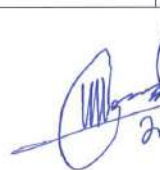
SEMESTER - III							
Sr. No.	Subject Code	Title of the Subject	Contact Hours Per Week		Evaluation Scheme (marks)		Credit
			L	P	CIA	SEE	
General Academic Components							
1	BVMA-231	Energy and Environment	4	0	20	80	4
2	BVMA-232	Advance Web Designing	4	0	20	80	4
3	BVMA-233	Film Making	4	0	20	80	4
Skill Development Components							
4	BVMA-234	3D Modelling	4	0	20	80	4
5	BVMA-235	Texturing Artist	4	0	20	80	4
6	BVMA-236	LAB: Based on 3D Modelling	0	6	25	25	3
7	BVMA-237	LAB: Based on Texturing Artist	0	6	25	25	3
8	BVMA-238	Video Editor	4 Lectures/ 100 hrs. Industrial Certification		20	80	4
Total					170	530	30

SEMESTER - IV							
Sr. No.	Subject Code	Title of the Subject	Contact Hours Per Week		Evaluation Scheme (marks)		Credit
			L	P	CIA	SEE	
General Academic Components							
1	BVMA-241	Personality Development and Stress Management	4	0	20	80	4
2	BVMA-242	C++	4	0	20	80	4
3	BVMA-243	Lighting Artist	4	0	20	80	4
Skill Development Components							
4	BVMA-244	Stop Motion Animation	4	0	20	80	4
5	BVMA-245	Motion Graphics Artist	4	0	20	80	4
6	BVMA-246	LAB: Based on Stop Motion Animation	0	6	25	25	3
7	BVMA-247	LAB: Based on Motion Graphics Artist	0	6	25	25	3
8	BVMA-248	Music composition	4 Lectures/ 100 hrs. Industrial Certification		20	80	4
Total					170	530	30

 20/11/24



SEMESTER – V							
Sr. No.	Subject Code	Title of the Subject	Contact Hours Per Week		Evaluation Scheme (marks)		Credits
			L	P	CIA	SEE	
General Academic Components							
1	BVMA-351	Human Resource Management	4	0	20	80	4
2	BVMA-352	Basics of Digital Marketing	4	0	20	80	4
3	BVMA-353	Elective : (a) Rigging Artist (b) Director of Photography-I	4	0	20	80	4
Skill Development Components							
4	BVMA-354	Elective : (a) VFX Compositor (b)Live Action Director-I	4	0	20	80	4
5	BVMA-355	3D Animation	0	8	25	25	4
6	BVMA-356	Off Campus Industrial/Institutional Training/Field Survey	#		50	125	6
7	BVMA-357	Major Project - I	0	6	50	50	3
8	BVMA-358	Seminar	0	2	25	00	1
Total					230	520	30


28/11/24



SEMESTER – VI							
Sr. No.	Subject Code	Title of the Subject	Contact Hours Per Week		Evaluation Scheme (marks)		Credits
			L	P	CIA	SEE	
General Academic Components							
1	BVMA-361	Entrepreneurship Development	4	0	20	80	4
2	BVMA-362	Desktop Publishing	4	0	20	80	4
3	BVMA-363	Elective: (a) FX Artist (b) Director of Photography-II	4	0	20	80	4
Skill Development Components							
4	BVMA-364	Elective : (a) ROTO Artist (b) Live Action Director-II	4	0	20	80	4
5	BVMA-365	Gaming Engine	0	8	25	25	4
6	BVMA-366	Off Campus Industrial/Institutional Training/Field Survey	#		20	80	4
7	BVMA-367	Major Project – II, Report and Seminar	0	12	100	100	6
Total					225	525	30

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The Bachelor of Vocation (B. VOC.) program run under Faculty of Science and Technology of the University, is divided into six semesters shaving 180 credits. Each semester has courses categorized under **General Education Components** and **Skill Development Components**.

Preamble:

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad proposes to offer a three year Bachelor programme in Vocation (B. Voc.) program which are being run University Department and various affiliated colleges. The curriculum design of this program is undertaken in the following framework-

- 8
- a) Although there has been remarkable progress in all sectors of education in last couple of decades, the less regulated area of the education sector-vocational training—seems to have lost its significance/importance. This has led to the widening gap between the supply and demand for skilled manpower across various industries and R&D organizations. This shortage of skills has translated directly into unemployment among an increasing number of graduates who pass-out every year and are forced to be retrained in order to become marketable.

These programme are designed to produce skilled manpower so that wide variety of options in job sectors would be available and it will improve the opportunities for the unemployed youths in the country in both the private and public sectors.

- b) According to a study conducted by the Associated Chambers of Commerce and Industry of India (ASSOCHAM), there will be a deficit of 40 million working professionals by the year 2020 and the employers would face the difficulty of filling positions because of the dearth of suitable talent and skilled person.

These programme aim to provide concrete solution for these problems and would facilitate to improve:

- 8
- (i) **Quality of training**
 - (ii) **High drop-out rates**
 - (iii) **Linkages with Universities and Industry**
 - (iv) **Inadequacy of resources**

- c) These programme are intended to offer practical training and skills needed to pursue an occupation straight away. It will provide options to the students to select the courses of their choice which are directly aligned to land a job in a chosen profession or a skilled trade. One of the end results of these programme is to enable an individual to attain self-employment.

Program Educational Objectives:

The objectives of B.Voc. (Skill Specific) program are to produce graduates who -

1. Are equipped with time relevant knowledge of specialized Skills to address the multidisciplinary demand of the target skill sector.
2. Have a broad-based background to practice target oriented skills in concerned specialization in manufacturing/service industries and Government settings meeting the growth expectations of stakeholders.
3. Have an ability to pursue higher studies and succeed in academic and professional careers.
4. Have the ability to address professional demands individually and as a team member communicating effectively in technical environment using modern tools.
5. Recognize the need for and possess the ability to engage in lifelong learning.
6. Will be sensitive to consequences of their work both ethically and professionally for productive professional career.

Program Outcomes (PO):

Vocational Education is education that prepares the students for specific trades, crafts and careers at various levels and scopes. Scope of modern fabric of vocational education builds Human resource from a trade/ craftsmanship, technician or professional position in R & D organizations.

The Program Outcomes are the skills and knowledge which the students have at each exit level/at the time of graduation. These Outcomes are generic and are common to all exit levels mentioned in the programme structure. Graduates of the B.Voc. Program are expected to -

PO1. Apply broad based fundamental knowledge of the specific skill based trade for the solution of target skill sector.

PO2. Identify industry domain related problems at varied complexity and analyze the same to formulate/ develop substantiated conclusion using first principles of domain sectors and technical literature.

PO3. Design / develop solutions for broad based problems in the target skill based trade to Address changing challenges put forward by market demand/ stakeholder

PO4. Design and conduct technology enabled experiments, analyze the resulting data and interpret the same to provide valid conclusions

PO5. Use the techniques, skills and modern tools necessary skill based trade to practice with clear understanding of limitations.

PO6.Apply broad understanding of ethical and professional skill based trade practice in the context of global, economic, environmental and societal realities while encompassing relevant contemporary issues.

PO7.Apply broad understanding of impact of skill based trade in a global, economic, environmental and societal context.

PO8.Apply ability to develop practical solutions for skill trade problems within positive professional and ethical boundaries.

PO9.Function effectively as a leader and as well as team member in diverse/ multidisciplinary environments.

PO10.Communicate effectively in oral and written format addressing specific professional/ social demands.

PO11. Demonstrate knowledge and understanding of the first principles of skill trade and apply these to one's own work as a member and leader in a team, to complete project in any environment.

PO12. Recognize the need for and have the ability to acquire advance knowledge for addressing the changing technological demands of the target skill trade.

Program Specific Outcomes (PSO):

Graduates of the B.Voc. (Skill Specific) program are expected to -

1. Apply broad based fundamental knowledge of specialized skills for the solution of concerned manufacturing and service industries related problems.
2. Identify demand oriented and need based skillsets at varied complexity and analyze the same to formulate/ develop substantiated conclusion.
3. Design and conduct technology enabled experiments, analyze the resulting data and interpret the same to provide valid conclusions.
4. Use the techniques, skills and modern tools necessary for concerned skill sectors for clear understanding of the limitations.

Exit Options:

The program allows exit of a student in an intermediate stage, on successful employment. Scopes will be there for further continuation of study. The other wise exit options will be as follows-

Exit Point	Duration After	Diploma / Degree to be Offered
First exit	6 months	Certificate in Vocation
Second exit	After 1 yr.	Diploma in Vocation (D. Voc.)
Third exit	After 2 yrs.	Advanced Diploma in Vocation (Adv. D. Voc.)
Fourth exit	After 3 yrs.	Bachelor in Vocation (B. Voc.)

Eligibility:

The eligibility condition for admission of B.Voc. (Multimedia & Animation) Programme shall be 12th pass science, arts & commerce (English medium)/MCVC or equivalent the selection procedure is as per university norms and institution guidelines.

Admission / Promotion Process:

In response to the advertisement for registration, interested students will have to register themselves for a Common Entrance Test (CET)/ Merit based admission process. Admission will be done on the basis of performance of students at Common Entrance Test (CET)/ Marks scored in qualifying examination.

A candidate who has sought admission to Semester – I shall be admitted to Semester – II automatically. A candidate who has passed 75% of the papers at First Year (First and Second Semesters together) examinations shall be allowed to take admissions in third semester. Similarly, a candidate who has passed 75% of the papers at the Second Year (Third and Fourth Semesters together) examinations shall be allowed to take admission to the Fifth semester. However, if a candidate has not passed the First and Second Semester examinations, he shall not be allowed to take admission to the Fifth Semester. Appearance in the First, Third and Fifth semester is compulsory to get promoted to next semester.

Choice Based Credit System (CBCS):

The choice based credit system is going to be adopted. This provides flexibility to make the system more responsive to the changing needs of our students, the professionals and society. It gives greater freedom to students to determine their own pace of study. The credit based system also facilitates the transfer of credits.

- Students will have to earn 30 credits for the award of Six Month Certificate in Vocation
- Students will have to earn 60 credits for the award of one year Diploma in Vocation (D. Voc.)
- Students will have to earn 120 credits for the award of two year Advance Diploma in Vocation (Adv. D. Voc.)
- Students will have to earn 180 credits for the award of three year Bachelor Degree in Vocation (B. Voc.)

Credit-to-contact hour Mapping:

- (a) One Credit would mean equivalent of 15 contact hours for theory lecture.
- (b) For lab course/ workshops/internship/field work/project, the credit weightage for equivalent hours shall be 50% that for lectures.
- (c) For self- learning, based on e-content or otherwise, the credit weightage for equivalent hours of study should be 50% or less of that for lectures/workshops.

Attendance:

Students must have 75 % of attendance in each course for appearing examination otherwise he / she will not be strictly allowed for appearing the examination of each course.

Evaluation Methods:

The assessment will be based on 20: 80 ratio of continuous internal assessment (CIA) and semester end examination (SEE). Performance will be decided after combining performance in CIA and SEE. In case of failure in SEE in particular course(s), exam will be conducted in immediate subsequent semester. However, if a student fails in CIA (considering independent CIA score), he/she may appear for the same CIA, at his/her own responsibility in the next academic year, when the same course is offered during regular academic session.

Continuous Internal Assessment (CIA):

(A) For 4 credit courses-

There will be 20 marks for Continuous Internal Assessment. Two internal tests (of 20 marks each) will be conducted, after completion of 40% and 80% of the curriculum respectively.

Average performance of the two tests will be considered for final marks-memo preparation. The setting of question papers and the assessment will be done by concerned teacher.

(B) For 2 credit courses-

There will be 10 marks for Continuous Internal Assessment. Two internal tests (of 10 marks each) will be conducted, after completion of 40% and 80% of the curriculum respectively.

Average performance of the two tests will be considered for final marks-memo preparation. The setting of question papers and the assessment will be done by concerned teacher.

Semester End Examination (SEE):

The semester end theory examination for each theory course of 4 credits will be of 80 marks, whereas, for 2 credit theory course, the same will be of 40 marks. Therefore, the total marks shall be 100 for 4 credit theory course (80 marks semester end exam + 20 marks CIA) and 50 for 2 credit theory course (40 marks semester end exam + 10 marks CIA).

Pattern of semester end question paper will be as below:

(A) For 4 credit courses-

- The semester end examination of theory course will have two parts (20+60 = 80 Marks)
- Part A will be consisting of 10 questions having 2 marks each (multiple choice questions / fill in the blanks/ answer in one sentence) as compulsory questions and it should cover entire course syllabus (20 Marks)
- Part B will contain 05 questions of 12 marks each with equal weightage on every module. Each of these questions will have two options, from which students will have to attempt any one.
- 20 to 30% weightage can be given to problems/ numerical (wherever applicable) wherein use of non-programmable scientific calculator may be allowed.
- Number of sub questions (with allotment of marks) in a question may be decided by the examiner.

(B) For 2 credit courses-

- The semester end examination of theory course will have two parts (10+30 = 40 Marks)
- Part A will be consisting of 05 questions having 2 marks each (multiple choice questions / fill in the blanks/ answer in one sentence) as compulsory questions and it should cover entire course syllabus (10 Marks)
- Part B will contain 05 questions of 06 marks each with equal weightage on every module. Each of these questions will have two options, from which students will have to attempt any one.
- 20 to 30% weightage can be given to problems/ numerical (wherever applicable) wherein use of non-programmable scientific calculator may be allowed.
- Number of sub questions (with allotment of marks) in a question may be decided by the examiner.

Regarding practical examinations, the assessment will be based on 50: 50 ratio of continuous internal assessment (CIA) and semester end examination (SEE). During each semester, student must perform at least six experiments from every laboratory course. Internal and external (Semester end) practical examination will be conducted at the end of each semester.

