

B.Sc. (Graphics and Animation)

(Three years Degree Course)

Syllabus-2017

(Proposed Credit Distribution Scheme under CBCS)



Department of New Media Technology

**Makhanlal Chaturvedi Rashtriya Patrakarita Evam
Sanchar Vishwavidhyalay, Bhopal**

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Course Objective:

B.Sc.(Graphics and Animation) is an Undergraduate courses prepare a student to be part of the digital industry as a creator of content with focus on the convergence of text, video sound, graphics and animation. This is continuation of the skill leaned in the Digital Technology. The course begins with the basic concept learning of computers, communicative languages, environmental studies, social science and includes variety of software application. These software packages include the Internet, Adobe (Photoshop, After Effect, Illustrator, InDesign, Premiere, Flash and Dreamweaver), Coral Draw, Final Cut Pro, Page Maker, 3DS MAX, 3D MAYA, Web development languages, Sound Forge and open source software. Student gradually move towards professional skills for creating effective visual communication, global communication through a website, Advance Art, Pre-production, Video Editing, in order to specialize in Animation and Visual effect. This course is highly recommended for all students who desire state-of-the-art skills in multimedia, Graphics and Animation and for those whose goal is to become proficient in the use of current technology and software tools.

The project work in the final year is a unique experience and showcase for students' creativity, technological skills, and engagement with the field of Multimedia, Graphics and Animation. Students gain a wide range of experience and skills by creating independent and group projects utilizing audio, video, animation, digital games, web and graphic design, and programming. As a requirement, the student works towards a professional presentation that forms part of a final evaluation. This process is done in close collaboration with a Guide from the Department, Media and Communication industry, which will facilitate progress through the course.



(Semester wise Credit Distribution Scheme under CBCS)

B.Sc. (GRAPHICS AND ANIMATION)

| Sem. | Core Course Compulsory (CCC) (6 Credits Each) | Core Course Elective (CCE) (6 Credits Each) | Ability Enhancement Course (AEC) (3 Credits Each) | Skill Enhancement Course (SEC) (3 Credits Each) | Open Elective (OE) (3 Credits Each) | Total Credits |
|----------------------|--|---|--|--|--|----------------------|
| 1 | 1. Principles of Art 2. Fundamentals of Multimedia 3. Science of Communication | | 1. Communicative English and Hindi | | 1. Fundamentals of Computer 2. PC Packages | 24 |
| 2 | 4. Internet & Web site development 5. Basic Mathematics 6. New Trends in DTP | | 2. Environmental Studies | | 3. Digital Art & Digital Photography 4. Social Science | 24 |
| 3 | 7. Sound Editing 8. Digital Art Designing & Image Editing | 1. Art and Techniques of Animation / 2. Script Writing & Storyboarding | | 1. 2D Animation using flash | 5. Animation Technology 6. Design Concepts and Technology | 24 |
| 4 | 9. Digital Film Making 10. Design with 3D MAX | 3. Video Editing / 4. Principles of Game Design | | 2. Website Development | 7. Social Media 8. 3D Design with MAYA - Advanced | 24 |
| 5 | 11. 3D Design with MAYA 12. Animation for Multiplatform | 5. Character Animation / 6. Visual Effects | | 3. Dynamics of Visual Communication | | 24 |
| 6 | 13. Project Portfolio Management 14. Project | 7. Animation Production Pipeline | | 4. Video Game Design | | 24 |
| TOTAL CREDITS | | | | | | 144 |

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Department of New Media Technology

Scheme for B.Sc. (Graphics and Animation)

SEMESTER -1

| Class and Paper | Course of Study | Numerical Code | Subject Name | Credit | Marks | | | |
|-----------------|-----------------|--|---------------------------------|--------|-------|----|----|-------|
| | | | | | Th. | P | IA | Total |
| 1BSc(GA)1 | CCC1 | 4261 | Principles of Art | 6 | 30 | 50 | 20 | 100 |
| 1BSc(GA)2 | CCC2 | 4262 | Fundamentals of Multimedia | 6 | 50 | 30 | 20 | 100 |
| 1BSc(GA)3 | CCC3 | 4263 | Science of Communication | 6 | 80 | - | 20 | 100 |
| 1BSc(GA)4 | AEC1 | 4264 | Communicative English and Hindi | 3 | 40 | - | 10 | 50 |
| 1BSc(GA)5 | OE | Select any one subject from Open Electives | | | | | | |

SEMESTER -2

| Class and Paper | Course of Study | Numerical Code | Subject Name | Credit | Marks | | | |
|-----------------|-----------------|--|---------------------------------|--------|-------|----|----|-------|
| | | | | | Th. | P | IA | Total |
| 2BSc(GA)1 | CCC4 | 4273 | Internet & Web site development | 6 | 50 | 30 | 20 | 100 |
| 2BSc(GA)2 | CCC5 | 4274 | Basic Mathematics | 6 | 80 | - | 20 | 100 |
| 2BSc(GA)3 | CCC6 | 4275 | New Trends in DTP | 6 | 50 | 30 | 20 | 100 |
| 2BSc(GA)4 | AEC2 | 4276 | Environmental Studies | 3 | 40 | - | 10 | 50 |
| 2BSc(GA)5 | OE | Select any one subject from Open Electives | | | | | | |

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SEMESTER -3

| Class and Paper | Course of Study | Numerical Code | Subject Name | Credit | Marks | | | |
|-----------------|-----------------|--|--|--------|-------|----|----|-------|
| | | | | | Th. | P | IA | Total |
| 3BSc(GA)1 | CCC7 | 4277 | Sound Editing | 6 | 50 | 30 | 20 | 100 |
| 3BSc(GA)2 | CCC8 | 4278 | Digital Art Designing & Image Editing | 6 | 50 | 30 | 20 | 100 |
| 3BSc(GA)3 | CCE1 | 4279 | (a) Art and Techniques of Animation | 6 | 50 | 30 | 20 | 100 |
| | CCE2 | 4280 | OR (b) Script Writing & Storyboarding | 6 | 50 | 30 | 20 | 100 |
| 3BSc(GA)4 | SEC1 | 4281 | 2D Animation using flash | 3 | - | 40 | 10 | 50 |
| 3BSc(GA)5 | OE | Select any one subject from Open Electives | | | | | | |

SEMESTER -4

| Class and Paper | Course of Study | Numerical Code | Subject Name | Credit | Marks | | | |
|-----------------|-----------------|--|-------------------------------------|--------|-------|----|----|-------|
| | | | | | Th. | P | IA | Total |
| 4BSc(GA)1 | CCC9 | 4282 | Digital Film Making | 6 | 50 | 30 | 20 | 100 |
| 4BSc(GA)2 | CCC10 | 4283 | Design with 3D MAX | 6 | 50 | 30 | 20 | 100 |
| 4BSc(GA)3 | CCE3 | 4284 | (a) Video Editing | 6 | 50 | 30 | 20 | 100 |
| | CCE4 | 4285 | OR (b) Principles of Game Design | 6 | 50 | 30 | 20 | 100 |
| 4BSc(GA)4 | SEC2 | 4286 | Website Development | 3 | - | 40 | 10 | 50 |
| 4BSc(GA)5 | OE | Select any one subject from Open Electives | | | | | | |

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SEMESTER -5

| Class and Paper | Course of Study | Numerical Code | Subject Name | Credit | Marks | | | |
|-----------------|-----------------|--|----------------------------------|--------|-------|----|----|-------|
| | | | | | Th. | P | IA | Total |
| 5BSc(GA)1 | CCC11 | 4287 | 3D Design with MAYA | 6 | 50 | 30 | 20 | 100 |
| 5BSc(GA)2 | CCC12 | 4288 | Animation for Multiplatform | 6 | 50 | 30 | 20 | 100 |
| 5BSc(GA)3 | CCE5 | 4289 | (a) Character Animation | 6 | 50 | 30 | 20 | 100 |
| | CCE6 | 4290 | (b) Visual Effects | 6 | 50 | 30 | 20 | 100 |
| 5BSc(GA)4 | SEC3 | 4291 | Dynamics of Visual Communication | 3 | 40 | - | 10 | 50 |
| 5BSc(GA)5 | OE | Select any one subject from Open Electives | | | | | | |

SEMESTER -6

| Class and Paper | Course of Study | Numerical Code | Subject Name | Credit | Marks | | | |
|-----------------|-----------------|--|-------------------------------|--------|-------|----|----|-------|
| | | | | | Th. | P | IA | Total |
| 6BSc(GA)1 | CCC13 | 4292 | Project Portfolio Management | 6 | 80 | - | 20 | 100 |
| 6BSc(GA)2 | CCC14 | 4293 | Project | 6 | - | 80 | 20 | 100 |
| 6BSc(GA)3 | CCE5 | 4294 | Animation Production Pipeline | 6 | 80 | - | 20 | 100 |
| 6BSc(GA)4 | SEC4 | 4295 | Video Game Design | 3 | 40 | - | 10 | 50 |
| 6BSc(GA)5 | OE | Select any one subject from Open Electives | | | | | | |

OPEN ELECTIVES

| Class and Paper | Course of Study | Numerical Code | Subject Name | Credit | Marks | | | |
|-----------------|-----------------|----------------|-----------------------------------|--------|-------|----|----|-------|
| | | | | | Th. | P | IA | Total |
| BSc(GA)5 | OE1 | 4265 | Fundamentals of Computers | 3 | 40 | - | 10 | 50 |
| BSc(GA)5 | OE2 | 4266 | PC Packages | 3 | - | 40 | 10 | 50 |
| BSc(GA)5 | OE3 | 4267 | Digital Art & Digital Photography | 3 | - | 40 | 10 | 50 |
| BSc(GA)5 | OE4 | 4268 | Social Science | 3 | 40 | - | 10 | 50 |
| BSc(GA)5 | OE5 | 4269 | Animation Technology | 3 | 40 | - | 10 | 50 |
| BSc(GA)5 | OE6 | 4270 | Design Concepts and Technology | 3 | 40 | - | 10 | 50 |
| BSc(GA)5 | OE7 | 4271 | Social Media | 3 | 40 | - | 10 | 50 |
| BSc(GA)5 | OE8 | 4272 | 3D Design with Maya Advanced | 3 | - | 40 | 10 | 50 |

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| Course | Principles of Art | Marking Scheme | | | Credits |
|--|-------------------|----------------|----|----|-------------|
| | | T | P | I | |
| 1BSc(GA)1 | | 30 | 50 | 20 | 6 (CCC1) |
| Objectives: <ul style="list-style-type: none"> To understand the basic of art, drawing & sketching To use digital art software & tools To develop the artistic skills within students | | | | | |
| Unit 1: Basics of Art Definition of Art, History of Art/Utility/Visual and Performing Art. Elements of Art: Point, Line, Curve, Form, Colour, Texture Tone, Space. Principles of Art : Unity, Rhythm, Harmony, balance, Perspective, Proportion Colour Theory, Colour Wheel | | | | | |
| Unit 2: Types of Art Calligraphy, Typography, Poster, Layout, Press and Magazine, Logo, Monogram Hording, Aesthetic, Shading, Object drawing, Human Anatomy, Memory drawing, Model drawing. Caricature: Definition and examples, cartoonists In India. Definition of Cartoon, Types of Cartoons, Cartoon Characters, Utility of Cartoons Face expression. Traditional Art Forms. | | | | | |
| Unit 3: Techniques of Drawing Definition, Techniques, Area of application, Tools used for Drawing, Pencil Tool: Importance, use etc. Difference between a photograph and pencil drawing. Medlums of drawing: Pencils, Wax Colour, Water Colours etc. Themes of Cartoons - Oil Paint, PortraIt, landscape composition. | | | | | |
| Unit 4: Sketching Definition, Types of sketches, Area of application, Tools used for sketching, Features of real Photograph and sketching. Sketching: Practical steps, Use of Colours and shades. Converting techniques of photographs to sketches, software used for sketching, Preparation of pocket cartoons and strips. | | | | | |
| Unit 5: Adobe Illustrator Introduction, Vector Graphics, Interface - Menu, Tool bar, Option Bar, Palettes layer, Path and Anchor points, Curve Path, Crating Text, Text around the pIcture, Importing and placing graph; background border; Implementing Colours, File formats. Prevention. | | | | | |
| Assignments: <ol style="list-style-type: none"> Presentation on drawing, and sketching Performing art work using digital software. | | | | | |
| Text Books and Reference: <ol style="list-style-type: none"> The Principles of Art- by Robin George Collingwood, Susquehanna University Press, 2008 Elements of Art by Jane Castillo, Crystal Productions, 2008 Adobe Illustrator Bibles, Wiley, 2010 Anatomy & Drawing by Victor Perard, Grace Prakashan, 2006 | | | | | |

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| Course | Fundamentals of Multimedia | Marking Scheme | | | Credits |
|---|----------------------------|----------------|----|----|---------|
| | | T | P | I | 6 |
| | | 50 | 30 | 20 | (CCC2) |
| 1BSc(GA)2 | | | | | |
| Objectives: <ul style="list-style-type: none">To learn about MultimediaTo get the perspectives of MultimediaTo understand the various elements of multimedia. | | | | | |
| Unit 1: Introduction to Multimedia <p>Multimedia - Introduction, applications, Components, Hardware and Software requirements, Characteristics of effective multimedia presentation, Overview of Multimedia Authoring Tools, Interactive media, Hypermedia, Distributed Multimedia Applications, Multimedia Database Systems, Virtual Reality</p> | | | | | |
| Unit 2: Basics of Text and Graphics <p>Text - Introduction, Standards - ASCII, Unicode. Fonts</p> <p>Graphics - Introduction, Types, Color and color models, digital images, Image processing, Graphic file formats, Graphics input and output devices.</p> | | | | | |
| Unit 3: Introduction to Audio and Video <p>Audio - Introduction, attributes, Mono V/s Stereo audio, audio channels, Analog V/s Digital audio, Musical Instrument Digital Interface (MIDI), File formats, audio recording and editing - hardware and software. Video - Introduction, Video frames and frame rate, video recording and editing - hardware and software, File formats.</p> | | | | | |
| Unit 4: Basics of Animation <p>Animation - Introduction, Principles, Types and Uses, Animation Software</p> <p>Compression techniques - Introduction, need and types of compression - lossy and lossless, CODECs</p> | | | | | |
| Unit 5: Multimedia on the Web <p>Introduction, Bandwidth, Text on the web - Dynamic and embedded font technology, Audio and video on the web, buffering and streaming, webcasting, video conferencing</p> | | | | | |
| Assignments: <ol style="list-style-type: none">To be prepare presentation on Multimedia MediumTo be prepare Presentation on File format.To be prepare presentation of Communication Technology. | | | | | |
| Text Books and References: <ol style="list-style-type: none">Computer Graphics & Multimedia - by A.P.Godse, Technical Publications; SECOND edition (January 2011), ISBN-10: 9350381222, ISBN-13: 978-9350381229Multimedia: Making It Work, Eighth Edition - by Tay Vaughan, McGraw-Hill Osborne; 8 edition (1 January 2011), ISBN-10: 0071748466, ISBN-13: 978-0071748469Computer Graphics, Multimedia and Animation - by Pakhira (Author), Malay K (Author), Publisher: Prentice Hall India Learning Private Limited; 2 edition (2010), ISBN-10: 8120341279, ISBN-13: 978-8120341272Multimedia - by M.Mahalakshmi (Author), Publisher: Margham Publications (2013), ISBN-10: 9381430993, ISBN-13: 978-9381430996 | | | | | |

