SCHEME & SYLLABUS

(Choice Based Credit System)

for

B.Sc. Animation & Game Design

(w.e.f. Session 2020-21)

Program Code: ANM-201

DEPARTMENT OF ANIMATION & MULTIMEDIA

RIMT UNIVERSITY, MANDIGOBINDGARH, PUNJAB

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SECTION 1

Vision & Mission of the University

VISION

To become one of the most preferred learning places a centre of excellence to promote and nurture future leaders who would facilitate in desired change in the society

MISSION

- To impart teaching and learning through cutting edge technologies supported by the world class infrastructure

- To empower and transform young minds into capable leaders and responsible citizens of India instilled with high ethical and moral values

SECTION 2

Vision and Mission of the Department

VISION

The Department of Animation & Multimedia vision is to produce industry knowledge Media & Animation professionals who'll bring fame and name to the media industry by their culture conscious skills.

MISSION

- Educating visual communicators who highly exemplify the creative spirit and a commitment to professional attitudes in the fields of new media, animation and creative advertising;
- Preparing students for strategic positions in service industries with a strong sense of ethics and entrepreneurship and who can make a contribution to society;
- Improving the quality of life of Indonesians and the international community through good design;
- Recognizing and rewarding the most creative and value-adding talents;
- Designing creative products and conducting professional services in visual communication design with an emphasis on application of knowledge to the society.

SECTION 3

About the Program

B.Sc. Animation & Game Design Program is an Outcome Based Education model which is a 3year, 6 Semester Full time Program of 108 credit hours with a Choice Based Credit System (CBCS) and Grading Evaluation System. B.Sc. Animation & Game Design is an undergraduate Multimedia, Animation, and Gaming course. The Program helps produce full-fledged animation professionals with the skills and confidence to build a rewarding career in the field. The curriculum in multimedia and animation typically includes broad exposure to print media and digital media, as well as animation-focused classes. Traditional art courses cover topics like basic drawing, form, and space, figures and motion, the study of color and art history, digital media, and animation courses.

SECTION 4

Program Educational Objectives (PEOs), Program Outcomes (POs) and Program Specific Outcomes (PSOs)

PROGRAMME EDUCATION OBJECTIVES (PEOs)

PEO1	To Create competence in the fields of Computer Graphics assets creation, Visual Effects, Gaming and Graphic designing.
PEO2	To inculcate adequate knowledge, skill, dedication and work ethics required for accomplishment of the assigned task.
PEO3	Understand the ongoing changing trends and keep them updated with the latest technology.
PE04	To help acquire multiple skills that will enhance their employability in different segments of Animation, Gaming and Entertainment industry.
PE05	To empower the student's critical thinking skills and problem-solving strategies for overall development of the professional growth.

PROGRAMME OUTCOMES (POs)

PO 1	Get expertise in the fields of Computer Graphics assets creation, Visual Effects, Gaming and Graphic Design.
PO 2	Succeed in life-long learning to remain accountable and thoughtful contributors to society.
PO 3	Learn the ability to work collaboratively and effectively in diverse situations.
PO 4	Latest technology and keep updating their skills as per the industrial requirements.
PO 5	Able to undertake a complex project to finish with smoothly in a result-oriented manner both individually and as a team.
PO 6	Communicate ideas, emotion and intent effectively in visual, oral and written forms.
PO 7	Gain real world project experience throughout their learning cycle, and become effective and efficient industry leaders with the quality of entrepreneurship.
PO 8	Highly trained to demonstrate their knowledge, skill, dedication and work ethics required to be a successful member of a production team.
PO 9	Able to demonstrate their acquired knowledge for the growth of social and ethical values in outdoor activities, such as service learning, internships and field work.
PO 10	Highly trained to Learn the ability to Product Development: Analyse, design and develop novel products and solutions for emerging new media opportunities.
PO 11	Highly trained to Modern Tool / Techniques usage: Select, adapt, and apply appropriate tools, techniques, resources to various activities, with an understanding of their boundaries.
PO 12	Students will learn the ability to work in a team.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO 1	Animation: This specialization offered to the students will enhance their knowledge in the field 3D Animation. Students will become an expert in specific domain of 3d Animation and will work in Films, Games and other animation related fields.
PSO 2	Graphic Design: This specialization offered to the students will enhance their knowledge in the field of 2D Animation & Graphic Design. Students will achieve expertise in the specific domain of Graphics Design, 2D animation and will be able to work in Films, Graphic design Companies and other animation related fields.
PSO 3	VFX: This specialization offered to the students will enhance their knowledge in the field of VFX. This course mainly focuses on creative VFX for Films. Students will become expert in the specific domain of VFX and will be able to work in Films, Games and other animation related fields.
PSO 4	Film and Graphics: This specialization offered to the students will enhance their knowledge in the field of Film and Graphics. It will enhance their skills in both Creative and technical aspect. Students will become expert in the specific domain and will be able to work in Films and Graphics fields.

SECTION 5

Curriculum / Scheme with Examination Grading Scheme

SEMESTER WISE SUMMARY OF THE PROGRAMME:

(B.Sc. Animation & Game Design)

S. No.	Semester	No. of Contact Hours	Marks	Credits
1.	I	22	700	22.5
2.	II	23	700	26.5
3	III	26	600	19
4	IV	22	600	16
5	V	18	500	13
6	VI	15	400	11
	Total	**126**	**3500**	**108**

EXAMINATION GRADING SCHEME

Marks Percentage Range	Grade	Grade Point	Qualitative Meaning
80-100	O	10	Outstanding
70-79	A+	9	Excellent
60-69	A	8	Very Good
55-59	B	7	Good
50-54	B	6	Above Average
45-49	C	5	Average
40-44	P	4	Fail
0-39	F	0	Fail
ABSENT	AB	0	Fail

Percentage Calculation: CGPA *10

FIRST SEMESTER

Course		Contact Hours/Week			Credit	Contact Hrs.	Evaluation Scheme (% of Total Marks)			Exam Duration (Hours)
Course Code	Course Title	L	T	P			Internal	External	Total	
BSAM1101	Introduction to Computers and IT	4	1	-	4.5	3	40	60	100	3 Hrs
BSAM1102	Programming in C	4	1	-	4.5	3	40	60	100	3 Hrs
BSAM1103	Personality Development-I	3	-	-	3	2	40	60	100	3 Hrs
BSAM1104	Fundamental of Fine Art	-	-	6	3	3	60	40	100	3 Hrs
BSAM1105	Introduction to Multimedia	3	1	-	3.5	3	40	60	100	3 Hrs
BSAM1106	S/W Lab-I (Introduction to Computers and IT)	-	-	4	2	4	60	40	100	3 Hrs
BSAM1107	S/W Lab-II (Programming in C)	-	-	4	2	4	60	40	100	3 Hrs
Total		**14**	**3**	**14**	**22.5**	**22**			**700**	

SECOND SEMESTER

Course		Contact Hours/Week			Credit	Contact Hrs.	Evaluation Scheme (% of Total Marks)			Exam Duration (Hours)
Course Code	Course Title	L	T	P			Internal	External	Total	
BSAM1201	Introduction to Computer Graphics	4	1	-	4.5	3	40	60	100	3 Hrs
BSAM1202	Computer Graphics using programming	4	1	-	4.5	3	40	60	100	3 Hrs
BSAM1203	Foundation Art	4	1	-	4.5	3	40	60	100	3 Hrs
BSAM1204	Animation Techniques	4	1	-	4.5	3	40	60	100	3 Hrs
BSAM1205	Design Graphic Application	4	1	-	4.5	3	40	60	100	3 Hrs
BSAM1206	Software Lab –III (Computer Graphics Using ‘C’)	-	-	4	2	4	60	40	100	3 Hrs
BSAM1207	Software Lab –IV (Design Graphic Application)	-	-	4	2	4	60	40	100	3 Hrs
Total		**20**	**5**	**8**	**26.5**	**23**			**700**	

THIRD SEMESTER

Course		Contact Hours/Week			Credit	Contact Hrs.	Evaluation Scheme (% of Total Marks)			Exam Duration (Hours)
Course Code	Course Title	L	T	P			Internal	External	Total	
BSAM2301	Content and script writing	5	1	0	5.5	5	40	60	100	3 Hrs
BSAM2302	Principles of animation	5	1	0	5.5	5	40	60	100	3 Hrs
BSAM2303	Software Lab – (3D Modeling)	-	-	4	2	4	60	40	100	3 Hrs
BSAM2304	Software Lab – (Advanced Photo shop)	-	-	4	2	4	60	40	100	3 Hrs
BSAM2305	Software Lab – (Graphics with Premiere Pro)	-	-	4	2	4	60	40	100	3 Hrs
BSAM2306	Lab -Advanced Foundation Art	-	-	4	2	4	60	40	100	3 Hrs
Total		**10**	**2**	**16**	**19**	**26**			**600**	

FOURTH SEMESTER

Course		Contact Hours/Week			Credit	Contact Hrs.	Evaluation Scheme (% of Total Marks)			Exam Duration (Hours)
Course Code	Course Title	L	T	P			Internal	External	Total	
BSAM2401	Photography	-	-	4	2	3	60	40	100	3 Hrs
BSAM2402	Film Language	-	-	4	2	3	60	40	100	3 Hrs
BSAM2403	Software Lab –(3D Texturing)	-	-	6	3	4	60	40	100	3 Hrs
BSAM2404	Software Lab – (Vector Graphics with Illustrator)	-	-	6	3	4	60	40	100	3 Hrs
BSAM2405	Software Lab – (3D Architecture Modeling)	-	-	6	3	4	60	40	100	3 Hrs
BSAM2406	Lab - Minor Project-I	-	-	6	3	4	60	40	100	3 Hrs
Total		-	-	**32**	**16**	**22**			**600**	