Earning Credits:

At the end of every semester, a letter grade will be awarded in each course for which a student had registered. A student's performance will be measured by the number of credits that he/she earned by the weighted Grade Point Average (GPA). The SGPA (Semester Grade Point Average) will be awarded after completion of respective semester and the CGPA (Cumulative Grade Point Average) will be awarded at the respective exit point.

Grading System:

The grading reflects a student-own proficiency in the course. A ten point rating scale shall be used for the evaluation of the performance of the students to provide letter grade for each course and overall grade for the Bachelor Program. Grade points are based on the total number of marks obtained by him / her in all heads of the examination of the course. The grade points and their equivalent range of marks are shown in Table-I

Table – I: Ten point grade and grade description

Marks Obtained (%)	Grade Point	Letter Grade	Description
90-100	9.00- 10	O	Outstanding
80-89	8.00-8.90	A+++	Exceptional
70-79	7.00-7.90	A	Excellent
60-69	6.00-6.90	A +	Very Good
55-59	5.50-5.90	B	Good
50-54	5.00-5.40	B	Fair
45-49	4.50-4.90	C++	Average (Above)
41-44	4.1-4.49	C	Average
40	4.0	P	Pass
< 40	0.0	F	Fail (Unsatisfactory
	0.0	AB	Absent

- Non-appearance in any examination / assessment shall be treated as the students have secured zero marks in that subject examination / assessment.
- Minimum P grade (4.00 grade points) shall be the limit to clear / pass the course / subject. A student with F grade will be considered as —failed in the concerned course and he / she has to clear the course by appearing in the next successive semester examinations. There will be no revaluation or recounting under this system.
- Every student shall be awarded grade points out of maximum 10 points in each subject (based on 10 point scale). Based on the grade points obtained in each subject, Semester
- Grade Point Average (SGPA) and then Cumulative Grade Point Average (CGPA) shall be computed. Results will be announced at the end of each semester and CGPA will be given at respective exit point.

Computation of SGPA (Semester Grade Point Average) and CGPA (Cumulative Grade Point Average)

Grade in each subject / course will be calculated based on the summation of marks obtained in all five modules.

The computation of SGPA and CGPA will be as below

- Semester Grade Point Average (SGPA) is the weighted average points obtained by the students in a semester and will be computed as follows:

$$\text{SGPA} = \frac{\text{Sum (Course Credits) X Number of Grade Points in concerned Course Gained by the Student}}{\text{Sum (Course Credits)}}$$

- The SGPA will be mentioned on the grade card at the end of every semester.
- The Cumulative Grade Point Average (CGPA) will be used to describe the overall performance of a student in all semester of the course and will be computed as under.

$$\text{CGPA} = \frac{\text{Sum (All six Semester SGPA)}}{\text{Total Number of Semester}}$$

- The SGPA and CGPA shall be rounded off to the second place of decimal.

Grade Card

Results will be declared by the Centre and the grade card (containing the grades obtained by the student along with SGPA) will be issued by the university after completion of every semester. The grade card will be consisting of following details.

- Title of the courses along with code opted by the student. Credits associated with the course.
- Grades and grade points secured by the student.
- Total credits earned by the student in a particular semester. Total credits earned by the students till that semester.
- SGPA of the student.
- CGPA of the student (at respective exit point).

Cumulative Grade Card

The grade card showing details grades secured by the student in each subject in all semesters along with overall CGPA will be issued by the University at respective exit point.

**B.Voc.
(Multimedia and Animation)
First Year
Semester-I**

BVMA111: Functional English

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

To provide students with fundamental backgrounds of communicative English.

COURSE OUTCOMES:

On completion of the course, students should be able to —

- 1) Apply grammatical tools to formulate correct sentences in English.
- 2) Formulate different types of dialogues, expression of ideas/information in English

Course Contents:-

UNIT-1: Functional Grammar Elements

(12 Hrs.)

Recapitulation of Grammar — Noun, Verb (Classifications), Infinitive and Gerunds, Auxiliaries and Modals, Passivity, Conditionals, Concord, Articles, Conjunction, Prepositions, Pronouns, Adverbs; Active and Passive Voice; Question Tag

UNIT -2: Tenses

(12 Hrs.)

Present Tense, Past Tense, Future Tense (all four types to be included in each)

UNIT-3: Sentence Formation

(12 Hrs.)

Types of Sentences — Simple, Complex, Compound; Phrases; Clauses; Synthesis of Sentences;

Transformation of Sentences; Direct and Indirect Speech

UNIT-4: Basic Verbal Communications

(12 Hrs.)

Introducing yourself (The communicator); introducing people to others; Giving Personal information; Getting people's attention and interrupting; Giving instructions and Seeking clarifications; Making requests and responding to requests

UNIT-5: Basic Writing Skill

(12 Hrs.)

Writing Notices; Drafting Agendas; Writing minutes; Notetaking; Writing applications for various jobs, referring to threads. Writing summary; Writing advertisements

Reference Book:-

High School Grammar and Composition; Wren and Martin; Fifteenth Edition; Blackie/Et Books; India; ISBN- 978-8 1-219-0009-6

Synergy: Communication in English and Study Skills; Board of Ed.; 2008; Orient Blackswan; India

ISBN- 978-81-250-3577-0

Business Communicator — V.K. Jain, O. P. Biyani, S. Chand, New Delhi.

Suggested Reading:

Macmillan Foundation English — R. K. Dwivedi, A. Kumar: Macmillan India Ltd. 2001

Link:-

<https://www.udemy.com/course/advanced-english-grammar-including-english-grammar-tenses/>

BVMA112: History of Animation

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the concept of Animation and its worldwide history.

COURSE OUTCOMES:

1. On completion of the course, students should be able to research and create theses on worldwide animation.
2. Students should be able to categorize the types and culture of Worldwide Animation.

Course Contents:

UNIT-1

(12 Hrs.)

What is Animation? Origin of Animation, Understanding the concept of Moving Pictures and its relation to Animation.

Concept of Animation: Definition of Animation, Types of Animation such as; Traditional 2D Animation (Cel animation), Stop Motion Animation (Clay Animation, Object Animation, Puppet Animation etc.), Digital 2D Animation, 3D Animation (CGI Animation).

UNIT-2

(12 Hrs.)

History of Western Animation: First Animators, ÉmileCohl's first animated film, ÉmileCohl's history. History of 2D Animation, Legend of Animation 'Walt Disney': History of Walt Disney, Walt Disney Studio. History of 3D Animation also known as Computer Generated Imagery (CGI). Understanding the concept of CGI, Legendary 3D (CGI) Animator and Director 'John Lasseter'. History of John Lasseter and 3D Animated Movies.

UNIT-3

(12 Hrs.)

History of Eastern Animation (Anime): Anime also refer as Japanese Animated cartoon style. Origin of Anime, What is the difference? First Anime – 'Matsumoto fragment'

Legendary Animator Hayao Miyazaki: History of Hayao Miyazaki, Film and Animation style. New generation of Anime (Japanese Animation), Anime Influence on other countries such as China, South Korea and other countries.

UNIT-4

(12 Hrs.)

History of Indian Animation:

India's centuries old style of Animation like Puppet Animation, Marwari Animation Style. Ram Mohan; Godfather of Indian Animation. Indian Animators.

UNIT-5

(12 Hrs.)

Future of Animation and VFX Industry.

New techniques for Animation, New Updates on Animation and VFX Industry. Future of Indian Animation and Future of Animation around the globe.

Reference Book/Link:

1. The World History of Animation.
2. The New History of Animation.

Link:-

<https://www.classcentral.com/course/swayam-animations-13880>

BVMA113: Script Writer

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

After studying this lesson your students will be able to:

- List many terms associated with script writing.
- Write their very own short TV ads.

COURSE OUTCOMES:

1. Understanding and using techniques in narrative writing for the stage and screen.
2. Collaborating with peers in both writing and producing works.

UNIT-1

(12 Hrs.)

Introduction Script Writing

Storytelling, Audiovisual Writing- The format for writing the Synopsis, Step-outline, Screenplay and Script for a film, The Elements of Scriptwriting- Action, Character, Setting, Theme, Structure, Characterization- A character sketch of one of the major characters of a film & an analysis of how the character has been established in the film, Structuring- Scene-by-scene analysis of a film the student likes

UNIT-2

(12 Hrs.)

Analysing the concept, (scriptwriter, script editor, Director, Producers),

Construct a complete story that is rooted in a central idea/premise, with integrity between the plot and characters

The process of script writing

Storyboard stages from concept sketches and previs (previsualization), to thumbnails, to Storyboards, to animatic, and beyond, Effective boarding strategies

UNIT-3

(12 Hrs.)

Tools of the trade:

Tools and methods for storyboard creation, Develop the story into a complete script, Break the script into scenes with dialogues, visual elements, gestures and actions that ensure story progression and audience engagement ,

UNIT-4

(12 Hrs.)

Prepare pitch presentations for pitching it to producers, directors and/or the cast, if written under assignment, as required

Blocking and composition:

Controlling the eye, Coherence between shots, making sure boards “read”, “Acting” and visual Character development: bringing the script to life

UNIT-5

(12 Hrs.)

Conveying the mood:

Scene tone - comedic, dramatic, action--based, et cetera, visual idioms and tropes storyboarding and the rest of your team: Scripts and screenplays, character design, props and backgrounds, layout, animation, audio design Storyboarding for your bosses: "the network," producers, directors, art director

Reference Books:-

1. Storyboard Design Course: Principles, Practice, and Techniques by Giuseppe Cristiano
2. From Word to Image, Storyboarding and the Filmmaking Process. 2nd Ed.by Begleiter, Marcie. Studio City, CA: Michael Wiese Productions, 2010. Print
3. Directing the Story, Professional Storytelling and Storyboarding Techniques for Live by Glebas, Francis
4. Storyboards, Motion in Art. By Simon, Mark. 3rd Ed. Burlington, MA: Focal Press, 2007.

Links:-

<https://www.udemy.com/course/screenwriting-for-beginners-from-a-produced-screenwriter/>

BVMA114: Graphic Designer

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the concept of Graphic Designing, Learning the basics of Image Manipulation and Color Concept. Getting started with Industry standard Graphic Designing software.

COURSE OUTCOMES:

On completion of the course, students should be able to understand the process of making Printing and Digital Graphics such as Logo designing, Broacher designing, Leaflet and many more using the Graphic Designing software.

Course Contents:

UNIT-1

(12 Hrs.)

Introduction to Graphic Design: -

What is Design?, Uses of Graphic design, Study the Principles of the Designing, What is Composition?, Principles of the Composition, Study the Colors and color meanings, traditional color wheels Types- Primary, Secondary and Tertiary colors, Warm & Cool colors, study the color Schemes types, What is tint and shade?, Study the Monochromatic color shade.

UNIT-2

(12 Hrs.)

Introduction of General elements of Graphics designing -

Study the Digital colors theory-Primary (RGB) & Secondary (CMYK), study the branches for using RGB and CMYK color modes, study the file format of RGB and CMYK color modes, Study the Vector Graphic and Pixel/Raster based output, Study the Elements of Graphic designing/Art, study the Basic shapes for drawing, Study the different size of Papers and banners, what is the Resolution?.

UNIT-3

(12 Hrs.)

Introduction Exploring Workspace of Corel Draw –

Introduction Exploring Workspace:- Introduction to Corel Draw, study the canvas area, using Toolbox panel, study the title and option bar, Study the color choice section and color panel box, study new , open, delete, save, import and export options in Corel draw , Defining the Page Size, Creating Basic Shapes, Working with Type tool, Using curve object, select and moving nodes.

UNIT-4

(12 Hrs.)

Using Shape Objects in Corel Draw –

Adding ,removing, joining and aligning nodes, using types of nodes, Breaking the path option, Using mirror options, skewing and stretching objects, roughening objects Creating the stylish Fonts, Drawing Basic, study the Trim options, Outlines and Fills, About Curves, Combining and Breaking Apart, Create Raster to Vector image, study the Smart fill tool option, Using Guidelines on canvas area. Use new page option in Corel draw.

UNIT- 5

(12 Hrs.)

Creating Special Effects –

Using Advanced Tools and Special Effects, Envelope and Distortion Effects, Blends and Contours, Lens Effects and Transparency, Embellishments: Bevels, Power Clips and Shadows, Using Bitmap, Working with Perspective. Convert RGB to CMYK color mode on image study the types of Logo design, opening PDF file in Corel draw, Create the PDF file in Corel Draw.

Reference Books:-

1. Corel Draw x7 Official Guide- jul- 2016 by Gary David Bouton
2. Corel Draw X5 The Official Guide. By Gary David Bouton
3. Photoshop CS5 Bible by Adobe Creative Team
4. Adobe Photoshop CS6 Bible- by Brad Dayley and DaNaeDayley

Links:-

https://onlinecourses.swayam2.ac.in/ntr20_ed15/preview

<https://www.udemy.com/course/coreldraw-2018-for-beginners-graphic-design-in-corel-draw/>

BVMA116LAB: Based on Graphic Designer

Credit: 3

Marks: 50

List of Practical based on Graphic Designing

- 1) Create a Visiting Card.
- 2) Create an Advertising banner.
- 3) Create a Pamphlet designing (college/ Institute).
- 4) Create a basic Company Logo design
- 5) Create an Animation movie CD / DVD and Cover design.
- 6) Create a Creative 3D Logo Design.
- 7) Create a Lens Effect 3D design.
- 8) Create a Vector Graphic Drawing.
- 9) Create any Shop's Banner Design.
- 10) Create a Bill Recipe design.
- 11) Create 2D and 3D logo.
- 12) Create a Birthday Inviting Card.
- 13) Create a Certificate design.
- 14) Create notebook cover page.
- 15) Create Product packaging cover page.
- 16) Create Info graphics templates.
- 17) Create Award Certificate.
- 18) Create Hand tag design.
- 19) Create Letter Head Design
- 20) Create cooperate folder design.

BVMA115: Designing of Character

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the concept of Character Designing. Types of Character in various shapes and sizes. Meaning and application of creating characters in different shapes.