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| Course | Science of Communication | Marking Scheme | | | Credits |
|---|--------------------------|----------------|---|----|---------|
| | | T | P | I | 6 |
| 1BSc(GA)3 | | 80 | - | 20 | (CCC3) |
| Objectives: <ul style="list-style-type: none"> To understand the Theory of Communication To understand the elements of Human Communication To understand the Barriers In Communication & Modes of Communication. | | | | | |
| Unit 1: Communication Basics Introduction to communication theory, The fact of communication, Communication -Definition, Nature, Scope, Purpose. Process of Communication. Functions of Communication, communication and Information, communication and languages, Evolution of Social Groups and organic structure of society, Essentiality of communication In social groups. | | | | | |
| Unit 2: Human Communication Definition and elements of human communication, Socialization and role of communication In Socialization Types of communication, Intrapersonal communication, Interpersonal communication, Focused and unfocused Interactions, group communication, mass communication, Interactive communication, Public Communication, Corporate communication. | | | | | |
| Unit 3: Types of Communication Verbal communication, Non verbal communication, Importance of Body Language, Appropriate Body Postures, Oral communication, Written communication, Visual communication, Signs, symbols and code system, communication skills, mannerism, accent and etiquettes, listening -important and art of developing listening habits. | | | | | |
| Unit 4: Communication Barriers & Modes Different Barriers of communication, Removal of Barriers, Traditional modes of communication, Fax Communication, Telephone communication, Mobile communication, Television communication, Satellite communication, Internet, Multimedia communication. | | | | | |
| Unit 5: Communication(Theories & Models) Brief Introduction to Communication theories & Models, Different Communication theories(Multistep Theory, Selective Exposure, Selective Perception, Selective Retention, Play Theory, Uses & Gratification Theory, Cultivation Theory, Agenda Setting Theory), Different Models (SMCR Model, Shannon & Weaver Model, Wilbur Schramm Model, Lasswell Model, Gate Keeping Model, Sadharanikaran Model of communication) | | | | | |
| Assignments: <ol style="list-style-type: none"> Discuss basic communication processes as well as self perception in communication Discuss effective communication in organization Other assignment given by the concerned faculty | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Mass communication In India by Keval J . Kumar - A Jalco Book Communication Mosaics: An Introductionto the Field of Communication, 2001. By Wood, Julia T, Wadsworth Communication by C.S. Raidu, Himalaya Publishing House Barnlund, D. C. (2008). A transactional model of communication. In. C. D. Mortensen (Eds.), <i>Communication theory</i> (2nd ed., pp47-57). New Brunswick, New Jersey: Transaction | | | | | |

5. Adhikary, N. M. (2007d). Hindu awadharanama gairashabdik sanchar. In N. M. Adhikary, Sanchar shodha ra media paryavekshan (pp. 139-180). Kathmandu: Prashanti Pustak Bhandar.

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| Course | Communicative English and Hindi | Marking Scheme | | | Credits |
|---|--|----------------|---------------------------------|----|-------------|
| 1BSc(GA)4 | | T | P | I | 3 (AEC1) |
| | | 40 | - | 10 | |
| Unit 1: Language Skills and Presentation | | | | | |
| Speaking Skills and Presentation: Presentation Design and Delivery, Monologue Dialogue, Group Discussion, Effective Communication/ Mis-Communication, Interview, Public Speech, Effective Writing, Report Writing, Resume, Circular, Notice and letter Writing | | | | | |
| Unit 2: Reading and Understanding | | | | | |
| Importance of English as a vehicle of Spoken and written Communication, Close Reading Comprehension Summary Paraphrasing Analysis and Interpretation, Translation (from Indian language to English and vice-versa), Introduction to Articles of eminent Indian authors, Short Stories of eminent Indian authors | | | | | |
| Unit 3: हिन्दी भाषा का परिचय | | | | | |
| भाषा की विकास यात्रा, हिन्दी भाषा की संवैधानिक स्थिति: समस्याएँ और समाधान, भाषा: विभिन्न बोलियाँ व स्वरूप, भाषा परिवार और भारतीय भाषाएँ, वर्तमान संदर्भों में हिन्दी की उपादेयता | | | | | |
| Unit 4: भाषा | | | | | |
| शब्दों की संस्कृति एवं उनका इतिहास, भाषा एवं संस्कृति, भाषा एवं समाज, हिंदी में शब्द संरचना एवं उसके प्रयोगों की विशेषताएं, संधि, समास, उपसर्ग, प्रत्यय, पर्यायवाची, विलोमार्थी, अनेकार्थक, समूहार्थक शब्द (व्यावहारिक, व्याकरण केवल परिचयात्मक), वाक्य, रचना एवं प्रकार, वाक्य रचना के कारक, वाक्य रचना की सामान्य विधियां | | | | | |
| Unit 5: Translation / अनुवाद | | | | | |
| अनुवाद का अर्थ और परिभाषा, अनुवाद के प्रकार, अनुवाद के उपकरण एवं समस्या, भाव तथा प्रभाव के आधार पर अनुवाद एवं लेख, अनुवाद Hindi to English and English to Hindi | | | | | |
| Suggested Readings: | | | | | |
| 1. | Pathway to Greatness | : | APJ Abdul kalam | | |
| 2. | Wise and Otherwise | : | Sudha Murthy | | |
| 3. | The Serpents Revenue | : | Sudha Murthy | | |
| 4. | World Myths and Legends | : | Anita Nair | | |
| 5. | The Mother I Never Knew | : | Sudha Murthy | | |
| 6. | The Jungle Book | : | R Kipling | | |
| 7. | Malgudi Days | : | R K Narayana | | |
| 8. | The Adventure of Rusty | : | Ruskin Bond (Collected Stories) | | |
| 9. | अनुवाद विकास एवं संप्रेषण | : | डॉ. हरिमोहन | | |
| 10. | अनुवाद कला सिद्धांत और प्रयोग | : | डॉ. कैलाश भाटिया | | |
| 11. | व्यावहारिक हिंदी | : | डॉ. माखेन्द्र पाठक | | |
| 12. | परिष्कृत हिंदी व्याकरण | : | बदरीनाथ | | |
| 13. | अच्छी हिंदी | : | रामचंद्र वर्मा | | |
| 14. | प्रेम चन्द्र एवं जयशंकर प्रसाद की कहानियाँ | : | | | |

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| Course | Open Elective | Credits |
|---|-----------------------------------|-----------|
| 1BSc(GA)5 | | 3 (OE) |
| Choose any one subject in each semester - | | |
| OE1 | Fundamentals of Computers | |
| OE2 | PC Packages | |
| OE3 | Digital Art & Digital Photography | |
| OE4 | Social Science | |
| OE5 | Animation Technology | |
| OE6 | Design Concepts and Technology | |
| OE7 | Social Media | |
| OE8 | 3D Design with Maya Advanced | |
| For detailed syllabus of Open Elective Subjects, please refer to "Open Electives" section on page no. 48. | | |

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| Course | Internet and Web Site Development | Marking Scheme | | | Credits |
|---|-----------------------------------|----------------|----|----|-------------|
| | | T | P | I | |
| 2BSc(GA)1 | | 50 | 30 | 20 | 6 (CCC4) |
| Objectives: <ul style="list-style-type: none"> To understand the basics of Internet and World wide web To use Web publishing Compare HTML and XHTML. To use CSS to create WebPages. | | | | | |
| Unit 1: Basics Of Internet And Web Designing Internet- HTTP,URLs, Domain names, websites and web Portals, dynamic and static websites, World wide web (www), Web Browsers, Its functions, Concept of Search Engines, Searching the Web, Web Servers, Web Protocols, Basic principles involved in developing a web site, Planning process, site map. Web layouts -Designing Home Page Layout, Page design, navigation bar, save and store web pages, web writing styles, understanding the use of various fonts and type issues with web designing, Creating the Web Site, Saving the site, Working on the web site, Creating web site structure | | | | | |
| Unit 2: HTML HTML - Concepts of Hypertext, Versions of HTML, Elements of HTML syntax, Head & Body Sections, Building HTML documents, Inserting texts, Images, Hyperlinks, Backgrounds and Color controls, Different HTML tags, Table layout and presentation, Use of font size & Attributes, List types and its tags, Use of Frames and Forms in web pages, Introduction of WYSIWYG Design tools for HTML background, text, font, list, box and block properties, understanding the basic concepts of XHTML, creating and saving XHTML document. | | | | | |
| Unit 3: Hyper linking & HTML Embedding Multimedia Hyperlink- Setting hyperlink colors, linking different sections of a web page , Working with image, displaying alternate text for an image, adding border to an Image, aligning an Image, using image as link, working with multimedia, embedding multimedia on the web pages, creating link to a multimedia file, using object tag to insert object, | | | | | |
| Unit 4: Introduction to Cascading Style Sheets Concept of CSS, Creating Style Sheet, CSS Properties, CSS Styling(Background, Text Format, Controlling Fonts), Working with block elements and objects, Working with Lists and Tables, CSS Id and Class, Box Model (Introduction, Border properties, Padding Properties, Margin properties), Navigation Bar, Image Sprites, Attribute sector), CSS Color, Creating page Layout and Site Designs. | | | | | |
| Unit 5: Web publishing, ethics and standards Web publishing - Concepts, Domain name Registration, Space on Host Server for Web site database server FTP software for uploading web site, Issues In Web site creations & Maintenance. Ethics and Standards of Website - Identify and apply appropriate web standards (W3C),Concepts of Cyber, Cyber Crime and Law, Issues of New Media technology. | | | | | |
| Assignments: <ol style="list-style-type: none"> Create home page for Newspaper or Commercial Website Creating WebPages by embedding suitable audio/video files. Hosting a website | | | | | |

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Books and References:

1. HTML 4.0 In Simple Steps by Kogent Solutions Inc. Dreamtech
2. O.level Module – M1.2- Internet & Web paged designing by V.K.Jain-BPB Publications.
3. Internet for Everyone – Alexis Leon and Mathews Leon, Vikas Publishing House Pvt.Ltd., New Delhi
4. A Beginner's Guide to HTML available at: <http://www.ncsa.uiuc.edu/General/Internet/>
5. Learning Web Design 4th Edition (A Beginner's Guide to HTML, CSS, JavaScript and Web Graphicsby Jennifer Niederst RobbinsX

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| Course | Basic Mathematics | Marking Scheme | | | Credits |
|---|-------------------|----------------|---|----|-------------|
| | | T | P | I | |
| | | 80 | - | 20 | |
| 2BSc(GA)2 | | | | | 6 (CCC5) |
| Objectives: <ul style="list-style-type: none"> To have a clear understanding about the basic mathematics required for multimedia To understand about the basic geometry To learn how to interpolate or extrapolate any value for the given statistical data To understanding about the matrix, used in developing computer games etc. | | | | | |
| Unit 1: Vectors Vectors Notation, Scalar and Vector, Types of vector, Collinear and coplanar vector, Multiplying Vector by Scalar, Vector addition and Subtraction, Position Vector, Unit Vector, Cartesian vector, Vector Multiplication, The Right hand tool, Normal vector. | | | | | |
| Unit 2: Determinant & Matrix Determinant Introduction, Properties of Determinant, Minors and Cofactors Matrix Introduction, Types of Matrix, Operation on Matrix, Transpose of Matrix, Symmetric and Skew Symmetric Matrix, Transformation of Matrix, Adjoint and Inverse of Matrix, Solution of equation by matrix Method. | | | | | |
| Unit 3: Coordinate System Coordinate System, Cartesian coordinate system, Polar coordinate system, Points in a Plane, Distance between points, Equation of Line, Slope of a Line, Slope Intercept, Circle, Standard Equation of Circle, Intersection of circle with Line. | | | | | |
| Unit 4: Points and lines Conic section Standard Equation of parabola, Ellipse and Hyperbola, Coordinate of a point in Space, Direction cosine and Direction Ratio of a Line, Equation of Line in Space, Angle between two lines, Shortest distance Between Two lines. Co planarity of two lines, Angle between two Planes, Distance of a Point from a Plane Angle between Line and a Plane. | | | | | |
| Unit 5: Interpolation Interpolation, Linear and Non Linear Interpolation. Curve fitting | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Coordinate Geometry, M L Khanna. Engineering Mathematics, B S Grewal Statistic, Ray and Sharma | | | | | |

