

**DEPARTMENT
OF
MEDIA TECHNOLOGY**

ADDITIONAL SUBJECTS

| Code | Subject Name | Credit |
|-------|---|--------|
| MT101 | Introduction to Media | 3:0:0 |
| MT102 | Engineering Graphics | 2:0:2 |
| MT103 | Electronics – I | 3:0:0 |
| MT104 | Basics of Multimedia | 2:0:0 |
| MT105 | Media Practical – I | 0:0:2 |
| MT106 | Media Practical – II | 0:0:2 |
| MT107 | Applied Physics | 3:0:0 |
| MT108 | Basic Electrical Engineering | 3:0:0 |
| MT201 | Video Production | 4:0:0 |
| MT202 | Video Production Lab | 0:0:2 |
| MT203 | Script writing | 4:0:0 |
| MT204 | Introduction of Multi Media | 4:0:0 |
| MT205 | Radio Production | 4:0:0 |
| MT206 | Television Production I | 4:0:0 |
| MT207 | Post Production (Sound) Lab I | 0:0:2 |
| MT208 | Television Production II | 4:0:0 |
| MT209 | Post Production (Multimedia) Lab I | 0:0:2 |
| MT210 | Post Production (Video Editing) Lab I | 0:0:2 |
| MT211 | Media Laws and Ethics | 4:0:0 |
| MT212 | Media Management | 4:0:0 |
| MT213 | Video Codes and Standards | 4:0:0 |
| MT214 | Post Production (Video Editing) Lab II | 4:0:0 |
| MT215 | Basics of Photography | 4:0:0 |
| MT216 | Advanced Photography | 4:0:0 |
| MT217 | Media Research | 4:0:0 |

MT101 INTRODUCTION TO MEDIA

Credits 3:0:0

Marks 40+60

Unit I: Nature and Characteristics of Communication

Communication: definition, nature and scope - Human needs of communication - Functions of communications - Types of communication: intrapersonal - interpersonal, group and mass communication - Indian concept of communication

Unit II: Process of Communication

Elements and process of communication - Communication flows: one-step, two-step, and multi-steps - Barriers in communication - Verbal and non-verbal communication

Unit III: Introduction to Media

Characteristics of media - Print, electronic, new media and traditional media

Unit IV: Media Ethics

Concept of ethics and importance of professional ethics - Ethics and law - Ethics and various pressure

Unit V: Advertising and Public Relations

Concept and definition of public relations - Public relations: tools and technique - Public relations organizations - Concept and definition of advertising - Classifications of advertising

Text Books:

1. Keval J. Kumar - Mass Communication in India Jaico, Mumbai.
2. Denis McQuonil - Mass Communication Theory : An Introduction, Sage Delhi.

References:

1. Philip Lesley - Handbook of PR and Communication, Jaico Publishing House, Mumbai.
2. Chunawala and Sethia, Advertising Principles and Practice, Himalaya, New Delhi.

MT102 ENGINEERING GRAPHICS

Credits 2:0:2

Marks 50+50

Unit – I

Graphics input-output devices: Direct input devices-cursor devices –direct screen interaction-logical input function-cathode ray tubes-Line drawing displays-raster scan displays-hard copy devices.

Unit – II

Two Dimensional graphics – 2D transformations – 2D algorithms-line drawing algorithms-line covering- line clipping and polygon clipping. Raster graphics – Scan conversion of polygons –region filling – algorithms.

Unit – III

Curves and surfaces: parametric representation of curves- curves-B-spline curves-parametric representation of surfaces-planes-curved surfaces-ruled surfaces – surfaces.

Unit – IV

Three dimensional graphics: 3D transformations-normal oblique central projections – 3D algorithms-hidden lines and hidden surfaces removal.

Animation Graphics : Simple animation –usage of GETIMAGE() and PUTIMAGE () functions-usage of buffering techniques –manipulation of color lookup table-tweening.

Unit –V

Computer Graphics realism: tiling the plane-recursively defined curves-Koch curves-C curves& Dragons –space tiling curves-Fractals and grafatals –turtic graphics –ray tracing. Graphics standards: the GKS international standards – GXD –standard for Micro computers.

Text Books:

1. John R. Rankin- Computer Graphics software construction Prentice Hall of Australia Pvt, Ltd., 1989.
2. William M. Newmann, Robert P. Sproull, "Principle of Interactive Computer Graphics", McGraw Hill International Book Company, 1989.

Reference Books :

1. F.S. Hill, JR., Computer Graphics Maxwell Macmillan International Editions, 1990
2. James Alan Farrel, "From PIXELS to ANIMATION: An Introduction to Graphics Programming, AP Professional, 1994
3. Rod Salmman, Mel Slater, "Computer Graphics: Systems and concepts Addison Wesley Publishing Company 1987
4. Roy. A Plastock, Gordon Kalley, "Theory and Problems of computer Graphics", Schaum's outline series, Mc graw hill International editions, 1986.

MT103 ELECTRONICS-I**Credit: 3:0:0****Marks : 40 + 40****UNIT I : Semiconductor Diodes and Applications:**

Semiconductor materials- Energy levels- P and N type materials- Diode equation- equivalent circuit- diode capacitance and reverse time- Zener diodes- Light emitting diodes. Rectifier circuits- clipper -claspers- Voltage multipliers.

UNIT II: Bipolar Junction Transistor (BJT):

Transistor construction and operation- PNP and NPN- CE, CB CC configurations. DC biasing of BJT- Bias stabilization modelling BJT- Hybrid equivalent circuit.

UNIT III : Junction Field Effect Transistor (JFET) and MOSFET:

Construction and characteristics- Current equation- Enhancement and depletion MOSFET- P and N Channel MOSFET- Biasing JFET and MOSFET.

UNIT IV : BJT and FET Small Signal Analysis:

Transistor as amplifier- Common emitter- Common base and common collector amplifiers- Equivalent circuits and analysis- Source follower- Common Source- Common gate configurations- equivalent circuit and analysis- Low frequency and high frequency response- Miller effect- Multistage frequency effects.

UNIT V : Compound Configurations:

Cascade-cascode and Darlington Connections- feedback pair- CMOS Circuit- Current Source and Current Mirror Circuits- Differential amplifier circuit- Mos differential amplifier.

Text Book:

1. Boylestad and Nashelsty, 'Electronic Devices and Circuit Theory', Prentice-Hall of India, 2003.

Reference Books:

1. Malvino, 'Electronic Principles', Tata McGraw Hill, 1999.
2. Sedra and Smith, 'Microelectronic Circuits', Oxford University Press, 2004.
3. Jager and Blalock, 'Microelectronic Circuit Design', Tata Mc-Graw-Hill, 2006.

MT104 BASICS OF MULTIMEDIA**Credits 2:0:0****Marks 40+60****UNIT I:**

Evolution of Multimedia – Structure and components of Multimedia – multimedia platforms - Applications of Multimedia in Education, Communication, Medication, Business, Entertainment – Video Conferencing, Web Streaming, Video Streaming, Internet Telephony – Virtual Reality – Artificial intelligence

UNIT II:

Introduction to authoring – authoring approaches – (programming, screen based, information centered) – features of authoring systems – cross platform systems – cost – technical support – ease of interface design.

UNIT III:

Content planning – Prototyping – programming – testing – evaluation - delivery modes and techniques.

UNIT IV:

Image processing – special effects – 2D & 3D animation – compositing – rendering and editing – cell & computer animation – model building – key frame animation – dynamic particles – character animation – modeling and animation techniques.

UNIT V:

Video basics - Working with video - Video Formats - Video hardware - encoding – decoding – video editing – non-linear editing – Audio basics – working with audio – audio formats – audio hardware & software. Adobe Premiere – tools & features – recording audio & video – types of audio & video – time line – project planning – trimming – motion effects – digital compositing.