COURSE OUTCOMES:

On completion of the course, students should be able to create Characters with different Personality, Poses, Cloths and Perspective. Students should understand the Anatomy in Character Designing.

Course Contents:

UNIT-1

(12 Hrs.)

Introduction to Animation Artist: -

Skills required for an animation artist, Terms used in Animation, Introduction to equipment required for animation: Animator's Drawing Tools, study the basic shape, study the one-, two- and three-point Perspectives, 3D objects model sheet, study the types of pencil shading, Rapid Sketching & Drawing, study the three-tone shading of Light, middle and dark concept using black/colour pencils.

UNIT-2

(12 Hrs.)

Animator's Art Skills: -

Study Drawing for according animation principles, study the man made and nature drawing concept, Cloth drapery, character costume design, Facial expressions, study the composition concept, study the cartoon characters Anatomy: study the line of action, cylindrical form and detail shape of character, Basic Proportions, Key Line shape using Heads, Hands, Legs, body, and Muscles.

UNIT-3

(12 Hrs.)

Character Design and Development:

Principle of Character Designing, elements of character design, Study Behaviour and Personality of cartoon character, create characters walking, running cycle frame by frame drawing, movements and action, types of Characters, 3D drawing and Detail views Designing a Character for villain, Hero and baby character, study the comic art concept, create comic character,

UNIT-4

(12 Hrs.)

Developing the character on Model Sheet Paper: -

What is character model sheet? study the Purposes and Specific annotations of model sheet, Research, Skeleton, Construction, Sketching, Different views, Study the cartoon Animal drawing concept, different angle wise views study, create animal character model sheet.

UNIT- 6

(12 Hrs.)

Study the Colour Model Sheet Paper: -

Study the traditional colours theory and knowledge using poster colours/ pencil colours, meaning of colours in using costume design, create model sheet for using colour concept, 3D colour tone uses on character and background model sheet, Study the background and foreground scenes composition, details Drawing and colouring background scenes.

Reference Books:-

1. Figure Study Made Easy By- Aditya Chari -- Grace Publication
2. Perspective- By MilindMulik–JyotsnaPrakashan
3. Anatomy for the Artist by Daniel Carter and Michael Courtney
4. An Afternoon - with David Colman
5. Character Design from the Ground Up
6. Artwork by Victor Navone the animation archive:Character model & expression sheets

Links

<https://www.udemy.com/course/character-art-school-complete-character-drawing/>

BVMA117: LAB: Based on Designing of Character

Credit: 3

Marks: 50

List of Practical based on Designing of Character:

1. Basic drawing shape
2. Create details 3D Object Model sheet
3. Perspective Drawing model sheet (interior, exterior)
4. Shading and Lighting using pencil shading
5. Character One third view of character model sheet (male/female)
6. Create Detail cartoon baby or old character model sheet
7. Character One third view of animal character model sheet
8. Create Cloth drapery or character costume design sheet
9. Create drawing for according animation principles
10. Create a details Male/ Female character Model sheet
11. Create Detail Animal model character sheet
12. Create Detail Animal colour model character sheet
13. Create a details Male/ Female character colour Model sheet
14. Create Detail Background scene model character sheet
15. Create Detail Model sheet for Baby character
16. Create Detail Model sheet for Young boy character
17. Create Detail Model sheet for Super-women character
18. Create Detail Model sheet for Alliance gaming character
19. Create Detail Model sheet for Super-heroes character
20. Create Detail Model sheet for any Asset designing

BVMA118: Programming in Python

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the concepts of Programming languages. Understand the Language of Python and its Uses.

COURSE OUTCOMES:

On completion of the course, students should be able to write a Python scripting language and implement it in various Graphic Designing, VFX and Animation software's.

Course Contents:

UNIT-1

(12Hrs.)

Brief introduction to Python, History and features of python, Applications of Python, Installation of python and PyCharm IDE

UNIT-2

(12 Hrs.)

Data types, variables, Arithmetic, Logical, Comparison and Assignment operators, Control Flow Structures (simple if, if-else and else-if ladder).

UNIT-3

(12 Hrs.)

Loops: - while and for loop in python, pass, break and continue keywords.
List: - Characteristics of List, List indexing and splitting. Tuple, Dictionary

UNIT-4

(12 Hrs.)

Functions: - Calling a function, Arguments to function.
Modules: - What is module, how to create module, naming and renaming the module.
File handling in python: - Read operation, write operation

UNIT- 5

(12 Hrs.)

Python OOPs concepts: - Class, Object, Constructor, Inheritance and its types.

Reference Books:-

- Python: The Complete Reference. Martin C. Brown
- Let Us Python. Yashavant Kantar.
- Python Crash Course, 2nd Edition: A Hands-On, Project-Based Introduction to Programming. Eric Matthes. ...

Links:-

<https://www.python.org/>
https://onlinecourses.nptel.ac.in/noc22_cs08/preview

**B.Voc.
(Multimedia and Animation)
First Year
Semester-II**

BVMA121: Computer Skills

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

1. To facilitate the students to study basic computer skills using application software tools,
2. To facilitate the students to make functional use of computer skills in teaching - Learning and day to day occupational necessities.

COURSE OUTCOMES:

On completion of the course, students should be able to —

1. Extend the knowledge of basic and advanced tools of Word Processing, Spreadsheet, Presentation Graphics, DBMS, and Internet in MS-Office for specific tasks.
2. Apply Word Processing tools to create Notice, Application.

Course Contents:

UNIT-I: Word Processing

(12 Hrs.)

Overview of Word Processing

Creating and Editing a Document (Exercise 1 - Creating Notice)

Revising and Refining a Document (Exercise 2 —Revising notice)

Using Additional MS Word Features (Exercise 3 — Creating notice for different classes)

Changing the Display of the Document (Exercise 4 - Changing the display of your notice)

Using Standard Templates (Exercise 5—Create notice using standard templates)

Using Mail Merge (Exercise 6 — Apply mail merge to send a notice)

UNIT-II: Spreadsheet Applications

(12 Hrs.)

Overview of Excel

Creating and Editing (Exercise 1 — Creating attendance sheet)

Using Charts (Exercise 2 — Creating a chart) Managing a Workbook (Exercise 3 — Managing Attendance Sheet) Using of Basic mathematical Formulae (Exercise 4 — Application of basic mathematical formulae) Sorting and Filtering of data in a workbook

UNIT-III: Presentation Graphics

(12 Hrs.)

Overview of Presentation Graphics

Creating a Presentation (Exercise 1 — Creating a Annual Day Presentation)

Modifying and Refining a Presentation (Exercise 2 — Modifying and Refining Presentation)

Using Advanced Presentation Features (Exercise 3 — Advanced Features for Presentation)

UNIT-IV: Database Management Systems

(12 Hrs.)

Overview: Creating a Database (Exercise 1 — Creating a Student Database)

Modifying a Table (Exercise 2 — Modifying a Student Database)

Creating Forms (Exercise 3 — Creating Form for Student Database)

Queries and Reports (Exercise 4 — Creating Report)

Protecting the Database (Exercise 5 — Protecting a Student Database)

UNIT-V: Internet**(12 Hrs.)****Internet Basics**

Navigating the Web (Exercise 1 - Navigating the website)

Finding Information on the Web (Exercise 2 - Searching result on the web)

Communication Using E-Mail (Exercise 3 - Communicate result to your friends)

Sending SMS through Web (Exercise 4 - Communicate through SMS through Web service)

Creating a Blog (Exercise 5 - Creating a blog using Wordpress.com)

Reference Books/Links:

1. Microsoft Office Word 2007 a Beginners Guide: A Training Book of Microsoft Word 2007, By W.R. Mills, United States of America, Bloomington, Indiana.
2. Microsoft Office Excel 2007: Comprehensive Concepts and Techniques, By Greg B. Shelly, Thomas J. Cashman, Jeffrey J. Quasney.
3. Microsoft Office Power Point 2007: Illustrated Introductory: Introductory, By David Beskeen
Microsoft Office Access 2007: Comprehensive Concepts and Techniques, By Thomas J. Cashman, Philip J. Pratt
3. Basic Internet, By O.H.U. Heathcote

Links:-https://onlinecourses.swayam2.ac.in/cec20_cs05/preview<https://www.udemy.com/course/computer-fundamentals-u/>

BVMA 122: Camera Operator

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to familiarize the component of camera and its operating Course

COURSE OUTCOMES:

On completion of the course, students should be able to understand that he will develop skills and knowledge in cinematography by Camera

Course Contents:

UNIT-I

(12 Hrs.)

Study of Camera System: -

History of Cameras, Basic of Cameras, Types of Cameras, Important of safety instructions, Part of Camera, Display of Cameras, Battery Included, Study the DSLR and SLR camera, Study the Camera Exposure Triangles - ISO, Shutter speed and Aperture, Setting the Time and Date, Shooting Mode, Choosing a Focus Mode, selecting a Focus Point, Using the Built-in Flash.

UNIT-II

(12 Hrs.)

Understanding Exposure: -

Attaching the Strips, attaching a Lens, inserting the Battery & Memory Card, turning the Camera on and off, Choosing Display, Adjusting Display Brightness, LCD Panel Readouts, RAW conversion, erase, crop, resize, image rotate, red eyes removal, slide show.

UNIT-III

(12 Hrs.)

Basic Photography and Playback: -

Quality Settings, Release Shutter Without Card, Red-Eye Reduction, White Balance, Custom White Balance, Color Space, Grid Display, Playback 1 & 2 Menu Options, Creative Filters, Highlight Alert, Slide Show, Auto Rotate, Format

UNIT-IV

(12 Hrs.)

Live View and Advanced Photography: -

LCD Brightness, Zoom, Camera Angles Close-up, Wide-Shot, Master shot, High and low angle shot, long Shot, mid shot, Over the Shoulder. Working with Live View, Activating Live View, Focusing in Live View, video shooting option, Capturing Video/Sound, ISO settings.

UNIT- V

(12 Hrs.)

Lens types, Focusing Options, Macro Photography, Portraiture Photography, Landscape Photography, Action Photography, and Still Life Photography. Ground level Photography, Prospective Photography, Black & White Photography, Time Laps Photography using setting.

Reference Books/Links:

1. The Camera Assistant's Manual (FIFTH EDITION) by David E. Elkins, S.O.C.
2. Digital SLR Cameras & Photography for Dummies®, 5th Edition Published by: John Wiley &
3. The Digital Photography Book by Scott Kelby

Links:-

BVMA 123: Image Editor

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to learn the Basics of Image Manipulation. Understanding the basics of Adobe Photoshop.

COURSE OUTCOMES:

On completion of the course, students should be able to understand the process of Image Manipulation using Adobe Photoshop. Students should be able to create, mix, color correct and Export quality outputs.

Course Contents:

UNIT-I

(12 Hrs.)

Understanding Basics of Editing and mixing:

What is Editing and Mixing concept? Study the pixel and vector-based images, what is Resolutions? study the PSD, JPEG, gif, pdf, and other file formats, Study the Photoshop Workspace, Set Preferences, Open an Image, Save and delete file, Study the digital colorTheory, Study the color modes, Introducing the Photoshop Toolbox. Details Workingwith Layers and Layers Styles.

UNIT-II

(12 Hrs.)

Understanding Photoshop tools Basics: -

Study the types of Layers, magnify with the Zoom Tool, Change Screen Modes, Using Rulers and Guides, Change the On-Screen Size of an Image, Change the Resolution of an Image, Crop, trim an Image, Change the Canvas Size of an Image, Making Selections Types, select with the Color Range Command, Move, copy, rotate, scale a Selection, study the image Manipulation effect concept, create manipulation effects.

UNIT-III

(12 Hrs.)

Painting and Drawing with Color: -

Study the Screen mode options, Select the Foreground and Background Colors, Select a Color with the Eyedropper Tool and Swatches Panel, Using the Brush Tool, Brush Styles, Custom Brush, Apply a Gradient, Using the Paint Bucket, Fill a Selection, study the image Composition concept, What is matt painting? Study the concept and purposes of matt painting.

UNIT-IV

(12 Hrs.)

Using the Pattern Stamp, Healing Brush, Patch Tool, Fix Red Eye in a Photo, Change Brightness and Contrast, Using the Dodge, Burn, Blur, Sponge and Sharpen Tools, Adjust Levels, Curves, Hue and Saturation, Color Balance, Convert to Black and White. Study the time line windows, creating time line or Gif animation using layers.

UNIT- V

(12 Hrs.)

Correct Shadows and Highlights, draw a Shape, Custom Shape, with the Pen tool, Create Digital Painting, Collage Painting, and Study the Video Editing windows. Create documentary-based video editing concept, study the video file formats, what is Digital Painting? Study the purposes of Digital painting, creating object or background digital painting.

Reference Books:-

3. Photoshop CC 2020 Bible by Adobe Creative Team
4. Adobe Photoshop CS6 Bible- by Brad Dayley and DaNaeDayley

Links:-

<https://helpx.adobe.com/in/photoshop/tutorials.html>

BVMA124: Vector Artist

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to learn the Basics of Vector art creation. Understanding the basics of Adobe Illustrator.

COURSE OUTCOMES:

On completion of the course, students should be able to understand the process of Vector Art using Adobe Illustrator. Students should be able to create Characters, backgrounds and more for 2D animation or Motion Graphics.

Course Contents:

UNIT-I

(12 Hrs.)

Workspace Basics:

Workspace overview, Hide or show all panels, Enter a value in a panel or dialog box, Customizing the workspace, Manage windows and panels, Move panels, Add and remove panels, Restore the default workspace.

UNIT-II

(12 Hrs.)

Tools panel overview:

Selection tool, direct selection tool, group selection tool, Pen tool, magicwand tool, lasso tool, Selection tool gallery, Drawing tool gallery, type tool gallery Painting tool gallery Reshaping tool gallery

UNIT- III

(12 Hrs.)