FIFTH SEMESTER

Course		Contact Hours/Week			Credit	Contact Hrs.	Evaluation Scheme (% of Total Marks)			Exam Duration (Hours)
Course Code	Course Title	L	T	P			Internal	External	Total	
BSAM3501	Software Lab –(3D Rigging)	-	-	4	2	3	60	40	100	3 Hrs
BSAM3502	Software Lab – (3D Animation)	-	-	4	2	3	60	40	100	3 Hrs
PE	**Program Elective-I**	-	-	6	3	4	60	40	100	3 Hrs
BSAM3504	Software Lab – (UI and Web design)	-	-	6	3	4	60	40	100	3 Hrs
BSAM3505	Lab - Minor Project-II	-	-	6	3	4	60	40	100	3 Hrs
Total		**-**	**-**	**26**	**13**	**18**			**500**	

	Course Code	**Course Title**
Program Elective-I	BSAM3503	Software Lab – (Post Production)
	BSAM3506	Software Lab – (CG Compositing)
	BSAM3507	Software Lab – (Fluid Mechanism)

SIXTH SEMESTER

Course		Contact Hours/Week			Credit	Contact Hrs.	Evaluation Scheme (% of Total Marks)			Exam Duration (Hours)
Course Code	Course Title	L	T	P			Internal	External	Total	
BSAM3601	Software Lab – (3D Animation-II)	-	-	4	2	3	60	40	100	3 Hrs
BSAM3602	Software Lab – (Motion Graphics)	-	-	4	2	3	60	40	100	3 Hrs
BSAM3603	Software Lab – (3D Lighting)	-	-	6	3	4	60	40	100	3 Hrs
BSAM3604	Lab - Major Project	-	-	8	4	5	60	40	100	3 Hrs
Total		-	-	**22**	**11**	**15**			**400**	

SECTION 6

Detailed Syllabus with Course Outcomes

SYLLABUS

SEMESTER-I

SUBJECT TITLE: Introduction to Computers and IT

SUBJECT CODE: BSAM1101

SEMESTER: I

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
4	1	0	4.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objectives:

- Define and describe the hardware used in information technology (IT).
- Define and describe the types of software and Hardware used in IT.
- Demonstrate the ability to create and use documents, spreadsheets, presentations and databases in order to communicate and store information as well as to support problem solving
- **Contents of Syllabus:**

Sr. No	Contents	Contact Hours
UNIT-I	Introduction- Characteristics of Computers, Evolution of computers, Capabilities and limitations of computers, Generations of computers, Types of computers (micro, mini, main frame, supercomputers), Block diagram of computer, Basic components of a computer system- Input unit, output unit, Arithmetic logic Unit, Control unit, central processing unit, Instruction set, registers, processor speed, type of processors, Memory- main memory organization, main memory capacity, RAM, ROM, EPROM, PROM, cache memory. Secondary Storage Devices- Magnetic Tape, Magnetic Disks-Internal Hard Disk, External Hard Drives, Floppy Disks, Optical Disks-CD, VCD, CD-R, CD-RW, DVD, Solid State Storage-Flash Memory, USB Drives.	**15**
UNIT-II	Input devices- Keyboard, Pointing Devices-mouse, Touch Screens, Joystick, Electronic pen, Trackball, Scanning Devices-Optical Scanners, OCR, OMR, Bar Code Readers, MICR, Digitizer, Electronic card reader, Image Capturing Devices-Digital Cameras. Output devices- Monitors- CRT, LCD/TFT, Printers- Dot matrix, Inkjet,	**15**

	Laser, Plotters- Drum, Flatbed, Screen Image Projector. Computer Software-Software and its Need, Types of software-System software, Application software, System software-operating system, utility program, programming languages, assemblers, compilers and interpreter.	
UNIT-III	Application software and its types: word-processing, spreadsheet, presentation graphics, Data Base Management Software, Characteristics, Uses and examples and area of application of each of them, Virus working, features, types of viruses, virus detection prevention and cure.	**10**
UNIT-IV	Data communication and computer network- Basic elements of a communication system, data transmission modes, data transmission speed, data transmission media-twisted pair coaxial, fibre optic, Types of Networks-LAN, WAN, MAN, Internet, VPN, Topologies of LAN-ring, bus, star, mesh and tree topologies.	**10**

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1101.1**	Understanding the concept of input and output devices of Computers
CO2	**BANM -1101.2**	Learn the functional units and classify types of computers, how they process information and how individual computers interact with other computing systems and devices
CO3	**BANM -1101.3**	Understand an operating system and its working, and solve common problems related to operating systems.
CO4	**BANM -1101.4**	Learn basic word processing, spreadsheet and Presentation Graphics software skills.

Recommended Books:

1. Pardeep K. Sinha, Priti Sinha, Computer Fundamentals, BPB Publications.
2. Rajaraman, V., Fundamental of Computers. Prentice Hall India, New Delhi.

Instruction of Question Paper setter

Paper setters have to follow the following pattern while setting up the question paper.

Maximum Marks will be 60.

There will be three parts in the question paper

1. Part 1 (Question 1) will consists of 12 multiple choice questions having one mark each.
2. Part 2 (Questions 2 to 7) will consists of 6 questions each having 4 marks.

   There will be choice in the even number questions i.e Q. No 2, 4 and 6

3. Part 3 (Questions 8 to 10) will consists of 3 questions each having 8 marks. There will be choice in the odd number question i.e Q. No 9.

SUBJECT TITLE: Programming in C
SUBJECT CODE: BSAM1102
SEMESTER: I
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
4	1	0	4.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective:

- To learn C Programming basics and the fundamentals of C
- To learn the basics of Control statements.
- To enhance problem solving and programming skills by implementing Functions, Arrays, Pointers, File management and dynamic memory allocation.

Contents of Syllabus:

Sr. No	Contents	Contact Hours
UNIT-I	Introductory Concepts- Introduction to computers, Computer characteristics, modes of operation, Types of programming languages, Introduction to C, some simple C programs, Desirable program characteristics. C Fundamentals- C character Set, Identifiers and keywords, data types, constants, variables and arrays, Declarations, expressions, statements, Symbolic constants. Operators and expressions Arithmetic operators, unary operator, Relational and logical operators, assignment operators, conditional operators, Library Functions.	**20**
UNIT-II	Data Input and Output- Preliminaries, singe character input, singe character output, Entering input data, writing output data, the gets and puts function. Preparing and Running a Complete C Program- Planning a program, Writing a C program, entering the program into the compiler, compiling and executing the program, error diagnosis, debugging techniques. Control Statements- Preliminaries, Branching, Looping, Nested control statements, switch statement, break statement, The continue statement, The goto statement, The comma operator.	**10**

UNIT-III	Arrays: Defining an array, processing an array, passing arrays to functions, Multidimensional arrays, Arrays and strings. Functions: A brief overview, Defining a function, accessing a function,	**10**
	function prototypes, passing arguments to a function, recursion.	
UNIT-IV	Pointers- Fundamentals, Pointer declarations, Passing pointers to the functions, pointers and one dimensional array, dynamic memory allocation, Operations on pointers, arrays of pointers. Data files- Opening and closing a data file, creating a data file, processing a data file, unformatted data files.	**10**

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1102.1**	Identify the need and use of programming in real world environment.
CO2	**BANM -1102.2**	Understanding of using data types, variables and arithmetic operations in programming.
CO3	**BANM -1102.3**	Understand the fundamentals of control statements.
CO4	**BANM -1102.4**	Understand concept of functions, pointer and Array.

Recommended Books:

1. Byron Gottfried, Programming with C, Schaums Outlines, Tata McGraw Hill.
2. Mullis Cooper, Spirit of C, Jacob Publications.
3. Yashwant Kanetkar, Let us C, BPB.
4. Kerninghan B.W. & Ritchie D. M., The C Programming Language, PHI.

Instruction of Question Paper setter

Paper setters have to follow the following pattern while setting up the question paper.

Maximum Marks will be 60.

There will be three parts in the question paper

1. Part 1 (Question 1) will consists of 12 multiple choice questions having one mark each.
2. Part 2 (Questions 2 to 7) will consists of 6 questions each having 4 marks.

   There will be choice in the even number questions i.e Q. No 2, 4 and 6
3. Part 3 (Questions 8 to 10) will consists of 3 questions each having 8 marks.

   There will be choice in the odd number question i.e Q. No 9.

SUBJECT TITLE: Personality Development-I
SUBJECT CODE: BSAM1103
SEMESTER: I
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
3	0	0	3

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective :

- Know themselves better
- Identify their potential and accept their limitations.
- Consciously overcome their limitations and move towards self esteem.

Contents of Syllabus:

Sr. No	Contents	Contact Hours
UNIT-I	Self Analysis: SWOT Analysis, Who am I, Attributes, Importance of Self Confidence, Self Esteem. Creativity: Out of box thinking, Lateral Thinking.	**10**
UNIT-II	Attitude: Factors influencing Attitude, Challenges and lessons from Attitude, Etiquette. Motivation: Factors of motivation, Self talk, Intrinsic & Extrinsic Motivators. Goal Setting : Wish List, SMART Goals, Blue print for success, Short Term, Long Term, Life Time Goals.	**15**
UNIT-III	Time Management: Value of time, Diagnosing Time Management, Weekly Planner To do list, Prioritizing work. Extempore Gratitude: Understanding the relationship between Leadership Networking & Team work.	**15**

UNIT-IV	Team Work: Necessity of Team Work - Personally, Socially and Educationally.	**10**
	Leadership: Skills for a good Leader, Assessment of Leadership Skills.	

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1103.1**	Identify their own potentials and accept their limitations.
CO2	**BANM -1103.2**	Make use of techniques for self-awareness and self-development.
CO3	**BANM -1103.3**	Consciously overcome their limitations and move towards self-esteem.
CO4	**BANM -1103.4**	Understand the importance of team building and time management.

Recommended Books:

1. Covey Sean, Seven Habits of Highly Effective Teens, New York, Fireside Publishers, 2nd Edition.
2. Carnegie Dale, How to win Friends and Influence People, New York: Simon & Schuster, 2ndEdition..
3. Daniel Coleman, Emotional Intelligence, Bantam Book, 2006
4. SOFT SKILLS, Career Development Centre, Green Pearl Publications, 2015.

Instruction of Question Paper setter

Paper setters have to follow the following pattern while setting up the question paper.