Text Books:

1. The Ultimate Multimedia Handbook, Tata Mc Graw Hill
2. Multimedia at Work, Tata Mc Graw Hill
3. Adobe Photoshop Unleashed, Tata Mc Graw Hill

References:

1. Teach yourself Corel Draw, Sams Publishing
2. Flash Mx for Dummies, Pustak Mahal

MT105 MEDIA PRACTICAL-I

Credits 0:0:2

Marks 50+50

12 Experiments will be notified by HOD from time to time

MT 106 MEDIA PRACTICAL-II

Credits 0:0:2

Marks 50+50

12 Experiments will be notified by HOD from time to time

MT107 APPLIED PHYSICS

Credit: 3:0:0

Marks : 40 + 40

UNIT I : Optics

Propagation of light – Doppler Effect- Linear Polarization- Circular and Elliptical Polarization – Reflection and Refraction- Fresnel's equation- Total Internal Reflection – Evanescent wave in Total internal reflection – Phase changes in Total Internal Reflection – Coherence and Interference – Michelson Interferometer – Theory of Partial Coherence – Fabrey Perrot instrument – Multilayer film – Fresnel and Fraunhofer Diffraction – Diffraction pattern due to narrow slit, circular aperture and straight edge- Scattering of light

UNIT II : Ray Optics

Reflection and Refraction at a spherical surface – Thin lens formula – Lenses – Ray Equation – Lens aberrations - Resolving Power of Optical instruments – Rayleigh's criterion of resolution – Resolving power of Telescope, Microscope, Prism ,Grating.

UNIT III : Laser and Fibre-Optics

Interaction of light with matter – Principle of Laser– Operation of Laser- population inversion – Nd-YAG laser – Dye Laser - He-Ne Laser – Semiconductor Laser – Fiber Optics – Propagation of light in a cladded fibre – Types of Fibre optic cables – principles of Coupling Fibre optic cables – Reconstruction of wavefront by diffraction -Holography

UNIT IV : Acoustics:

Introduction – Sound – Wave motion – Types of wave motion – Characteristics of wave motion – Relation between frequency and wavelength – Relation between wavelength and velocity – Group velocity – Phase velocity - Reflection of sound waves – Defects due to reflected sound – Absorption of sound – Sabine's formula – Reverberation theory – Eyring's equation – Acoustical materials.- Acoustic design of a Hall – Common acoustical defects –

UNIT V: Ultrasonics

Introduction - Generation of ultrasonic waves – Properties of ultrasonic waves – Detection of Ultrasonic waves – Absorption and dispersion of Ultrasonic waves - Determination of wavelength and velocity – Applications.Books for study :

Text books:

1. Introduction to Optics by Frank.L.Pedrotti, Leno Mathew Pedrotti

Reference books:

1. Engineering Physics by R.K.Gaur and S.L.Gupta, Dhanpat Rai Publications (2001)
2. Physics I by V.Rajendran and A Marikani , Tata McGraw Hill (2004)

MT108 BASIC ELECTRICAL ENGINEERING**Credit: 3:0:0****Marks : 40 + 40****Unit I : Basic Quantities and D.C. Circuits :**

Electrical quantities-Electric current, Electric potential, Electric power, Electrical Energy, Resistance, Temperature Co-efficient of Resistance, Lumped circuits-Ohm's Law, Kirchoff's laws-Independent and dependent sources-Voltage division and current division-Simple resistive circuits-Source transformation.

Unit II : A.C. Circuits

Generation of alternating E.M.F-Equation of alternating voltage-Alternating quantity (Current or voltage)-Cycle –Time period-Frequency-Maximum value- Average value-R.M.S. value-Form factor and peak factor-Phase and phase difference-VI relationships of R,L & C-Phasor-Sinusoidal steady state response-Concepts of impedance and admittance-Analysis of simple circuits-Power and power factor-Resonance in AC series and parallel circuits.

Unit III : D.C Machines & Transformer,

DC Generators: Principle of D.C Generator, Parts of DC generators-EMF equation-Types of generators-Characteristics of generator-Applications.

DC Motors : Principle of DC motors, Parts of DC motor-Back EMF-Type of motors-Characteristics of motor-Applications.

Transformers : Principle-Constructional details-Parts-Types (Core & Shell)-E.M.F. equation-Applications.

Unit IV : Generation, Transmission and Distribution

Generation of Electrical Energy-Thermal power generating station-Hydro power generating station-Nuclear power generating station-Transmission of Electrical energy-Classification of Transmission lines-Conductors-Insulator-Underground cables-Classification of cables-Laying of underground cables-Distribution of electrical energy-AC distribution system-DC distribution system-Over head distribution system-Under ground distribution system.

Unit V : Measuring Instruments and Wiring Circuits

Basic principle of indicating instruments-Moving iron and moving coil instrument-Voltmeters and ammeters-Dynamo type watt meter-Induction type energy meter.

Wiring Circuits : Wiring material & accessories-Rating of wiring materials,Type of wiring-Stair case wiring-Fluorescent lamp wiring-Simple domestic wiring layout-Basic principle of earthing.

Text Book:

1. T. Thyagarajan, K.P. Sendur Chelvi and T.R. Rangaswamy, "Engineering Basics" 3rd Edition, New Age International Publishers, 2001

Reference

1. T. Thyagarajan, "Fundamentals of Electrical and Electronics Engineering", Scitech Publications (Ind) Pvt. Ltd., Fourth Edition August 2006
2. Paranjothi S.R., "Electric Circuit Analysis" New Age International Ltd., Delhi, 2nd Edition, 2000

MT201 VIDEO PRODUCTION**Credits 4:0:0****Marks 40+60****Unit I: Introduction to TV technology**

Picture formation-T.V Scanning : Horizontal & Vertical-Frame & field rate-Resolution video bandwidth, sync. blanking signals, colour burst, sensitivity, linearity etc.-Television standards: NTSC, PAL, SECAM.

Unit II: Principle of Video Camera

Primary & secondary colours-Photo conduction, photo voltaic, photo emissive effect-Working principle of video camera-CCD cameras: Three CCD, single CCD colour camera-Various sizes of pickup devices

Unit III: Components and Controls of Video Camera.

Parts of a video camera-Different controls on video camera-Power switch, preheat, genlock, white balance, gain, iris, pedestal etc.-Zoom control: servo, manual, remote, zoom extenders-Focus control : auto, manual , remote, back focus, macro focus.-Camera view finders (B/W and colour). Its indicators and control.

Unit IV: Balancing of Colours of a video camera.

Colour temperature-White balance: Process and need.-Camera filters-Camera control unit (CCU)-Waveform monitor for output level of video-Vectorscope

Unit V: Video camera lenses.

Perspective-Types and use-normal lens, telephoto lens, wide-angle lens.

Zoom lens-Tripod, types of tripod heads, dolly, trolley & other accessories-Different types of camera angles and use-Camera movements – types & use - Different Types of Television Cameras-NG camera - EFP camera - Studio cameras - Special cameras: underwater camera, Endoscopic camera, Aerial photography camera, remote control camera, high-speed video cameras - Types of microphones used on video camera - Types of audio & video connectors.

Text Book:

1. Peter ward "Studio and outside broadcast Camera"
2. Bernard Wilkie "Creating special effects for TV & Video"

References:

1. Roy Thomson "Grammar of the shot"
2. Der Lyur & Graham "Basics of Video Production"

MT 202 VIDEO PRODUCTION LAB

Credits 0:0:2

Marks 50+50

12 Experiments will be notified by HOD from time to time

MT 203 SCRIPT WRITING

Credits 4:0:0

Marks 40+60

Unit I:

What you need to become a good script writer – the proposal outline – questions to ask before writing the script – Visual treatment- subject factor – the film treatment – thinking through the treatment – the sequence outline – types of sequence – the shooting script

Unit II:

How shots are related – writing narration – the feature – preparing the presentation – the character – full length - the story treatment.

Unit III:

The art of confrontation – confrontation dynamics – secondary function – the step outline – dialogue devices – the master scene script – format – adaptation and its problems – surviving story conferences

Unit IV:

The scriptwriter as business person - What to know about – lessons from the pros – the other side – the story board – judging screen time – terminology used

Unit V:

story outline – proposal outline – script discussion – characterization – story treatment – master scene script – project presentation.