Drawing basics:

Drawing modes, draw polygons, draw stars, and draw arcs, drawing with Pen tool, Flare tool, Pencil tool options, drawing flares. Study the image mixing concept, collage effect design, Study the character clean up concept,

UNIT- IV

(12 Hrs.)

Brushes:

Color :selecting colors, Display the Color Picker, Change the color spectrum displayed in the Color Picker, Painting methods, Apply a fill color to an object, About brushes, The Blob Brush Tool, Pattern brush, Paintbrush tool options, Transparency and blending mode

UNIT- V

(12 Hrs.)

Study Path concept using the Adobe Illustrator, study the raster to vector design, Study the 3D object vector design, Blending Vector Art, Remove the fill or stroke from an object, Convert strokes to compound paths, Gradients, Gradient panel and Gradient tool overview

Reference Books:-

Adobe Illustrator CC Book

Links:-

<https://helpx.adobe.com/in/illustrator/tutorials.html>

BVMA 126: LAB: Based on Vector Artist

Credit: 3

Marks: 50

Practical based on Graphic Design with Adobe Illustrator:

1. Illustrator and basic tools
2. Layers, Eraser, Magic Wand.
3. A Create a simple car using shape tool
4. Create a simple Snowman
5. The Blob Brush Tool
6. Pencil, Brush & Symbol.
7. Wrap Text into custom shape
8. Text wrap
9. Create a Text Envelope Distort Effect
10. Create a Seamless Pattern Brush
11. Business Card Design.
12. Visiting card.
13. Design a Logo with Shadows
14. Shiny text
15. Magazine Cover in illustrator
16. Concept of logo Design
17. Professional Logo Design
18. Logo Design
19. Camera shutter icon
20. 3D Object or Logo Creation

BVMA 125: 2D Animation

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to learn the Principles of Animation. Understanding the basics of Adobe Animate for 2D Animation.

COURSE OUTCOMES:

On completion of the course, students should be able to understand Principles of Animation. Students should learn the process of 2D Animation using Adobe Animate. Students should be able to Animate Objects, Characters, backgrounds and more.

Course Contents:

UNIT-I

(12 Hrs.)

Introduction to Animation: History of Animation, the Origins of Animation, History of Walt Disney, Study the principles of Animation, concept of flip book animation, Types of Animation, Terms used in Animation, Introduction to equipment required for animation. Study the drawing concept of traditional animation.

UNIT-II

(12 Hrs.)

Basic animation: What is 2D and 3D animation? Create the Character walking concept of drawing, create animation principle regarding drawing. Animation techniques Introduction to Flash: What is Flash? Understanding the concept of flash, what is FPS? Flash Document setup, Create Animation, Basic Drawing.

UNIT-III

(12 Hrs.)

Starting Adobe Flash –

To start Adobe Flash or Animate, Exploring the Adobe Flash Professional CS6 Interface, study the tool panel, study the time line windows, study the property, library windows, study colour pallet, working of layer, what is frame and key frame? Study the path concept using animation, study the file formats using in flash, Text tool: Vertical Text, Rotation Text & Zoom Text, Spotlight, Text effects, working in the timeline, to save a Flash file.

UNIT-IV

(12 Hrs.)

Working with symbols, Shape tween, Classic tween, Motion tween, staggering animation effect, break apart and distribute, Intro to Motion Guide, Mask layers, Button Intro, 3D rotate & Transform, free transform tool and Align.

Unit- V

(12 Hrs.)

Introduction to Action Script:

Introducing the Actions Panel, When to Use Action Script, Using the Reference Panel, Understanding Action Script Syntax,

Creating Action Script Movies:

About Flash Symbol Types, create a Button, Adding an Action to Your Script, Adding an Action to a Key frame, Adding an Action to an Object, Adding an Action to a Button.

Reference Books:-

1. Adobe Flash Cs6 Classroom
2. The Illusion of Life by Walt Disney
3. The Complete Animation course by Chris Patmore, By Barons Educational Series (New York)

Links:-

<https://www.udemy.com/course/learn-adobe-animate-from-scratch/>

BVMA 127:LAB: Based on 2D Animation

Credit: 3

Marks: 50

List of Practical based on 2D Animation

1. Basic Drawing Shapes assignment
2. Character Walking concept drawing
3. Animation principle wise drawing-based assignment
4. Create flip book animation effect on paper
5. Study the interface of adobe Flash or Animate
6. Study the Time Line windows
7. Animate simple Shapes using Adobe flash.
8. Practical Based on Motion tween.
9. Practical Based on Classic tween.
10. Text Using shape tween.
11. Create Sunrise/sunset Using Adobe Flash.
12. Bouncing ball.
13. Create Mask effect to the text
14. Shape to the text by using skew break apart
15. Animate along path.
16. Earth rotation effect by mask
17. Motion tween on text
18. Create butterfly animation using path
19. Create action script-based assignment
20. Create football move on, of button action script assignment

BVMA128: Storyboard Artist

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the need of Storyboard and how to practice and create Traditional and Digital storyboard.

COURSE OUTCOMES:

On completion of the course, students should be able to create their own Storyboard and Utilize the art in Production Pipeline.

Course Contents:

UNIT-I

(12 Hrs.)

Introduction to Storyboarding: -

What is storyboard? Purpose of storyboard, why the need for a storyboard? Storyboard materials, the history of storyboard, early storyboard, study the storyboard from Disney studio, lay-out & Structure the storyboard, The Storyboard Artist Is Part of the Preproduction, Benefits to Preproduction, study the types of storyboards. Study the storyboard film Aspect Ratios types.

UNIT-II

(12 Hrs.)

Basic Art Components and Principles of the Storyboard: -

Practice the basic shapes of drawing, composition, balance, shade and light, drawing alphabet: SICO Shapes, S- Curves, Straight line, C- Curves, Ellipse, Compound shapes, the art of Thumbnails or rough drawing, drawing shortcuts- simplify, characters, star people, poses, hands, heads eyes, what is story?

Story and script different, study the script analysis. Break down the script

UNIT-III

(12 Hrs.)

Storyboard Drawing and Visual Literacy: -

Screen reference, the story point, emotional response, visual appeal, composition within your picture frame, working with shapes, lines, design of the shapes, focal point, depth, perspective concept, contrast, study the concept of foreground, middle ground and background, overlapping forms, Storyboard Colouring, change in size.

UNIT-IV

(12 Hrs.)

Advanced Storyboard Techniques: -

Before starting to storyboard, creating efficiency, complex camera moves, Study the different types of camera shots- Establishing shot, close up, extreme close up, mid shot, medium close up, long shot, medium long shot, extreme long shot, Study the basic camera angles- point

of view, over the shoulder, two shots. Up shot or worm's eye view, down shot or bird's eye view, study camera movements.

UNIT-V

(12 Hrs.)

Digital Storyboard Techniques: -

Study the interface of storyboard software, save, delete, edit files, study the color panel, study the edit and import or export file formats, view of sketch panel, study the types of brush tools, study time duration, dialogue, action, note panels, study the board drawer.

Reference Books:-

Storyboard's motion in art third edition by: Mark Simon

Art of Storyboard by: John

Beginning illustration and storyboarding by: Les Pardew

Links:-

<https://learn.toonboom.com/courses/storyboard-kick-start>

<https://wonderunit.com/storyboarder/>

<https://www.youtube.com/watch?v=upxBGNeryRs>

**B.Voc.
(Multimedia and Animation)
Second Year
Semester-III**

BVMA 231: Energy and Environment

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

To develop basic idea of energy resources, allied techniques and conscience for environment among students

COURSE OUTCOMES:

On completion of the course, students should be able to —

1. Describe basic concepts of conventional and non-conventional energy
2. Recognize elements of primary non-conventional energy resources

Course Contents:

UNIT-I: Fundamentals of Energy

(12 Hrs.)

Global energy consumption profile, Oil crisis of 1973, Classification of energy resources, Consumption trends of primary energy resources, Importance of non-conventional energy resources, Energy chain, Common forms of energy,

Advantages and disadvantages of conventional energy resources, Salient features of on-conventional energy resources, environmental aspects of energy, Sustainable development, Energy density of fuels

Principles of energy conservation, Energy conservation ACT 2001, General electrical ECOs, Cogeneration, Need of energy storage, Overview of energy storage methods

UNIT-II: Non-conventional Energy Sources

(12 Hrs.)

Solar energy basics, solar thermal systems, Basics of solar photovoltaic; Wind Energy fundamentals, Environmental aspects of wind energy generation, Biomass energy, Usable form of biomass- composition and fuel property, Biomass resources and conversion technologies, Urban waste to energy conversion, Biogas production from waste biomass.

Small Hydro resources, advantages and disadvantage, Layout, Water Turbines, Generation, Basics of financial and economic evaluation.

UNIT-III: Environment Pollution and Waste Management

(12 Hrs.)

Pollution- Air, Water, Noise and Soil Pollution (causes, Effect, Control Measures); Nuclear hazards, Role of an individual in preventing pollution, Climate Change, Global Warming, Acid rain, Ozone Layer Depletion, Nuclear Accidents; Disaster management.

Waste Management — Solid Waste Management, Causes, Effects and control measures of urban and individual waste, Municipal Solid Waste, Vermicomposting, Hazardous waste.

UNIT-IV: Social Issues and Environment

(12 Hrs.)

Human Population — Population growth, Global profile, Urbanization, Environmental and Human health, Values and Human rights. Sustainable development, Waste conservation, Wasteland reclamation, Consumerism and waste products, Environmental Ethics- Issues and possible solutions

UNIT-V: Environment Regulations

(12 Hrs.)

Environmental Acts - Environment Protection, Air (Prevention and Control of Pollution Act), Wildlife Protection Act, Forest Conservation Act, Issues involved in enforcement of environment legislation, Public Awareness. Environment Management Standards — ISO 14000, BHARAT and EURO Stages, Environmental Clearance/ Permission for establishing Industries

Text:

1. Textbook for Environmental Studies-Erach Bharucha for University Grants Commission; University Press; 2004 New Delhi, India
2. Environmental Management- N. K. Uberoi; Excel Books; 2013 New Delhi India
3. Non-Conventional Energy Resources; B. H. Khan; 2006 Tata McGraw-Hill Education; India

Reference Books:-

1. Environmental Science and Engineering- Glynn Henry J., Gary W. Heinke; 2004.; Pearson Education, Inc, NY
2. Non-Conventional Energy Sources- G. D. Rai, 2006; Khanna Publishers, India

Links:-

1. https://onlinecourses.nptel.ac.in/noc18_ge09/preview
2. <https://nptel.ac.in/courses/127106004/>
3. <https://nptel.ac.in/courses/122106030/>

BVMA232: Advance Web Designing

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course is to introduces key foundation concepts such as Internet infrastructure, web page creation and publishing, wire framing, layout techniques, multimedia, content, color, typography, and accessibility.

COURSE OUTCOMES:

At the successful conclusion of this course, students will be able to:

1. Demonstrate an understanding of the general workings of the Internet and infrastructure.
2. Use web authoring and design environment - tools, browsers, servers.

Course Contents:

UNIT-I

(12 Hrs.)

What is WordPress?, Setting up the Local Server Installing MAMP/XAMPP, Creating a WordPress Site (Installing WordPress) Installing WordPress with a Web Host's "1-Click Install" Manually Installing WordPress Introduction to WordPress, Logging into the Admin Area, The WordPress Interface and Dashboard, The Word Press Toolbar?

UNIT-II

(12 Hrs.)

Creating Posts-

Posts vs. Pages, Creating a New Post, The Formatting Toolbar, Copying and Pasting Content, Text Formatting, Creating Links, Adding Images, Using Featured Images, Adding Images form a URL, Adding an Image Gallery, Saving a Draft, Using Revisions to Compare and Restore, Publishing Posts, Using Categories and Tags, Using the Read More Tag and Excerpts, Managing Comments

UNIT-III

(12 Hrs.)

Creating Pages

Creating Basic Pages, Page Hierarchy, Using Page Templates, Creating a Static Front (Home) Page, Managing Pages and Posts, Quick Edit, Bulk Edit

WordPress Plugins-

Installing Plugins, Installing a Form Plugin, Installing a Social Media Button Plugin, Installing an E-Commerce Plugin

UNIT-IV

(12 Hrs.)

Themes and Customizing Site Appearance-

Selecting and Changing Themes, The Theme Customizer, Custom Header Images, Custom Menus, Using Widgets, Installing Themes from the WordPress Theme Directory, Installing Custom Themes, Customizing WordPress for Mobile.

UNIT-V

(12 Hrs.)

Attracting and Keeping an Audience-Creating Permalinks, Search Engine Optimization, Moderating Comments.

Maintenance and Security-Manually Installing Themes and Plugins, Updating WordPress Security and Backup Plugins.

References:-

Web Designing and Publishing

by Prof.Satish Jain M. Geethalyer

Links:-

https://onlinecourses.swayam2.ac.in/ugc19_hs26/preview

<https://wordpress.com/>

BVMA233: Film Making

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the concept of Filmmaking. Learn film production pipeline. Learn Filmmaking techniques

COURSE OUTCOMES:

On completion of the course, students should be able to understand the process of film making. They learn; How to make Short Films? Students should be able to create Professional Short Films.

Course Contents:

UNIT- I

(12 Hrs.)

History of Cinema

History of Indian cinema, Development of Classical Indian & Hollywood Cinema, Students will study various films (World Cinemas) and try to understand and analyse the essence of filmmaking, various types of films, introduction theatre drama.

UNIT- II

(12 Hrs.)

Development and Pre-Production

Come up with idea, Story, article Get a writer to write it up, Cover all legal obligations - option, purchase the rights, elements - cast, director, DP, Prod Designer, Production manager • Assistant directors • Production Designer • Costume Designer • Make Up and Hair Stylists • Director of Photography • Crew • Editor • Location Manager • Casting Director • Production Accountant

UNIT- III

(12 Hrs.)