Maximum Marks will be 60.

There will be three parts in the question paper

1. Part 1 (Question 1) will consists of 12 multiple choice questions having one mark each.
2. Part 2 (Questions 2 to 7) will consists of 6 questions each having 4 marks.

   There will be choice in the even number questions i.e Q. No 2, 4 and 6
3. Part 3 (Questions 8 to 10) will consists of 3 questions each having 8 marks.

   There will be choice in the odd number question i.e Q. No 9.

SUBJECT TITLE: Fundamental of Fine Art
SUBJECT CODE: BSAM1104
SEMESTER: I
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	6	3

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective :

- Exercise and demonstrate use and mastery of the elements of design
- Demonstrate mastery of materials, tools, and processes in predominantly one medium
- Create a series of original works of art with coherent formal, conceptual, and procedural relationships to one another

Contents of Syllabus:

Sr. No	Contents	Contact Hours
UNIT-I	**The Principles of Art:-**Balance, Emphasis, Movement, Pattern, Proportion, Harmony, Rhythm, Movement, Unity and Variety.	10
UNIT-II	**Proportion**:-Symmetrical and Asymmetrical **Perspective:-**Different types of perspective, vanishing point, horizon line, orthogonal, graphic designing, Parallel Lines and Angles,	15

UNIT-III	**2-D and 3-D** :-Line Segments, Line, Rays, infinity; visualize infinity; a point on a line; distance; perceived distance; represent distance in a two dimensional way; distance between railroad ties reflect diminishing and increasing distance; rectangular prism; geometric tools.	**15**

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1104.1**	Upon successful completion of this course, student will demonstrate an ability to draw through observation.
CO2	**BANM -1104.2**	Understand the importance of line, volume, proportion, and perspective in a unified Composition
CO3	**BANM -1104.3**	Student will be able to layout, compose, and paint natural and manufactured forms.
CO4	**BANM -1104.4**	Identify applying different color techniques in different medium.

Recommended Books:

1) The Graphic Design Reference & Specification Book: Everything Graphic Designer by **Aaris Sherin and Poppy Evans** 2) Human dimension & interior space by **Julius Panero**

3) History Of Medieval India : From 1000 A. D. To 1707 A. D. By **R.S. Chaurasia**

SUBJECT TITLE: Introduction to Multimedia
SUBJECT CODE: BSAM1105
SEMESTER: I
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
3	0	1	3.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective :

- Summarize the key concepts in current multimedia technology.
- Create quality multimedia software titles.
- Structuring Information In A Multimedia Form

Contents of Syllabus:

Sr. No	Contents	Contact Hours
UNIT-I	Introduction to multimedia Key elements of multimedia: text, audio, video, graphics, animation Hardware and software requirements for multimedia Applications of multimedia	**10**
UNIT-II	Desktop publishing Basic design concepts User interface design Hypermedia authoring concepts.	**10**
UNIT-III	Process of multimedia production Various file formats of text, audio, video, graphics and animation File compression techniques Creating web based multimedia.	**15**
UNIT-IV	Introduction to animation Basic audio and video integration techniques Animation effects Production process of animation	**10**

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1105.1**	Define what Multimedia is and how that works.
CO2	**BANM -1105.2**	Understand multimedia components using various tools and techniques.
CO3	**BANM -1105.3**	Analyze and interpret Multimedia data.
CO4	**BANM -1105.4**	Discuss about different types of media format and their properties.

Recommended Books:

1. Multimedia Basics, Volume 1 by Andreas Holzinger, Firewall Media

2. Fundamentals of Multimedia, Ze-Nian Li, Mark S. Drew, Pearson Prentice Hall, 2004

Instruction of Question Paper setter

Paper setters have to follow the following pattern while setting up the question paper.

Maximum Marks will be 60.

There will be three parts in the question paper

4. Part 1 (Question 1) will consists of 12 multiple choice questions having one mark each.
5. Part 2 (Questions 2 to 7) will consists of 6 questions each having 4 marks.

   There will be choice in the even number questions i.e Q. No 2, 4 and 6
6. Part 3 (Questions 8 to 10) will consists of 3 questions each having 8 marks.

   There will be choice in the odd number question i.e Q. No 9.

SUBJECT TITLE: S/W Lab - I (Introduction to Computers and IT)
SUBJECT CODE: BSIT1106
SEMESTER: I

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objectives:

- Define and describe the hardware used in information technology (IT).
- Define and describe the types of software and Hardware used in IT.
- Demonstrate the ability to create and use documents, spreadsheets, presentations and databases in order to communicate and store information as well as to support problem solving

Contents of Syllabus:

Sr. No	Contents	Contact Hours
UNIT-I	MS-DOS Internal and External Commands: | attrib, backup | batch | bcdedit | bootcfg | bootsect | break, cd | chkdsk | cls | cmd | color | command | copy ,date | | del | delete | deltree | dir | diskcopy | ,echo | edit | fdisk | md | mkdir | mode | | move | undelete | unformat | ver | vol, xcopy.	**10**

	145124	Kiran	55	62	85	
	145125	Gurbir	53	49	79	
	145126	Vicky	45	70	88	

- Insert a row between Krishna and Ram and add the following data:

Krishna	Ram	42	25

- Highlight the 2nd row and right-align the data.
- Apply superscript to the word " Xuereb" and change it to capital letters.
- Below the table insert a picture about Computers from clip art.
- Using the help function, search using the word " Table" choose "Delete a cell , row , or column from a table". Copy the first point stating " Select the cells…..delete" and paste it under the table.
- Set the magnification to 75% 21)Set the top margin to 3 cm. 20)Save your work and close Microsoft word.
- Create Mail Merge with using student information to represent their class performance.

UNIT-III	**MS-Excel** • Create a Personal Monthly Budget through worksheet • Create a sale report of any organization and also represent through various charts. • Insert picture and data sorting, filtering and using conditional formatting in MS-Excel • Use different functions in MS-Excel • Macro and how it is used in MS Excel	**10**
UNIT-IV	**MS-PowerPoint** • To change your slide layout • To change your background color • To make design changes that will apply to ALL slides	**10**
UNIT-II	**MS-WORD** • Creating, Editing and Deleting images (Paint) • Customize Desktop and Creating Folder and Briefcase on Desktop through accessories • Save your work as on my Desktop. • Page Layout as Horizontal and Vertical • Run the spell checker and Text Alignment • Use of Formatting tools • Add a header to the document and write your Name and Surname. • Create a table as shown below.	**20**

Roll Number	Name	English	Math
145123	Reshma	85	88

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1106.1**	Understand the basic concept of Microsoft Disk Operating System Internal and External command interface.
CO2	**BANM -1106.2**	Work on MS Paint and its also learn to save images on different modes.
CO3	**BANM -1106.3**	Learn how to write a various types of letters and manage with latesttools of MS-Word.
CO4	**BANM -1106.4**	Understand and execute the MS Excel functions, graphs and manage organizational data.

SUBJECT TITLE: S/W Lab – II (Programming in C)
SUBJECT CODE: BSIT1107
SEMESTER: I

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- The purpose of the course is to provide students with an understanding of C programming Concepts.
- To learn How to create ,implement and debug the program. • To learn how to optimize the solution using Functions, Arrays, Pointers, Structures.

Contents of Syllabus:

Contents

1. Conversion of any mathematical equation into C format and its evaluation
2. Evaluation of any mathematical Expression and identify the hierarchy
3. C program to reverse any given number
4. C program to find the day of any given date in a calendar
5. C program to check whether a triangle is valid or not when the three angles are entered using keyboard.
6. C program to check whether a triangle is valid or not when the three sides are entered using keyboard.(Triangle is valid if the sum of two sides are greater than the largest side)
7. C program to find the greatest among the three numbers using conditional operator
8. C program to check whether the entered number is prime or not
9. C program to print prime numbers between 1 to 100
10. C program to print various patterns

```
*                A B C D E F G F E D C B A
***             A B C D E F     F E D C B A
*****           A B C D E         E D C B A
******* A B C D D C B A A B C           C B
                A
                  A B                       B A
```

11. C program to print the multiplication table of the number entered by the user
12. C program to evaluate the compound interest using the formula as $a=p(1+r/q)^{nq}$ where q =number of times per year r=annual rate, n=number of years, p=principle amount
13. C program to find the factorial of a number entered by the user
14. C program to generate the Fibonacci series upto n terms 15. C program which is menu driven to havig following options:
    i. Factorial of a number
    ii. Prime or not
    iii. Odd or even
    iv. Exit
16. C program to find the sum of digits
    i. Without using recursion ii. using recursion
17. C Program to Swap of two no's using third variable
18. C Program to Swap of two no's without using third variable
19. C program for array addition
20. C program for array multiplication
21. C program for transpose of a matrix
22. C menu driven program that depicts the working of a library. The menu option would be: i. Add book information
    ii. Display book information
    iii. List all the books for a given author iv. List the title of a specified book
    v. List the count of books in the library
13. List the books in order of accession number vii. Exit

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1107.1**	Understand to create, save, compile and run a program In C.
CO2	**BANM -1107.2**	Understand and develop programming skills using the fundamentals and basics of C Language.
CO3	**BANM -1107.3**	Develop programs using the basic elements like control statements.
CO4	**BANM -1107.4**	Develop programs using Arrays and Strings. Implement structures, functions and pointers.