Text Book:

1. Dwight V Swain “Film Scriptwriting” Focal Press publishers
2. Steve Katz “Film Directing Shot” Focal Press publishers

References:

1. Steven Katz “Film Directing: Cinematic Motion “ Focal Press publishers
2. Antony Friedman “Writing for media” –Focal press

MT204 INTRODUCTION TO MULTIMEDIA

Credits 2:0:0

Marks 40+60

UNIT I:

Evolution of Multimedia – Structure and components of Multimedia – multimedia platforms - Applications of Multimedia in Education, Communication, Medication, Business,

Entertainment – Video Conferencing, Web Streaming, Video Streaming, Internet Telephony
– Virtual Reality – Artificial intelligence

UNIT II:

Introduction to authoring – authoring approaches – (programming, screen based, information centered) – features of authoring systems – cross platform systems – cost – technical support – ease of interface design.

UNIT III:

Content planning – Prototyping – programming – testing – evaluation - delivery modes and techniques.

UNIT IV:

Image processing – special effects – 2D & 3D animation – compositing – rendering and editing – cell & computer animation – model building – key frame animation – dynamic particles – character animation – modeling and animation techniques.

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Text Books:

4. The Ultimate Multimedia Handbook, Tata Mc Graw Hill
5. Multimedia at Work, Tata Mc Graw Hill
6. Adobe Photoshop Unleashed, Tata Mc Graw Hill

References:

3. Teach yourself Corel Draw, Sams Publishing
4. Flash Mx for Dummies, Pustak Mahal

MT 205 RADIO PRODUCTION

Credits 4:0:0

Marks 40+60

Unit I:

What is Sound?-Sound is created by vibrating materials-Vibration generates waves in the air – sound waves-Number of waves (cycles) occurring in each second is frequency of that sound-Types, Classification & Quality- Pitch, Low & High frequency etc-Voice -Voice Culture- Practices, Voice care-Production of Speech and Song- Basic ingredients of a Radio Programme- Human voice, International Sounds, Music-Exploitation of Sound- Mixture of voice, sounds and music-Formats – Simple and complex-Characteristics of the Medium- Unlimited imagination; directness; simplicity-limitations of blind media.

Unit II:

Simple formats- Use of voice and natural sounds (included without effort)-Complex Formats- Eg: Drama (mixture of all the ingredients)-Selection formats- Subject determines format.

Unit III:

Writing for Radio

Unit IV:

Production of Programmes-Talk –Types and techniques-Interview – types. Preparation-questioning techniques, location-Discussion : selection of participants, clarity of scope, control-Quiz - Types , Dos and Donts-Documentary and Feature – types, planning and structure, persons, collection of materials and recordings-Magazine programme: – choice of subject, construction, variety, Presentation techniques and listeners participation-Running commentary – types-selection of commentators, checklist, crisis resolution, Dos and Donts of Live broadcast –Sports – recorded and live – giving ring side view-Outside Broadcast – Checklist, media for relay, compere, recording arrangement, crisis management -Music – types, placement of micro phones, mixing and coloring aided by software-Drama, Docudrama and Skit – complexity, selection of scripts – voluntary and commissioned, selection of voices thro audition and casting, thematic music and sound effects, production techniques, exercises-Radio Cartoon – cartoon in sound Jingles, PSAs and Trailers – Promos, public service announcements.

Unit V:

News and Current Affairs-Selection, treatment, objectivity, accuracy, intelligibility, impartiality, legality, news room operation, importance of style, -News casting and presentation – reading, pronunciation, stressing, inflection-Radio News Reel – selection, duration and presentation-Discussion and interview (Devils Advocate)-Live Reporting – an event, a personality, a land mark etc. - Radio Journalism – Hard News, Features, Field Recording, Live Broadcast, Professionalism- What makes a Good Producer?- Importance of home work, planning and preparation, conceptualisation and creativity, exercises-Broadcast and Law-Legal concepts like Copy right, defamation etc.-Broadcast Ethics-Impartiality, Fairness, Credibility etc-Digital Recording-Use of software-Presentation techniques-Art of RJing, excercises

Text Book:

1. The Technical Radio Production by Robert McLeish, Focal Press, London

References:

1. Guide to Radio Journalism, Kendall / Hunt, Dubuque, Iowa, USA.

MT206 TELEVISION PRODUCTION – I**Credits 4:0:0****Marks 40+60****Unit I:**

Idea-The seed of the Programme-How do we get ideas-Inspiration- Creative inspiration-adapted inspiration-Visual thinking

Unit II:

Writing for television production-Single Camera production-Multi camera production in studio and outdoor

Unit III:

Different genre of television productions-Digital Videography-Introductions to shots-Camera angles-Combination of camera movements and subject movements

Unit IV:

Compositions-Basic lighting-Improving the composition and colour rendition in the computer

Unit V:

Glossary of TV production-Budgeting-Blending of content and form-Vizualisation in single camera operation

Text Book:

1. Sr.Mary Peter Claver & Sr.Mary Jyosita "First steps to TV-video production"
2. Margarete Mehring, Blending of content and form.

Reference:

1. Books on television production published by focal press, U.K.

MT 207 POST PRODUCTION (Sound) LAB I**Credits 0:0:2****Marks 50+50**

12 Experiments will be notified by HOD from time to time

MT 208 TELEVISION PRODUCTION – II**Credits 4:0:0****Marks 40+60****Unit I:**

Basic shots-head room-looking room-walking room-rule of thirds-angles of the camera.

Unit II:

Lighting -visual thinking-basic movements of the camera-various lenses of the camera-difference between zoom and trolley

Unit III:

Script writing for television-dialogue and commentary-various formats to television productions-television documentaries-short videos-commercial spots-TV feature

Unit IV:

News reporting-soft stories-introduction to studio production-introduction to OB coverage - role of director, editor, cameraman-incorporating multi media techniques

Unit V:

Sound mixing-role of music-sound effects.

Text Book:

1. Sr.Mary Peter Claver & Sr.Mary Jyosita “First steps to TV-video production”
2. Margarete Mehring, Blending of content and form.

Reference:

1. Books on television production published by focal press, U.K.

MT 209 POST PRODUCTION (MULTIMEDIA) LAB I**Credits 0:0:2****Marks 50+50**

12 Experiments will be notified by HOD from time to time

MT 210 POST PRODUCTION (VIDEO EDITING) LAB I**Credits 0:0:2****Marks 50+50**

12 Experiments will be notified by HOD from time to time

MT 211 MEDIA LAWS AND ETHICS**Credits 4:0:0****Marks 40+60****Unit I: Indian Constitution**

Overview of the Indian constitution, Fundamental Rights, Duties of citizens, Directive principles of state policy, Functions of Executive, Judiciary , Legislative, Powers and Privileges of Parliament, Provisions for declaring Emergency, Provision for amending the constitution, freedom of the press and restrictions these upon, Centre-state relations

Unit II: Media laws in India

PRB Act 1867, the press(objectionable matters)Act 1957, The News Paper (prices and Pages)Act 1956, Defence of India Act, Delivery of Books and News paper (public libraries)Act, Press Council Act, Cable TV Networks (regulations)Act, The Cinematographic Act 1952, Drugs and magic remedies Act

Unit III: Civil and Criminal Laws

Laws of Libel and defamation, Contempt of courts Act 1971 and contempt of Legislative, Copy right Act and IPR, Trade Mark Act and patents Act, Right to Information and Official Secrets Act, Autonomy and Prasar Bharati Act, Broadcasting Bill.

Unit IV: Code and Ethics

Recommendations of press commission I and II, Mac Bridge report, Press council guide to Journalistic ethics, Self regulation and code of ethics, censorship and control of the press,

press ownership and monopolies, Various committees of broadcasting, Broadcasting policies, Act regarding to working journalists.

Unit V: Cyber Laws in India

Nature and scope of cyber laws, The right to publish and right to privacy, Digital signature, Piracy, Domain name registration issues, convergences bill, Media council and media ombudsman in the world. New IT Law IT 2000.