Production

Shot, ready to shot to related story, introduction camera and camera equipment, makeup and practices .introduction about blocking and acting block, data management, multi-location and multi camera shot. camera lighting and sound, Acting, Special physical effects, Digital Video Cinematography, operate HD video cameras, use lights, determine set and lighting, Lenses and Cameras,

UNIT- IV

(12 Hrs.)

Post Production

Introduction about post production and distribution, Data analyse, system setup, post scheduling, shot review, introduction editing, Editing Video, Rough cuts and Final cuts Editing Audio, Sound Effects, Scoring, Pre-mix and Final mix, Dubbing, Editing final cut Sound mixing, Color correction introduction about VFX, RE recording.

UNIT- V

(12 Hrs.)

Promotion and Distribution

Film distribution, film promotional activate, film marketing, Digital distribution, various ways of distribution, film sensor, types of film certificate, film relies format, etc.

Reference Books/

- 1) Fundamental of Indian cinema.
- 2) Film Direction Fundamentals "Milos Forman" Third Edition.
- 3) Film Directing Fundamentals "Nicholas T. Proffers"
- 4) Writing, Directing, and Producing Documentary Films and Videos Third Edition "Alan Rosenthal"

Links:-

https://onlinecourses.nptel.ac.in/noc19_hs60/preview

BVMA234: 3D Modelling

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are learning Basics of 3D modeling in 3D Program

COURSE OUTCOMES:

On completion of the course, students should be able to Model 3D Artworks and Learn Industry workflow.

Course Contents:

UNIT-I

(12 Hrs.)

Exploring the 3D Application Interface (Recommended: Autodesk MAYA):

The Interface Elements, Using the Menus, Toolbars, Viewports, Command Panel, Lower Interface Bar Controls, Interacting with the Interface, Working with the Viewports. Understanding 3D Space, Using the Viewport Navigation Controls, Configuring the Viewports, Working with Viewport Backgrounds, Working with Max Scene Files, Setting File Preferences, Importing and Exporting, Referencing External Objects

UNIT-II

(12 Hrs.)

Modelling Fundamentals and Preparation:

Principles of 3D modelling, concepts like polygons, Nurbs, and Mesh modelling etc. Form, scale and proportion of various models, Viewports, Command Panel, Lower Interface Bar Controls, Interacting with the Interface, Rotate, and Scale: Translating, Rotating, and Scaling Objects, Working with the Transformation Tools, Using Pivot Points, Using the Align Commands, Using Grids, Using Snap Options, File Management.

UNIT-III

(12 Hrs.)

3D Modelling: Beginner Level

Basic Introduction of 3D Production Pipeline for 3D Modelling. Types of Modelling: Props, Architectural, Environment and Characters for Visualization, Films and Games.

Understanding 3D Props Modelling for Visualization, Films and Games. Understanding 3D Architectural Modelling for Visualization, Films and Games.

UNIT-IV

(12 Hrs.)

3D Modelling: Intermediate Level

Introduction of 3D Studio Workflow for 3D Modelling. Understanding 3D Environment Modelling for Visualization, Films and Games.

UNIT-V

(12 Hrs.)

Understanding 3D Character Modelling for Visualization, Films and Games. Character Modelling, Creature Modelling, Stylized Character Modelling.

Reference Books:-

3D Art Essentials, Mastering Autodesk Maya (Version 2016 and above), The Art of Maya.

Links:-

https://onlinecourses.swayam2.ac.in/cec20_cs08/preview

BVMA236: LAB: Based on 3D Modelling

Credit: 3

Marks: 50

List of Practical based on 3D Modelling:

1. 3D Application interface
2. 3D Application Navigation (Views, XYZ Axis, Move tool, Rotate tool, Sale, Pan, Zoom)
3. Standard primitives for 3D Modelling (Box/Cube, Cylinder, Sphere etc.)
4. File Setup, Importing & Exporting
5. Basics Modelling Using Standard primitives
6. Create a Wooden Box
7. Create a Wooden Bucket
8. Create a Barrel
9. Create a Garden chair
10. Setting up images in Photoshop for creating 3D in 3D Application
11. Create a 3D Model using Reference Image
12. 3D Modelling Process - Blocking
13. 3D Modelling Process – Asset Creation
14. 3D Modelling Process – Assembling Assets
15. Making a simple Interior
16. Making a simple Exterior
17. Create 3D character Face
18. Create 3D character Torso
19. Create 3D character Hand
20. Create 3D character Leg
21. Create 3D character Costume

BVMA235: Texturing Artist

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are learning Basics of Texturing in 3D Program

COURSE OUTCOMES:

On completion of the course, students should be able to Texture and Render Beautiful 3D Artworks and Learn Industry workflow.

Course Contents:

UNIT-I

(12 Hrs.)

Introduction of Texturing:

Understanding the Concept of Texturing. Exploring and Understanding the Fundamentals of Texturing. Understanding the concept of Surfacing. Real life observation and implementation of texturing concept in CGI.

Introduction of Texturing in 3D Application (Recommended: Autodesk Maya):

Understanding Material Properties in CGI. Introduction of texturing concept in 3D Applications. Introduction to Materials/Shader and Maps in 3D application.

UNIT-II

(12 Hrs.)

Creating Textures and Materials/Shader:

Basic Texturing in 3D application. Understanding Map concept for texturing. Create textures in 3D application which may include default maps, patterns and materials/Shader. Material editing options, Removing materials and maps.

UNIT-III

(12 Hrs.)

Controlling Mapping Coordinates:

Understanding the concept of UVW Mapping in 3D application. Navigating in UV coordinates. Exploring UV Editor in 3D application. Default Unwrapping and manual Unwrapping. Tools and Techniques for UV unwrapping in 3D application.

UNIT-IV

(12 Hrs.)

Creating Advanced Textures and Multi-Layer Materials/Shader:

Advance Texturing using UV mapping in 3D application. Advanced Map concept for texturing. Create textures in Traditional (Photoshop) or Special 3D texturing application which

may include organic and inorganic surfaces Maps, Setting Material Editor options, Removing materials and maps

UNIT-V

(12 Hrs.)

Using Shading Types, Creating Advanced Multi-Layer Materials, Adding Material Details with Maps, naming materials, getting new materials, Assigning materials to objects. Node based Material Creation (Procedural Material/Shader Creation)

Reference Books:-

1. 3D Art Essentials
2. Photoshop Essentials
3. Mastering Autodesk Maya (Version 2016 and above)
4. The Art of Maya

Links:-

https://onlinecourses.swayam2.ac.in/cec20_cs08/preview

BVMA237: LAB: Based on Texturing Artist

Credit: 3

Marks: 50

List of Practical based on Texturing Artist:

1. Understanding the Shaders/Materials
2. Texturing Elements
3. Create a Moon in 3D
4. Create a Earth in 3D
5. Create a Sun in 3D
6. Basics of UVs
7. Basic Unwrapping
8. Create a Dice Texture Using Texturing Program
9. Create texture in Photoshop and apply in 3D Application
10. Explain Maps in 3D Application
11. Apply textures for road using bump map
12. Using Opacity Mapping for the Fences
13. Texture a simple wall using Uvw Unwrap
14. Texturing simple pillar
15. UV unwrap and texturing
16. Model game asset and Unwrap
17. Face unwrapping
18. Apply texture on face
19. Unwrap a male torso
20. Apply texture on male torso

BVMA238: Video Editor

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are learning fundamentals of Video Editing and work with industry standard software.

COURSE OUTCOMES:

On completion of the course, students should be able to Edit Videos on Industry standards software.

Course Contents:

UNIT-I

(12 Hrs.)

Role and responsibility of video editor:

Understand the Directors vision, creative and technical requirements and expectations in terms of quality of deliverables and timelines,

Gather raw footage/material (e.g. raw camera footage, dialogue, sound effects, graphics, special effects) ,Ready for the post-production process Ensure software/equipment is ready for editing ,In appropriate file formats (e.g. .mp4, .avi, .wmv, mpg and .mov) and appropriate medium (e.g. DVD, film, tape and digital) compatible .

UNIT-II

(12 Hrs.)

Introduction of Adobe Premier:

Uses of Premier Pro, Basics of digital video and movie editing, Creating and changing sequences, Importing and Capturing Footage, Importing layered Photoshop and Illustrator files, Timeline, Sequence and Clip Management,

UNIT-III

(12 Hrs.)

Effects & Transitions:

About effects, Applying, removing, finding, Viewing and adjusting, Effects and key frames, Applying effects to audio, working with audio transitions, Effect presets, Creating common results, Motion: position, scale, and rotate a clip, working with markers, Applying different audio & Video transitions & Download & add new transitions.

UNIT-IV

(12 Hrs.)

Titling and the Titler:

Creating and editing titles, creating and formatting text in titles, Drawing shapes in titles, Add images to titles, Working with text and objects in titles, Fills, strokes, and shadows in titles, Titler text styles, Rolling and crawling titles, Rough cut. Rendering & Final output.

UNIT-V

(12 Hrs.)

Adobe Premiere Audio Editing, Audio Recording in premiere, editing, import dialogue on timeline. Audio clip selection & change or trimming audio clip, Essential Sound Panel and “Dialogue” audio type. Edit using presets or effects for loudness controls, repair, clarity, creative, and volume controls, equalizer plug-in, apply easy in & easy out effect to audio.

Reference Books/

01. Using ADOBE® PREMIERE® PRO CC

Links:-

https://onlinecourses.swayam2.ac.in/cec21_ge17/preview

<https://helpx.adobe.com/in/premiere-pro/tutorials.html>

B.Voc.
(Multimedia and Animation)
Second Year
Semester-IV

BVMA 241: Personality Development and Stress Management

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

1. To enable the students to understand the necessity of a pleasant personality
2. Equip students with stress handling practices
3. Provide effective verbal and non-verbal communication skills to students
4. Provide effective interview, group discussion and professional skills necessary for global job sector to students

COURSE OUTCOMES:

On completion of the course, students should be able to

1. Identify habits leading to stress
2. Implement effective verbal and non-verbal communication skills in professional and personal realm
3. Apply appropriate interview and group discussion skills

Course Contents:

UNIT- I: Changed Approach to Learning

(12 Hrs.)

Introduction, Planning and Goal Setting Understanding People, Self- Management Skills, Developing Potential and Self Actualisation, Need Achievement, Conflict Resolution Skills Seeking Win-Win Situation, Interpersonal Conflicts, Types of Conflict, Conflict Resolution

UNIT- II: Stress and Habits

(12 Hrs.)

Introduction, Types of Stress - Self-awareness about stress, Regulating Stress- Making the best out of stress, Stress Coping strategies, Habits-Guiding Principles, Identifying Good and Bad Habits, Habit Cycle, Breaking Bad Habits, Zeigernik effect for productivity and personal growth, Forming habit of success,

UNIT- III: Effective Communication

(12 Hrs.)

Introduction, Barriers to communication - Arising out of sender's/ Receiver personality, Interpersonal Transactions, Miscommunication; Non-Verbal Communication-Introduction and Importance, Issues and Types, Basics and Universals, Interpreting Non-Verbal Cues

UNIT- IV: Becoming a Professional. (12 Hrs.)

Importance of Body Language, Body language For Interview, For Group Discussions; Presentation skills for a professional, Role of Body language during presentation, Using of visuals presentation, Effective Reading, Developing Trust and Integrity

UNIT- V: Tutorials, assignments and presentation based on Unit I to IV(12 Hrs.)

Reference Books:-

1. Personality Development and Soft Skills- BarunMitra, Oxford University Press;2012, ISBN 9780198066217
2. Personality Development and Soft Skills, Preparing for Tomorrow-S. Kapoor,Wiley India; 2016, ISBN: 9789389583090
3. Effective Communication Skills- Dr M Sinha, Avishkar Publishers, ISBN: 9788179103500
4. MTD Training Effective Communication Skills; MTD Training Publishing APS, ISBN: 978-87-7681-598-1
5. Managing Stress- Ann Edworthy, Open University Press, SBN 0335204058
6. Stress Management-P. K.Dutta,Himalaya Publishing House Pvt. Ltd. ISBN: 978 81-8488-6078

Links:-

<https://mptel.ac.in/courses/109/104/109104107/>
https://onlinecourses.nptel.ac.in/noc19_hs32/preview

BVMA242: C++

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

C++ Programming is intended for software engineers, systems analysts, program managers and user support personnel who wish to learn the C++ programming language.

COURSE OUTCOMES:

- To understand how C++ improves C with object-oriented features.
- To learn how to write inline functions for efficiency and performance.
- To learn the syntax and semantics of the C++ programming language.
- To learn how to design C++ classes for code reuse.

UNIT —I

(12 Hrs.)

Introduction of OOPS

Procedural Vs Object Oriented Programming, Basic concepts of Object Oriented Programming, Class, Object, Data Abstraction, Encapsulation, Inheritance, Polymorphism, Dynamic Binding, Message Passing.

UNIT—II

(12 Hrs.)

Benefits and applications of OOP, History and overview of C++, C++ program structure. Reference variables, Scope resolution operator, Member de-referencing operators, new and delete, cin and cout, The endl and setw manipulator.

UNIT —III

(12 Hrs.)

Functions in C++:

Function prototype, Call by reference (using reference variable), Return by reference, Inline function, Default arguments, Const arguments. Function overloading:

Different numbers and different kinds of arguments

UNIT —IV

(12 Hrs.)

Objects and Classes:

Specifying a class, private and public, Defining member functions, nesting of member function, object as data types, Memory allocation for objects, static data members and member functions. Array of objects, Objects as function argument, returning objects, Friend function and its characteristics.

UNIT—V

(12 Hrs.)

Constructors and Destructors:

Introduction, default and parameterized constructors, multiple constructors in a class, Copy Constructor, Destructors

Open tor. Over log cl i g

Overloading unary operators., Roles for operator overloading, Overloading without friend function and using friend function, Overloading binary operators such as arithmetic and relational operators, Concatenating Strings, Comparison operators.