SYLLABUS

SEMESTER-II

SUBJECT TITLE: Introduction to Computer Graphics

SUBJECT CODE: BSAM1201
SEMESTER: II
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
4	1	0	4.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective:

- Acquire the competency in technical skills applicable to graphic design.
- Understand the ability to use design thinking strategies in an iterative design process.
- Enrich the skill level of graphic design through the topics

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Features and application of photo editing software; image sizes and resolutions; creating new images; placing images; file browser; tool selections; color models and modes; adjusting color display for cross platform variations; working with layers; features of layer masks and clipping path; blending modes; adjustment layers; 3D editor.	15
UNIT-II	Features and applications of illustrator; vector and raster images: resolution in images: illustrator environment; documents; working with colors. Features and applications of drawing software; interface and toolbox; common tasks; creating basic shapes: reshaping objects; applying color fills and outlines; text tools; text formatting; embedding objects into text; text wraps; text object links.	15
UNIT-III	Applying effects – distortion effects, contour effects, transparency and lens effects; depth effects; working with bitmaps; editing and applying bitmaps.	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1201.1**	Seek design principles, design process, theory, history and contemporary design practice.
CO2	**BANM-1201.2**	Gain proficiency in identified technical skills, understand the process of creating, analyzing, and evaluating graphic design solutions.
CO3	**BANM-1201.3**	Justify the choice of appropriate tools according to the type of digital art work
CO4	**BANM-1201.4**	Visualize and demonstrate an idea and express it through visual design

SUGGESTED READINGS:

1. Russell N. Barid, “The Graphic Communication”, Holt, Rinehart and Winston, Canada, 1987.
2. John Christopher Jones, “Design Methods”, Wiley, 1992

SUBJECT TITLE: Computer Graphics using programming C

SUBJECT CODE: BSAM1202
SEMESTER: II
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
4	1	0	4.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective:

- To enable students to understand fundamentals of programming language.
- To gain knowledge in designing multimedia elements using code.
- To enable students to develop game programs using Graphics.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Basic of Computer Graphics: Basic of Computer Graphics, Applications of computer graphics, Display devices, Random and Raster scan systems, Graphics input devices, Graphics software and standards Graphics Primitives: Points, lines, circles and ellipses as primitives, scan conversion algorithms for primitives, Fill area primitives including scan-line polygon filling, inside-outside test, boundary and flood-fill, character generation, line attributes, area-fill attributes, character attributers.	15

UNIT-II	2D transformation and viewing: Transformations (translation, rotation, scaling), matrix representation, homogeneous coordinates, composite transformations, reflection and shearing, viewing pipeline and coordinates system, window-to-viewport transformation, clipping including point clipping, line clipping (cohen-sutherland, liangbersky, NLN), polygon clipping	15
UNIT-III	3D concepts and object representation: 3D display methods, polygon surfaces, tables, equations, meshes, curved lies and surfaces, quadric surfaces, spline representation, cubic spline interpolation methods, Bazier curves and surfaces, B-spline curves and surfaces 3D transformation and viewing: 3D scaling, rotation and translation, composite transformation, viewing pipeline and coordinates, parallel and perspective transformation, view volume and general (parallel and perspective) projection transformations	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1202.1**	Discuss the ways to represent different types of data, visually.
CO2	**BANM-1202.2**	Justify suitable methods to process information according to variable types.
CO3	**BANM-1202.3**	Develop programs for real time application using basics of programming language.
CO4	**BANM-1202.4**	Design various multimedia elements using code.

SUGGESTED READINGS:

1. Computer Graphics, D.Hearn And P.Baker - Pearson Eduction - C Version
2. Computer Graphics, with OpenGL Hearn and Baker, - Pearson
3. Computer Graphics, Sinha & Udai, - TMH
4. Computer Graphics, Foley and van Dam - Person Education **Instruction for**

SUBJECT TITLE: Foundation Art

SUBJECT CODE: BSAM1203

SEMESTER: II

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
4	1	0	4.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective:

1. To provide a comprehensive introduction to different techniques related to art for animation
2. To understand basic terminology, progress, issues, and trends.
3. Exercise and demonstrate use and mastery of the elements of design
4. Create a series of original works of art with coherent formal, conceptual, and procedural relationships to one another

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	**Skills required for an Animation Artist** Introduction to Visual and Creative development of an artist, Introduction to Light & shade, Introduction to Grayscale pencil shading. **Introduction to Colors** Different types of Methods Additive and Subtractive, Introduction to Pigment colors, Introduction to Harmony and Schemes, Tint, Shade,	15

	Value, Warm Colors, Cool Colors	
UNIT-II	**Introduction to Visual Design** Elements and Principles of Design, Elements of Design, Line, Color, Shape, Categories, Texture, Space, Form **Principles of design** Unity/Harmony, Methods, Balance, Types, Scale/proportion, Dominance/emphasis, Similarity and contrast **Introduction to Design** Introduction to 2D Design and 3D Design**,** Elements of 2D and 3D Design**,** How to create 2D and 3D Design using Elements and Principles **Introduction to Perspective Drawing** Introduction to Perspective, Different types of Perspective, Different types of Eye Levels	15
UNIT-III	**Introduction to Human Figure** Introduction to gestures Draw, Introduction to Quick Sketches, Drawing Human Figures, Basic Proportions **Introduction to Cartoon Character** Cartoon volume construction, Anatomy of Cartoon Character, Drawing for Animation Characters **Introduction to Foreshortening** Hands & Leg, Foreshortening, Facial expressions, Sketching from live models, Shape and Action	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1203.1**	Understand and apply principles of designs into given projects
CO2	**BANM-1203.2**	Acquire and analyze different ideas about designs and its implementations
CO3	**BANM-1203.3**	Demonstrate progress in basic design shapes and color

CO4	**BANM-1203.4**	Possess good knowledge about industry standards of contemporary design and its implementations

TEXT/REFERENCE BOOKS:

1. Figure Study Made Easy By- Aditya Chari -- Grace Publication
2. Perspective By Milind Mulik -- Jyotsna Prakashan
3. Animal Anatomy for Artists – The Elements of Form – Eliot Goldfinger - Oxford University Press.

SUBJECT TITLE: Animation Techniques

SUBJECT CODE: BSAM1204

SEMESTER: II

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
4	1	0	4.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective:

1. To provide a comprehensive introduction to different techniques related to art for animation 2. To understand basic terminology, progress, issues, and trends.

3. To study the various application of art in creating animation projects.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Animation: origin and growth Basic principle of animation Animation: meaning, definition and types	15

UNIT-II	Main elements of animation Role of computers in animation Computer language for animation Basic computer graphics algorithm	15
UNIT-III	2D and 3D coordinated system Reflection and rotation matrix Motion control Transparency, texture, shadow and anti hashing Automatic motion control: mechanics, robotics, kinematics	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1204.1**	Understand and apply various techniques of drawing for animation.
CO2	**BANM-1204.2**	Analyze a given story or scenario and draw necessary artworks related to it.
CO3	**BANM-1204.3**	Process knowledge about art in animation field.
CO4	**BANM-1204.4**	Understand and create the various human & animal figures for a given storyline or concept.

SUGGESTED READINGS:

1. Computer Graphics: Principles & Practice In C, 2/E by Foley; Pearson Education India.

2. Animation: The Mechanics of Motion, Volume 1by Chris Webster; Taylor & Francis.

SUBJECT TITLE: Design Graphic Application
SUBJECT CODE: BSAM1205
SEMESTER: II
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
4	1	0	4.5

Internal Assessment: 40
End Term Exam: 60
Duration of Exam; 3 Hrs

Course Objective:

- Developing the basic skills necessary for the student to produce digital character based animation, titles for film and video.
- Learning and experiencing the arts of storytelling, animation and cinematography while making 2D animation movies, motion graphics, and GIF stickers.
- Understanding principles that translate sequential images into action to make animation Believable

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS

UNIT-I	**Flash:** Introduction, logging onto server, basic Macintosh skills, Working in Flash, Drawing with Flash, Basic animation, Working in the timeline, Working with symbols, Shape between, staggering animation effect, Animation Review, Break apart and distribute, Intro to Motion Guide, Motion Guide Paths, Mask layers, Button Intro, Intro to scripting	15
UNIT-II	**Front page:** Introduction to FrontPage, Viewing a Completed Web, Overview of the FrontPage Environment, Creating a Web Page, Linking Web Pages, Creating Internal Links, Creating External Links, Creating a Navigation Bar, Enhancing Web Pages, Formatting Text on a Web Page, Applying Themes, Adding Pictures to a Web Page, Inserting Pictures, Using Pictures as Hyperlinks, Working with Tables. Creating and Modifying a Table. Enhancing a Table, Introduction to Web Page Management, Importing a Web, Working with Web Pages and Webs, Publishing Your Webs	15
UNIT-III	**Corel Draw:** Introduction to Corel DRAW , Getting Started, Moving Around and Viewing Drawings, Basic Drawing Skills, Selecting and Manipulating Objects, Drawing and Shaping Objects, Arranging Objects, Using Text, Working With Text, Working With Objects, Outlining and Filling Objects, Using Symbols and Clipart, Transforming Objects, Adding Special Effects, Special Effects, Creating Output, Exporting Drawings. Printing	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1205.1**	Define and apply design principles and theories to animation production.2.
CO2	**BANM-1205.2**	Evaluate and apply the 12 principles of animation based on the requirements of the storyline.
CO3	**BANM-1205.3**	Assess, criticize the current animation trends in relation to the past trends.
CO4	**BANM-1205.4**	Demonstrate progress in basic drawing and animation skills

SUGGESTED READINGS:

3. Macromedia Flash mx express By Leon cych,
4. Macromedia flash mx for windows & macintosh By Katherine Ulrich.
5. Corel draw x5 The official guide: By Gray David Bouton.
6. The corel draw wow! Book: By Linnea Dayton.

7. Corel draw! 5 for dummies: By Deke Mcclelland

SUBJECT TITLE: Software Lab –III
(Computer Graphics Using 'C')
SUBJECT CODE: BSAM1206
SEMESTER: II
CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- We will look at raster scan graphics including line and circle drawing, polygon filling, anti- aliasing algorithms
- Clipping, hidden-line and hidden surface algorithms including ray tracing and, of course, rendering
- Implementation of basic and advanced algorithms will be done in C/ C++. **Contents of Syllabus:**

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	1. To study the various graphics commands in C language. 2. Develop the DDA Line drawing algorithm using C language	15

UNIT-II	3. Develop the Bresenham's Line drawing algorithm using C language 4. Develop the Bresenham's Circle drawing algorithm using C language	15
UNIT-III	5. Develop the C program for to display different types of lines 6. Perform the following 2D Transformation operation Translation , Rotation and Scaling 7. Perform the Line Clipping Algorithm 8. Perform the Polygone clipping algorithm	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1206.1**	Design Programusing basic computer graphics commands.
CO2	**BANM-1206.2**	Apply direct algorithm to implement line drawing.
CO3	**BANM-1206.3**	Apply polynomial method to implement circle drawing.
CO4	**BANM-1206.4**	Apply the scan conversion algorithm for various graphics primitives.