Text Books:

1. Basu, Law of the Press in India, Practice Hall of India(2003)
2. Basu, Introduction to Indian Constitution, Practice hall of india(2003)
3. R.K Ravindran, Press in the Indian Constitution, Indian Publishers, Distributors (1997)
4. Radha Krishna Murthi , Indian Press Laws

References:

1. Na. Vijayshankar, Cyber laws in India, Citizen's India
2. Hamelink cess-J.Ehics of cyber Space, Sage
3. Philip Patterson, Lee Wilking, Media ethics , Issues capes MC Graw Hill

MT212 MEDIA MANAGEMENT

Credits 4:0:0

Marks 40+60

Unit I: Media economics

Structure, function and economic of an electronic media - India's major media houses and their holdings-Inflow of capital in media-Major heads of income in media-Advertising and media industry

Unit II: Electronic media as business

Programme management-(Planning, scheduling, production and broadcasting)-Costing and budgeting of programme-Commissioned and sponsored programme

Unit III: Media marketing

Market survey : media, product and audience profile-Television rating point (TRP)-Agencies of rating, process and method of rating-Selling of a programme

Unit IV: Media management

Structure of radio and television organization-Recruitment and contractual engagement of H.R.-Service conditions and general administration-Channel management and training and redeployment of personnel.

Unit V: Cable Industry

Evolution, growth and development of cable industry-Indian scenario of cable industry-Major players: Siti Cable, In Cable, RPG, Sun etc-Process of distribution of signals-Pay channels vs. free channel-Channel war and cable industry .New technologies and cable industry

Text Books:

1. Promotion & Marketing for Broadcasting Cable of the web by Eastman, Susantylen
2. Consumer Behavior by Leon G. Schiffman and Leslie Lazar Kanuk, Prentice Hall India

References:

1. Essentials of Management by Harold Koonz and Heinz wehrich, Mac Graw Hills Pub.
2. Management and Practice of Public Relations by Norman Stone, Mac Millan Pub.

MT213 VIDEO CODES AND STANDARDS**Credits 4:0:0****Marks 40+60****Unit I: Video Formation, Perception, Representation**

Color Perception and Specification, Analog Video, Raster, Analog color Television Systems, Digital Video

Unit II: Fourier analysis of Video Signal

Frequency, Domain Characterization of Video signals, Multidimensional Continuous and Discrete –space signals and systems, sampling of video signals

Unit III: 2D/3D Motion Estimation

Motion Methodologies, pixel based motion estimation, block matching Algorithm, Global Regional Motion Estimation, Multi resolution motion estimation, Feature based, direct motion estimation.

Unit IV: Video Compression standards and its Algorithms:

Consumer Video communication with MPEG1, digital TV with MPEG2, MPEG3, H264, Video Bit stream Syntax

Unit V: Scalable Coding:

Basic Methods of Scalability- object based Scalability- Error Control and Concealment: Video Communication network-Transport level Error Control-Error resilient Encoding-Error Concealment

Text Books:

1. video processing and communications yao wang, joern ostermann, and ya-qin zhang prentice-hall, isbn 0-13-017547-1,

References:

1. jvt document jvt50r ITU Documents for Mpeg2, Mpeg4 and JVT doc for H264 NK Publishers

MT 214 POST PRODUCTION (VIDEO EDITING) LAB II

Credits 0:0:2

Marks 50+50

12 Experiments will be notified by HOD from time to time

MT215 BASICS OF PHOTOGRAPHY

Credits 4:0:0

Marks 40+60

Unit I: Camera:

Over view on Photography – Shutter – Aperture – Depth of field – Major type of camera – making a career in photography – categories of photography – photojournalism – advertising- portrait-nature photography-purpose and control over aperture- aperture – shutter speed – factors that affect D.O.F.

Unit II: Lens:

Pinhole Photography – construction of a pinhole camera – Focal length – Wide angle, Normal, and Long focal length lenses – Focus and depth of field-hyperfocal distance – determining the hyperfocal distance of a lens- – History of Photography.-Daguerotype – Fox Talbot-Modern B/W chemistry – Eastman Kodak.

Unit III: Film:

Selecting and using film –tungsten film & daylight films – black and white films – monochrome films – infrared films and other special effects films-different formats-35m-120 mm – 220mm – 4 x 5 film -Film speed – How film responds to light-film grain – sensitivity – structure of film – light vs film -.

Unit IV: Exposure and image making Techniques:

How an exposure meter works – ambient light meters –flash meter readings- Built in meter – External light meter – Metering techniques –incident light metering – reflective light metering -0 spot metering – gray scale- Framing- Perspective- Texture- Pattern- Composition- and Design-

Unit V: Black and White photography:

Black and white film – Black and white filters – Developing –developing tank – structure of B/W film-Printing.-making a mask – photograms- push processing – pull processing – masters of B/W photography – Ansel Adams – identifying the various zones

Reference:

1. The Basic Book of Photography (Fourth Edition) (Paperback) -by [Tom Grimm](#) (Author), [Michele Grimm](#) (Author)
2. Mastering the Basics of Photography (Paperback) -by [Susan McCartney](#) (Author) "If you understand how cameras operate, and how the lens and shutter work together to control exposure, it will make learning the basic photographic skill..." ([more](#))

MT 216 ADVANCED PHOTOGRAPHY

Credits 4:0:0

Marks 40+60

Unit I: Colour

Additive colours – Subtractive colours – Colour balance – colour corrections – hue and saturation- contrasting colours –psychological significance of colours-Types of colour film – Characteristic of colour films –sensitivity to colour-colour temperature

Unit II:Lights

Direction of lights – Diffused light-bounced diffused light – diffused bounce diffused light – point light – difference between point light and diffused light-Degree of diffusion – Available Light – Artificial Lights – Portable flash light –using a portable flash extensively - using portable flash for portraiture

Unit III: Lightings

Key Light or Main light – Fill light – Simple portraiture lightings - using one light source- using two lights-using multiple lights – synchronization – flash sync speed- slave lights- international portrait photographers

Unit IV: Techniques on Image making

Advanced techniques of Framing – Perspective –forced perspective-perspective correction- Texture – Pattern – Composition – Graphic Design in photography – Emphasis – Balance- the symmetrical world – asymmetry

Unit V: Digital imaging

Digital imaging – Latest trends in digital imaging-Overview on Digital imaging – Equipment needed for digital imaging- Editing digital images-resizing digital images –print usage-online usage- a career in digital imaging-digital photographers

Reference:

1. Beyond Basic Photography : A Technical Manual by Henry Horenstein, Henry Asaacs, Henry Isaacs (Illustrator) Revised edition (August 1993)
2. Lighting Secrets for the Professional Photographer by Alan Brown, Joe Braun, Tim Grondin (October 1990)
3. Night & Low-Light Photography : A Complete Guide by Bob Gibbons, Peter Wilson (Contributor) Revised edition (September 1993)
4. Advanced Photography by Langford , Michael, New York: Focal Press, 1980. 4th. ed

MT217 MEDIA RESEARCH

Credits 4:0:0

Marks 40+60

Unit I

Introduction to research – nature of scope and distinction between research in natural and social sciences – nature and scope of communication research – review of research related to effects research – limitations of effects research – basic parameters of media related studies

Unit II

Designing a research study – the problems and the method – preparing a research proposal – sources of research – primary and secondary etc.

Unit III

Types of research design – Exploratory studies – descriptive studies – diagnostic studies – experimental studies – their relevance and use in communication research

Unit IV

Methods of data collection – field studies – Holistic approach – observation – Interviews – Questionnaires – structured and unstructured schedules – sampling – content analysis – approach, method and use – techniques basic – data analysis techniques

Unit V

Writing a research project – organization – chapterization – citation - footnotes

Text Book

1. 'Research Methods in Mass Communication' by Stempel and Westley Prentice Hall, 1981.
2. 'Communication Theories: Origins, Methods and Uses' by Severin and Tankard, Hastings House Publishers, 1979.
3. 'Mass Media Research – an introduction' by Roger Wimmer and Joseph Dominick, (III EDITION), Wadsworth Pub., 1991.

Reference:

1. 'Handbook of Radio and TV Broadcasting' Ed. By James Fletcher, Van Nostrand Reinhold Company, London, 1981.
2. 'Studies in Mass Communication and Technology' Ed. By Sari Thomaas, Ablex Publishing Company, 1984.