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| Course | New Trends in DTP | Marking Scheme | | | Credits |
|--|-------------------|----------------|----|----|-------------|
| | | T | P | I | |
| 2BSc(GA)3 | | 50 | 30 | 20 | 6 (CCC6) |
| Objectives: <ul style="list-style-type: none"> To learn Desk Top Publishing. To have work experience using Quark Express. To understand and use Adobe InDesign | | | | | |
| Unit 1: Introduction to Desk Top Publishing Introduction, Definition, Need and Area of Application, Difference between a word processor and Publication, Use and Importance of DTP in Publication & Newspaper Printing, Various DTP Software. Introduction to Offset Printing Technology, Printers, Formatting of a text: Typography, Fonts, Point Size, Spacing, Breaks, Measurements etc. | | | | | |
| Unit 2: Quark Express Basics Specifying document setting, Creating and Opening Publications, Use of Palettes and Controls, Positioning, Resizing, Inserting and placing text and picture, Box and line manipulations, Choosing a measurement, Adjusting Layout, Creating Columns, Grouping and Locking subject, Wrapping text around pictures and graphics, Using Libraries, Creating Columns, Applying and Editing Colours, Creating Style and Alignment, | | | | | |
| Unit 3: Quark Express Advanced features Tab setting, Columns & Gutters. Import & Export of files. Use of - Styles, Palettes, Colours, Bullets, Column Balancing, Breaks. Text Wrapping, Widows & Orphan lines, Revert Command and its use, Using Drop Caps and various style formats, Editing of Graphics and Frames. | | | | | |
| Unit 4: InDesign Basics Introduction to Adobe InDesign CS6, Creating and Viewing Documents, Understanding Your Workspace, Pages, Working with Type, Working with Graphics, Formatting Objects, Working with Color | | | | | |
| Unit 5: InDesign Advanced features Points and Paths, Managing and Transforming Objects, Character and Paragraph Formatting, Using Styles, Tables, Long and Interactive Documents, Packaging and Printing | | | | | |
| Assignments: <ol style="list-style-type: none"> To prepare presentation on Use of Quark Xpress in News paper and magazines. To prepare layout for print media. Page designing with Quark XPress. Designing different pages for News paper, magazine with Quark XPress. Wrap text around a graphic in InDesign. Import text or Image in Adobe InDesign. Different ways of adding text to the document in Adobe InDesign. Page designing with InDesign. | | | | | |
| Text Books and References: <ol style="list-style-type: none"> DTP - by Vikas Gupta - Published by Dreamtech Press, New Delhi, ISBN-10: 8177229273, 2010 QuarkXPress 8: Essential Skills for Page Layout and Web, Design by Kelly Kordes Anton and John Cruise, Peachpit Press, ISBN: 032161691X, 2009 Quarkxpress 8: Production Tricks And Experts' Tips, Cyndie Shaffstall, The Power XChange, | | | | | |

ISBN-10: 0615249914, 2008

4. QuarkXPress 8 Step by Step Training, Noble Desktop, Noble Desktop, ISBN-10:
1934624055, 2009

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| Course | Environmental Studies | Marking Scheme | | | Credits |
|--------|-----------------------|----------------|---|----|---------|
| | | T | P | I | |
| | | 40 | - | 10 | |

UNIT-1: The Multidisciplinary nature of environmental studies and Natural resources

Definition; Scope and importance, Need for public awareness. Natural resources and associated problems. Forest resources: Use and Over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams benefits and problems. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, Case studies.

Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles.

UNIT-2: Ecosystems, Biodiversity and its Conservation

Concept, structure and function of an ecosystem, producers, consumers and decomposers, energy flow in the ecosystem, ecological succession, food chains, food webs and ecological pyramids. Introduction, types, characteristic features, structure and function of the following ecosystem: - Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries). Biodiversity introduction-Definition: genetic, species and ecosystem diversity. Bio-geographical classification of India. Value of biodiversity: consumptive use, productive use, social, ethical, aesthetic and option values, biodiversity at global, national and local levels, India as a mega-diversity nation, Hot-spots of biodiversity. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, endangered and endemic species of India. Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.

UNIT-3: Environmental Pollution

Definitions. Causes, effects and control measures of: (a) Air pollution (b) Water pollution (c) Soil pollution (d) Marine pollution (e) Noise pollution (f) Thermal pollution (g) Nuclear hazards. Solid waste Management: Causes, effects and control measures of urban and industrial wastes. Role of an individual in prevention of pollution. Pollution case studies. Disaster management: floods, earthquake, cyclone and landslides.

UNIT-4: Social Issues and the Environment

From Unsustainable to Sustainable development. Urban problems related to energy. Water conservation, rain water harvesting, watershed management. Resettlement and rehabilitation of people; its problems and concerns. Case studies. Environmental ethics: Issues and possible solutions. Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies. Wasteland reclamation, Consumerism and waste products. Environment Protection Act- Air (Prevention and Control of Pollution) Act, Water (Prevention and Control of Pollution) Act, Wildlife Protection Act.- Forest Conservation Act, Issues involved in enforcement of environmental legislation, Public awareness.

UNIT-5:

Human Population and the Environment

Population growth, variation among nations. Population explosion-Family welfare Programme. Environment and human health, Human Rights, Value Education, HIV/AIDS, Women and Child Welfare. Role of information Technology in Environment and human health, Case Studies.

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Field Work (Practical) 6 hrs = 3 Lectures

1. Visit to a local area to document environmental assets- river/forest/grassland/hill/mountain.
2. Visit to a local polluted site- Urban/Rural/Industrial/Agricultural.
3. Study of common plants, insects, birds.
4. Study of simple ecosystems-pond, river, hill slopes, etc.

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| | | |
|------------------|----------------------|-------------------|
| Course | Open Elective | Credits |
| 2BSc(GA)5 | | 3 (OE) |

Choose any one subject in each semester -

| | |
|-----|-----------------------------------|
| OE1 | Fundamentals of Computers |
| OE2 | PC Packages |
| OE3 | Digital Art & Digital Photography |
| OE4 | Social Science |
| OE5 | Animation Technology |
| OE6 | Design Concepts and Technology |
| OE7 | Social Media |
| OE8 | 3D Design with Maya Advanced |

For detailed syllabus of Open Elective Subjects, please refer to "Open Electives" section on page no. 48.

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| Course | Sound Editing | Marking Scheme | | | Credits |
|--|---------------|----------------|----|----|---------|
| | | T | P | I | 6 |
| | | 50 | 30 | 20 | (CCC7) |
| 3BSc(GA)1 | | | | | |
| Objectives: <ul style="list-style-type: none">To develop the Students skill as Digital Audio EditorTo impart knowledge of Audio Editor and toolsTo Impart skills of Publishing Audio for various medium and formatTo Impart knowledge Digital Audio Effect. | | | | | |
| Unit 1: Introduction of Digital Audio <p>Sound: Introduction to Audio components, Sound and its Attributes, Effect and use of In multimedia products, Analog V/s Digital sound, Basics of digital Sounds - Sampling, Frequency, Sound Depth, Channels, Definition of Digital Audio, Advantages of Digital Audio. PC Sound card standards - FM & AM synthesis, Wave and MP3 files, 3D sounds, Capturing and Editing sound on Windows Sound Recorder. Audio Input/output devices.</p> | | | | | |
| Unit 2: Introduction of Sound Forge <p>Sound Forge: Introduction, Setting up Sound Forge, File Formats Supported by Sound Forge, Exploring the Sound Forge - Versions, Menus, default files. Conversion of audio files, Audio File Compression - Compressed file formats, Advantages & Disadvantages of compressed files, Audio file formats: Track, WAV, MP3 etc. MIDI files.</p> <p>Working with Sound Forge :,Introduction to Menus and Important commands, Data Windows - Creating, Playing, Working, Editing, Mixing etc., Overview of Transport Control. Saving and Save as of an Audio File. Working with Markers, Regions. Recording a sound file with various options, Sound Recording system.</p> | | | | | |
| Unit 3: Audio Editing <p>Basic Editing In Sound Forge: Overview of Editing Tools - Selection, Cutting and Copying of Data, Pasting of Data, Paste Special, Multiple Paste, Deleing etc. Editing the Cut llists.</p> <p>Recording and Playback: Automatic Retake Recording, Multiple Takes Recording, Punch-In Recording, Automatic Recording, Playing an Audio File, Working with Playllst.</p> <p>Audio Effects In Sound Forge: Echo Effects, Pitch Effects, Volume Effects, Reverberation Effects, Wave Hammer Effect, Synthesis, Synthesizing Audio, Sampling, Batch Processing.</p> | | | | | |
| Unit 4: Processing of Audio <p>Working with Presets, Auto Trimming and Audio Data, Changing the bit depth of the Audio File, Changing Channels of the Audio Data, Setting the DC Offset, Audio Volume, Inserting Silence, Inverting, Muting, length of audio data.</p> <p>Normalizing the Audio Volume, Panning/Expanding the Audio. Audio mixing and noise adjustments. New trends in digital audio - Audio streaming, Audios for Videos.</p> | | | | | |
| Unit 5: Publshing of Audio <p>Advanced Setting - Setting the Sample rate, Reversing the Audio Data, Smoothing/Enhancing the Audio Data, Setting the Graphic equalizer etc. Working with Video Files - Attaching Video to an Audio file, Editing Audio track of Video File, Previewing of Video. Preparing the audio for Internet and CDs.</p> <p>Open source audio editing software.</p> | | | | | |

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Assignments:

1. To prepare audio for various media.
2. To prepare audio for Radio.
3. Any other Assignment given by the concerned faculty.

Text Books and References:

1. Sound Forge 9.0 in Simple Steps : Dreamtech Press, New Delhi (2010)
2. Sound Forge 8 Power!: The Official Guide by Scott R. Garrigus (2010)
3. Instant Sound Forge (Instant Series) by Jeffrey P. Fisher- January 2004; ISBN: 9781578202447
4. Designing Sound; Andy Farnell; MIT Press, ISBN :20100262014416, 9780262014410
5. Sound Design: The Expressive Power of Music, Voice and Sound Effects in Cinema; by David Sonnenschein ; ISBN:0941188264 (ISBN13: 9780941188265) ; 2001 by Michael Wiese Productions

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| Course | Digital Art Designing and Image Editing | Marking Scheme | | | Credits |
|---|---|----------------|----|----|-------------|
| 3BSc(GA)2 | | T | P | I | 6 (CCC8) |
| | | 50 | 30 | 20 | |
| Objectives: <ul style="list-style-type: none">To impart skills of digital Image EditingTo Impart skills of Text editing.To develop skills of Color and effects. | | | | | |
| Unit 1: Introduction of Digital Image <p>Bitmap and Vector Image, Digital Image, Pixel and Resolution, Definition of Illustration, Introduction to Corel draw, Corel draw Interface, Window management. Working with shapes, rectangle, Ellipse. Polygon and star, Drawing grids, spirals and perfect shapes.</p> | | | | | |
| Unit 2: Text Editing <p>Page and document setup, working with rulers, setting the unit measurement, Working with Color and fills. Color palette, adding pattern to object, and Texture fill</p> <p>Working With Paragraph Text, Special Text Effects, Object arrangement, special effect to object, interactive distortion tool, contour tool, Designing, Effects and Filter.</p> | | | | | |
| Unit 3: Introduction of Photoshop <p>Introduction of Photoshop: Interface, Tools and Templates, Workspace, Using Layers, Modes, Filters, Customizing preferences.</p> | | | | | |
| Unit 4: Digital Image editing <p>Editing Image, Colour mode in Photoshop, Making Color Adjustment and File Formats of Image, Working with Selection tools, Modifying and transforming Selections. Saving and Loading Selections, Using Drawing and Painting tools, Using Retouching tools, Setting foreground and background color, Working with Layers, Moving layers, Linking and Unlinking layers Working with adjustment Layers ,masking Layers, Applying layer style.</p> | | | | | |
| Unit 5: Effect and Filter <p>Applying Filters, Creating and editing smart objects. The Filter Gallery, File Formats.</p> <p>Text editing in Photoshop, reacting 3D artwork In Photoshop, Animation In Photoshop, Printing in Photoshop.</p> <p>Open source tools for design and image editing, Animation.</p> | | | | | |
| Assignments: <ol style="list-style-type: none">Create a Cartoon Character Using Coral.Create a one Image Using Multi Images.Create Mask Image.Create GIF Animation. | | | | | |
| Text Books and References: <ol style="list-style-type: none">Straight to the point CorelDraw12, Firewall media(2009)Straight to the point CorelDrawx3, Firewall media (2010)Adobe Photoshop CS4 for Photographers: A professional Image Editors Gulde By Martin Evening(2006)Photoshop CS4 In Simple Steps by Kogent Learning Solutions Inc. Published by dremtech press(2008)Photoshop CS4 The Missing Manual By Lesa Snider King; Publisher: O'Reilly Media, | | | | | |

Analash

- December 2008;
6. Understanding Adobe Photoshop: Digital Imaging Concepts and techniques By Richard M. Harrington; ISBN 0-321-36898-3; Published 2007 American Chemical Society
 7. Photoshop in depth -Benjanim &David (2001)

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| Course | Art and Techniques of Animation | Marking Scheme | | | Credits |
|---|---------------------------------|----------------|----|----|-------------|
| | | T | P | I | |
| | | 50 | 30 | 20 | |
| 3BSc(GA)3 | | | | | 6 (CCE1) |
| Objectives: <ul style="list-style-type: none"> To learn the basics of animation techniques and art of doing it. To understand various animation techniques. | | | | | |
| Unit 1: Traditional Animation Meaning of Traditional Animation and types-Full animation-Limited animation, Rotoscoping and Live Action Animation, Shadow Animation Unit 2: Stop Motion Animation Concept of Stop Motion animation-Puppet Animation, Puppetoon, Clay Animation, Strata-Cut-Out Animation, Cut-Out Animation, Silhouette Animation, Model Animation, Go Animation, Object Animation, Graphic Animation, Brickfilm, Pixilation Unit 3: Computer Animation 2D animation, 3D animation, 3D terms-Cel-Shaded Animation, Machinima, Motion Capture, Motion Graphics, Photo-realistic Animation Unit 4: Mechanical Animation Animatronics-Audio-Animatronics, Linear Animation Generator, Chuckimation, Puppetry, Zoetrope Unit 5: Other Animation Techniques Drawn-on-Film Animation, Paint-on-Glass Animation, Erasure Animation-Pinscreen Animation, Sand Animation, Flip Book | | | | | |
| Assignments: <ol style="list-style-type: none"> Create a model on any one of animation technique Case study on 2D or 3D animation technique | | | | | |
| Text Books and References: <ol style="list-style-type: none"> The Encyclopedia of Animation Techniques: A Comprehensive Step-By-Step Directory of Techniques, with an Inspirational Gallery of Finished Works - 2004 - Richard Taylor - ISBN-10: 0785818057, ISBN-13: 978-0785818052 Animation Techniques - Roger Noake (Author) The Animator's Survival Kit--Revised Edition: A Manual of Methods, Principles and Formulas for Classical, Computer, Games, Stop Motion and Internet - Richard Williams - ISBN-13: 9780865478978 | | | | | |