SUGGESTED READINGS:

3. Russell N. Barid, "The Graphic Communication", Holt, Rinehart and Winston, Canada, 1987.

4. John Christopher Jones, "Design Methods", Wiley, 1992

SUBJECT TITLE: Software Lab IV (Design Graphic Application)

SUBJECT CODE: BSAM1207

SEMESTER: II

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- Developing the basic skills necessary for the student to produce digital character based animation, titles for film and video.
- Learning and experiencing the arts of storytelling, animation and cinematography while making 2D animation movies, motion graphics, and GIF stickers.
- Understanding principles that translate sequential images into action to make animation Believable

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS

UNIT-I	**Flash:** Introduction, logging onto server, basic Macintosh skills, Working in Flash, Drawing with Flash, Basic animation, Working in the timeline, Working with symbols, Shape between, staggering animation effect, Animation Review, Break apart and distribute, Intro to Motion Guide, Motion Guide Paths, Mask layers, Button Intro, Intro to scripting	15
UNIT-II	**Front page:** Introduction to FrontPage, Viewing a Completed Web, Overview of the FrontPage Environment, Creating a Web Page, Linking Web Pages, Creating Internal Links, Creating External Links, Creating a Navigation Bar, Enhancing Web Pages, Formatting Text on a Web Page, Applying Themes, Adding Pictures to a Web Page, Inserting Pictures, Using Pictures as Hyperlinks, Working with Tables. Creating and Modifying a Table. Enhancing a Table, Introduction to Web Page Management, Importing a Web, Working with Web Pages and Webs, Publishing Your Webs	15
UNIT-III	**Corel Draw:** Introduction to Corel DRAW , Getting Started, Moving Around and Viewing Drawings, Basic Drawing Skills, Selecting and Manipulating Objects, Drawing and Shaping Objects, Arranging Objects, Using Text, Working With Text, Working With Objects, Outlining and Filling Objects, Using Symbols and Clipart, Transforming Objects, Adding Special Effects, Special Effects, Creating Output, Exporting Drawings. Printing	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-1207.1**	Define and apply design principles and theories to animation production.2.
CO2	**BANM-1207.2**	Evaluate and apply the 12 principles of animation based on the requirements of the storyline.
CO3	**BANM-1207.3**	Assess, criticize the current animation trends in relation to the past trends.
CO4	**BANM-1207.4**	Demonstrate progress in basic drawing and animation skills Create traditional and computer generated 2D animation based on current industry trends and Practices

SUGGESTED READINGS:

8. Macromedia Flash mx express By Leon cych,

9. Macromedia flash mx for windows & macintosh By Katherine Ulrich.
10. Corel draw x5 The official guide: By Gray David Bouton.
11. The corel draw wow! Book: By Linnea Dayton.
12. Corel draw! 5 for dummies: By Deke Mcclelland

SYLLABUS

SEMESTER-III

SUBJECT TITLE: Content and script writing

SUBJECT CODE: BSAM2301

SEMESTER: III

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
5	1	0	5.5

CONTACT HOURS/WEEK:

Internal Assessment: 40

End Term Exam: 60

Duration of Exam; 3 Hrs

Course Objective :

1. Outline the Evolution of CG Storyboarding with Digital Filmmaking.
2. Demonstrate the knowledge of different Storyboarding software used in Drawing sketching, its interface and tools.
3. Understand the significance of CG filmmaking, Light, shadow and composition in Storyboard

The purpose of the course is to learn about film and television screenplay structure, analyze dramatic strategies in film and television, learn and apply correct script form, and creatively engage in the various stages of original scriptwriting. The assignments will include the writing of scenes, a treatment and a half-hour script, with special emphasis on the steps leading toward creating a final screenplay

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S. NO.	CONTENTS	CONTACT HOURS

UNIT-I	The journey of the self; Wanting to tell stories; Self-exposure and giving support; What is therapy and what is art?; What stories mean; Theme and variation; Just do it; Outline and expansion; Collaboration; CREATIVE INTELLIGENCE; Radiant thinking; Creative-workouts (brain storming); Improvisation; CREATING A STORY; Understand the visual media; Analyzing audience.	15
UNIT-II	Character; Mono myth/hero's journey; The 17 stages of joseph ; cambell's stages; Departure; Initiation; Return; Story; narrative meaning; Structure of the story; essential elements of a story; Three Act of story; Plot; The exposition;Climax; Falling action; The journey and return; Comedy; Tragedy; CREATE YOUR OWN STORY; Generate an IDEA; FICTION OR NONFICTION.	15
UNIT-III	SCRIPT; Script Elements; Scene Heading; CINEMATOGRAPHY; Shot Types; Camera Angles; Eye viwes; Camera Movements; Arc Shot; Camera Pan; Camera Tilt; Tracking; Crabbing Shot; Dolly Shot; Dolly Zoom; Follow Shot; Pedestal Shot; TRANSITIONS; Type of transition.	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2301.1**	Students will be able to express ideas fluently in standard screenwriting format at an advanced level.
CO2	**BANM-2301.2**	Students will be able to craft character-based stories with clear conflicts at an advanced level.
CO3	**BANM-2301.3**	Students will be able to analyze film and television structure at an advanced level.
CO4	**BANM-2301.4**	Students will be able to workshop creative ideas at an advanced level

.SUGGESTED READINGS:

1. Animation Writing and Development, : From Script Development to Pitch (Focal Press Visual Effects and Animation)

2. How to Write for Animation by Jeffrey Scott

3. The complete book of script writing by J. Michael Straczynski

SUBJECT TITLE: Principles of animation

SUBJECT CODE: BSAM2302

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
5	1	0	5.5

Course Objective :

1. To familiarize the students with various approaches, methods and techniques of Animation Technology.
2. To train students in applying laws of human motion and psychology in 2-D or 3-D Characters.
3. To develop expertise in life-drawing and related techniques.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACTHOURS
UNIT-I	Introduction; Brief history of Animation; Animation as an Art form; Different Mediums and Early devices; Animation in different part of the world; Disney Animation principles; Limited and Full Animation Type; Equipment used in classical animation; Language of animation; The Different Mediums of Animation; 2D Animation; 3D Animation; Storytelling and Script; Story boarding and its importance; Unit of timing, Exposure and bar sheet; Properties of	15

	matter in animation; Difference between realistic and cartoonic movement; The numbering system and effect animation	
UNIT-II	**Laws of Motion in Animation-** The Newton's laws of motion and animation; Effect of gravity and COG; Timing for movement of inanimate object; Force and Weight in animation; Storbing Fast and Slow action; **Creating Better Scene-** Inner feeling and emotions; Clear acting and definite action; Character and personality; Thought process through expression; Ability to analyze; Clear Staging and Composition; Timing and Strength in movement; Solidity and Forceful Drawing; Imagination **Classical Animation-** Capabilities; How does animation work; Origins of Animation; Brief History of Animation; Oxberry Animation Stand; Hall of Fame in Animation; Disney's Nine Old Man; Invention of the Principles; 12 Principles of Animation; Glossary; ANIMATION Language/Terminology ; Equipments/Materials which will be used.	15
UNIT-III	**Building Characters-** Character Building for ANIMATION; What is Acting; Theory of Psycho-Physical Action; Character's LIFE; Pantomime; The Two elements; Psychological Process; Some Technique; Applying Psychological process to a Character; Physical Gesture; Using the two Element r	15

	esult in successful acting; Character's Note; Scene Exploration; Develop Intentions and Objectives in the Dialogue and Action; Improvisation; 7 Essential Acting Concept; Difference between Actor and animator; The Audience; The Goal.	

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2302.1**	This course will offer skill development in the use of software to develop storyboards.
CO2	**BANM-2302.2**	2-Dimentional animation including creating, importing and sequencing media elements to create multi-media presentations.
CO3	**BANM-2302.3**	Emphasis will be on conceptualization, creativity, and visual aesthetics.
CO4	**BANM-2302.4**	This course takes the students through various aspects of animation using a variety of 2 dimensional software.

SUGGESTED READINGS:

1. Disney Animation: The Illusion of Life by-Walt Disney

2. Computer Graphics: Principles and Practice. By Foley, Van Damn

3. Image Processing for Computer Graphics. By Gomez and Velho.

SUBJECT TITLE: Software Lab –(3D Modeling)

SUBJECT CODE: BSAM2303

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objective:

1.Examine object behavior in 3D space

2 Demonstrate tools and techniques required for NURBS modelling and UV unwrapping.

3 Create simple Animations including Expressions, constraints and cycles using dope and graph editor.

4 Exhibit Rigging techniques for props, using deformer, and basic understanding of joints and control types

5 Demonstrate Skinning techniques for various objects.

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS
UNIT-I	Introduction, Tools, Projects and Scenes, Polygon modeling tools, Props Modeling, Building simple prop	15
UNIT-II	Modeling with Polygons; Human full body modeling Modeling the Leg of the Character Modeling the eyes, nose;	15

	Script Editor and Attribute editor; face anatomy, face structures, and face modeling; Cartoon character modeling;	
UNIT-III	Automobile modeling Interior and exterior modeling Smooth and non-smooth; Ambient occlusion render;	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2303.1**	Create various 3D models according to the topology.
CO2	**BANM-2303.2**	Creating and editing geometry from primitives.
CO3	**BANM-2303.3**	Create realistic and semi realistic models with appropriate details in both mesh and texture level.
CO4	**BANM-2303.4**	Construct effective modeling pipeline.