ADDITIONAL SUBJECTS

| Code | Subject Name | Credits |
|-------|--|---------|
| MT109 | Introduction to Mass Communication | 2:0:0 |
| MT110 | Drawing and Computer Aided Graphics | 1:0:2 |
| MT222 | Scripting and Soft Presentation | 3:0:0 |
| MT223 | Media, Culture and Communication | 2:0:0 |
| MT224 | Electronic Devices and Basic Circuits | 3:1:0 |
| MT225 | Electronics Devices and Circuits Lab | 0:0:2 |
| MT226 | Analog and Digital Integrated Circuits | 3:1:0 |
| MT227 | Digital Electronics | 3:1:0 |
| MT228 | Audio Video Studios | 3:0:0 |
| MT229 | Principles of Advertising | 3:0:0 |
| MT230 | Digital Electronics Lab | 0:0:2 |
| MT231 | Photography Lab | 0:0:2 |
| MT232 | Digital Compositing | 3:0:0 |
| MT233 | Fundamentals of Electronic Communication | 3:1:0 |
| MT234 | Audio Video Production Techniques | 3:1:0 |
| MT235 | Memories and Analog Signal Conditioning | 3:1:0 |
| MT236 | Communication Circuits Lab | 0:0:2 |
| MT237 | Programme Production Lab | 0:0:2 |
| MT238 | Signal Transmission and Radiation | 3:1:0 |
| MT239 | Post Production Techniques | 3:0:0 |
| MT240 | Microprocessors and Microcontrollers | 3:1:0 |
| MT241 | Digital Signal Processing | 3:1:0 |
| MT242 | Media Economics | 3:0:0 |
| MT243 | Microprocessor and Microcontroller Lab | 0:0:2 |
| MT244 | Post Production Lab | 0:0:2 |
| MT245 | Television and Video Engineering | 4:0:0 |
| MT246 | Application of DSP for Audio and Image Processing | 3:1:0 |
| MT247 | Digital Music | 4:0:0 |
| MT248 | Media Aesthetics | 3:0:0 |
| MT249 | Media Management and Entrepreneurship | 3:0:0 |
| MT250 | Satellite Communication | 4:0:0 |
| MT251 | DSP and Data Compression Lab | 0:0:2 |
| MT252 | Special Production Lab (Audio or Video or Animation) | 0:0:2 |
| MT253 | Media Laws and Ethics | 3:0:0 |
| MT254 | Media Research | 3:0:0 |
| MT255 | Audio Presentation | 3:0:0 |
| MT256 | Audio Programme Production | 3:0:0 |
| MT257 | Lighting Techniques | 3:0:0 |
| MT258 | Television Programme Production | 3:0:0 |
| MT259 | Game Programming With C++ | 3:1:0 |

| | | |
|-------|-----------------------------------|-------|
| MT260 | Artificial Intelligence For Games | 3:0:0 |
| MT261 | Audio Production and Presentation | 4:0:0 |
| MT262 | Advertising and Public Relation | 4:0:0 |
| MT263 | Video Production and Editing | 4:0:0 |
| MT264 | Mass Communication | 4:0:0 |
| MT265 | Graphics and Animation | 3:1:0 |

MT109 INTRODUCTION TO MASS COMMUNICATION

Credit: 2:0:0

Unit I Fundamentals of Communication:

Origin of communication, Meaning & Elements/components of human communications; Concept of Communication, Communication as a social, human & universal process; seven C's of Communication, Communication - Objectives, Scope & Functions, Factors responsible for Growing importance of Communication, Effective communication & its Barriers. Functions of Mass Communication: To-Persuade, Inform, Educate, Entertain; Other functions; Impact & Influence of Mass Media

Unit II Process of Communication:

Transmission of ideas, Facts & feelings from one person to another-elements of Communication Process (message, Sender, Encoding, Channel, Receiver, Decoding, Acting & Feedback). Form of Communication: Intra Personal Communication, Interpersonal Communication Group Communication (Public, Crowd, Small Group), Mass Communication

Unit III Theories of Communication:

Hypodermic Needle Theory, Two-step & Multi-step Theory, Commercial Theory, Play Theory Uses & Gratification Theory, Selective Exposure, Selective Perception & Selective Retention Theory, Individual Difference Theory, Meaning of theories based on scientific study & analysis; Four major theories of Press, according to Fred Siebert, Theodore Peterson & Wilbur Schramm Authoritarian Theory, Libertarian Theory, Social Responsibility Theory, Other Theories: Development Media & Democratic Participant Theory

Unit IV Models of Communication:

SMR Model, SMRc Model, Shannon & Weaver Model, Laswell Model, Osgood Model, Dance Model, Schramm Model, Gerbner's Model, New Comb Model, Gate Keeping Model: Tools of Mass Communication: Newspapers, Magazines, Radio, TV, Films Records Internet, Advertising, Public Relations & Public Affairs, Traditional & Folk Media

Unit V Verbal & Non-Verbal Communication

Universals of Verbal Communication, Meaning & Barriers in Verbal Communication Language, Sub-Language & Culture, Elements of speech communication, on-Verbal behavior as communication, Body communication-Body movement, Facial Communication, Space Communication-Physical environment, Silence, Paralanguage & Temporal communication

Text Books

1. Mcquail, Dennis, Mass Communication Theories, Sage Publication, 2000
2. Asa, Berger, Essentials of Mass Communication, Sage Publication, 2000.

References

1. Rosenberg, Karl Erik, Communication, an Introduction, Sage Publication, 2000
2. Webster, Frank, Theories of Information Society, Routledge, 1995.

MT110 DRAWING AND COMPUTER AIDED GRAPHICS**Credit: 1:0:2****Unit I Fundamentals of Drawing**

Foundation of Perspective, Drawing cubic objects, initial sketches to redefine drawing, drawing cylindrical objects, drawing spherical objects, drawing conical objects

Unit II Drawing Landscapes and Portraits

Drawing Landscapes- Creating textures with lines and storks, seeing landscapes as values, creating a dark value pattern, smudging the pencil, adding reflection in water, interpreting a cluttered scene, creating a centre of interest, Drawing Portraits, Handling colour pencils, Mixing color, tonal technique, burnishing

Unit III Computer Aided Graphics

Introduction to Computers and Computer Aided Graphics – Workstations – Display Technology – Input and Output Devices – Graphics standards. Introduction to Computer Aided Design and Drafting – Applications – Various CAD Packages – Study of AUTOCAD 2000 software – Hardware requirements.

Unit IV Simple Exercises

Simple Exercises using various Drawing and Editing commands of AUTOCAD 2000 Simple Exercises using various formatting commands – Basic Dimensioning practice using AUTOCAD 2000.

Unit V Exercises using Layers and blocks

Simple Exercises using Layers and Blocks – Introduction to Isometric Drawings – Basic Plotting practice.

Text Book

1. George Omura, 'AUTOCAD 2000', BPP Publications, New Delhi, 2000

Reference Books

1. Shyam Tickoo, 'AUTOCAD 2000 BIBLE', BPP Publications, New Delhi, 2000
2. K.V. Natarajan, "Engineering Drawing and Graphics", 15th Ed. 2001
3. David Lewis, Pencil Drawing techniques, Watson-Guption Publications, 1984.

MT222 SCRIPTING AND SOFT PRESENTATION

Credit : 3:0:0

Unit I Basics of Scriptwriting

Structure of script Units of Time, A, B and C Plots, Screenplay Nomenclature, Treatment, Plot, Character, Script Form, Writing Scripts for Television News, Minutes and Seconds, Script Form. Writing Documentaries, Scripting Commercials, Commercial Formats, Steps in Creating a Commercial, PSAs, Promos, and Ads, Copyright Issues, Important Vocabulary Terms

Unit II Formats of Script

Features, Documentaries, Educational programmes, Short films, Fiction, Non-Fictions, Time Chunks, Children programmes, Women programmes, writing for special audience, Farmers and youth.

Unit III Concept and Story Idea

Idea: What makes a good concept, idea for television, what are the elements necessary for character for your story, Create obstacles, and Dramatic points in the story. Plot: Its importance, twist in plots, Daily soap, Series story-the comedy, The thriller story, Story elements: Characters, How to create interesting characters, subsidiary characters, relief characters, character stories, polarization of characters in story, elements of Teleplay.

Unit IV Scenes and Dialogues

Scene: What is a scene? How to create scene for play? Types of scenes, breaking Individual tracks into scenes, the opening scene, the end scene, the filler scene, and target Audience consideration. Dialogue: Importance of dialogues, Dialogues for different genres like comedy, Soap, thrillers and TV films, preparation of shooting script, Story board writing.