Shalabh

| Course | Script Writing and Story Boarding | Marking Scheme | | | Credits |
|--|-----------------------------------|----------------|----|----|----------|
| | | T | P | I | |
| 3BSc(GA)3 | | 50 | 30 | 20 | 6 (CCE2) |
| Objectives: <ul style="list-style-type: none"> To acquire the knowledge of scripting for different new media To develop storyboarding skills. To develop the skills of writing for audio-visual media. | | | | | |
| Unit 1: Introduction to Writing Purpose and types of writing Forms of writing: Prose, Poetry, Letters, Essay, News, Article, Feature Review, Memoir, Travelogue, Writing a Play, Story and Novel | | | | | |
| Unit 2: Introduction to Writing for Different Media Basic principles of writing for Film and Television Basic principles of writing for animated movies Concepts of writing for Multimedia and Animation Movies The scriptwriter as Animation writer | | | | | |
| Unit 3: Screenplay Basics Film Genres: Drama, Melodrama, Comedy, Action, Tragedy, Fantasy etc. Theme and Plot, Beginning, middle and end Location, Music, From Scenes to Sequences | | | | | |
| Unit 4: Scriptwriting for Movie and Animation Screenplay, Shooting Script Concept- Goals and Objectives Structure- Flashback, Conflict, Climax, Style- Fade in, Scene Heading, Character, Action, Dialogue, Transition | | | | | |
| Unit 5: Introduction to Storyboard Need and Importance of Storyboard Formats of Storyboard, Planning of visual storytelling, Shot Types, Continuity, Transitions and sequencing Introduction to Popular Storyboard software | | | | | |
| Assignments: <ol style="list-style-type: none"> Exercises of scripting on different format Write a script for a short animation movie. Write a five minutes story on any current issue | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Screenplay: The Foundations of Screenwriting: Syd Field Making a Good Script Great: A Guide for Writing & Rewriting: Linda Seger Script Writing: How to Write a Screenplay: Aishley Foley From Word to Image: Storyboarding and the Filmmaking Process: Marcie Begleiter Animation - The Art of Layout and Storyboarding: Mark Byrne Storyboarding: Turning Script to Motion: Stephanie Torta and Vladimir Minuty पटकथा लेखन — एक परिचय : मनोहर श्याम जोशी | | | | | |

Shalash

| Course | 2D Animation using Flash | Marking Scheme | | | Credits |
|---|--------------------------|----------------|----|----|-------------|
| | | T | P | I | |
| 3BSc(GA)4 | | - | 40 | 10 | 3 (SEC1) |
| Objectives: <ul style="list-style-type: none"> • Become familiar with the Flash authoring environment and Flash terminology • Gain understanding of fundamental Flash paradigms (Stage, Symbols, Library, Timeline) • Create simple, tasteful animation effects • Use Buttons and ActionScript to enable basic user Interaction • Learn to export and deploy Flash content on the Web | | | | | |
| Unit 1: Creating Graphics Introducing Flash, Working with Graphics ,Toolbar, drawing tools, Work Area, Symbols and the Library, Timeline, Frames and Keyframes Unit 2: Text and Animation Text Type, Typography, Working with Text, Using text effectively between Illustrator and Flash, Color Settings, Filters, and Blend Modes , Creating Animations, Shape tweens, Motion tweens, animating masks, Unit 3: Advanced Animation Articulated Motion and Morphing, Animate a Logo, Animate a Logo, adding digital audio and video. Unit 4: Interaction Button ActionScript, Instance Names, Controlling Nested Objects, Interactive Navigation, Script Assist to add interactivity. Unit 5: Publishing Flash Content Working with bitmap, Publishing to player, Work Optimizing, Linking to external pages and web sites, Linking lines of text, Using buttons as text links, Email links, Publishing Flash Content for the web, Flash and search engines, Alternate delivery methods. | | | | | |
| Assignments: <ol style="list-style-type: none"> 1. Create Tween Animation. 2. Create Morphing Animation. 3. Create Interactive Buttons and UI Prototype. 4. Publishing Interactive content to web. 5. Assignment given by the class teacher. | | | | | |
| Text Books and References: <ol style="list-style-type: none"> 1. Adobe Flash Professional CC Classroom in a Book; by Adobe Creative Team/Adobe; Pap/Psc edition (7 June 2013) ; ISBN-10: 0321927850, ISBN-13: 978-0321927859 2. Foundation Flash Cartoon Animation; by Barry Kelly (Author), Tim Jones (Author), David Wolfe (Author), Allan Rosson (Author)/ Apress; 1st ed. edition (28 November 2007) ; ISBN-10: 1590599128, ISBN-13: 978-1590599129 | | | | | |


| | | | |
|---|-----------------------------------|--|-------------------|
| Course | Open Elective | | Credits |
| 3BSc(GA)5 | | | 3 (OE) |
| Choose any one subject In each semester - | | | |
| OE1 | Fundamentals of Computers | | |
| OE2 | PC Packages | | |
| OE3 | Digital Art & Digital Photography | | |
| OE4 | Social Science | | |
| OE5 | Animation Technology | | |
| OE6 | Design Concepts and Technology | | |
| OE7 | Social Media | | |
| OE8 | 3D Design with Maya Advanced | | |
| For detailed syllabus of Open Elective Subjects, please refer to "Open Electives" section on page no. 48. | | | |

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| Course | Digital Film Making | Marking Scheme | | | Credits |
|---|---------------------|----------------|----|----|---------|
| | | T | P | I | 6 |
| 4BSc(GA)1 | | 50 | 30 | 20 | (CCC9) |
| Objectives: <ul style="list-style-type: none"> To understand the process of digital film making | | | | | |
| Unit 1: Basics of Film Making Concept of film Making, Computer based film and Cinematic film, Element of film, Film and society. Script for film, Pre-Production, Cinematography, People and place | | | | | |
| Unit 2: Writing and Scheduling for Film Writing and Scheduling – Screenwriting, Scheduling, Breaking Down a Script | | | | | |
| Unit 3: Digital Video Primer Digital Video Primer – Introduction to HD, Components of Digital Video, Working with Analog or SD Video, Digital Image Quality, Understanding Digital Media Files | | | | | |
| Unit 4: Production Choosing a Camera, Planning Your Shoot, Lighting, Using the Camera, Production Sound, Shooting and Directing, | | | | | |
| Unit 5: Post Production of Digital Film Editing using Editing Software, Colour Correction, Titles and Effects Finishing. | | | | | |
| Assignments: <ol style="list-style-type: none"> Plan a small Project of Digital Film Prepare Social Documentary and Advertising Any Assignment given by concerned faculty | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Digital filmmaking handbook - Ben Long, Sonja Schenk The IFILM digital video filmmaker's handbook-, Volume 1-Maxie D. Collier The Digital producer - getting it done with computer-based tools, Volume 1- Curtis Poole, Ellen Feldman | | | | | |

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| Course | Design with 3D MAX | Marking Scheme | | | Credits |
|--|--------------------|----------------|----|----|--------------|
| 4BSc(GA)2 | | T | P | I | 6 (CCC10) |
| | | 50 | 30 | 20 | |
| Objectives: <ul style="list-style-type: none">To acquire the knowledge of Modeling Techniques.To learn the process of Idea generation for 3D Designing.To understand the concept of Light and Shadow.To acquire the knowledge of Modeling | | | | | |
| Unit 1: Introduction of 3D & 3D Max <p>Definition of 3D Design, Hardware and software technical specification, 3ds Max : Interface, Terms and concepts, view Port , screen layout, menu bar, main tool bar, command panel, create panel, modify panel, hierarchy panel, motion panel, display panel, utilities panel.</p> | | | | | |
| Unit 2: Polygon Modeling <p>Working with primitive polygon objects, creating box and sphere, creating prism ,modifying primitive ,selecting object : name, color, region, transforming objects, coordinate system In 3d max, transform Gizmos , moving an object, rotating an object, scaling an object, Hiding and freezing an object, cloning objects, grouping objects, Mirroring objects, Aligning objects.</p> | | | | | |
| Unit 3: Subdivision Modeling <p>Basic modeling techniques, Introduction to modifiers, modifiers types, modifier stack, using various modifiers, working with 2d Shapes, shapes primitive , 3D object, Using the Graphite Modeling tool, materials, Properties of materials , Modifier , Modeling concepts. Exploring NURBS Modeling, Creating a NURBS Curve Sub Object, Converting object to NURBS, Editing NURBS.</p> | | | | | |
| Unit 4: Texturing <p>Mesh Object and Sub Object, Exploring Subdivision Modeling, Applying the mesh smooth modifier, Applying the Turbo smooth modifier, Exploring Polygonal modelling, Creating Mesh Object, Converting and object into an Editable poly object, Collapsing an object, Advanced Materials, Subsurface Scattering, Texture Map, Layered Texture, Human Anatomy UV Coordinates Setup for Texturing, Maps - Color Maps, Bump Maps, Displacement Maps, Normal Maps, Specular Maps, Mask Maps, Occlusion map.</p> | | | | | |
| Unit 5: Lighting and Rendering <p>Basic concepts of lighting , Properties of light, Lights Shadows and Cameras, Light Types: Omni, Spot, Directional ,Creating Lights, Changing Light, Types, Creating a Sunlight System, Adjusting Illumination, On/Off, Exclusion, Intensity, Color, Hotspot and Falloff, Attenuation, Decay, Projector Maps , Volumetric Lighting, Casting Shadows, On/Off, Shadow Types, Shadow Color, Light Placement, Light Viewport Controls, Animating Lights, Camera Types, Target, Free, Creating Cameras, Aiming Cameras, Changing, Camera Types, Activating a Camera View, Adjusting Cameras, Focal Length, Field of View, Clipping Planes, Environment Ranges, Camera Placement, 3d Rendering , Rendering methods.</p> | | | | | |
| Assignments: <ol style="list-style-type: none">To prepare various Model.To prepare Animation.Exercise of Light and Texture for 3D Design.Any other Assignment given by the concerned faculty. | | | | | |

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Text Books and References:

1. Introducing 3ds Max 3D for Beginners by Darlush Derakhshani, SYBEX (2003)
2. 3ds Max 2010 IN Simple Steps by Kogent Learning Solution Inc., Dreamtech Press
3. 3D Max Bible(2006)

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| Course | VIDEO EDITING | Marking Scheme | | | Credits |
|---|---------------|----------------|----|----|-------------|
| | | T | P | I | 6 (CCE3) |
| 4BSc(GA)3 | | 50 | 30 | 20 | |
| Objectives: <ul style="list-style-type: none"> To equip Students with profound Video Editing Skills To teach basis of Video Editing To familiarize students with Video software commonly used for editing. | | | | | |
| Unit 1: Introduction to Video Editing Principles of editing, Manipulation of time, Rhythm & Pace, Dramatic Continuity, Action Sequence/ Cross Cutting / Parallel Cutting, Definition of Video, Frame, Concept Digital and Analog Video, Overview of computer video editing | | | | | |
| Unit 2: Introduction to Adobe Premiere Project Settings and Preferences, Understanding Adobe Premiere editing software (Project, Monitor, Timeline) Introduction to editing tools, Setting in and out points, Adding audio tracks, | | | | | |
| Unit 3: Adobe Premiere Features Razor edit cuts, Fade to black, Transparency layers in Premiere, Adding a super-imposed graphic logo with transparency, Animation paths, Camera blur filter, Exporting and Synchronizing audio, Introduction to transitions, Applying slow and fast motion effects. | | | | | |
| Unit 4: Introduction of Final Cut Pro: Final Cut Pro: Introduction and system requirements, Working with the Interface Marking and Editing, Drag-and-drop Editing, Marking in the Timeline, Trimming Edit Points, Adjusting Edit Points, Other Editing Points. | | | | | |
| Unit 5: Final Cut Pro Features Changing Motion Properties, Applying Filters, Multicam Editing, Adding Titles and Graphics, Finishing and Outputting, File Format of Video. | | | | | |
| Assignments: <ol style="list-style-type: none"> Plan a small Project of Video Editing Develop Video for DVD and Internet Prepare various Programme format Any Assignment given by concerned faculty. | | | | | |
| Text Books and References: <ol style="list-style-type: none"> The Technique of Film and Video Editing: History, Theory, and Practice, Edition 5 Ken Dancyger 23 July 2014 CRC Press, ISBN NO. 978024081397 Cutting Rhythms: Intuitive Film Editing, Edition 2 Karen Pearlman 10 December 2015 CRC Press, English ISBN 9781317516422 Learn Adobe Premiere Pro CS5 by Video -By Video2Brain Adobe Premiere Elements 9 Classroom In a Book -By Adobe Creative Team. FINAL CUT PRO HD HANDS-ON TRAINING-by Larry Jordan Editing techniques with Final cut pro - Michael Wohl | | | | | |

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| Course | Principles of Game Design | Marking Scheme | | | Credits |
|---|---------------------------|----------------|----|----|-------------|
| | | T | P | I | |
| | | 50 | 30 | 20 | |
| 4BSc(GA)3 | | | | | 6 (CCE4) |
| Objectives: <ul style="list-style-type: none"> To understand the components of games To understand the various approaches in the design of a game To familiarize students with best practices in the design of a game | | | | | |
| Unit 1: Introduction of Game Design Origin and Growth of Gaming Industry and Digital Gaming, Principles of Game Design, The Anatomy of Game Design, The Importance of Game Design, Key Elements of Games, Ground Rules. Documenting the Design, Need for Documents, The Types of Design Documents, Anatomy of a Game Designer – Imagination, Technical Awareness, Analytical Competence, Mathematical Competence, Aesthetic Competence, General Knowledge, Writing Skills, Drawing Skills, The Ability to Compromise. | | | | | |
| Unit 2: Elements of Game Game concepts, Formal elements of games, The Elements of a Game - Games, Toys, and Puzzles, Challenges, Gameplay and the Victory Condition. Setting, Interaction Model, and Perspective, The Players Role, Modes and Structure, Realism. | | | | | |
| Unit 3: Game Machines and Dimensions Game as an Interactive Entertainment. The Types of Game Machines - Home Game Consoles, Personal Computers, Handheld Game Machines, Other Devices. The Purpose of a Game Setting, The Dimensions of a Game World - The Physical Dimension, The Temporal Dimension, The Environmental Dimension, The Emotional Dimension, The Ethical Dimension. Realism and Abstraction. | | | | | |
| Unit 4: Game Storytelling and Character development Storytelling and Narrative, Stories in Games, The Story Vehicle - Plot Pacing, Gameplay and Narrative, Multi-Part Stories, Storytelling and Narrative Worksheet . Character Development - Art-Driven Character Design, Story-Driven Character Design, Character Development Worksheet. | | | | | |
| Unit 5: User Experience and Game play Creating the User Experience - Interactive Element, Visual Element, Audio Element. The Human-Computer Interface, Components of the User Experience. Gameplay - Use of Language, Defining Gameplay, Gameplay Worksheet Game Balance - Static Balance v/s Dynamic Balance, Tools for balancing. | | | | | |
| Assignments: <ol style="list-style-type: none"> Plan a small Project for Game design Prepare a Gameplay Worksheet Prepare a Storytelling and Narrative Worksheet. | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Digital game-based learning – by Marc Prensky The Computer Game Design Course Principles, Practices and Techniques for the Aspiring Game Designer, Jim Thompson, Barnaby Berbank-Green Andrew Rollings and Ernest Adams on Game Design | | | | | |