SUGGESTED READINGS:

1. Mastering Autodesk Maya 2012 by Todd Palamar& Eric Keller

2. 3D Automotive Modeling: An Insider's Guide to 3D Car Modeling and Design by Andrew Gahan

3. 3D for Graphic Designer by Ellery Connell

SUBJECT TITLE: Software Lab – (Advanced Photo shop)

SUBJECT CODE: BSAM2304

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objective:

•Adobe Photoshop is the premiere image manipulation tool for print design, Web design, and photography.

•Students planning to work with photos or design projects at any level.

•Students will learn to choose and use the best techniques for common Photoshop jobs including selecting and isolating objects, creating image composites, masking and, setting typography, and improving images with retouching and effects.

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS
UNIT-I	Introductions; Introduction to PSD Work spaces and Keyboard Shortcuts; Working extensively with the Healing Brush and Spot Healing Brush Align and create up to 5 Clone sources; Eliminating red eye in a photograph with the Red Eye Tool; Correcting the tonal range of a too dark/light image using the dodge/burn tool;	15

	A look at the different selection tools; Understanding File Formats;	
UNIT-II	Choosing the resolution you need; Re-size vs. Re-sample; Saving; Layers and the Adjustment Panel; Apply the Target Adjustment tool to visually manage color adjustments; Vibrance vs. Saturation; Methods of Color Correcting; Selections in depth; Combining selections basic Layer Masks; Non-Destructive Transformations with a Smart Object; Image Manipulation- Filters and Using Smart Filters; Sharpening an image; Introduction to Blending Modes- Creating Textures with Blending Modes; Editing Text with Blending Modes; Selecting and formatting a paragraph; Drawing with shape outlines; Scale, Rotate, Skew, Warp, Duplicate;	15
UNIT-III	Image Manipulation- Filters and Using Smart Filters; Sharpening an image; Introduction to Blending Modes- Creating Textures with Blending Modes; Editing Text with Blending Modes; Selecting and formatting a paragraph; Drawing with shape outlines; Scale, Rotate, Skew, Warp, Duplicate;	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2304.1**	Understand the basic principles of graphic design using Photoshop including typography, compositing, color, and composition
CO2	**BANM-2304.2**	Design better pages and documents using design-thinking principles
CO3	**BANM-2304.3**	Create learning materials including infographics and visual content to fortify learning objectives
CO4	**BANM-2304.4**	Understand how to create better layouts using grids and guides using Photoshop

SUGGESTED READINGS:

1. Adobe Photoshop CS6 Digital Classroom by Jennifer Smith (Author), AGI Creative Team
2. Russell N. Barid, “The Graphic Communication”, Holt, Rinehart and Winston, Canada, 1987.
3. John Christopher Jones, “Design Methods”, Wiley, 1992

SUBJECT TITLE: Software Lab –
(Graphics with Premiere Pro)

SUBJECT CODE: BSAM2305

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objective:

Premiere Pro is a professional video editing program that allows you to edit video from a number of different sources and publish edited videos to many different formats. In this training, you'll be creating a video highlighting a selection of different dances, and in the process you'll gain familiarity with the Premiere Pro interface and learn how to perform a number of different editing tasks.

- Understand terminology used in video editing
- Create, edit, and combine sequences
- Edit and combine audio, video, and still images
- Create titles and credits for videos
- Publish a video to a format suitable for web use

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS
UNIT-I	Introductions; Navigate Premiere Pro and Create and open projects; Import media into Premiere Pro;	15

	Edit tracks in the Time line; Create sequences and nested sequences; Add motion to your clips; Create and work with key frames; Add transitions;	
UNIT-II	Add animation and other effects; Create your own concept and execute and Edit your movie; Create a trailer from feature movie; shoot your documentary movie and compile it; Titles; Video Effects; Video Transitions and Audio Transitions; Re-sizing and opacity; color-correction tools; Add text, shapes, and logos to your project.	15
UNIT-III	Effects Controls; Audio Mixer and Meta data; Imports and exports; Rendering;	15

	Export media from Premiere Pro.	

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2305.1**	Recall the evolution of the traditional methods of compositing to the modern techniques
CO2	**BANM-2305.2**	Interpret various color manipulation techniques used for digital image generation
CO3	**BANM-2305.3**	Demonstrate Layer manipulation techniques of the layer based compositing software – After Effects
CO4	**BANM-2305.4**	Demonstrate the Lighting and advanced compositing techniques of the layer based compositing software – After Effects

SUGGESTED READINGS:

1. **Adobe Premiere Pro CC Classroom in a Book by Adobe**
2. **Teach Yourself Adobe Premiere Pro CS6 by Mr. Niranjan Jha**
3. **Premiere Pro CS6 Digital Classroom by Jerron Smith**

SUBJECT TITLE: Lab -Advanced Foundation Art

SUBJECT CODE: BSAM2306

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objectives:

1. Understand the formal elements of art and/or design through art analysis and develop competency in their application through studio practice.
2. Learn how to use materials, tools and processes, effectively and safely, from a variety of media (painting, sculpture, ceramic, photography), to create original works of art.
3. Select appropriate media to convey specific artistic expression that effectively communicates the artist intent. Develop creative problem-solving strategies as a means to create strong artwork.

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS
UNIT-I	Introduction;	15

	Introduction to flip book; work from still life of cubes, spheres, cones; Introduction to Perspective Drawing Introduction to Perspective, Different types of Perspective, Different types of Eye Levels Introduction to Visual Design Line, Color, Shape, Categories, Texture, Space, Form	
UNIT-II	Introduction to Human Figure Introduction to gestures Draw, Introduction to Quick Sketches, Drawing Human Figures, Basic Proportions Introduction to Cartoon Character Cartoon volume construction, Anatomy of Cartoon Character, Drawing for Animation Characters Introduction to Foreshortening Hands & Leg, Foreshortening, Facial expressions, Sketching from live models, Shape and Action	15
UNIT-III	Principles of design Unity/Harmony, Methods, Balance, Types, Scale/proportion, Dominance/emphasis, Similarity and contrast Introduction to Design Introduction to 2D Design and 3D Design, Elements of 2D and 3D Design, How to create 2D and 3D Design using Elements and Principles	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2306.1**	Define the role of different medium and materials.
CO2	**BANM-2306.2**	Analyze importance of Perspective.
CO3	**BANM-2306.3**	Utilizing perspective drawing from real life
CO4	**BANM-2306.4**	Apply Light and shade in Art.

SUGGESTED READINGS:

1. Disney Animation: The Illusion of Life by-Walt Disney
2. Perspective By Milind Mulik -- Jyotsna Prakashan
3. Animal Anatomy for Artists – The Elements of Form – Eliot Goldfinger - Oxford University Press.

SYLLABUS

SEMESTER-IV

SUBJECT TITLE: Photography

SUBJECT CODE: BSAM2401

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objectives:

This course will teach basic still and video camera techniques and concepts. It covers topics such as photography and digital video terms, cutaways and establishing shots, capture images, Video, montage sequence, incorporating visual elements such as transitions, color correction, chroma key.

1. To understand the functional working of a video camera

2. To learn the Art of Film Making and its nuances.

3. To create a story and tell it convincingly to the audience using various techniques related to cinematography, editing and sound effects.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Introduction to Photography; History of Photography; Technology; Types of digital cameras; point and shoot digital camera; prosumer digital camera; Digital SLR cameras; Image quality; how to digital sensor works; pixels; full frame versus APS-C; movement compensation; dust reduction; Live view; Facial recognition; Exposure; Shutter speed; Types of shutter speed; Aperture; F-stop number; Depth Of field; ISO; The fourth element; White balance; Basic in Camera setting; Scene modes; Metering modes; Composition: The rule of third; post processing and image management;	20
UNIT-II	DSLR; Full form of DSLR; how its work; Functioning; Advantages of DSLR; Disadvantages of DSLR; Exposure triangles; three element of exposure; DOF; Light; Grains; Tripod; Moving subjects; Photography is art; three style of photography; Contrast; point of view; proximity; Center of interest; Subject placement; simplicity; viewpoints and camera angles; balance; shape a nd lines; Symmetrical, or Formal; Asymmetrical, or Informal; perspective; landscapes; portraits.	25

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2401.1**	To develop the skill & knowledge of Digital Photography.
CO2	**BANM-2402.1**	Use and describe basic technical and aesthetic aspects of photography such as depth- of-field, composition, color theory and image content.
CO3	**BANM-2403.1**	Analyze a diverse range of fine art photographers and cinematographers and their techniques

CO4	**BANM-2404.1**	Students will demonstrate that they understand the pre-production, production, and postproduction filmmaking process

REFERENCES

1. Basic Principles of Photography: Gerald Millerson
2. Grammar of Shot (Second edition) :Roy Thompson (Focal Press)
3. How to read a film: James Monaco
4. The T.V. Production: Hand Book- Zetti Herbert
5. Elements of film: Lee. R.Bobker
6. The Art of Pictorial Composition: Wolohomok

SUBJECT TITLE: Film Language

SUBJECT CODE: BSAM2402

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objectives:

1 .Observe with knowledge and reflect upon the articulation of a film's content, form and structure.

Identify and define the formal and stylistic elements of film.

2. Develop an understanding of film language and terminology, and analyze the ways in which that this language constructs meaning and ideology.

3. Gain a basic understanding of film theory and global film history, to be able to identify significant movements and articulate key concepts.

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS

UNIT-I	Introduction; Direction ; Production pipeline; pre-production; production ; post production ; Production bible ; Screenplay ; Script ; Story boarding ; Thumb-nailing ; Composition and Point of Emphasis ; Camera Distances ; Camera Angles ; Light and Shadow ; What's in Motion, and Why? ; The Significance of Color ; Real Time v. Reel Time; Acting	20
UNIT-II	Information about famous directors ; Presentation about directors ; Lighting ; Three point lighting ; Fill light ; Key light; Back Light; Scene Transitions; Cinematic Point of View ; Soundtrack Communicates ; Explicit and Implicit Information ; Mise-en-Scène ; Create a Short movie or documentary movie within 8 to 10 mint time; Follow the instruction (Production pipeline, production bible, Screenplay, story boarding, and script) Stand; Hall of Fame in Animation; Disney's Nine Old Man; Invention of the Principles; 12 Principles of Animation; Glossary; ANIMATION Language/Terminology; Equipments/Materials which will be used.	25

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2402.1**	At the end of this module, the students will learn the evolution of the traditional methods of compositing to the modern techniques.
CO2	**BANM-2402.1**	At the end of this module, the students will learn the color manipulation used for digital image generation.