Unit V Presentation Techniques

Who are you talking to? Pace problems, making sense of intonation, Script problem, Breath Support and resonance, Are you sitting comfortably, Learning to love microphone, getting your breath, being conversational, Language and Perform

Text Book

1. Antony Friedman, Writing for Visual Media, Focal Press, April 2001

References

1. Jan Johnson Yopp and Katherine C. McAdams, Reaching Audiences: A Guide to Media Writing, 2002

MT223 MEDIA, CULTURE AND COMMUNICATION

Credit: 2:0:0

Unit I Media Studies

An introduction to the media, media industries and audiences: Media is a cultural force and changing paradigm. Basic concepts: Language of persuasion, Media messages, de

constructing media Dynamics of modern communication: the shaping and impact of new communication technologies. Theoretical approaches, theories of the media, theories of society, messages and meanings.

Unit II Media and Globalization

Large corporations and control of the communications industries Negotiation of control in media organization and occupation, Cultural dependency and mass media. The economies of media industry, the global gaps, social class, technology gaps, structure and agency, communication and connectivity. Dynamics of global culture, and migration, cultural melding and mediation, globalization, Diasporas, circular migration. Hegemony - the role of media and popular culture, global capitalist hegemony and Communist hegemony.

Unit III Media and Society

Language and social construction of reality, mediation and representation - texts, meanings and audiences. Rules in society, rules and culture, the special authority of electronic media public images and private practices, media and rules.

Unit IV Media and Culture

Defining Ideology and culture, emotions and culture, language and culture, race and culture, social class and culture, habits and popular culture, popular reception, popular emotions, emotional branding, mediated feelings, story, genre, discourse, culture uses of material world. Media and cultural imperialism, defining dominant ideology, hegemony.

Unit V Media and Audiences

Media and audience direct effects, limited effects, uses and gratification, the mass audience, the mass society, rethinking the mass audience, the audience and the technological change, segmentation, polarization, TV as dominant culture.

Text Books

1. Mohammad Ali, International Communication & Globalization, Sage Publications, London, 1997.
2. Dennis McQuail, Mass Communication Theories, Sage Publications, 2000.

References

1. Straubhar, Larose, Media Now, Thomson Wordsworth, 2004
2. Vincent Mosco, the Political Economy of Communication (Media, Culture and Society Series), Thomson Series, 2004

MT224 ELECTRONIC DEVICES AND BASIC CIRCUITS

Credit: 3:1:0

Unit I Introduction to Electronics

Signals, Frequency spectrum of signals, analog and digital signals, amplifiers, circuit models of amplifiers, Digital logic inverters

Unit II Operational Amplifiers

Ideal op amp, Inverting configuration, Non-inverting configuration, difference amplifiers, effect of finite open-loop gain and bandwidth on circuit performance, large-signal operation of op amps, DC imperfections, Integrator and differentiators

Unit III Diodes

The Ideal diode, Terminal characteristics of junction diodes, Zener diodes, rectifier circuits, limiting and clamping circuits, physical operation of diodes, special diode types

Unit IV MOS Field-Effect Transistors

Device structure and Physical operation, current-Voltage characteristics, MOSFET circuits at DC, MOSFET as an amplifier and a switch, Biasing in MOS amplifier circuits, DC bias point, signal current in drain terminal, CMOS digital logic inverter, Depletion type MOSFET

Unit V Bipolar junction Transistors

Device structure and Physical operation, current-voltage characteristics, BJT as an amplifier and as a switch, BJT circuits at DC, biasing in BJT amplifier circuits, single stage BJT amplifiers, Frequency response of the CE amplifier, Basic BJT digital logic inverter

Text Book:

1. Adel S. Sedra & Kenneth C. Smith, Microelectronics Circuits, Oxford University Press, 2003.

References:

1. Thomas Floyd, Electronic Devices, Prentice Hall of India, 2003
2. David A.Bell, Electronic Devices and Circuits, Prentice Hall of India., 1998

MT225 ELECTRONICS DEVICES AND CIRCUITS LAB

Credit: 0:0:2

List of Experiments:

1. Characteristics of PN diode, Zener diode and Photo diode
2. Characteristics of JFET
3. Characteristics of BJT in common emitter configuration
4. Half-wave rectifier with and without filters
5. Full-wave rectifier with and without filter
6. Clipper circuit
7. Clamper circuit
8. Design of BJT amplifier
9. Voltage regulator
10. Op-amp- Inverter, Non-Inverter
11. Op-amp – integrator
12. Op-amp - Differentiator

MT226 ANALOG AND DIGITAL INTEGRATED CIRCUITS

Credit: 3:1:0

Unit I Single-Stage Integrated-Circuit Amplifiers

IC design philosophy, Comparison of MOSFET and BJT, IC biasing, High-Frequency Response, CS and CE amplifiers with active loads, High-Frequency response of CS and CE amplifiers, CG and CB amplifiers with active loads, Cascode amplifier, Source and Emitter followers

Unit II Differential and Multistage Amplifiers

MOS Differential pair, small-signal operation, BJT Differential pair, other nonideal characteristics of differential amplifier, differential amplifier with active load, frequency response of differential amplifier, multistage amplifiers

Unit III Feedback Amplifiers

General feedback structure, properties of negative feedback, four basic feedback topologies, shunt-series feedback amplifier, series-series feedback amplifier, shunt-shunt and shunt-series feedback amplifiers, determining loop gain, stability problem,. Effect of feedback on amplifier poles, stability studying using Bode plots

Unit IV Operational-Amplifiers and Data-Converters Circuits

Two-stage CMOS Opamp, folded –cascode CMOS op amp, 741 Op-amp circuit, DC analysis of 741, small-signal analysis of 741, gain, frequency response and slew rate of 741, Data converters, D/A converter circuits, A/D converter circuits

Unit V Digital CMOS Logic Circuits

Digital Circuit Design: An overview, Design and Performance analysis of CMOS Inverter, CMOS Logic gate circuits, pseudo-NMOS Logic Circuits, Pass – Transistor logic circuits, Dynamic Logic circuits

Text Book:

1. Adel S.Sedra & Kenneth C. Smith, Microelectronics Circuits, Oxford University Press, 2003.

References:

1. Thomas Floyd, Electronic Devices, Prentice Hall of India, 2003
2. David A.Bell, Electronic Devices and Circuits, Prentice Hall of India., 1998

MT227 DIGITAL ELECTRONICS

Credit: 3:1:0

Unit I: Number Systems and Boolean algebra

Review of binary, octal, & hexadecimal number systems-representation of signed numbers-floating point number representation-BCD-ASCII-EBCDIC-Excess 3 codes-gray code-error detecting and correcting codes.

Boolean Algebra: Postulates and theorems of Boolean Algebra –canonical forms – simplification of logic functions using Karnaugh map Quine McClausky method.

Unit II: Combinational Logic Design

Logic gates –implementation of combinational logic functions – encoders & decoders – multiplexers & demultiplexers –code converters – comparator - half adder, full adder – parallel adder – binary adder – parity generator/checker – implementation of logical functions using multiplexers.

Unit III: Counters and Registers

RS, JK, JK Master–slave, D&T flip flops – level triggering and edge triggering – excitation tables –asynchronous & synchronous counters – modulus counters–shift register –Johnson counter- ring counter – timing waveforms-counter applications.

Unit IV: Sequential Logic Design

Basic models of sequential machines – concept of state table – state diagram – state reduction through partitioning & implementation of synchronous sequential circuits – Introduction to asynchronous sequential logic design.

Unit V: Programmable Logic Devices

Semicustom design – Introduction to PLD's – ROM – PAL – PLA – FPGA – Architecture of PLD's : PAL 22V10, PLS 100/101 – Implementation of digital functions.

LOGIC FAMILIES: RTL, DTL, TTL families, Schottky – clamped TTL, Emitter Coupled (ECL), Integrated Injection Logic (IIL), MOS inverters, CMOS inverters, comparison of performance of various logic families.