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| Course | Website Development | Marking Scheme | | | Credits |
|---|---------------------|----------------|----|----|-------------|
| | | T | P | I | |
| | | - | 40 | 10 | |
| 4BSc(GA)4 | | | | | 3 (SEC2) |
| Objectives: <ul style="list-style-type: none"> To understand Web Site Design Process. To teach basics of Web page Design using flash & Dreamweaver | | | | | |
| Unit 1: Introduction to web design and web layouts Design – Design aesthetic, characteristics for various websites(commerce, edutainment, IT, entertainment, games, online communities etc.) Introduction to Interface, types, design and trends for different platforms, layouts for web-Symmetrical and asymmetrical layout ,Workflow for designing a site | | | | | |
| Unit 2: Dreamweaver Dreamweaver-Getting Started with Dreamweaver, Developing a Web Page, Working with Texts and Graphics, Image Placement, Aligning & Modifying, Page Properties. Link web content, using hyperlinks-mail links and named anchors, Inserting rich media such as video, sound and animation in flash format, Importing tabular data to a web page, Creating Forms , | | | | | |
| Unit 3: Introduction to Flash Flash: Getting started with macromedia Flash working with symbols and Interactivity, Creating animations, Crating special effects, Integration activity Insert and edit Macromedia Flash Movies In Dreamweaver. | | | | | |
| Unit 4: Introduction to Java script and Wordpress Javascript Overview, syntax & conventions. Creating script, Hiding the script , Variables, Expressions, Branching & Looping statements, Objects, Events & Document Object Model - on Click, onMouseOver, onSubmit, on Focus, onChange, onBlur, OnLoad, onUnload, Alerts, Prompts & Confirms. Introduction to Open Source software Wordpress. | | | | | |
| Unit 5: Website Management and publishing Choosing a domain name, explanation of the components including domain extensions. Selecting a hosting company - business vs. personal. Understand the process of uploading, downloading a web site to, from a web server. Using hosting management tools through the browser such as Panel. Preparing to publish - Adding Meta tags to pages and general testing. Different types of FTP tools. Connecting to your host and transferring files effectively. Setting permissions on certain files to assist with security on your site. Understand the term copyright and its Implications for text, Images, audio, video available on websites. | | | | | |
| Assignments: <ol style="list-style-type: none"> Design a web site using Dreamweaver Implement a java script on to a web page | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Learning Dreamweaver Cs 5 Paperback – by Bangia Dreamweaver CS5 in Simple Steps Paperback – by Kogent Learning Solutions Inc. JavaScript: the Complete Reference Paperback – by Thomas Powell (Author), Fritz Schneider (Author) | | | | | |

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4. JavaScript Testing: Beginner's Guide Author : Eugene Publisher : Shroff - Packt Publishing
ISBN13 : 9789350232644; ISBN10 : 9350232642
5. WordPress: The Missing Manual, 2/e Paperback – 2014 by Matthew MacDonald (Author)
Publisher: Shroff/O'Reilly; Thlrd Edition edition (2014) ISBN-10: 935110706X; ISBN-13: 978-9351107064

Shroff

Shroff

| | | | |
|---|-----------------------------------|--|-------------------|
| Course | Open Elective | | Credits |
| 4BSc(GA)5 | | | 3 (OE) |
| Choose any one subject In each semester - | | | |
| OE1 | Fundamentals of Computers | | |
| OE2 | PC Packages | | |
| OE3 | Digital Art & Digital Photography | | |
| OE4 | Social Science | | |
| OE5 | Animation Technology | | |
| OE6 | Design Concepts and Technology | | |
| OE7 | Social Media | | |
| OE8 | 3D Design with Maya Advanced | | |
| For detailed syllabus of Open Elective Subjects, please refer to "Open Electives" section on page no. 48. | | | |

Available *Dr* *Am*

| Course | 3D Design with MAYA | Marking Scheme | | | Credits |
|--------|---------------------|----------------|----|----|---------|
| | | T | P | I | 6 |
| | | 50 | 30 | 20 | (CCC11) |

Objectives:

- To Impart knowledge of Modeling & Texturing.
- To Impart knowledge of Rigging & Animation.
- To Impart skills of Light and Shadow.
- To Impart knowledge of Dynamics Effects& Rendering.

Unit 1: Introduction to MAYA

Introduction to MAYA, Maya Interface, Creating a Scene, Manipulating a Scene in 3D, Texturing an Object, Lighting a Scene, Rendering a Still Frame.

Unit 2: Modeling & Texturing

Basic of Clay modeling, Modeling with NURBS - NURBS topology, NURBS Modeling Tools, Attaching surfaces, Rebuilding Surfaces, Textures Coordinates, Polygon Modeling and Texturing - Modeling with Polygon Tools , Working with Symmetry, Using Image Planes, Block Modeling, Sculpturing Polygon Objects, UV Texturing, Paint Effects, Material's, Hyper shade.

Unit 3: Rigging & Animation

Creating the Skeleton, Using Deformers, Constrain and utility's, Set driven key, Connection editor, Creating a rig using IK FK., Skinning, Animation Introduction, Key frame, Animation principles, Graph editor, Dope Sheet, Animating objects along paths, Playblast, Ball bouncing, Walk cycle

Unit 4: Dynamics Effects

Particle properties, fluids dynamics, fields, soft and rigid bodies. Basic of hair fur and cloth simulation.

Unit 5: Lighting and Rendering

The art and techniques of lighting, Three point lighting, Light links, camera shot, Types of Rendering In Maya, Material and light Interaction, Render Layers, Render with Alpha Channel.

Assignments:

1. Prepare 3D Animation for Film
2. Exercise of Light and Texture for 3D Design
3. Prepare 3D Character.
4. Create a desk lamp.

Text Books and References:

1. The Yucatan : A Guide to the Land of Maya Mysteries Plus Sacred Sites at Bellize, Tikal & Copan - by Antoinette May
2. Maya 8 : The Complete Reference, Tom Meade, Shinsaku Arima
3. Maya Character Modeling and Animation: Principles and Practices, Tereza Flaxman
4. Introducing Maya 8: 3D for Beginners, Darlush Derakhshani
5. Understanding 3D Animation Using Maya, John Edgar Park
6. Stop Staring: Facial Modeling and Animation Done Right, Originally published: 2003 Author: Jason Osipa
7. The Art of Rigging, Volume 1,2,3 Publish ed : 2006;Author:Klaran Ritchie
Advanced Maya Texturing and Lighting, Published: 2008; Author: Jeremy Birn

| Course | Animation for Multiplatform | Marking Scheme | | | Credits |
|---|-----------------------------|----------------|----|----|--------------|
| | | T | P | I | |
| | | 50 | 30 | 20 | |
| 5BSc(GA)2 | | | | | 6 (CCC12) |
| Objectives: <ol style="list-style-type: none"> 1. To understand 2D Animation for web 2. To understand Effect and Filter. 3. To understand programming prototype and testing (QA) for multiplatform 4. To impart Knowledge of design process for multiplatform. | | | | | |
| Unit 1: Introduction of Multiplatform animation Introduction to flash, New features, The Flash Interface, creating a new flash document, Architecture of a flash document Understanding and reading the frame-based Timeline ,Various tool bar, The panels, using various Drawing Tool ,Using the Oval and Rectangle Drawing Tool and tool modes, The frame concepts, Selecting objects, Editing object, Creating Graphics, Fills and outline, Grouping object, Understanding the stacking order of objects, Transforming the objects, Aligning the object, The colour palette, Using the colour Swatches Panel, Colour mixer Panel. Drawing in Flash- Background and character design for 2d Animation movie, Definition, Human Interaction: Need, Basic Rules & Principles, Features, Human Interface, Digital Interactivity, Types, platforms, GIF Animation - Process, Content Creation, Tools, UI Elements, Platform, Introduction to 3d software, 3D object animation, basics of all animation techniques | | | | | |
| Unit 2: Tweens and time slider animation working with frames and key frames, working with layers and layer folders using the Library, Creating and editing symbols, working with Instances, Creating custom Library, Working with sound and video In flash. Creating animation, Frame by frame animation, Onion-skinning, Introduction to Symbols and Tweening, Three types of symbols, Graphic, Button and Movie Clip, Classic Motion Tweens. Object-based animation, 3D transformation, Procedural modelling with Deco and Spray Brush. Inverse Kinematics, Motion Presets. Various types of pans, horizontal pan, vertical pan and diagonal Pan. Animation in 3d software – time slider, graph editor. | | | | | |
| Unit 3: Effect and filter for multiplatform Motion Tweens ,Shape Tweening ,Creating masking effect, Incomplete or incorrect tweens, "Scrubbing" to preview motion ,Using the "Test Movie" command to view the movie The Flash Player, Adjusting speed ,animating filter , applying glow filter, Animating the filter using the motion tween, editing motion path of a motion Tween, Motion preset In flash, Understanding mask layer. Creating Walk and run cycle using Frame by frame animation, 3d effects – Particles dynamics, fluid dynamics, Photoshop filters. | | | | | |
| Unit 4: Design process for multiplatform Using a storyboard ,Planning an animation, Animating text , Using Timeline layers, Animating multiple objects ,The Align Panel, Compound tweens ,Spacing events on the timeline, Moving objects on and off the stage, Creating a multi-layered graphic symbol, Color adjustments, Stopping an animation, Introduction to Flash interface design, Working with a site map Designing a Flash based web site, All-Flash sites and "hybrid" sites, advantages and disadvantages, Precision layout and design in Flash, Using the contextual menus in the Flash interface, Incorporating animation sequences with site pages Introduction to Button Symbols Button states, The Hit Area Creating Walk cycle using bone tool, Creating 3D graphics, Creating video for web, 2d animation for web using Photoshop. | | | | | |

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Unit 5: Programming prototype and testing (QA) for multiplatform

Basics of MEL and python scripting , basics of max scripting ,action Script and Basic Interactivity, Organizing Actions and Frame Labels on the Timeline Introduction to Action Script 3.0 ,Assigning Actions to buttons, Organizing movies with Scenes Linking to external pages and web sites, Linking lines of text, Using buttons as text links, Email links ,Publishing Flash files for the web, Flash and search engines, Alternate delivery methods, Design Documentation, Flow Chart, Graphical UI/UX, Quality Assurance, Feedback, User Experience, Testing (QA)

Assignments:

1. Prepare 2D Animation for WEB.
2. Creating interactive presentation.
3. Prepare 3D Animation video.
4. Creating GIF animation.
5. Exercise of Effect and Filter In any 2d or 3d software.

Text Books and References:

1. Flash CS3 for Dummies - by Ellen Finkelstein & Gurdy Leete
2. Cross-GUI Handbook: For Multiplatform User Interface Design - Aaron Marcus (Author), Nick Smillonich (Author), Lynn Thompson (Author)
3. Macromedia Flash MX: A Beginner's Guide - by Brian Underdahl
4. Android App Development for Dummies by Michael Burton, 6 October 2015
5. Android Studio New Media Fundamentals: Content Production of Digital Audio/Video, Illustration and 3D Animation; by Imusti -2009



| Course | Character Animation | Marking Scheme | | | Credits |
|--|---------------------|----------------|----|----|-------------|
| | | T | P | I | |
| 5BSc(GA)3 | | 50 | 30 | 20 | 6 (CCE5) |
| Objectives: <ul style="list-style-type: none"> To impart knowledge of character animation. To impart training of idea generation for 3D character To impart skills of creating walk through. | | | | | |
| Unit 1: Introduction to Character Animation Fundamentals of Character Animation – Key frame, Set key, Auto key, Frame rate, Adding sound in timeline, Play blast, Constrain, Basic of acting and drawing. | | | | | |
| Unit 2: Animation Principles Animation principles - Squash and Stretch ,Anticipation ,Staging, Straight Ahead Action and Pose to Pose, Follow Through and Overlapping Action, Slow In and Slow Out, Arc, Secondary Action, Timing, Exaggeration, Solid drawing, Appeal | | | | | |
| Unit 3: Introduction to Editors Graph editor - Tangents and Curve Types, Breakdowns /Smoothing the Curves, Set Driven Keys, Motion Path - Attach to motion path, Trax Editor, Dope Sheet, Camera Animation | | | | | |
| Unit 4: Animation Constrain animation, Bouncing the Ball/Squash and Stretch, Refining the Bouncing Ball, Pendulum animation, Facial animation - blend shapes, blocking the Walk Cycle, Finalizing the Walk Cycle | | | | | |
| Unit 5: Project Development Project Work 1: Creating a walk cycle animation clip. Project Work 2: Creating a Run cycle animation clip. Project Work 3: Creating a facial animation clip using blend shape | | | | | |
| Text Books and References: <ol style="list-style-type: none"> The Animator's Survival Kit by Richard Williams. Stop Staring: Facial Modeling and Animation Done Right by Jason Osipa . Cartoon Animation (Collector's Series) by Preston Blair | | | | | |