CO3	**BANM-2402.1**	Understanding principles that translate sequential images into action to make animation Believable
CO4	**BANM-2402.1**	The Word-Spoken & Written

READING REFERENCES

1. The Illusion of Life: Disney Animation: Ollie Johnston, Frank Thomas
2. The Animator's Survival Kit: Richard Williams
3. Timing for Animation: Harold Whitaker and John Halas
4. The Art of the Storyboard – Storyboarding for Film, TV, and Animation: John Hart
5. Exploring Storyboarding: Wendy Tumminello
6. Don Bluth's Art of Storyboard: Don Bluth

SUBJECT TITLE: Software Lab –(3D Texturing)

SUBJECT CODE: BSAM2403

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	**0**	**6**	**3**

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objective:

The course is aimed:

1. To explore the principles of 3D design.

2. To gain knowledge in creating 3D assets and product development.

3. To create and texture a simple 3D Model.

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS
UNIT-I	Introduction; Modeling a High Polygonal; Material assigning;	25

	Hyper Shade over view; Shades and Textures; Material Linking; Light Linking to the materials	
UNIT-II	Mental Ray Shades; Mental Ray Textures; Image based Texture Shades; Controlling Photon Emission from Shades; Character UV Texturing and UV Texturing over View; Applying Texture for Dice and Applying UV's for Inorganic Models; Applying UV's for head and Applying UV's for body; Applying UV's for B.G;	20

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2403.1**	Understanding the material and textures with Modeling
CO2	**BANM-2403.1**	Analyze the method of Advance unwrapping and texture creation in Photoshop
CO3	**BANM-2403.1**	Detail knowledge about Hyper shade, UV mapping and Image Based mapping.
CO4	**BANM-2403.1**	Detail knowledge about background Texturing and Arnold Shaders.

Reference books:-

1) Digital Lighting & Rendering - Jeremy Birn, Pub. - New Riders Press.

2) Maya Texturing & Lighting - Lee Lanier, Pub.-Sybex.

SUBJECT TITLE: Software Lab – (Vector Graphics with Illustrator)

SUBJECT CODE: BSAM2404

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	6	3

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- To learn about Adobe Illustrator CC interface and work with menus, tools and panels.
- To draw and edit simple and complex shapes using shape and transform tools.
- To work with color panels to create, manage and edit color and color groups.
- To work with type and text formatting tools.

Adobe Illustrator is the industry standard computer illustration software. Use Illustrator to draw shapes and design logos, flyers, posters, banners, business cards or any other vector graphics for print or web. In this course, you will learn Adobe Illustrator fundamentals to set up a print document and use various tools to draw, type and color all kinds of shapes and illustrations.

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS

UNIT-I	Introduction to Adobe Illustrator: Work area, workspaces and tools. Opening files, importing art work, viewing art work, ruler's grids. Drawing lines and shapes, pencil tool, pen tool, Editing drawing, tracing, symbols	15
UNIT-II	Concept of vector Logos: Re-creation of logos, 3D vector Logos. Creating 3D object, text and typing, Filters, Illustrations for web and print, Creating own text and types for web and print.	15
UNIT-III	Painting with Illustrator, Study of Icons, Types of icons, use of icons and Symbols as a company's promotion, Create outlines, templates, graphic style, file formats, Export illustrator Files in Other Formats	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2404.1**	Work comfortably with the software's most common tools and panels.
CO2	**BANM-2404.1**	Create and edit all sorts of print documents.
CO3	**BANM-2404.1**	Insert images, draw shapes, paint, type and apply color.
CO4	**BANM-2404.1**	Design and save print-ready digital files.

SUGGESTED READINGS:

- How to be an Illustrator(Brian Wood)
- Adobe Illustrator CC Classroom(Darrel Rees)

SUBJECT TITLE: Software Lab – (3D Architecture Modeling)

SUBJECT CODE: BSAM2405

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Objective and outcome of course:

1.This 3D Architecture modeling aims to teach numerous techniques on creating 3D models from the basic level to the most polished ones.

2.Learning high-end software 3DS Max is not an easy task, especially, when the user is a beginner.

3.The approach of the 3D Architecture modeling is entirely practical and it counts on real-time education that will help us to know and master the industry standards.

Contents of Syllabus:

S. NO.	CONTENTS	CONTAC THOURS

UNIT-I	Introduction; User Coordinate Systems Multiple View ports Visual Styles; Units Modeling by Layer (and Material) Solid Modeling, Extrusions and Booleans	15
UNIT-II	Mesh Modeling, Thicknesses and 3D Faces Creating 3D blocks for Windows and Doors Path Extrusions Legacy Import Grouping (from blocks) in Maya Standard DWG/DXF Import View ports and Creating Cameras Basic Rendering	15
UNIT-III	Modeling with Topography Lines Surface Modeling Tools and Surftab Settings 3-point USC and Region Creation Z-axis Interpolation for Streets and Sidewalks 3DS MAX Material Types Material Editor (compact mode) Material Parameters	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2405.1**	Identify the use of 3D Models in various industries.
CO2	**BANM-2405.1**	Use modeling techniques and software to create an environmental model.
CO3	**BANM-2405.1**	Understand how 3D simulation is applied in the real world.
CO4	**BANM-2405.1**	Explain how environmental models impact the larger field

SUGGESTED READINGS:

1. Architectural Design with SketchUp 3D Modeling, Extensions, BIM, Rendering, Making, and Scripting By Alexander C. Schreyer · 2015

2. Printing Architecture Innovative Recipes for 3D Printing By Ronald Rael, Virginia San Fratello · 2018

SUBJECT TITLE: Lab - Minor Project-I

SUBJECT CODE: BSAM2406

SEMESTER: III

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	6	3

Internal Assessment: 60
End Term Exam: 40

Objective and outcome of course:

Course Objective: Ability to work in a team and also have planning and decision making skills.

- Initiative, Confidence and ability to handle new problems
- Habit to keeping proper records and present a formal comprehensive report of their task.

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-2406.1**	Understand the basic concepts & broad principles of Industrial projects.
CO2	**BANM-2406.1**	Apply the theoretical concepts to solve industrial problems with teamwork and multidisciplinary approach.
CO3	**BANM-2406.1**	To make them understand fundamentals of costing and budgeting.
CO4	**BANM-2406.1**	Apply the risk management plan and analyse the role of stakeholders.

SYLLABUS

SEMESTER-V

SUBJECT TITLE: Software Lab –(3D Rigging)

SUBJECT CODE: BSAM3501

SEMESTER: V

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- In this subject the student will be introduced to the principles involved in rigging in Maya.
- A variety of rigging techniques and tools will be explored.
- Character rig as well as bind/skin geometry to that rig.
- The main objective of the subject is to impart the practical knowledge about organic & inorganic rigging in Maya.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Create and edit node based-hierarchies within a 3D environment, Identify pivot point locations of nodes, groups and other 3D objects, Apply procedural deformers to geometry for animation, Generate conceptual skeleton for 3D models.	15
UNIT-II	Create and edit joint deformers to create a skeleton rig for 3D	15

	models, Apply a skin to bind joints to geometry, Modify the bind and skin weights with editing tools, Create rigging controls for joint chain skeleton, Test / troubleshoot custom character rigs, Design custom character rigs for animations, Character(Human, Cartoon characters) rigging, Automobile (car,truck,bike) Rigging	
UNIT-III	Ball Legs -- Joints; Ball Legs -- Rigging Controls Ball Legs -- Skinning ; Ball Legs -- Animate Ball Legs -- Export; Biped -- Joints Biped -- Rigging Controls; Biped -- Blend Shapes Biped -- Skinning; Biped -- Animate Biped -- Export	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3501.1**	Student will be able to Build the character's skeleton by creating bone objects
CO2	**BANM-3501.1**	Student will be able to Understand the difference between IK and FK systems
CO3	**BANM-3501.1**	Student will be able to Establishing animation controls that will allow the character to be animated
CO4	**BANM-3501.1**	Student will be able to Skinning the 3d character and each tool that will help in improving skin deformations

TEXT/REFERENCE BOOKS:

- **"Stop Staring: Facial Modeling and Animation Done Right"** by Jason Osipa
- **Inspired 3D Advanced Rigging and Deformations**;- Brad Clark, Joe Harkins, and John Hood

SUBJECT TITLE: Software Lab –(3D Animation)

SUBJECT CODE: BSAM3502

SEMESTER: V

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- Creating solid base in animation fundamentals.
- Understanding different animation styles and techniques, and how to apply.
- Enriching the student skill set to meet professional expectations necessary for a career in

the expanding industry of entertainment.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Introduction Work flows, Pipelines of Production. Core Concepts object creation, manipulation, and animation. Further UI exploration, Hierarchies, Objects and Props animation	15

UNIT-II	Introduction to Poly modeling. Joints animation Human and animal walk Run cycle Jump cycle Girl and boy animation	15
UNIT-III	Automobile (Car,Truck,Bike) Animation	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3502.1**	Student will be able to animate 3D objects with keyframes
CO2	**BANM-3502.1**	Ability to develop their skills using key-frame animation and the graph editor.
CO3	**BANM-3502.1**	Students will also learn techniques for researching & using reference.
CO4	**BANM-3502.1**	Know how to animate the 3d character

TEXT/REFERENCE BOOKS:

- **Understanding 3-D animation using Maya;-** by John Edgar Park
- **3D Animation Essentials;-** by Andy Beane
- **The Art of 3D Computer Animation and Effects;-** by Isaac Victor Kerlow

SUBJECT TITLE: Software Lab –(Post Production)

SUBJECT CODE: BSAM3503

SEMESTER: V

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	6	3

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- Understand terminology used in the video post-production process
- Work with content on the Timeline
- Understand how to work with 2D & 3D layers
- Understand video formats Rendering and Exporting