Text Books

1. Morris Mano, Digital Design, Prentice Hall of India, 1995.
2. Puri V.K., Digital Electronics”, TMH, 1997.

Reference Books

1. Tocci.R.J, Digital Systems – Principles & Applications, Prentice Hall of India, 1997.
3. Fletcher.W.I, An Engineering Approach To Digital Design, Prentice Hall of India, 1994.
4. Millman & Halkias, Integrated Electronics, TMH, 1995.
5. Floyd, “Digital Fundamentals”, PHI, 1997.
6. Mano M.M., “Digital Logic and Computer Design”, PHI, 1998.

MT228 AUDIO VIDEO STUDIOS

Credits: 3:0:0

Unit I Sound Isolation and Room Acoustics

Sound, decibels and hearing; Sound isolation; Room acoustics and means of control; Designing neutral rooms; Rooms with characteristic acoustics; Variable acoustics; Room combinations and operational considerations

Unit II Studio Environment

Ventilation and Air conditioning, Power cabling, Ear thing, Limitations to design Predictions; Loudspeakers in rooms; flattening the room response; Control rooms; the behavior of multiple loudspeakers in rooms

Unit III Consoles and Studio Furniture

Response disturbances due to mixing consoles and studio furniture; Objective measurement and subjective evaluations; Pressure amplitude response, Harmonic distortion, Noise

Unit IV Studio Monitoring Systems and Surround Sound

Cables and connectors, Cross over networks, loud speaker driver units, Psychoacoustics of surround sound, Surround loud speakers

Unit V Lighting

Basic Lighting Concepts, Lighting Equipment: Types of Lamps. Common Lighting, Instruments, Light Mounts, Light Modification and Control. Studio Lighting Principles, Field Lighting, Principles, Lighting Safety, Planning.

Text Book

1. Philip Newell, Recording Studio Design, Focal Press, 2007

References

1. Ronald J. Compesi, Jaime S. Gomez, Introduction to Video Production: Studio, Field, and Beyond, Pearson, 2006
2. Don Davis, Sound System Engineering, Focal Press, 2007
3. Alton Everest, Master Hand Book of Acoustics, McGraw Hill, 2001
4. Gary Davis, the Sound Reinforcement Hand Book, Hal Leonard Corporation, 1989

MT229 PRINCIPLES OF ADVERTISING

Credit: 3:0:0

Unit I Introduction

Understanding advertising today-The foundations of advertising -The advertiser Agency Partnership-The advertising Environment.

Unit II Audience and Advertising

Audience Definition, Research, and Planning – Audience analysis and buyer behavior – Segmentation ,Targeting and Positioning- Advertising Research- Objectives, Strategy and Plans- Intercultural and International Advertising

Unit III Creative Process

The Creative Process – Creativity, Creative Strategy and Copywriting – Art Production – Print Production – Electronic Production

Unit IV Media

Media Choice- Media Objectives, strategy and planning –print media – electronic media- direct marketing and out of home advertising- Putting the campaign together- Sales promotion and supplementary media – public relations and special communications- local advertising –from plan to results: The complete campaign -

Unit V Public Relations

Evolution and growth, definition and relevance of PR role – Mass media & PR; PR in Government, public and private sectors; PR and corporate Communications, writing for PR; PR ethics and regulations.

Text Book

1. Courtland L. Bovee, Advertising Excellence: McGraw Hill Publications. Delhi,(2001).

References:

1. Sean Brierley, The Advertising and Hand book, New York, 2000.
2. McGraw Hill, Principles of Advertising and IMC, McGraw Hill, 2000.
3. John McDonough, Encyclopedia of Advertising”, Vol 1, 2000.

MT230 DIGITAL ELECTRONICS LAB

Credit: 0:0:2

List of Experiments:

1. Logic gates
2. Half adder and Full adder
3. Multiplexer and Demultiplexer
4. Code converter – BCD to 7-Segment, BCD to excess-3 , Gray to Binary, Binary to Gray
5. Encoder and Decoder
6. Flip-flops
7. Counters
8. Shift registers
9. IC timer
10. Parity generation and checking
11. Analog to digital converter
12. Digital to analog converter

MT231 PHOTOGRAPHY LAB

Credit: 0:0:2

List of Experiments:

1. Framing and composition
2. Pictures at varying shutter speeds
3. Pictures with different lenses
4. Pictures under different light conditions
5. Black and White pictures on a selected theme
6. Pictures each on
7. Different patterns
8. Portrait photography
9. Architecture photography
10. Product photography
11. Fashion photography
12. Travel photography
13. Nature Photography
14. Indoor / Outdoor Photography
15. Developing B/W film
16. Printing B/W film
17. Pictures with digital camera on a selected theme

References

1. Dan Simson, Digital Photography Bible, Wiley, 2004
2. Wolfgang Freiher, Modern Photography Techniques, J.Bartholomew, 1996

MT232 DIGITAL COMPOSITING

Credit: 3:0:0

Unit I Digital Representation of Visual Information

Image Generation Pixels, Components, and Channels Spatial Resolution Bit Depth Normalized Values Additional Channels, HSV Color Representation Image Input Devices Digital Image File Formats, File Format Features Vendor Implementations of File Formats, Compression Choosing a File Format Nonlinear Color Spaces ,Basic Image Manipulation Terminology Color Manipulations ,3D Transforms Warping Expression Language Filtering Algorithms

Unit II Basic Image Compositing

Matte Image The Integrated Matte Channel, Multi source Operators, Over Mix Subtract In Out Atop Masks Compositing With Pre multiplied Images ,Color Difference Method Specialized Keying Software Matting Techniques Garbage Mattes Edge Mattes Combining Mattes Manipulating Mattes ,6 Time and Temporal Manipulations Apparent Motion Temporal Resolution Temporal Artifacts Changing the Length or Timing of a Sequence Key framing

Unit III Image Tracking and Stabilization

Tracking an Element Into a Plate Choosing the Feature to Track Limiting the Search Area Human Intervention Using Tracking Curves Manually Stabilizing a Plate Tracking Multiple Points, Interface Interactions Workflow Online Versus Batch Methods of Representing the Compositing Process Compressed Trees Timelines Curve Editors Working With Proxy Images, Image Viewing and Analysis Tools Image Viewers Flipbooks Image Statistics Pixel or Regional Information Tools Histograms

Unit IV Formats

Media, Resolution, and Aspect Ratio, Aspect Ratio Non square Pixels Deciding on a Resolution for an Aspect Ratio, Format Conversion Pipeline , Format Conversion Example, Film Formats ,35mm Formats ,16mm Formats Specialized Film Formats Video Formats ,Lines of Resolution Fields Color Resolution Gamma NTSC PAL ,SECAM ,HDTV ,Other Formats

Unit V Creating Elements

Lighting Interactive, Lighting Matched Cameras, Reference Stand-in Clean Plates Film Stock Filters Choosing a Format Lighting and Shooting with Blue screens Blue screen versus Green screen Shooting Order ,Integration Techniques ,Scene Continuity Lighting Shadows Lens Flares Atmosphere Camera Mismatches Camera Movements Focus Motion Blur, Film Grain ,Blue screen Integration ,Digital Integration .

Text Book:

Ron Brinmann, The Art and Science of Digital Compositing, Morgann Kaufmann, 1999

References:

1. Steve Wright, Digital Compositing for Film and Video, Focal Press, 2006
2. Dough Kelly, Digital Compositing in-Depth, Coriolis, 2000.