J. Nalash

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| Course | Visual Effects | Marking Scheme | | | Credits |
|---|----------------|----------------|----|----|-------------|
| | | T | P | I | |
| 5BSc(GA)3 | | 50 | 30 | 20 | 6 (CCE6) |
| Objectives: <ul style="list-style-type: none"> To Impart knowledge of visual effects To Impart knowledge of editing and compositing. To Impart skills of visual effects software. | | | | | |
| Unit 1: Introduction VFX Preproduction, Introduction to Cinema & Film Appreciation, Basics of Photography, Concept of Story Boarding, Basics of Documentary Film Making, VFX Pipeline | | | | | |
| Unit 2: Cinematography & TV Production Introduction to Direction for Television , Basics of Cinematography, Motion Graphics, Introduction of Stereoscopic Pipeline, Concepts of Advertisement Film Making, | | | | | |
| Unit 3: Editing & Compositing Editing with FCP , Visual Special Effects & Compositing, Importance of Sound & Sound Special Effects ,Rotoscopy and Keying, Paint and Match Moving, Character Effects, Wire Removal | | | | | |
| Unit 4: Advanced VFX FX with Maya, Motion Graphics with after effects, Rotoscope & Match-Moving In Mocha, Introduction – Nuke, Tracking with boujou, Rotoscopy with Fusion | | | | | |
| Unit 5: Project Development Project & Case Studies for Motion Graphics. Project & Case Studies for Editing. Project & Case Studies for Compositing. | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Compositing Visual Effects: Essentials for the Aspiring Artist by Steve Wright ISBN-13: 978-0240817811 ISBN-10: 0240817818. [Digital] Visual Effects and Compositing by Jon Gress ISBN-13: 978-0321984388 ISBN-10: 0321984382. Masters of FX: Behind the Scenes with Genluses of Visual and Special Effects by Ian Failes, ISBN-13: 978-1138845961 ISBN-10: 1138845965. | | | | | |

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| Course | Dynamics of Visual Communication | Marking Scheme | | | Credits |
|---|-------------------------------------|----------------|---|----|---------|
| 5BSc(GA)4 | | T | P | I | 2 |
| | | 40 | - | 10 | (SEC3) |
| Objectives: <ul style="list-style-type: none">To understand visual and visual communication fundamentals.To understand the principles of Principles of visual media communicationTo learn the Visual Application and visual designTo understand Visual language and cultureTo understand visual effects and Its Important perspectives | | | | | |
| Unit 1: Introduction to Visual Communication <p>Historical Development - Conceptual development - Visualisation process Visualisation environment- Tools for visualization- Sensual and perceptual theories. The influence of documentary, popular arts and television.</p> | | | | | |
| Unit 2: Visual Media <p>Varlous visual media – basic comparison, Principles of visual media communication - Video medium, Non Projected audio visuals - Scientific visual media Creative visualization.</p> | | | | | |
| Unit 3: Visual Application <p>Types of Visual applications, Rendering and rasterisation - Visual perception - Information design Communication design – Graphlc design – Cartoons.</p> | | | | | |
| Unit 4: Visual Language and Culture <p>Study of Visuality - World culture - Visual rhetoric, sociology and ethics Temple grandins views on autism and visual thought -Abstract thought Visual thinking and mental imagery -Implication in visual syntax.</p> | | | | | |
| Unit 5: Visual Effects and Important Perspectives <p>Important Perspectives Image Analysis – Typography - Graphics design - Informational Graphics - Cartoon – Photography Motion pictures Television and video - Computer graphics - World Wide Web</p> <p>Visual Effects – evolution of visual effects, special effects used in varlous applications</p> | | | | | |
| Assignments: <ol style="list-style-type: none">How to categorize visual effects?Comparison of visual mediaCreating visual effects without softwareCreating visual effects using software. | | | | | |
| Text Books and References: <ol style="list-style-type: none">Visual communication images with messages by paul Mrtln lester(2008) wordsworthPaul martin, Visual communication (2008) Global vision publishing house – New Delhi.Pradeep Mandav- visual media communication (2001) – Authors press – New Delhi | | | | | |

Shalash

| | | |
|---|-----------------------------------|-----------|
| Course | Open Elective | Credits |
| 5BSc(GA)5 | | 3 (OE) |
| Choose any one subject in each semester - | | |
| OE1 | Fundamentals of Computers | |
| OE2 | PC Packages | |
| OE3 | Digital Art & Digital Photography | |
| OE4 | Social Science | |
| OE5 | Animation Technology | |
| OE6 | Design Concepts and Technology | |
| OE7 | Social Media | |
| OE8 | 3D Design with Maya Advanced | |
| For detailed syllabus of Open Elective Subjects, please refer to "Open Electives" section on page no. 48. | | |

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| Course | Project Portfolio Management | Marking Scheme | | | Credits |
|--|------------------------------|----------------|---|----|--------------|
| | | T | P | I | |
| 6BSc(GA)1 | | 80 | - | 20 | 6 (CCC13) |
| Objectives: <ul style="list-style-type: none"> To Impart Project Planning and Execution | | | | | |
| Unit 1: Portfolio Management Framework Portfolio Management Framework: create-select-plan-manage. | | | | | |
| Unit 2: Creation Create-Demand management, Team collaboration, Program management, Portfolio reporting. | | | | | |
| Unit 3: Selection Select-Portfolio, Financial Management Public Relation, Team Collaboration, Program Management. | | | | | |
| Unit 4: Planning Plan-Capacity Planning, Resource Management Project Scheduling, Financial Management, Public Relation, Team Collaboration, Program Management | | | | | |
| Unit 5: Management Manage-Resources Management, Project Scheduling, Financial Management Time reporting, Public relation, Team Collaboration, Program Management. | | | | | |
| Case Studies | | | | | |
| Assignments: <ol style="list-style-type: none"> Prepare Small Project of given CG Complete Any Assignment given by Concerned Faculty | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Project Management Institute. (2006) The Standard for Portfolio Management. Newtown Square, PA: Project Management Institute. Top 5 Project Portfolio Management Books by muydwriter Edited by: Ginny Edwards, 2010 | | | | | |

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| Course | Major Project | Marking Scheme | | | Credits |
|-----------|---------------|----------------|----|----|--------------|
| | | T | P | I | |
| 6BSc(GA)2 | | - | 80 | 20 | 6 (CCC14) |

Guidelines for submission of BSc(Multimedia /Graphics and Animation) Project

All the candidates of BSc(MM/GA) are required to do a project as part of their curriculum and submit a project report based on the work done by him/her during the project period.

THE GUIDE

The Guide for BSc(MM/GA) will be a faculty in New Media Technology with 3 years teaching experience.

PROJECT TIME / MAN-HOURS

- The BSc(MM/GA) Projects would be approximately 225 man-hours (in a span of 2 months) and carries a total of 300 marks (240 Pr + 60 IA)
- Project work should be based on topics in syllabus to identified situations.
- Number of students in a project group will not be more than three for BSc(MM/GA) .
- Synopsis of the project work should be submitted within the first 15 days of the duration.
- Project report should be submitted 10 days before the final exam for evaluation.

PROJECT DEVELOPMENT:

The project work shall be evaluated on two different parameters.

- I. The Product
- II. The Process

I. The Product

The final product developed during the project work should meet the following minimum criteria as mentioned below-

1. The product developed should have a meaningful Concept/Story implementing an idea with meaningful commentary
2. Incorporating background music
3. Minimum 5 to 10 minute clips
4. Minimum 20 sec live action clip
5. Still graphics
6. A 2D/3D animation must be incorporated
7. A project report in the specified format

II. The Process

The process shall be evaluated in the following areas:

1. Application of Production pipeline (Preproduction, Production, Postproduction)
2. Clarity in Need Identification/objectives (Converting this into Idea)
3. Idea - how to implement/Evidence for each idea like text, image, sound/ minimum platform required to implement the same
4. Design and Development - looking to the idea, storyboard/communication strategy, pedagogy, aesthetics/ Quality of Presentation of each piece of evidence Format, Technical Quality, Readability, Software used/ Data management
5. Validation
6. Ability to defend the ideas through questioning and Viva

Sample Topics for project work

1. Global warming
2. Prevent Deforestation
3. Documentary on health
4. Conservation of water
5. Conservation of power(Energy)
6. Good habits /bad habits.
7. Road traffic sense.
8. Pollution.
9. Right to education
10. Women Rights
11. Website Development
12. Game Development
13. Advertisement

Project Evaluation Guidelines.**A.) To be done by the Internal Examiner : (60 marks)**

The evaluation of Project will be done on the basis of following heads:

| | |
|--|-----------------------|
| Synopsis/Internal Assessment | - 20% of total marks. |
| Product | - 30% of total marks. |
| Process and Its In-process documentation | - 30% of total marks. |
| Final Project report and presentation | - 20% of total marks. |

B.) To be done by External Examiner : (240 marks)

The evaluation of Project will be done on the basis of following heads:

| | |
|--------------------|-----------------------|
| Product | - 30% of total marks. |
| Process | - 20% of total marks. |
| Project report | - 20% of total marks. |
| Comprehensive Viva | - 30% of total marks. |

SYNOPSIS

All students must submit a synopsis separately with the project report. Synopsis preferably should be of about 3-4 pages. The content should be as brief enough to explain the objective and implementation of the project that the candidate is going to take up. The write up must adhere to the guidelines and should include the following:

- Name / Title of the Project
- Objective and scope of the Project
- Process Description
- Hardware & Software to be used
- What contribution would the project make?
- Target Audience.

TOPIC OF THE PROJECT: This should be explicitly mentioned at the beginning of the Synopsis. Since the topic itself gives a peep into the project to be taken up, candidate is advised to be prudent on naming the project. This being the overall impression on the future work, the topic should corroborate the work.

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OBJECTIVE AND SCOPE: This should give a clear picture of the project. Objective should be clearly specified. What the project ends up to and in what way this is going to help the end user has to be mentioned.

PROCESS DESCRIPTION: The process of the whole multimedia/animation system proposed, to be developed, should be mentioned in brief.

RESOURCES AND LIMITATIONS: The requirement of the resources for designing and developing the proposed system must be given. The resources might be in form of the hardware/software or the data from the industry. The limitation of the proposed system in respect of a larger and comprehensive system must be given.

CONCLUSION: The write-up must end with the concluding remarks-briefly describing innovation in the approach for implementing the project, main achievements and also any other important feature that makes the system stand out from the rest.

The following suggested guidelines must be followed in preparing the Final project Report:

Good quality white executive bond paper A4 size should be used for typing and duplication. Care should be taken to avoid smudging while duplicating the copies.

Page Specification : (Written paper and source code)

- Left margin - 3.0 cms
- Right margin- 2.0 cms
- Top margin 2.54 cms
- Bottom margin 2.54 cms
- Page numbers - All text pages should be numbered at the bottom center of the pages.

Normal Body Text: Font Size: 12, Times New Roman, Double Spacing, Justified. 6 point above and below para spacing

Paragraph Heading Font Size: 14, Times New Roman, Underlined, Left Aligned. 12 point above & below spacing.

Chapter Heading Font Size: 20, Times New Roman, Centre Aligned, 30 point above and below spacing.

Coding Font size : 10, Courier New, Normal

Submission of Project Report to the University : The student will submit his/her project report in the prescribed format. The Project Report should include:

- One copy of the synopsis//abstract.
- Two hard Copy of the Project Report.
- Soft copy of the final product on CD in a thick envelope pasted inside of the back cover of the project report.
- The Project Report may be of maximum 75 pages

FORMAT OF THE STUDENT PROJECT REPORT ON COMPLETION OF THE PROJECT

1. Cover Page as per format
2. Acknowledgement
3. Certificate of the project guide/Centre Manager as at Annexure III
4. Certificate of the Company/Organisation

Handwritten signatures and initials at the bottom of the page.

5. Synopsis of the Project

6. Main Report

- Objective & Scope of the Project
- Details of Hardware & Software used
- Production pipeline
- Product Validation
- Cost and benefit Analysis
- Conclusion

Annexure:

1. Brief background of the organization where the student has developed the project.
2. References

Binding & Color code of the Report

BSc(MM) and BSc(GA)

Hard Bound Report

Background of the cover page -Blue

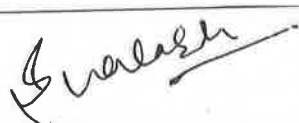
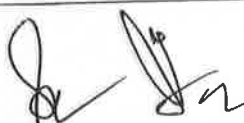
Letters in Black

CERTIFICATE

This is to certify that this project entitled " xxxxxx xxxxx xxxxx xxxx xxxx xxx" submitted under partial fulfillment of the degree of BACHELOR OF SCIENCE(Multimedia/ Graphics and Animation) to the Makhanlal Chaturvedi National University of Journalism and Communication, Bhopal, done by Mr./Ms. _____, Roll No. _____ is a project work carried out by him/her at _____ under my guidance. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Signature of the student

Signature of the Guide

Title of the report

(Times New Roman, Italic, Font size = 24)

Submitted under partial fulfillment of the requirements

for the award of the degree of B.Sc In Multimedia/Graphics and Animation

(Bookman Old Style, 16 point, centre)

University Logo

Guide

(Guide Name)

Submitted by:

(Student's name)

Roll No.:

Gurdeep

[Signature]

Makhanlal Chaturvedi National University
of Journalism and Communication, Bhopal,

SELF CERTIFICATE

This is to certify that the project report entitled
"_____ " is done by me is

an authentic work carried out for the partial fulfillment of the requirements for the award of the degree of BSc in Multimedia / Graphics and Animation under the guidance of _____. The matter embodied in this project work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Signature of the student

Name of the Student

Roll No.

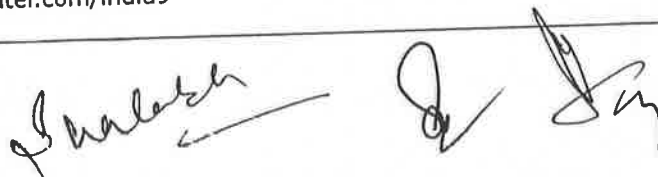
Study Centre Name

ACKNOWLEDGEMENTS

In the "Acknowledgement" page, the writer recognises his indebtedness for guidance and assistance of the project advisor and other members of the faculty. Courtesy demands that he also recognise specific contributions by other persons or institutions such as libraries and research foundations. Acknowledgements should be expressed simply, tastefully, and tactfully.