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	The basics of creating projects, compositions, and layers, Importing footage, including video, audio, and still images, Creating special effects using the Effects menu, Creating animation for shapes, objects, and layers, Adding and animating text, Drawing shapes,	15

	Working with Masks, Animating Layers, Introducing the Puppet Tools, Working in 3D	
UNIT-II	Animating shapes, Creating and using masks and track mattes, Time line, Color correction, Special Effects, Working in 3D, Using the puppet tools to create animated characters and effects, Tracking;	15
UNIT-III	Moving camera; Wrap stabilizer, Extracting and removing objects from layers, exporting to video, Rendering and Exporting Your Work	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3503.1**	Create Motion Graphics to enhance your videos using a step by step, easy-to-use method.
CO2	**BANM-3503.1**	Create advanced Text Animation in 2D & 3D in After Effects.
CO3	**BANM-3503.1**	Work with the latest Responsive Design Techniques
CO4	**BANM-3503.1**	To become an expert in Motion Graphics, Visual Effects and Compositing

TEXT/REFERENCE BOOKS:

- **Adobe After Effects CC Classroom in a Book (2015 Release);-** by Brie Gyncild
- **Adobe After Effects CC Visual Effects and Compositing Studio Techniques;-** by Mark Christiansen
- **Adobe After Effects CS6 Classroom in a Book 1st Edition;-** By Adobe creative suit

SUBJECT TITLE: Software Lab –(UI and Web Design)

SUBJECT CODE: BSAM3504

SEMESTER: V

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	6	3

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- Use their learned skills, knowledge and abilities to develop web sites for the internet.
- Structure and implement HTML/CSS.
- Understand the principles of creating an effective web page
- Learn the language of the web: HTML and CSS

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Learning HTML, Exploring an HTML document, Working with doctype declaration, examining the document head, Working on document body, adding document structure, coding a basic page,	15

	Formatting paragraphs, controlling line breaks, Link to pages within site, linking to external pages, linking to downloadable resources, linking to page regions.	
UNIT-II	Working on basic table structure, adding content to tables, Setting table attribute, adding table captions, defining table headers, Understanding the relationship between HTML and CSS, Creating inline style, exploring the style elements, Basic font style	15
UNIT-III	Understanding about CSS, Choosing the CSS editor, CSS style panel, Using CSS rule definition, Organizing styles, Modifying style properties, Attaching external Style Sheets. Setting external image editing preferences, Placing images, exploring two different software integration for web pages, Modifying smart objects, styling images with CSS, using background graphics, Positioning background graphics, Understanding about form working, reviewing form design, creating accessible forms, using field set and legend tags, Inserting text field, creating list menu items, creating checkboxes, creating radio buttons, functioning of Submit button, Exploring form styling. Creating list menu items, creating checkboxes, creating radio buttons, functioning of Submit button, Exploring form styling.	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3504.1**	Be able to use the HTML programming language
CO2	**BANM-3504.1**	Apply intermediate and advanced web development practices.
CO3	**BANM-3504.1**	Learn how to create webpages that function using external data.
CO4	**BANM-3504.1**	Be able to embed social media content into web pages.

TEXT/REFERENCE BOOKS:

- **Thomas A. Powell, HTML: The Complete Reference, Third Edition, McGraw Hill.**
- **W3SCHOOLS**

SUBJECT TITLE: Lab - Minor Project-II

SUBJECT CODE: BSAM3506

SEMESTER: V

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	6	3

Internal Assessment: 60

End Term Exam: 40

Course Objective:

- Ability to work in a team and also have planning and decision-making skills.
- Initiative, Confidence and ability to handle new problems
- Habit to keeping proper records and present a formal comprehensive report of their task.

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3505.1**	Understand the basic concepts & broad principles of Industrial projects.
CO2	**BANM-3505.1**	Understand the value of achieving perfection in project implementation & completion.
CO3	**BANM-3505.1**	Apply the theoretical concepts to solve industrial problems with teamwork and multidisciplinary approach.

CO4	**BANM-3505.1**	To make them understand fundamentals of costing and budgeting.

SYLLABUS

SEMESTER-VI

SUBJECT TITLE: Software Lab –(3D Animation-II)

SUBJECT CODE: BSAM3601

SEMESTER: VI

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

1. Developing more sophisticated skills for character performance

2. Experimenting with both realistic and highly exaggerated styles of animation

3. Identifying professional practices and standards in animation industry, while creating Demo reel

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS

UNIT-I	Staging Multiple Characters; Staging Standing – The Still Action Portraying Character Personality Observation Daily and Reflection Report; Character Design & Development	15
UNIT-II	Effort Animation; Walk and Run Animation Jump, Climb, Push and Pull Animation	15
UNIT-III	Lip Sync and Facial Animation with Voice Recording Action & Reaction Between two Characters Staging Multiple Characters; Standing – The Still Action Portraying Character Personality	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3601.1**	Student will be able to create and animate objects and characters with naturalistic and expressive movements and poses.
CO2	**BANM-3601.1**	Learn how to use appropriate tools and technologies for the development of animation projects
CO3	**BANM-3601.1**	Able to Plan, develop and execute a series of effective and believable animation sequences.
CO4	**BANM-3601.1**	Analyze methods for creating solid acting choices that are unique and interesting.

TEXT/REFERENCE BOOKS:

- **Understanding 3-D animation using Maya;-** by John Edgar Park
- **3D Animation Essentials;-** by Andy Beane

- **The Art of 3D Computer Animation and Effects;-** by Isaac Victor Kerlow

SUBJECT TITLE: Software Lab –(Motion Graphics)

SUBJECT CODE: BSAM3602

SEMESTER: VI

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	4	2

Internal Assessment: 60
End Term Exam: 40
Duration of Exam; 3 Hrs

Course Objective:

- To learn the Basics of compositing using layer based compositing software.
- To understand the tools and techniques of compositing.
- To practice the categories in compositing process.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Motion Graphics, Visual Effects, design principles, where are we going? After Effects interface and palettes. Interfacing with digital software. Vector Art vs. Bitmap Art. Early pioneers in Motion Graphics (Cohl), Motion graphics best practices, Exploring tools in AE	15
UNIT-II	• Type, Typography in After Effects. Design vs.Art • Advanced Layers, Key Framing and • BasicAnimation, Rotoscoping • Masking, Motion Masks. • Composting, Nesting, Pre-composing • Sequences • Frame-by-frame • Avant guarde cinema • overview of film titles	15
UNIT-II	• Computer Animation and the Future of • MoGraph Stabilization and Motion • Tracking • Green Screen, Color Keying, • Compositing! • Rendering	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3602.1**	Gain good understanding about compositing process.

CO2	**BANM-3602.1**	Identify major applications of compositing techniques used in industry.
CO3	**BANM-3602.1**	Develop a visual effects pipeline.
CO4	**BANM-3602.1**	Demonstrate an in-depth knowledge of grading and VFX principles, practice and system capabilities.

TEXT/REFERENCE BOOKS:

- Creating Motion Graphics with After Effects: Essential and Advanced Techniques Paperback – 29 Jul 2010;- by Chris Meyer and Trish Meyer
- Motion Graphics: Principles and Practices from the Ground Up ;- by Ian Crook and Peter Beare

SUBJECT TITLE: Software Lab –(3D Lighting)

SUBJECT CODE: BSAM3603

SEMESTER: VI

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	6	3

Internal Assessment: 60

End Term Exam: 40

Duration of Exam; 3 Hrs

Course Objective:

- To understanding the art of lighting with 3d Lighting, Omni, spot light, direct light on polygon
- models.
- To Build lighting an Interior with sunlight, Light Fog, light Glow, ambient light and
- Volume Fog.
- knowledge about Light Rig. Interior Light set and Exterior Light Set.

Contents of Syllabus:

S. NO.	CONTENTS	CONTACT HOURS
UNIT-I	Lighting Basics 01-Basic Lighting 01 - Midday 02 - Sunset 03 - Cloudy 04 - Moonlight 05 - Dappled 06 - Stained Glass 07 - Mental Ray & Daylight	15
UNIT-II	Lighting Project- the cabin and bedroom Effects 08 - Atmosphere 09 - Camera FX DOF F-Stop Bokeh Effects; Motion Blur	15
UNIT-III	Apple • Blend • Vertex Color & Vertex Paint • Tiles - Character Unwrap • Unwrap UVW • Baking Textures - ZBrush • Displacement Maps versus Normal Maps • Hi-Res onto Low-Res	15

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3603.1**	Discover the significance of light and surface properties in real life and CG.
CO2	**BANM-3603.1**	Evaluate the role of different elements in CG lighting and shading.
CO3	**BANM-3603.1**	Appraise the strategies for tools and techniques for Lighting in CGI for production.
CO4	**BANM-3603.1**	Compose a visual expression for artwork for desired styling.

TEXT/REFERENCE BOOKS:

- **3D lighting : history, concepts and techniques;-** by Arnold Gallardo
- **The Cg Tutorial: The Definitive Guide to Programmable Real-Time GraphicsPaperback – 26 Feb 2003;-** By Randima Fernando (Series Editor), Mark J. Kilgard

SUBJECT TITLE: Lab - Major Project

SUBJECT CODE: BSAM3604
SEMESTER: VI

CONTACT HOURS/WEEK:

Lecture (L)	Tutorial (T)	Practical (P)	Credit (C)
0	0	8	4

Internal Assessment: 60

End Term Exam: 40

Course Objective:

- Ability to work in a team and also have planning and decision-making skills.
- Initiative, Confidence and ability to handle new problems
- Habit to keeping proper records and present a formal comprehensive report of their task.

COURSE OUTCOMES: On completion of this course, the students will be able to

CO1	**BANM-3604.1**	Understand the basic concepts & broad principles of Industrial projects.

CO2	**BANM-3604.1**	Understand the value of achieving perfection in project implementation & completion.
CO3	**BANM-3604.1**	Apply the theoretical concepts to solve industrial problems with teamwork and multidisciplinary approach.
CO4	**BANM-3604.1**	To make them understand fundamentals of costing and budgeting.