Reference Books/

1. Object Oriented Programming with C++ E. Balagurusamy, Tata McGraw-Hill Publishing
2. Object Oriented Programming In C ++ Robert Lafore, Galgotia
3. Let us C++ YeshwantKanetkar; bpb publication.

Links:-

https://onlinecourses.nptel.ac.in/noc19_cs38/preview

BVMA243: Lighting Artist

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are learning Basics of Lighting in 3D Program using Industry standard software.

COURSE OUTCOMES:

On completion of the course, students should be able to Render Beautiful 3D Artworks and Learn Industry workflow.

Course Contents:

UNIT-I

(12 Hrs.)

Understanding Lighting Concept:

Introduction of real-world Lighting Concept. Lighting Parameters: Shading and Colour Concept. Understanding Highlights, Midtone, Shadow, Cast Shadow, Core Shadow and Bounce light. Types of Lights in real world.

UNIT-II

(12 Hrs.)

Understanding Lighting Concept in CGI:

Introduction of Lighting Concept in CGI. Lighting Parameters: Lighting Parameters: Shading and Colour Concept. Understanding Highlights, Midtone, Shadow, Cast Shadow, Core Shadow and Bounce light in CGI. Types of Lights in CGI

UNIT-III

(12 Hrs.)

Lighting in 3D Application (Recommended: Autodesk Maya):

Basics of Rendering, understanding rendering in CGI, Render settings in 3D Application. Types of Lights and Light Attributes. Basic Lighting for basic rendering in 3D application.

UNIT-IV

(12 Hrs.)

Advanced Lighting:

Studio Lighting, One Point Lighting, Two Point Lighting and Three Point Lighting Concept. HDRI Lighting, Environment Lighting using HDRI and other lighting setups. Advanced Lighting Techniques.

UNIT-V**(12 Hrs.)****Advanced Rendering with Render Passes.**

Types of Passes in rendering. Final Rendering and compositing passes. Mix Live Action and CG Footages together. Use compositing software's for edit and combine render passes.

Reference Book

1. 3D Art Essentials
2. Mastering Autodesk Maya (Version 2016 and above)
3. The Art of Maya

Link:-

https://onlinecourses.swayam2.ac.in/cec20_cs08/preview

BVMA 244: Stop Motion Animation**Credit: 4****Marks: 100****LEARNING OBJECTIVES:**

The objectives of the course to understand behavioural aspect of human in connect with motions.

COURSE OUTCOMES:

On completion of the course, students should be able to – understand important of stop motion animation and understanding of human behaviour.

Course Contents:-**UNIT -I****(12 Hrs.)**

History of Animation: - explore how animation works. Learn Stop Motion Animation, learn the basics for setting up your stage and camera learn image capture, editing and playback controls. While creating a simple movie of a blob moving. Study the types of Stop motion animation, history of stop motion animation.

UNIT -II**(12 Hrs.)**

Study the camera setup for capturing the frame-by-frame images, study the camera angle using capture images, and study the FPS time settings, Art forms and orientation into time and performing. Animation- Art of 21st century, History of Animation- Primitive Animation, Innovations and experiments in visual media, how to develop/portray the character in accordance to the script

UNIT -III**(12 Hrs.)**

Study the background set concept and ideas, study the colour theory for traditional and digital, study the Character costume design ideas, understand requirement include the way the character will act accordance to the storyboard, move character and compose a shot in accordance to the script and storyboard as prototype, Animated stop motion character in accordance to the script and directors process,

UNIT -IV**(12 Hrs.)**

Animated stop motion character in accordance to the script and directors process, Contribute creative ideas during the animation process, apply stop motion animation techniques include traditional frame by frame capture clay motion and cut out using computer generated, Tools.

UNIT – V

(12 Hrs.)

Stop motion, Comparison to Computer generated image, how to observe and study human behaviour and expressions to help visualize concepts Life drawing including human anatomy, emotions, actions and expressions, Assess the effort, duration and cost involved for each work activity, study the using of stop motion animation frame capture in software or app free version.

Reference Book

1. The Advanced Art of Stop-Motion Animation. “Ken A. Priebe”
2. Secrets of Clay Animation Revealed 3 Paperback
3. Stop motion animation. “Barry J C Purves”

Link:-

<http://content.photojojo.com/tutorials/stop-motion-digital-camera/>

<http://www.dragonframe.com/introduction-stop-motion-animation/>

BVMA245: Motion Graphics Artist

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are learning Basics of Video Compositing, Motion Graphics and Visual Effects in Compositing Program

COURSE OUTCOMES:

On completion of the course, students should be able to Render Visual Effects based Videos, Motion Graphic Videos and understand the Basic workflow of VFX Production.

Course Contents:

UNIT - I

(12 Hrs.)

Introducing After Effects CC.

What Is Adobe After Effects, Basic Workflow, **Interface Tour** the Project Panel and Flowchart Panel, The Composition Panel and the Layer Panel, The Timeline Panel, The Preview Panel, The Effects & Presets Panel, and the Effect Controls Panel, Colours, Modifying Preferences and Keyboard Shortcuts, Configuring the User Interface.

UNIT -II

(12 Hrs.)

Creating Compositions and Layers.

Creating Compositions and Changing Composition Settings, Creating Text with the Character Panel, Controlling Blocks of Text with the Paragraph Panel Creating Shape Layers, Working with Solids Importing Footage.

Importing Movies, Importing Still Images and Image Sequences, Importing Photoshop and Illustrator Files, Importing Projects, Interpreting Footage Manually and Automatically, Pixel Aspect Ratios Trimming Footage and Layers

UNIT-III

(12 Hrs.)

Animation Basics Animating Transform Properties, Working with Motion Paths, Using Motion Sketch to Record Motion Anchor Point Animation, Keyframe Types the Graph Editor Shape Layers, Ways to Create Shapes, Shape Layers for Text Effects, Blending Layers with Blending Modes, Alpha Channels and Transparency, Colour Keying

UNIT- IV

(12 Hrs.)

Compositing:

Motion Tracking and Rotoscoping, the 3D Camera Tracker ROTO Importance of roto, Roto Using with RotoBrush, paint, Matte painting, wire remove, Mask feather. TimeFrame Rates, Time Stretching and Time Remapping, Slowing Motion, freezing a Frame, and Reversing Time OutputOptions, Rendering and Exporting with the Render Queue, using a Simple Effect and Duplicate Layers for Creative Results, Using Basic Colour Correction.

UNIT- IV

(12 Hrs.)

Third Party Add-on

Introduction to third party add-ons. Exploring new add-ons for Adobe After Effects. Free and Paid Ad-ons for Adobe After Effects. Using add-ons for faster and better output.

Reference Book:-

1. <https://helpx.adobe.com/in/after-effects/tutorials.html>
2. Adobe after effect cc classroom in a book

Link:-

<https://www.udemy.com/course/after-effects-kinetic-typography/>

BVMA247: LAB: Based on Motion Graphic Artist

Credit: 3

Marks: 50

Any 10 from following list of Practical based on Roto Artist:

1. After effect interface tour
2. Bouncing ball using mask tool
3. Simple animation using rotation scale and position.
4. Double role using mask tool
5. Compositing
6. Chroma remove
7. Freeze frame
8. Colour correction
9. Particles text effect
10. Displacement map
11. CC sphere
12. Motion graphic
13. Create 2D simple watch using motion graphics.
14. One point tracking
15. Four point tracking
16. Stabilizing
17. 3D Matt painting
18. 3D camera tracking
19. VFX Roto
20. Video Rendering

BVMA246:LAB: Based on Stop Motion Animation

Credit: 3

Marks: 50

List of Practical based on Stop Motion Animation:

1. Create a clay base with different shape.
2. Create a clay character basic shape.
3. Create bouncing ball using stop motion.
4. Create a tree (practices for different shape)
5. Create animal in basic shape.
6. Draw character shape.
7. Traditional drawing tools and techniques.
8. Create human body.
9. Creating a simple movie of a blob moving.
10. Stop motion animation photography.
11. Claymation basics – stop motion animation.
12. Missing Stickman.
13. Paper cut stop motion animation.
14. Paper animation.
15. Making box Hulk Play.
16. Make A Simple Stop Motion Puppet.
17. Animate stop motion character.
18. Animate Computer mouse using camera.
19. Use camera angle to stop motion character.
20. Create a movie using stop motion techniques.

BVMA248: Music Composition

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are learning fundamentals of Audio and Music composition with industry standard software.

COURSE OUTCOMES:

On completion of the course, students should be able to compose new Audio and Music in Industry standards software.

Course Contents:

UNIT-I

(12 Hrs.)

Introduction to FL Studio

The FL studio Interface Basics, The windows audio setup, Testing the inputs and outputs, using external interfaces with FL Studio.

UNIT-II

(12 Hrs.)

Core workflow and MIDI

Audio set up, Connecting a keyboard and other MIDI instruments to FL studio, The channel and step sequencer, Tweaking the channels, Tweaking note properties, Adding plugins, Recording and editing MIDIS, Using patterns, The browser, Installation instructions

UNIT-III

(12 Hrs.)

Arrangement and Audio

Arranging the playlist, Key shortcuts, The mixer, Recording and editing audio, Parametric EQ2, Workflow organization, Mixer routing and sends, Recording with live knob movements, Making snare rolls,

UNIT-IV

(12 Hrs.)

Automation and Editing

Automation Clips, MIDI controller mapping, Recording Automation and the Event Editor, Piano Roll Editing such as pattern copying, Using scores and Midi with FPC, Tuning kicks and drum samples in FL studio, Mixing and effects, The event editor, Removing vocals from existing songs, Creating voice tags for beats, The piano roll, Integrated wave editor,

UNIT-V

(12 Hrs.)

Organize and export

The layer tool, Channel grouping, rendering a song, CPU optimization, Time stretching and pitch shifting, MIDI routing and output, Exporting audio & saving.

Reference Books:-

Fundamentals of Musical Composition by Arnold Schoenberg

Links:-

<https://www.image-line.com/>

B.Voc. (Multimedia and Animation) Third Year

Semester-V

BVMA351: Human Resource Management

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The aim of the Human Resource Management (HRM) is to give students the knowledge, understanding and key skills that are required by today's HR professionals and to enable students to effectively contribute to dynamic organizations.

COURSE OUTCOMES:

- 1: Explain the importance of human resources and their effective management in organizations
- 2: Demonstrate a basic understanding of different tools used in forecasting and planning human resource needs.
- 3: Describe the terminologies and tools used in managing employees effectively.
- 4: Describe rules and regulations affecting employees and employers.

Course Contents:

Unit –I

Introduction to Human Resource Management - Concept, Nature, Scope, Significance, Objectives and Functions of HRM.

Unit-II

— Human Resource Planning (HRP) - Meaning and need for Human resource Planning - Process of HRP - Factors affecting HRP, —Job Analysis -Recruitment and Selection — Meaning, - Sources of recruitment.

Unit-III

Employee Training - Meaning and need for training - Steps in training - Methods of Training — Impediments of effective training

Unit- IV

Performance Appraisal and Merit Rating - Meaning and purpose of performance

Appraisal - Methods of performance appraisal - Ethics in performance appraisal — Merit Rating — Meaning, Benefits of Merit Rating — Difference between performance appraisal and Merit rating.

Reference Books:-

Principles of Personnel Management — by Edwin B Philpo
Management of Organization Behaviour — by Paul Harsey K. Blanchard
Personnel/Human Resource Management — Decenza& David
Human Resource Management- P.Subbarao
Human Resource Management: R.S.Triwedi
K Ashwathappa : Human Resource Management, Tata McGraw Hill, New Delhi

Links:-

https://onlinecourses.swayam2.ac.in/cec21_mg06/preview

BVMA352: Basics of Digital Marketing

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course is learning basics of digital marketing. Exploring Social Media platform for digital marketing.

COURSE OUTCOMES:

On completion of the course, students should be able to do digital marketing on various social media platform.

Course Contents:

UNIT- I

(12 Hrs.)

What Is Marketing? How We Do Marketing? What Is Digital Marketing? Benefits of Digital Marketing. Digital Marketing Platforms and Strategies. Digital Marketing vs. Traditional Marketing, Defining Marketing Goals, Latest Digital Marketing Trends.

UNIT- II

(12 Hrs.)

Search Engine Optimization, Introduction to Search Engine, How Search Engine Works? Components of Search Engine, Google Algorithm, Panda, Penguin, Humming Bird, Pigeon Latest Updates in Google.

UNIT- III

(12 Hrs.)

Keyword Research and Competition, Introduction To keyword Research, Types of Keywords, Keyword Research Methodology, Business Analysis and Categorization, Google, Keyword Planner, Market Research and Analysis, New Keyword Ideas, Competition Analysis, Finalizingthe keyword list.

UNIT -IV

(12 Hrs.)

Social Media Optimization, What Is Social Media? SMM vs. SMO, Benefits Of Using SMM, Social Media Statistics, Why Use Social Media Marketing? Social Media Strategy, Dimensions in Posts, Impact of Social Media on SEO.

UNIT -V

(12 Hrs.)

Email Marketing, What Is Email Marketing? Importance of Email Marketing, Popular Email, Marketing Software's, Email Marketing Goals, Introduction to Mail Chimp, Mail, Chimp Pricing Structure, Account Setup and Settings, Email Marketing Strategy

Reference Books:-

Digital Marketing All-in-One For Dummies

Links:-

<https://www.digitalmarketer.com/assets/pdf>

<https://staenz.com/free-digital-marketing-pdf-books-download/>

https://onlinecourses.swayam2.ac.in/cec19_mg23/preview

BVMA353: Rigging Artist

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the Rigging for 3D Animation in 3D Program.

COURSE OUTCOMES:

On completion of the course, students should be able to create 3D Rigs to animate them in 3D Program.

Course Contents:

UNIT- I

(12 Hrs.)