References

1. D.L. Carney, J.I. Cochrane, "The 5ESS Switching System: Architectural Overview," AT&T Technical Journal, vol. 64, no. 6, July-August 1985, pp. 1339-1356.
2. A. Stevens, C++ Database Development, MIS Press, New York, 1992, p. 34.
3. J. Martin, Computer Data-base Organization, Prentice-Hall, Englewood Cliffs, NJ, 1977, p. 53.
4. www.ibm.com/in
5. www.intel.com/india9



| Course | Animation Production Pipeline | Marking Scheme | | | Credits |
|---|-------------------------------|----------------|---|----|-------------|
| | | T | P | I | |
| 6BSc(GA)3 | | 80 | - | 20 | 6 (CCE7) |
| Objectives: <ul style="list-style-type: none"> To impart Project Planning and Execution To impart production process. To impart titling for project To impart publishing a project | | | | | |
| Unit 1: Pre-Production Planning & Concept Design Ideas, writing, planning, Screenplay/Script (Writing/Editing), Storyboard, Feedback & Approval, Character and Prop design, backgrounds, and props, Key poses and animation, Animatics, Folder structure, Naming convention.. | | | | | |
| Unit 2: Production - 1 Using Model, Sheets and Animatics, Camera setting, Layout, Modeling, Texturing, Lighting. | | | | | |
| Unit 3: Production - 2 Rigging, Animation, Dynamics effects, Character effects, Rendering techniques, Authoring. | | | | | |
| Unit 4: Post-Production Compositing, Sound Editing, Voice recordings with Animation - Lip sync animation - syncing animation and voices together, Editing and sound effects, Music. Video Editing - Color Styling | | | | | |
| Unit 5: Delivery After Effects, Adding SFX and Music afterwards, Publish | | | | | |
| Assignments: <ol style="list-style-type: none"> Prepare Small Project of given CG Complete Any Assignment given by Concerned Faculty | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Infiltrator Production Pipeline, Vol 5 : Animation ebook available online Multimedia-Based Instructional Design , Computer-Based Training, Web-Based Training, Distance Broadcast Training - William W. Lee, Diana Owens Getting Started in Multimedia Design - Gary Olsen-2005 John Lasseter, "Principles of Traditional Animation"-2007 | | | | | |

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| Course | Video Game Design | Marking Scheme | | | Credits |
|--|-------------------|----------------|---|----|---------|
| 6BSc(GA)4 | | T | P | I | 3 |
| | | 40 | - | 10 | (SEC4) |
| Objectives: <ul style="list-style-type: none">To Learn the Process of Video Game CreationTo Learn the Elements of Game Design ProcessTo Learn the Process of Game Design Document CreationTo Learn& Understand the Steps to Enhance the End User Experience | | | | | |
| Unit 1: Video Game Design: Introduction <p>History and Evolution of Video Games & Gaming Industry, Video Game Theory & Gamer Interaction Theory, Video Game Genres & Linear or Nonlinear Storylines, Gameplay Views – 1st Person, 3rd Person, Isometric, Open World, God View, Game Design for Small Devices, Game Design for Consoles and PC.</p> | | | | | |
| Unit 2: Elements of Game Design <p>Types of Game Play & Control Mechanics Design, Powers & Weapons Design, Game & Level Progression Design, Scoring System & Reward-Achievement System Design, Dimensions of Video Game Design, Game and Level Difficulty Balancing, Game User Interface Design, User Experience Aspect of Video Game.</p> | | | | | |
| Unit 3: Process of Idea Generation <p>Market Research and User Feedback Analysis, Story Telling Art of Game, Rough Draft Creation of Game Story, Concept Story Creation Process, Process of Concept Art Creation of Character, Prop & Level, Cut Scene Storyboard Creation, Level Design Storyboard Creation, Music & Sound Design Process.</p> | | | | | |
| Unit 4: Game Design Document Creation Process <p>Creation of One Pager & Three Pager Concept Document, Dialogue Writing for Cut Scenes, Standard Formats of Game Design Documents, Standard Formats of Flowcharts for Control Mechanics & Gameplay, Standard Formats of Sound Design & Event Location Documents, Standard Formats of Level Design Documents & Game Progression Documents, Standard Format of Game Design Check List & Sound Design Checklist.</p> | | | | | |
| Unit 5: Case Study <p>Nintendo & Shigeru Miyamoto – Case Study Future of Gaming In Virtual Reality – Case Study</p> | | | | | |
| Assignments: <ol style="list-style-type: none">Creation of Concept Art & Story Board for a Game.Creation of Game Design Document in Standard Format. | | | | | |
| Text Books and References: <ol style="list-style-type: none">The Ultimate Guide to Video Game Writing and Design, Lone Eagle, ISBN-10: 9781580650663, ISBN-13: 978-1580650663Level Up! The Guide to Great Video Game Design, Wiley, ISBN-10: 8126551011, ISBN-13: 978-8126551019Video Game Design: Principles and Practices from the Ground Up, Bloomsbury Academic, ISBN-10: 147256748X, ISBN-13: 978-1472567482 | | | | | |

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| | | |
|---|-----------------------------------|-----------|
| Course | Open Elective | Credits |
| 6BSc(GA)5 | | 3 (OE) |
| Choose any one subject in each semester - | | |
| OE1 | Fundamentals of Computers | |
| OE2 | PC Packages | |
| OE3 | Digital Art & Digital Photography | |
| OE4 | Social Science | |
| OE5 | Animation Technology | |
| OE6 | Design Concepts and Technology | |
| OE7 | Social Media | |
| OE8 | 3D Design with Maya Advanced | |
| For detailed syllabus of Open Elective Subjects, please refer to "Open Electives" section on page no. 48. | | |

P. V. Lakshmi

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OPEN ELECTIVES

(Syllabus)

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| Course | Fundamentals of Computer | Marking Scheme | | | Credits |
|----------|--------------------------|----------------|---|----|---------|
| BSc(GA)5 | | T | P | I | 3 |
| | | 40 | - | 10 | (OE1) |

Objectives:

- To learn about Computer Devices
- To understand Software and Operating System
- To understand IT Communication
- To learn about Office Automation Package
- To learn about document creation, manipulation and storage of Chart and Slide Show Package

Unit 1: Introduction to Computer, Software and Devices

Computer System Concepts, Types Of Computers, Basic Components of a Computer System, Memory, Input Devices, Output Devices, Various Storage Devices, Software - Types - System software, Application software. System Software - Operating System, Utility Program, Assemblers, Compilers and Interpreter, Application Software - Word processing, Spreadsheet, Presentation Graphics, Database Management System.

Unit 2: Introduction to Operating System and Network

Introduction of Windows Linux and Mac. Windows - Features, Various versions, Working, My Computer & Recycle bin, Desktop Icons and Windows Explorer, Working with Files & Folders, Accessories and Windows Settings using Control Panel, Creating users, Internet settings, Start button & Program lists, Types of Network - LAN, WAN, MAN, Topologies of LAN - Ring, Bus Star, Mesh and Tree topologies, Components of LAN -Media, NIC, NOS, Bridges, HUB, Routers, Repeater and Gateways.

Unit 3: MS Word

Introduction to MS Office MS Word: Features & area of use, Menus, Toolbars & Buttons, Creating a New Document, Different Page Views and layouts, Text Formatting, Paragraph and Page Formatting; Bullets, Numbering, Printing & various print options, Spell Check, Thesaurus, Find & Replace, Auto texts, Working with Columns, Creation & Working with Tables, Mail Merge.

Unit 4: MS Excel

Concepts of Workbook & Worksheets, Using different features with Data, Cell and Texts, Inserting, Removing & Resizing of Columns & Rows, Working with Data & Ranges, Column Freezing, Labels, Hiding, Splitting etc. Use of Formulas, Calculations & Functions, Cell Formatting Including Borders & Shading, Working with Different Chart Types.

Unit 5: MS PowerPoint

Introduction, Creating a New Presentation, Working with Presentation, Using Wizards, Slides & its different views, Inserting, Deleting and Copying of Slides, Working with Notes, Handouts, Columns & Lists, Adding Graphics, Sounds and Movies to a Slide, Working with PowerPoint Objects, Designing & Presentation of a Slide Show, Printing Presentations, Notes, Handouts with print options.

Assignments:

1. Presentation of Comparison of different Computers, Memory & Devices
2. Comparison of types of Hardware.
3. Preparation of Files and folders in different O/S.
4. To find out type of network done and software available in Computer Lab.
5. Presentation of paper Document.
6. Preparation of Chart, Table and Graph for various medium.

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7. Preparation of Presentation on given topic.
8. Any other assignments given by the concerned Faculty.

Text Books and References:

1. Computers Today, S.K. Basandra, Galgotia Publications, ISBN-10: 8186340742, 1995
2. Fundamentals of Information technology, Alexs Leon & Mathews Leon, Vikas Publishing House, New Delhi, ISBN-10: 8182092450, 2009
3. Computer Ek Parichay, V. K. Jain, and S Publishers, ISBN-10: 9381448426, 2009
4. Fundamentals of computer Peter Norton, McGraw-Hill Inc, ISBN-10: 0028043375, 1997
5. Fundamentals of computers , 4th Edition (Paperback) By V. Rajaraman, PHI, ISBN-10: 8120340116, 2010
6. Office XP: The Complete Reference, Julia Kelly, McGraw Hill Education, ISBN-10: 0070447233, 2001
7. Exploring Microsoft Office XP, I. Breeden, Bpb Publicatons, ISBN-10: 8176564486, 2005
8. Peter Norton's Complete Guide To MS Office 2000 Publisher: BPB, ISBN-10: 8176353124, 1999.
9. Fundamentals of computers , 4th Edition (Paperback) By V. Rajaraman, PHI, ISBN-10: 8120340116, 2010
10. Office XP: The Complete Reference, Julia Kelly, McGraw Hill Education, ISBN-10: 0070447233, 2001
11. Exploring Microsoft Office XP, I. Breeden, Bpb Publicatons, ISBN-10: 8176564486, 2005
12. 8. Peter Norton's Complete Guide To MS Office 2000 Publisher: BPB, ISBN-10: 8176353124, 1999

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| Course | PC Packages | Marking Scheme | | | Credits |
|----------|-------------|----------------|----|----|---------|
| BSc(GA)5 | | T | P | I | 3 |
| | | - | 40 | 10 | (OE2) |

Objectives:

- To learn about Office Automation Package
- To learn about Document, creation, manipulation and storage of Chart and Slide Show Package
- To understand Database and Relational Database.

Unit 1: MS Word Basics

Introduction to MS Office. MS Word: Features & area of use, Menus, Toolbars & Buttons, Wizards & Templates, Creating a New Document, Different Page Views and layouts, Applying various Text Enhancements, Working with - Styles, Text Attributes; Paragraph and Page Formatting; Text Editing using various features, Bullets, Numbering, Auto formatting, Printing & various print options, Bullets, Numbering.

Unit 2: Advanced Features of MS Word

Spell Check, Thesaurus, Find & Replace, Headers & Footers, Inserting - Page Numbers, Pictures, Files, Auto texts, Symbols etc. Working with Columns, Tabs & Indents and Creation & Working with Tables Including conversion to and from text, Margins & Space management in Document, Mail Merge and Envelops & Mailing Labels. Importing and exporting to and from various formats.

Unit 3: MS Excel

Introduction, concepts of Workbook & Worksheets, Using Wizards, Various Data Types, Using different features with Data, Cell and Texts, Inserting, Removing & Resizing of Columns & Rows, Working with Data & Ranges, Column Freezing, Labels, Hiding, Splitting etc. Use of Formulas, Calculations & Functions, Cell Formatting Including Borders & Shading, Working with Different Chart Types, Printing of Workbook & Worksheets.

Unit 4: MS PowerPoint

Introduction, Creating a New Presentation, Working with Presentation, Using Wizards, Slides & its different views, Inserting, Deleting and Copying of Slides, Working with Notes, Handouts, Columns & Lists, Adding Graphics, Sounds and Movies to a Slide, Working with PowerPoint Objects, Designing & Presentation of a Slide Show, Printing Presentations, Notes and Handouts with print options.

Outlook Express: Features and uses, Configuring and using Outlook Express for accessing e-mails in office.

Unit 5: MS Access

Definition - Database, table, field, record. Creating a new database, Saving a table Adding and renaming fields, Using Datasheet View Adding Fields, Design View Data Type - Descriptions, Adding records to a table, Navigating through records within a table Editing data within a record, Deleting data within a record, Deleting a single record, Deleting multiple records, Deleting a table, Defining a Primary Key Creating forms, Creating a simple query, Creating a simple report.


Assignments:

1. Presentation of paper Document.
2. Preparation of Chart, Table and Graph for various medium.
3. Preparation of Presentation on given topic.
4. Any other assignments given by the concerned Faculty.

Text Books and References:

1. Windows XP Complete Reference. BPB Publications, 2003
2. MS Office XP complete BPB publication, 2003
3. MS Office Parichai BPB publication by Vishnu Singh. 2002
4. Peter Norton's Complete Guide To MS Office 2000 Publisher: BPB, 2002
5. MS Office Documentation, 2013

Dr. Rakesh

| Course | Digital Art and Digital Photography | Marking Scheme | | | Credits |
|---|--|----------------|----|----|------------|
| | | T | P | I | |
| BSc(GA)5 | | - | 40 | 10 | 3 (OE3) |
| Objectives: <ul style="list-style-type: none"> • Understanding digital camera Its Components and Handling • Understanding basic concepts and practice of Photography including understanding and use of the camera, lenses, and other basic photographic equipment. | | | | | |
| Unit 1: Basics of DSLR/SLR Camera Evolution of Camera, History of Photography, Photography Camera basics, Comparison of film Camera and digital camera, Types of DSLR/SLR camera, Parts of DSLR /SLR camera: Lens, Aperture, Shutter, Camera Sensor, ISO Setting . | | | | | |
| Unit 2: Colour Aesthetics and Composition Impact of colour in Photography, Association of colour moods hue, saturation, tone, shade, brightness, colour contrast, Complimentary colour Rule of Third, Balancing Elements, Leading lines, Texture, Viewpoint, Depth of field, Patterns, Colour, Symmetry, Background, Compositional Rules, | | | | | |
| Unit 3: Lighting Colour Temperature, White balance, Basic lighting technique, Three point lighting and its effects, lighting angles and directions, Lighting for set, atmosphere, Types of Photography lights | | | | | |
| Unit 4: Photography Lenses and Equipments Controlling The Image, Using different Focal Length Lenses, Filters and, its types, Close up equipments, Camera mounting device- Tripods, monopod, Storage media, Flash | | | | | |
| Unit 5: Types of Photography Sports & Action Photography, Product Photography, Wildlife & Nature Photography, Portrait Photography, Candid Photography, Archaeological Photography, Architecture Photography, Aerial Photography | | | | | |
| Assignments: <ol style="list-style-type: none"> 1. Digital Portfolio With Print(Nature photography, Product Photography, Candid Photography, Architecture Photography,) 2. Exercises of various types of Photography 3. Any other assignment given by the concerned faculty | | | | | |
| Text Books and References: <ol style="list-style-type: none"> 1. Handbook of Photography - Pradeep Tewari - MCNUJC, Bhopal 2. Langford's Basic Photography: The Guide for Serious Photographers, Edition 10 ISBN9781317964728 3. The Digital Photography by Scott Kilby 4. Digital Photography Quicksteps-by Doug Sahlin | | | | | |