Introduction of Rigging

What is rigging? Why we need rigging? Difference between 2d Rigging and 3D Rigging. Understanding basic mechanism for rigging, understanding basics of human anatomy.

Introduction Parent-Child in 3Ds Max

Relation between parent and child (Parent-Child Hierarchies) in 3Ds Max. How its work? Basics of Transform values for rigging – World, Object position, Pivot and Values.

UNIT- II

(12 Hrs.)

Mechanical Rigging

Understanding mechanical mechanism for rigging, Create Mechanical rig using transform values, Pivots and Child-Parenting the objects. Rigging Tools and Techniques. Tweaking transform values for Mechanical Transformation, Freezing Values or Creating limitations for Transformation. Basic understanding of FK and IK for Mechanical Rig. Creating Controllers for Mechanical rig. Handles and World Controller.

UNIT- III

(12 Hrs.)

Character Rigging

Understanding Character Rigging. Basics of Human Skeleton formation and Functions. Understanding Bones in 3Ds Max. Default Rig and Creating New Character rig using bones. **Forward Kinematics (FK) and Invers Kinematics (IK).**

How to use Forward Kinematics (FK) and Invers Kinematics (IK) to create Character Rig? Create Controllers for Character Rig. Rigging Male and Female Character.

UNIT- IV

(12 Hrs.)

Blend Shapes

Understanding Blend Shapes. Uses of Blend Shapes, Creating Facial Expression using blending shapes.

UNIT- V

(12 Hrs.)

Skinning

Fundamentals of Skinning in any 3D Program. Skinning in 3Ds Max. Binding the Object or Character mesh to the rig, Object or Character Geometry deformation using skinning technique and Tools. Weight Paint.

Reference Book:

01. Autodesk 3Ds Max 2014 (and Higher) Essential.
02. 3Ds Max 6 Bible by *Kelly L. Murdock*

Links:-

<https://www.udemy.com/course/maya-rigging-for-beginners/>
https://onlinecourses.swayam2.ac.in/cec20_cs08/preview

BVMA353: Director of Photography - I

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

Directors of photography specialize in developing unique still and live action photography shots for organizations. These directors are responsible for overseeing photography shoots, including selecting appropriate shots, camera angles, and lighting needs. Directors of photography can work for a variety of organizations, including educational services firms and government agencies.

COURSE OUTCOMES:

- Technical knowledge of cameras: have an in-depth understanding of all motion picture equipment, cameras, lens, monitors and lights
- Editing knowledge: understand the post-production work flow, have a good eye for colour in the editing process

UNIT – I

(12 Hrs.)

Concept of photography, Initial Set-up, detail review for scripting, Selecting a Shooting Mode, Select the medium for shooting, discussion producer, camera setting, selecting camera focus, location, coverage of each shoot day , shooting type, camera mode,

UNIT – II

(12 Hrs.)

Working with single camera and multi camera.Choosing a Metering Method
Understanding the requirement of the shoot, production requirement, technical requirement, That Quick Control Screen Again,

UNIT – III

(12 Hrs.)

Phase Detection, Focus Modes, Adding Circles of Confusion, Making Sense of Sensors, Autofocus Modes, Setting the AF Point, Assess the suitability of a location.Support in established the focus requirement for shots, focus lengths, type of production, type of shoot,

UNIT – IV**(12 Hrs.)**

Geography, Location, type of equipment that would need to be operated, working with Live View, Live View Essentials, Enabling Live View, Activating Live View, Focusing in Live View, Using Simulated Exposure, Silent Shooting, Visual style of production.

UNIT – V**(12 Hrs.)**

composition, perspective, aspect ratio, Dealing with Noise, Fixing Exposures with Histogram, estimating camera, equipment requirement for shoot, Procuring camera equipment for shoot, Make a Shooting Script, Use Storyboards, Lighting for Video, Movie Setting, Continuous Shooting, Focus Stacking, Camera lenses.

Reference Books:

1. Digital SLR Photography All-in-One For Dummies
2. How To Photograph Wildlife Like A Pro By Steve Rutherford

Links:-

https://onlinecourses.swayam2.ac.in/cec19_ge02/preview

BVMA354: VFX Compositor**Credit: 4****Marks: 100****LEARNING OBJECTIVES:**

The objectives of the course are to understand the basics of VFX Compositing using Nuke. Give an exposé of industry standard workflow and VFX Pipeline.

COURSE OUTCOMES:

On completion of the course, students should be able to compose VFX shots using Nuke. Students will learn multiple tips and tricks to manipulate given clips.

Course Contents:**UNIT-I****(12 Hrs.)****Introduction of VFX/Compositing:**

What is Composition? History of compositing, what is the job of Compositing Artist?

The Foundry Nuke:

Introduction of NUKE, Interface, tools, Fundamentals of navigation around Nuke. Difference between Layer based compositing and Node based compositing. Introduction of nodes

UNIT- II**(12 Hrs.)**

Understanding Video and Image format, 8/16/32bit - Color space, frame rate, Difference between PAL (Phase Alternative Line) and NTST (National Television System Committee)

File Setup compositing Project – Setting a folder and sub folders for your project files, setting a composition in The Foundry NUKE. Import footages and necessary data and basic Render.

UNIT- III**(12 Hrs.)**

Node system, Types of nodes, uses of nodes and its properties. Masking-Rotoscoping for composition. Time line and customization and Animation. Basics of Color correction in The Foundry NUKE.

Channels, Keying, Tracking and Stabilizing, Audio, Filters and Effects etc.

Compositions

Sky Replacement, Double roll using mask, Day to Night conversion etc.

UNIT- IV

(12 Hrs.)

Advance Composition

Compositing multiple footages in nuke and using filters and presets; deliver final composition in The Foundry NUKE. Composite Render passes from other 3d software using operations for blend footages together. 3D Compositing.

UNIT- V

(12 Hrs.)

Colour Correction

Color correcting footages using Tonal Adjustment, Hue-Saturation, Value adjustment and Curves.Final Rendering – Image sequence and Video format.

Note:Software's (Using Nuke/Fusion/Blender)

Reference Book:-

Nuke_7.0v1_UserGuide

Links:-

<https://www.udemy.com/topic/vfx-compositing/>

BVMA354: Live Action Director - I

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

Individuals at this job establish and drive the execution of the creative vision of the production with the support of the production, creative and technical teams

COURSE OUTCOMES:

- Students will be able to apply theoretical, critical, and historical concepts when making style choices in their own projects and in referencing or analysing the medium of cinema.
- Students will learn the rudiments of narrative filmmaking in the short form and be able to apply these skills to long-form work.

UNIT – I

(12 Hrs.)

INTRODUCTION TO FILM

introduction to Film, History of Cinema, Production Process, Fundamentals of Camera, Fundamentals of Sound, Fundamentals of Editing, Introduction to Light, Fundamentals of Script Writing, Fundamentals of Direction, 2 -3 minute short film planning .

UNIT – II

(12 Hrs.)

FILM DIRECTION

Various types of films, Short Films-Feature, Production Stages, Cast & Crew Selection, Recce and Production Design, Budgeting and scheduling, Creating Drama in films, Visualization of Screenplay, Dealing with actors, Narrative development of film, Genre Theory,

UNIT – III

(12 Hrs.)

Directing the Nonfiction, Editing & Sound Design, Final Project

Principles of Editing, Films Analysis, Continuity & Narrative, Various Genres, Technical Aspect, Postproduction Stages, Montage theory, Editing Practical using Software, Sound Editing,

UNIT – IV**(12 Hrs.)**

Advance Editing, Various output format, Introduction to VFX & Graphics, Software – Premier, Photoshop, after effects etc., Final Project Theory of Digital Cinematography, Videography, Lensing & operation, Camera Movements,

UNIT – V**(12 Hrs.)**

Lighting techniques, Visual design, Understanding color theories, Visual Aesthetics, Shooting for Chroma, Various Genres, Digital Intermediate & color grading. Multi cam & Steady cam workshop, Different Cameras, lenses and Grip equipment's, Final Project

Reference Books:

1. Film Directing Fundamentals "Nicholas T. Proferes"
2. Writing, Directing, and Producing Documentary Films and Videos Third Edition "Alan Rosenthal"

Links:-

https://onlinecourses.swayam2.ac.in/cec21_hs20/preview

BVMA355: 3D Animation**Credit: 4****Marks: 50****LEARNING OBJECTIVES:**

The objectives of the course are to learn the Principals of Animation. Understanding the basics of 3D Animation using 3D Application.

COURSE OUTCOMES:

On completion of the course, students should be able to understand Principals of Animation. Students should learn the process of 3D Animation using 3D Application. Students should be able to Animate Objects, Characters, backgrounds and more.

Course Contents:**UNIT- I****(12 Hrs.)****History of Animation**

What is Animation? Introduction of Animation. History of Traditional Animation, History of CGI (Computer Generated Imagery) or 3D Animation. Animation Industry Overview.

UNIT- II**(12 Hrs.)****12 Principals of Animation**

What is Animation Principals? Who made them? (Disney's Twelve Basic Principles of Animation were introduced by the Disney animators Ollie Johnston and Frank Thomas in their 1981 book *The Illusion of Life: Disney Animation*.) Why we need them?

1. Squash and Stretch, 2. Anticipation, 3. Staging, 4. Straight Ahead Action and Pose to Pose, 5. Follow through and Overlapping Action, 6. Slow In and Slow Out, 7. Arc, 8. Secondary Action, 9. Timing, 10. Exaggeration, 11. Solid drawing, 12. Appeal. More animation Principals.

UNIT- III**(12 Hrs.)****Introduction of CGI or 3D Animation.**

Introduction of animation in 3D. Understanding Timeline and Key framing and Frame Rate. Basic Object Animation using Transform Values, Paths and Key Frame (for Ex. Bouncing Ball or Box Animation) Understanding the Camera Animation using Transform Values, Paths and Key Frame.

UNIT- IV

(12 Hrs.)

Mechanical Animation

How to Animate Mechanical Objects? Understanding Normal, FK and IK rigs for Animation. Creating Mechanical Animation (for Ex. Lamp, Robot Arm, Car, etc.). Understanding Key Poses and In-between Poses. Refine Animation Using Curve Editor in Autodesk 3Ds Max.

UNIT- V

(12 Hrs.)

Character Animation

How to Animate Characters? Understanding Normal, FK and IK rigs for Character Animation. Animating Character (for Ex. Walk cycle, Run cycle, Action etc.). Understanding Key Poses and In-between Poses. Refine Character Animation Using Curve Editor in Autodesk 3Ds Max
Facial Animation-dialogue, Expressions etc.

Reference Books:

01. The Illusion of Life: Disney Animation by Ollie Johnston and Frank Thomas
02. Animator's survival kit by Richard Williams
03. Autodesk 3ds Max 2014 Essentials

Links:-

https://onlinecourses.swayam2.ac.in/cec20_cs08/preview
<https://www.youtube.com/watch?v=3WRQJyRFriI>

BVMA356: Off campus Industrial /Institutional Training/Field survey (After end of IVth semester)

Credit: 6

Marks: 175

BVMA357: Major Project –I

Credit: 3

Marks: 100

1. Review1:
PRE-PRODUCTION

20 Marks

2. Review2:
PRODUCTION

20 Marks

3. Review3:
POST-PRODUCTION

20 Marks

1. University Examination

40 Marks

Presentation
Viva
Final Report

15Marks
15 Marks
10 Marks

BVMA358: Seminar

Credit: 1

Marks: 25

**B.Voc.
(Multimedia and Animation)
Third Year
Semester-VI**

BVMA361: Entrepreneurship Development

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

1. To provide the students with basic traits of entrepreneurship
- 2 To introduce students with entrepreneurial environment
3. To equip students with basic tools for business plan preparation
4. To equip students with concepts of launching and management of small business

COURSE OUTCOMES:

On Completion of the course, students should be able to -

1. Explain key concepts underpinning entrepreneurship and its application in the recognition and exploitation of product/ service/ process opportunities
2. Describe Key concepts underpinning innovation and the issues associated with developing and sustaining innovation within organizations
3. Plan creative strategies for pursuing, exploiting and developing new opportunities
- 4, Analyse basic Issues associated with securing and managing new business ventures

Course Contents:

UNIT- I: Entrepreneur

(12 Hrs.)

Entrepreneurship concept, Entrepreneurship as a career, Required Personality traits for an entrepreneur, Characteristics of an Entrepreneur, Functions of an Entrepreneur, Entrepreneur vs. Manager, Entrepreneur/Corporate Entrepreneur

UNIT- II: Entrepreneur Development

(12 Hrs.)

Types of Entrepreneurs, Motivating Factors to Become Entrepreneur, Entrepreneurial Competencies, Requirements for Successful entrepreneur, Entrepreneur and Economic Development

UNIT- III: Entrepreneurial Environment

(12 Hrs.)

Business Environment, Role of Family and Society, Challenges, Entrepreneurship Development Training and Other Support Organizational Service, Start-up

Accelerators, Students Sandbox and Business Labs, Crowd Funding, Venture Capital, Co-Working Spaces, Boot Camps, Central and State Government Policies and Regulations

UNIT- IV: Business Plan Preparation

(12 Hrs.)

Sources of Product for Business, Pre-feasibility Study, Criteria for Selection of Product, Ownership, Capital, Budgeting Project Profile Preparation, Matching Entrepreneur with the Project, Feasibility Report Preparation and Evaluation Criteria

UNIT- V: Launching and Management of Small Business

(12 Hrs.)

Finance and Human Resource Mobilization Operations Planning, Market and Channel Selection, Growth Strategies, Product Launching, Monitoring and Evaluation of Business, Preventing Sickness and Rehabilitation of Business Units, Effective Management of Small Business

Reference Books:-

1. Entrepreneurship: R. D. Hisrich, M. P. Peters. D. A. Shepherd; McGraw Hill India; ISBN: 9789353163457
2. Entrepreneurship Development: E. Gordon, K. Natarajan; Himalaya Publishing House; ISBN: 9789352025404
3. Entrepreneurship Development: S. S. Khanka; S.S. Chand and Company; ISBN: 8121918014

Dynamics of Entrepreneurial Development and Management: V. Desai; Himalaya Publishing House; ISBN: 9788184884975

Entrepreneurial Development: N. P. Srinivasan & G.P. Gupta; S. Chand & Sons, ISBN 9788170148012

Links:-

https://onlinecourses.swayam2.ac.in/cec20_mg19/preview

BVMA 362: Desktop Publishing

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are giving a chance to explore Print Media. Understand the process making printable graphics.

COURSE OUTCOMES:

On completion of the course, students should be able to create Posters, banners, Books, Magazines, Newspaper and Comics.

Course Contents:

UNIT-I

(12 Hrs.)

Introduction to Digital and Print Media.

Introduction to Digital media. Introduction to printmedia. Deference between Digital Media and Print Media.

UNIT-II

(12 Hrs.)

Introduction the workspace:

Getting to Know InDesign, Working with Objects, looking at the workspace, working with panels, working with layers, Creating and editing modifying text frames, Menu Bar, Tools Panel, Default Panels, Dragging and customizing Panels, navigating through multiple pages, Introduce first resume project.

UNIT-III

(12 Hrs.)

Creating a document, MasterPages, Rulers and Guides, Adding and Deleting pages, Working with Master Pages, tracking kerning and leading, placing text and graphics on the document pages, Developing paragraph

UNIT-IV

(12 Hrs.)

Editing text:

Character and object styles, Nesting character styles within paragraph styles, Adjusting the viewing quality of the document, Finding and changing a missing font, Entering and importing text, developing paragraph, character and object styles, Editing text

UNIT-V**(12 Hrs.)****Working with transparency:**

Placing, managing and editing linked graphics, Workflow tips for placing graphics into InDesign, placing graphics within the cells of a table, wrapping text around a graphic, adding transparency effects • Applying transparency settings to images and text

Reference Books:-

Desktop Publishing: DTP Course Covering Photoshop, InDesign, CorelDraw & Flash

By Bittu Kumar

Links:-

<https://helpx.adobe.com/in/indesign/tutorials.html>

<https://www.udemy.com/course/graphic-design-and-desktop-publishing-with-scribus/>

BVMA363: FX Artist**Credit: 4****Marks: 100****LEARNING OBJECTIVES:**

The objectives of the course are to understand the basics of FX and Simulation using Houdini. Give an exposé of industry standard workflow and FX Pipeline.

COURSE OUTCOMES:

On completion of the course, students should be able to simulate various elements like Fire-Smoke, Liquid, Soft Body and Rigid body simulations using Houdini.

Course Contents:**UNIT-I****(12 Hrs.)**

Introduction of FX: What is FX? History of FX in Various industries like VFX, Animation and Gaming Industry. What is the job of FX Artist?

Introduction to Houdini: What is Houdini? Introduction of Houdini Interface, tools, Fundamentals of navigation. How to Import and Export files from other applications?

UNIT- II**(12 Hrs.)**

Introduction to Nodes in Houdini. Node functions and Types of node.

Modelling: Basics of Modelling in Houdini, Node Based Modelling also known as Procedural Modelling. How to Import Mesh from another 3D Application such as Autodesk Maya, 3Ds Max or Blender?

Texturing: Basics of Texturing in Houdini. Understanding the UVs, Materials and various Maps. Procedural Texturing methods in Houdini.

UNIT- III**(12 Hrs.)**

Rendering: Basic Setup Camera and Lights. Rendering Setup, Render Passes, Resolution

Animation: Introduction to Animation in Houdini. Timeline, Animation Editor, Motion FX menu for Procedural Animation nodes.

UNIT- IV**(12 Hrs.)**

Destruction FX: Use the Bullet Rigid Body solver to create highly complex simulations of large data sets.

Fluid: Use the FLIP Fluid solver to create realistic simulations using forces such as surface tension, viscosity, and Visco-elasticity.

Pyro FX: Use Houdini's Pyro FX tools to create realistic fire and smoke.

UNIT- V

(12 Hrs.)

Cloth: Cloth simulations in Houdini are created using the Vellum solver which is a simulation framework that uses extended Position Based Dynamics.

Hair and Fur: A comprehensive toolset for creating and grooming both hair and fur on characters and creatures.

Crowds: Crowd layout, rag doll dynamics, steering, collision avoidance, terrain adaptation, motion blending, and look-at targets.

Reference Books/Links:-

https://www.sidefx.com/learn/getting_started/

<https://www.udemy.com/course/become-an-fx-artist-using-houdini/>

BVMA363: Director of Photography - II

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

Director of Photography assists the director in giving visual look to the film. The essential duties listed on the Director of Photography Resume includes – helping in taking technical decisions, creating a visual identity to the movie.

COURSE OUTCOMES:

- How the main technical tools of cinema are used creatively in the art of cinema.
- While watching a movie work, analyze and interpret the visual elements of the work from a critical perspective.
- Evaluates the effect of the image on film styles with an objective perspective.

UNIT-I

(12 Hrs.)

Anatomy of the EOS 60D's Menus ,Shooting 1, 2, 3, & 4 Menu Options,175 Quality Settings, Beep , Release Shutter Without Card, Image Review , Peripheral Illumination Correction ,Red-Eye Reduction , Flash Control , Exposure Compensation/Automatic Exposure Bracketing, Auto Lighting Optimizer, Picture Style , White Balance, Custom White Balance ,White Balance Shift and Bracketing ,Color Space.

UNIT-II

(12 Hrs.)

Dust Delete Data, ISO Auto, Live View Shooting Settings , AF Mode, Grid ,Aspect Ratio , 218 Exposure Simulation, Silent Shooting , Metering Timer, Playback 1 & 2 Menu Options, Protect Images, Rotate, Erase Images, Print Order ,Creative Filters , Resize ,RAW Image ,Highlight Alert ,Autofocus Points Display , Histogram, Slide Show , Image Jump with Main Dial , Rating, Ctrl over HDMI

UNIT-III

(12 Hrs.)

But Don't Forget the Crop Factor, Your First Lens, Buy Now, Expand Later, What Lenses Can You Use?, EF vs. EF-S, Ingredients of Canon's Alphanumeric Soup, Your Second (and Third...) Lens, What Lenses Can Do for You, Zoom or Prime?, Categories of Lenses, Using

Wide-Angle and Wide-Zoom Lenses, Avoiding Potential Wide-Angle Problems, Using Telephoto and Tele-Zoom Lenses,

UNIT-IV

(12 Hrs.)

Avoiding Telephoto Lens Problems, Telephotos and Bokeh, Add-ons and Special Features, Lens Hoods, Telephoto Extenders, Macro Focusing, Image Stabilization.
Daylight ,Incandescent/Tungsten Light, Fluorescent Light/Other Light ,Adjusting White Balance, Electronic Flash Basics , How Electronic Flash Works, Determining Exposure, Getting Started with the Built-In Flash ,

UNIT-V

(12 Hrs.)

Basic Zone Flash, Creative Zone Flash ,Flash Range ,Red-Eye Reduction and Autofocus Assist ,Using FE Lock and Flash Exposure Compensation , More on Flash Control Settings , Flash Firing, Built-in Flash Function Setting , Using Flash Mode, External Flash Function Setting, External Flash Custom Function Setting , Clear External Flash Custom Function Setting,Downloading, Editing, and Printing Your Images.

Reference Books:-

- 1) The Digital Photography “Scott Kelby”
- 2) DAVID BUSCH’S CANON EOS 60D GUIDE TO DIGITAL SLR PHOTOGRAPHY

Links:-

<https://www.udemy.com/course/how-to-direct-movies/>

BVMA364: ROTO Artist

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The objectives of the course are to understand the basics of VFX Roto, Stereo Roto and VFX Paint. Give an exposé of industry standard workflow and VFX Pipeline.

COURSE OUTCOMES:

On completion of the course, students should be able to Roto VFX shots using software called SilhouetteFX. Students will learn multiple tips, tricks and techniques of Roto and VFX Paint.

Course Contents:

UNIT- I

(12 Hrs.)

Introduction of Roto and Paint

Concept of Rotoscoping, Concept of Paint in Post Production. What are the differences between Rotoscoping and Paint? History of Rotoscope and Paint. Job role of Roto Artist, Job role of Paint Artist in the Industry.

UNIT- II

(12 Hrs.)

SilhouetteFX

What is the Use of SilhouetteFX? Industry standard workflow in SilhouetteFX. Introduction of SilhouetteFX – User Interface (UI) – Menu bar, Tool bar, Source Panel, Node Panel, Tree Panel, View Panel and more, Tools bar contents and Node panel contents. Fundamentals of SilhouetteFX (Navigation and Node Based System)

UNIT- III

(12 Hrs.)

Import Image Sequence or data and File Setup in to SilhouetteFX. Creating a Session, Session Resolution, Frame count and Frame Rate.

Basic of Roto. Using with roto node create masks and mask adjustment, channels and navigation in Output view. Roto tools – Shapes, Bezier tool, B Spline tool, X Spline Tool. Object list Panel and Properties.

Types of ROTO

Difference between VFX ROTO and STERIO ROTO, Why we need VFX Roto? Why we need STERIO ROTO? Object Roto, Character Roto, Tracking inside SilhouetteFX. Export and Render.

UNIT- IV

(12 Hrs.)

Paint in Adobe Photoshop

Introduction of Paint method in Adobe Photoshop. Import Images or Image Sequence in to Adobe Photoshop. Paint in Adobe Photoshop using Clone Stamp tool and various tools and methods.

Wire Removal and Create Clean plate in Adobe Photoshop using Paint Method. Export.

UNIT- V

(12 Hrs.)

Paint in SilhouetteFX

Introduction of Paint method in SilhouetteFX. Import Images or Image Sequence in to SilhouetteFX. Paint in SilhouetteFX using Nodes, various tools and methods.

Wire Removal and Create Clean plate in Adobe Photoshop using Paint Method. Export. More uses of SilhouetteFX.

Note: Software's(Using Silhouette/nuke/after effect)

Reference Books:-

01. Silhouette v6 User Guide
02. Adobe Photoshop CS6 Bible

Links:-

<https://www.udemy.com/course/paint-and-roto-for-feature-film-vfx/>

BVMA364: Live Action Director - II

Credit: 4

Marks: 100

LEARNING OBJECTIVES:

The director is one of the most important people on a film set. They do more than shout “action” and “cut” behind the scenes—they’re the person who determines the creative vision and makes all of the film’s biggest decisions.

COURSE OUTCOMES:

- In addition to training as writer/directors, students will become proficient in other production and postproduction skills (camera, lighting, sound, editing) and have the ability to enter careers in the entertainment industry, broadcasting, journalism, art, advertising, and arts management.
- Students will engage in the use and analysis of emerging technologies.
- Students will be able to research, gather, and synthesize information.

UNIT-I

(12 Hrs.)

Introduction to Film Language and Grammar, The Film World , Film Language , Shots, Film Grammar, Screen Direction & Film-Time, Compression, Elaboration, Familiar Image, Introduction to the Dramatic Elements Embedded in the Screenplay ,Character, Circumstance, Dynamic Relationship,

UNIT-II

(12 Hrs.)

Wants, Expectations, Actions, Activity, Acting Beats, Dramatic Blocks, Narrative Beats
The Camera as Narrator, Reveal, Entrances, Objective Camera, Subjective Camera, Visual Design, Camera Height, Lenses, Composition, Looking for Order, Dramatic Blocks and Camera, Shot Lists, Storyboards, and Setups,

UNIT-III

(12 Hrs.)

The Prose Storyboard, Camera in Notorious Patio Scene, Dramatic block.
Detective Work on Scripts, Reading Your Screenplay, Screenplay, Character Circumstance,
Dynamic Relationships, Wants, Actions, Acting Beats, Activity, staging, camera, marking
shooting script with camera setup.

UNIT-IV

(12 Hrs.)

Working with Actors, Casting, and Auditions, Directing during Rehearsals, Directing Actors on
the set.
Managerial Responsibilities of the Director, Delegating Authority While Accepting
Responsibility, the Producer, the Assistant Director,

UNIT-V

(12 Hrs.)

A Realistic Shooting Schedule, Working with the Crew, Working with the Director of
Photography Postproduction, Editing, Music and Sound, Locking Picture, or, an Audience and a
Big Screen

Reference Books/Links:

- 1) Film Directing Fundamentals "Nicholas T. Proferes"
- 2) Writing, Directing, and Producing Documentary Films and Videos Third Edition "Alan
Rosenthal"
- 3) Film Making Learn Basics to Becoming a Film Maker

Links:-

https://onlinecourses.swayam2.ac.in/cec21_hs20/preview

BVMA365:LAB: Based onGame Engine

Credit: 4

Marks: 100

List of Practical based on Game Engine:

1. Theses on Game Engine
2. Game Engine User Interface
3. Download and Import Assets
4. Basic Level Creation
5. Export and Import custom Assets
6. Basic Level Creation using custom Assets
7. Rigging and Animation for Game Engine
8. Material Creation in Game Engine
9. Basic Lighting for Level
10. Light Backing for Level
11. Dynamic Lighting for Level
12. Level Designing using advance tools
13. Game Mechanics
14. FX Creation
15. Creating Game Prototype with Sound
16. What is Indie Game?
17. What is 'AAA' title game?
18. Game designing pipeline
19. Optimized Asset creation for Games
20. Environment creation and Set Dressing

Note:Software's(Using Unreal/Unity)

BVMA366: Off campus Industrial /Institutional Training/Field survey (After end of Vth semester)

Credit: 4

Marks: 100

In-Plant Training – III (After end of Vth semester)

BVMA367: Major Project –II, Report and Seminar

Credit: 6

Marks: 200

1. Review1:
PRE-PRODUCTION

40 Marks

2. Review2:
POST-PRODUCTION

40Marks

a) University Examination

70 Marks