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Dr. J. S.

| Course | Social Science | Marking Scheme | | | Credits |
|--|----------------|----------------|---|----|---------|
| | | T | P | I | |
| BSc(GA)5 | | 40 | - | 10 | 3 (OE4) |
| Objectives: <ul style="list-style-type: none"> To acquire the social, psychological and environmental awareness about the society. | | | | | |
| Unit 1: Basics of sociology Concept, definitions and Importance of sociology, Relation of sociology with other social sciences, Group-Community-Institution-organisation-Society-Humanity-Biosphere and their unity and Inter-dependence, Meaning of family, kinship, class, caste, clan, tribe, marriage. | | | | | |
| Unit 2: Socialization Concept of socialization, social stratification, Concept, definitions and process of social change, Understanding of contemporary changes in India, Characteristics of Indian culture. | | | | | |
| Unit 3: Psychology Concept, definitions and Importance of psychology, Relation of psychology with other social sciences, Importance of studying psychology for media students, Psychology of social groups, Elements and process of human behavior, Theory of Information Opinion and attitude formation. | | | | | |
| Unit 4: Urban Sociology Definition, Nature of Urban Sociology, Importance of Urban Sociology, Process of Urbanization | | | | | |
| Unit 5: Rural Sociology Origin And Development Of Rural Sociology In India, Importance Of Rural Sociology In India, Rural Social Structure, Panchayati Raj system | | | | | |
| Assignments: <ol style="list-style-type: none"> To analyse the changes in Indian culture. Any other assignment by the concerned faculty. | | | | | |
| Text Books and References: <ol style="list-style-type: none"> As Social Science by author R.S. Baweja Manohar Publications (November 1, 2010) Nagala B.K. Indian Sociological Thought Rawat Publications, Jaipur 2008 Sociology Vidhiya Bhushan & R.C Sachdewa Desai A. R. Rural Sociology in India, Popular Prakashan, Bombay (5th Edn) 1994. Mukharji Radhakamal The Dynamics of Rural Society, A. C. Mukharji Berlin 1957. Rajendra K. Sharma Urban Sociology, Atlantic Publishers and Distributors, New Delhi, 1997 | | | | | |

Shalash

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| Course | Animation Technology | Marking Scheme | | | Credits |
|--|----------------------|----------------|---|----|------------|
| | | T | P | I | |
| BSc(GA)5 | | 40 | - | 10 | 3 (OE5) |
| Objectives: <ul style="list-style-type: none"> To learn the basic elements and process of Animation To understand the basics of 2D & 3D animation. | | | | | |
| Unit 1: Introduction of Animation Definition, History, Principles, Uses, Animation for WEB, 2D versus 3D Animation. | | | | | |
| Unit 2: Process of Animation Concept Development, Story Developing, Audio & Video, Color Theory, Device Independent Color Model, 3D Animated Movies. | | | | | |
| Unit 3: Features of Animation Software Animation by the computer, Introduction to various animation software, Features of animation software, animation file formats, frame, key frame, modeling, 2D Animation and its concepts. Script Animation Usage, Different Language of Script Animation among the Software. 3D Rendering, Motion Caption, Formats, Methods – Usages, Expression, Motion, Capture Software's. | | | | | |
| Unit 4: Introduction of 2D Animation Definition, Concept, Types – Traditional Hand drawn animation, Stop Motion Animation, Flip Book, Digital animation, Key frames, In between Frames, Time Sliders, Software of 2D animation, File Formats of 2D animation – Video File formats, File Formats for web. | | | | | |
| Unit 5: Introduction to 3D Animation 3D Animation & Its Concepts – Types of 3D Animation, Skeleton & Kinetic 3D Animation, Texturing & Lighting of 3D Animation, Applications & Software of 3D Animation. | | | | | |
| Assignments: <ol style="list-style-type: none"> Create small animation clip in 2D. Create a lamp model in 3D. | | | | | |
| Text Books and References: <ol style="list-style-type: none"> Principles of Multimedia – Ranjan Parekh, 2007, TMH. (Unit I, Unit V) Multimedia Technologies – Ashok Banerji, Ananda Mohan Ghosh – McGraw Hill Multimedia Making it Work – Toy Vaughan – 7th edition, Tata McGraw Hill | | | | | |

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| Course | Design Concepts and Technology | Marking Scheme | | | Credits |
|---|--------------------------------|----------------|---|----|---------|
| | | T | P | I | |
| BSc(GA)5 | | 40 | - | 10 | 3 (OE6) |
| Objectives: <ol style="list-style-type: none"> 1. Knowledge of design disciplines 2. Design management and aesthetics | | | | | |
| Unit 1: Introduction to Design Defining Design. Nature of Design. Design as a Discipline, Specializations In Design Discipline; Various trends In Design; Emergence of Modern concept of Design; Introduction to various domains of design. design aesthetics sense | | | | | |
| Unit2: Industrial design and product design Industrial Product Design, History and Definition of Industrial Product Design, Industrial Designer. Multidisciplinary and Creativity In the Industrial Designer's Ability. Industrial Designer's Tools and Techniques, Working as a Consultant or in an Organization, Product Range In Industrial Product Design. Core Characteristics of Industrial Product Design. Design Criteria in Industrial Product Design Functional Criteria,. Psychological Criteria, Technological Criteria,. Economic Criteria. Engineering Criteria In Industrial Product Design. | | | | | |
| Unit 3: Fashion communication Introduction to Fashion communication. Principles of fashion. Factors affecting fashion, fashion Inspiration Importance of Fashion, Business of Fashion, Evolution of Fashion. Fashion Communicative devices In commercial publicity | | | | | |
| Unit 4: Communication design Interface Design: In the areas of product, space and communication design. Interface design basics, Interface design of product space and communication and the difference between the three, different types of Interface, making the different tangible and Intangible Interfaces user friendly, color, form, texture and interface design etc | | | | | |
| Unit 5: Design Management Design Management: Skills, knowledge and learning style evolution, personal goal setting and professional development planning, insight into the context that businesses and organization operate in, how they view and use design, and their relationship with designers, Examine the roles of design and innovation in achieving organizational objective. To bring together the languages of design and business, how design and innovation deliver value and return on Investment is evaluated. | | | | | |
| Assignments: <ol style="list-style-type: none"> 1. Select a pesticide packaging. Study the context in which it is used and redesign it from a design perspective for the local context. 2. Take a simple hand held product of everyday use like electric kettle, electric Iron, and toaster and analyze its design in detail from different design perspective including its visual design aspects. 4. Modify it and come up with a new modified product | | | | | |
| Text Books and References: <ol style="list-style-type: none"> 1. Hauffe, T., Design: A Concise History, Laurence King Publishing, 1998 2. Meggs, P.B., A History of Graphic Design, Library of Congress Cataloging, 1998 3. Pilloton, E., Design Revolution: 100 Products That Empower People, Metropolis Books, 2009 | | | | | |

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4. Lupton, E. and Miller, J.A., The ABC's of Bauhaus: The Bauhaus and Design Theory, Princeton Architectural Press, 1991
5. De Mozota, B.B. (2003). Design management -Using design to build brand value and corporate innovation. Allworth Press. New York. 281 pages.
6. The Aesthetics of Design. Jane Forsey. Oxford Press. 2013. ISBN 978-0199964369.

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Dr

San

| Course | Social Media | Marking Scheme | | | Credits |
|--------|--------------|----------------|---|----|---------|
| | | T | P | I | |
| | | 40 | - | 10 | |

BSc(GA)5

3

(OE7)

Objectives:

- To learn about basics of social media.
- To learn about social networking.

Unit 1: Development of Social Media

Introduction to New Media and Social Media, Types of Media (Print Electronic, Traditional and New Media), Traditional Media versus New Media, New Media as a communication tool, Pros & Cons of Social Media Types of New Media- Blog, micro-blogging, Forums, Internet Messaging, Social Bookmarking, Photo Sharing (Instagram, Picasa, Flickr), Video & Document Sharing (Slideshare, DocStoc, Scribd etc.) etc.

Unit 2: Social Networking and Smartphone Revolution

History of Social Media, Commonly used terms in Social Media, Networks and Social Networks: Information Society, Network Society, Social Networking sites MySpace, Facebook, Twitter, LinkedIn, Friendster, Mobile Communication: Intro to cellphones, smartphones and tablets, Mobile media Technology and Apps, Photography on the web, Flickr, Video for the web, content repository- YouTube,

Unit 3: Social Collaboration & Cyberspace

Online Community & Virtual reality: Social media for Community Development, Public Sphere in the Internet Era
Collaboration: Collaborative Media- Wikipedia, Wikihow, Ask.com, Britannica etc.
Cyberspace: The concept & Definitions,
Crowdsourcing: Getting things done online, collective action and sharing, Crowdfunding, Crowdsourcing
Media Convergence

Unit 4: Social Media for Business, P.R. & Marketing

E-Governance, E-Banking, E-Wallet
Mobile Phone for cashless economy
Online Shopping - Amazon, Flipkart, E-bay etc.
Social Media advertising & PR campaigns,
Maintaining Online Communities,
Social Media Start Ups

Unit 5: Net Neutrality & Cyber Law

User Generated Content: ethics and credibility, Open Source, Free content and data
Net Neutrality: TRAI rules, freedom and limitations,
Introduction to Cyber Laws: Copyright & Privacy Issues, Defamation
Information Technology act- Law related to social media, hactivism, Ethical hacking, morphing, cyber bullying,
Cyber Crimes & Security: Types and case studies

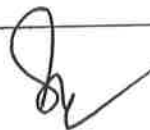
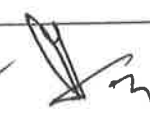
Text Books and References:

- The Art of Social Media: Guy Kawasaki
- The New Rules of Marketing and PR: David Scott
- Media Law and Ethics: M. Neelamalar
- New Media: A Critical Introduction: Martin Lister and Jon Dovey

5. Convergence: The Deepest Idea in the Universe: Peter Watson

6. सोशल मीडिया: सम्पर्क क्रांति का कल आज और कल : स्वर्ण सुमन

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| Course | 3D Design with Maya - Advanced | Marking Scheme | | | Credits |
|--|-----------------------------------|----------------|----|----|------------|
| | | T | P | I | 3 (OE8) |
| BSc(GA)5 | | - | 40 | 10 | |
| Objectives: <ul style="list-style-type: none"> To Improve knowledge of Modeling & Texturing. To Improve knowledge of Rigging & Animation. To Improve skills of Light and Shadow. To Improve knowledge of Dynamics Effects& Rendering. | | | | | |
| Unit 1: Introduction to MAYA Introduction to MAYA, Maya Interface, Creating a Scene, Manipulating a Scene in 3D, Texturing an Object, Lighting a Scene, Rendering a Still Frame. | | | | | |
| Unit 2: Modeling & Texturing Props modeling, Background modeling, Biped modeling, Quarterped modeling, Blend shapes, Texturing - Shading network, Mental ray shaders, Advanced Materials, Subsurface Scattering, Texture Map, Layered Texture, Human Anatomy UV Coordinates Setup for Texturing, Maps - Color Maps, bump Maps, Displacement Maps, Normal Maps, Specular Maps, Mask Maps, Occlusion map etc. | | | | | |
| Unit 3: Rigging & Animation Creating the Skeleton - Joint placement, Joint orientation, Machining rotation axis, Creating controls, Skinning with paint and component editor, Biped and Quarterped Character rigging, Dynamics rig, Facial rigging, Muscle system Introduction, Animation -Character animation, Blocking Techniques, Polishing Techniques, Lip syncing - Animating a Dialogue Scene, Walk cycle, Run cycle. | | | | | |
| Unit 4: Dynamics Effects Emitter, particles with collisions, Goal weight, Instancer, Fluid - 2D and 3D Container, Cashe, Fields - Air, Drag, Gravity, Newton, Radial, Turbulence, Uniform, Vortex, Volume Axis, Volume Curve, Soft and rigid body with constraints, N - Dynamics. N Cloth -Passive nCloth, Initial State, Pressure, Dynamic Curve, nCloth Cache , Hair - Hairstyle , Hair Simulation, Fur - Furstyle ,Fur simulation. | | | | | |
| Unit 5: Lighting and Rendering Lighting Theory - Colour Theory, Camera Composition - Rules of Thumb, Types of Shot, The Art of Lighting - 1, 2, 3 and 4 Point Lighting,Light,Decay,Spotlight,AreaLights,DecayRate,LightLinking,Artistic and Mood Lighting, Shadows - Depth Map Shadows, Retries shadow, Mental Ray Sun and Sky, Image Based Lighting - IBL and HDR Theory, Simple Tone Mapping, Product Level HDRs, interior and exterior lighting, Types of Rendering in Maya, mental ray, vray, arnold rendering, Render Layers. | | | | | |
| Assignments: <ol style="list-style-type: none"> Create one character or background with texturing Rig one Biped character Light a exterior background Create Dust storm. Prepare 3D Animation for Film | | | | | |
| Text Books and References: <ol style="list-style-type: none"> The Yucatan : A Guide to the Land of Maya Mysteries Plus Sacred Sites at Bellize, Tikal & Copan - by Antoinette May | | | | | |

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2. John Kundert - Gibbs, Eric Mick Larkins, Eric Keller, Boaz Livny, Mark E.A. De Saura, Mastering Maya 7 , Wiley Kunzen Dort, DariushDerakhashani, Publishing Edition 2006.
3. Maya - by Peter Schmidt (Editor), Enrique Nalda (Editor), Mercedes De LA Garza, Orefid
4. Maya 8 : The Complete Reference, Tom Meade, Shinsaku Arima
5. Maya Character Modeling and Animation: Principles and Practices, Tereza Flaxman
6. Introducing Maya 8: 3D for Beginners, Dariush Derakhshani
7. Understanding 3D Animation Using Maya, John Edgar Park
8. The Animators Survival Kit, Originally published: 2001 Author: Richard E. Williams
9. Stop Staring: Facial Modeling and Animation Done Right, Originally published: 2003 Author: Jason Osipa
10. The Art of Rigging, Volume 1,2,3 Publiised : 2006;Author:Kiaran Ritchie
11. Advanced Maya Texturing and Lighting, Published: 2008; Author: Jeremy Birn

Garza

Derakhshani