MT233 FUNDAMENTALS OF ELECTRONIC COMMUNICATION

Credit: 3:1:0

Unit-I Noise and Amplifiers

Signal, Waveform spectra, Noise, Equivalent noise resistance, SNR, Noise factor, Noise temperature, Tuned RF amplifiers, Neutralization, Frequency Conversion and mixers, IF amplifiers, Broadband video amplifiers, Class C and Linear amplifiers, Transmitter and amplifier matching

Unit-II Oscillators and Receivers

Passive feedback oscillators, Tuned LC oscillators, Crystal Oscillators, stability, Negative resistance Oscillators, Frequency Synthesizers, Super heterodyne receiver, choice of IF, Image rejection, Adjacent channel selectivity, Spurious response, tracking, AGC, double –conversion receivers, HF communication receivers

Unit-III Modulation – AM and FM

Amplitude modulation, AM transmitters, AM receivers, Single-sideband principles, balanced modulator, SSB generation, SSB reception, Modified SSB systems, Comparison of SNR, Frequency modulation

Unit-IV Phase and Pulse modulation

Phase modulation, Equivalence between FM and PM, Angle modulator, Angle modulation Detectors, Noise in FM, Pulse transmission, Pulse amplitude modulation, Time division multiplexing, Pulse time modulation

Unit-V Digital Communication

Bit transmission, Signaling rate, error probability, Pulse code modulation, Delta modulation, coding, codes, error detection and correction codes

Text Book:

1. Dennis John Roddy and Coolen, Electronic Communications, PHI, 1995.

References:

1. Taub and Schilling, Principles of Communication Systems, McGraw Hill, 2003.
2. G.Kennedy, "Electronic Communication Systems", McGraw Hill, 2003.

MT234 AUDIO VIDEO PRODUCTION TECHNIQUES

Credit: 3:1:0

Unit I Sound Transmission and Digital Audio

Capturing Sound Electronically-Magnetic and Electronic Principles, Dynamic Transducers, Ribbon Transducers, Carbon Particle Transducers, Piezoelectric Transducers Reversed Transducers. Digital audio-Digital Coding, Digital Conversion, Data Management, Digital Simulation of Analog Effects: Microphones-Technical Features, Pickup Patterns, Microphone Usage, Specialized Microphones, Microphone Placement, Off-axis Coloration, Proximity Effect ,Acoustic Phase Relationships
Distant Miking.

Unit II Mixers and Recorders

Pre-amplification, Peak Indicators, Faders and Potentiometers Level Indicators, Headroom, Signal Routing Signal Sends, Split and Inline Mixers, Control Room Monitoring, Mute and Solo, Pan Potentiometers, Channelized Mixers ,Mixer Automation
Digital Consoles, Broadcast Consoles, Automatic Consoles, Virtual Mixers, Digital Audio Workstations and Computers

Unit III Editing and Processing

Purposes of Editing, Foundations of Editing: Analog Tape, Editing with Digital Audio Workstations, Adjusting Levels, Control Surfaces in Editing. Audio Processors and Processing-Amplification and Level Control, Dynamic Processors, Frequency Processors
Temporal Processing, Digital Signal Processing, Noise Reduction Processors, Forensic Sound , Monitors and Loudspeakers, Transporting Sounds

Unit IV Video production Techniques

Cast and crew, Camera function and operation, Operation of special effects, Audio control facilities, Video switcher's Mobile truck production unit, Function and operation of the video recorder, Camera structure and lens design

Unit V Video Editing

Editing equipment and control systems, Field production, Digital tools-Non linear editing, Visual effects, editing rough-Final drafts, Planning edits and transition

Text Books:

1. Drew O. McDaniel, Rick C. Shriver, Kenneth R. Collins, Fundamentals of Audio Production, Pearson, 2008.
2. Lynne Schafer Gross, James C. Foust, Burrows Video Production: Disciplines and Techniques, McGraw Hill.

References

1. Adobe creativity team, Adobe After Effects 4.0 Class Room in a Book, Adobe, 1999.
2. Tomlinson Holman, Sound for Digital Video, Focal Press, 2005.
3. Video Maker, The Video Maker Guide to Video Production, Focal Press, 2007.

MT235 MEMORIES AND ANALOG SIGNAL CONDITIONING

Credit: 3:1:0

Unit I Memories and Advanced Digital Circuits

Latches and Flip-flops, multivibrator circuits, Semiconductor memories: Types and architectures, RAM cells, Sense amplifiers and address decoders, ROM, ECL, BiCMOS digital circuits

Unit II Filters and Tuned Amplifiers

Filter transmission, types and specification, filter transfer function, Butterworth and Chebyshev filters, first-order and second –order filter functions, second-order LCR resonator, and tuned amplifiers

Unit III Signal Generators and Waveform-Shaping Circuits

Basic Principles of sinusoidal oscillators, op amp-PC oscillator circuits, LC and crystal oscillators, Bistable Multivibrators, Generation of square and triangular waveforms using astable multivibrators, generation of standardized pulse-monostable multivibrator, IC timers, precision rectifier circuits

Unit IV Output Stages

Classification of output stages, Class A output stage, Class B output stage, Class AB output stage, Biasing, class AB circuit, Power BJTs, and Variation on Class AB configuration

Unit V Power Amplifiers

IC power amplifiers, MOS Power transistors: structure of power MOSFET, Characteristics, Temperature effects, comparison with BJT, Class AB output stage utilizing MOSFETs

Text Book:

1. Adel. S. Sedra & Kenneth C. Smith, Microelectronics Circuits, Oxford University Press, 2003.

Reference:

1. Millman & Taub ,Pulse Digital and Switching Waveforms, McGraw Hill, 1965.

MT236 COMMUNICATION CIRCUITS LAB**Credit: 0:0:2****List of Experiments:**

1. Design of filter
2. Design of Class A power amplifier
3. Design of single tuned amplifier
4. Hartley Oscillator
5. AM modulation and demodulation
6. FM modulation and demodulation
7. Pre-emphasis and De-emphasis
8. IF amplifier, Mixer
9. PLL applications
10. Pulse amplitude modulation
11. Time division Multiplexing
12. Radiation pattern of antennas

MT237 PROGRAMME PRODUCTION LAB**Credit: 0:0:2****List of Experiments:****Digital Compositing**

- Composing computer generated images
- Blue screen compositing and creating masks
- Rot scoping

Audio Programme Production

- Study of microphones
- Loud speakers, Mixers
- Audio editing software's: Pro tools/Sound forge/Neundo
- Plug in effects and virtual instruments
- MIDI

Video Programme Production

- Study of video cameras and studio equipments
- Lighting techniques, the production process
- Lighting preparation –Three point lighting
- Rehearsing and preparing the talent

Framing principles and movements

References

1. Steve Wright, Composing Visual Effects, Focal Press, 2008.
2. Cliff Truesdell, Mastering Digital Audio Production: The Professional Music Work Flow with Mac OSX, John Wiley, 2007.
3. Robert B.Manuals, Single Camera Video Production, Focal Press, 2005.
4. Ronald J.Compesi, Video Field Production and Editing, Pearson, 2006.

MT238 SIGNAL TRANSMISSION AND RADIATION

Credit: 3:1:0

Unit-I Transmission Lines and Cables

Primary line constants, phase velocity and line wavelength, characteristic impedance, propagation coefficient, phase and group velocities, standing waves, lossless lines at radio frequencies, VSWR, slotted-line measurements at radio frequencies, transmission lines as circuit elements, smith chart, time-domain reflectometry.

Unit-II RF lines and Waveguides

Telephone Lines and cables, Radio-Frequency lines, microstrip lines, wave guide introduction, rectangular waveguides, other modes

Unit-III Radio-Wave Propagation

Propagation in free space, Tropospheric propagation, ionospheric propagation, surface wave, LF propagation and VLF propagation, Extremely low-frequency propagation, summary of radio-wave propagation

Unit-IV Antennas

Antenna Equivalent circuits, coordinate system, radiation fields, polarization, Isotropic radiator, power gain of an antenna, effective area & effective length of an antenna, Hertzian dipole, vertical antennas, folded elements, loop and ferrite- rod receiving antennas, nonresonant antennas, driven arrays, parasitic arrays, VHF-UHF antennas, microwave antennas

Unit-V Fiber Optic Communication

Principles of light transmission in a fiber, losses in fibers, dispersion, light sources for fiber optics, photo detectors, connectors and splices, fiber optic communication systems

Text Book:

1. Dennis John Roddy and Coolen, Electronic Communications, PHI, 1995.

References:

1. Taub and Schilling – Principles of Communication Systems, McGraw Hill, 2003
2. G.Kennedy, Electronic Communication Systems, McGraw Hill, 2003

MT239 POST PRODUCTION TECHNIQUES

Credit: 3:0:0

Unit I Editing Systems

Audio post production equipments, mixing consoles and audio processing equipments, studio recording, mikes and microphones, Transmission and reproduction of audio post production materials, Synchronizing and controllers, sound effects, Audio workstations, stereo, music, monitoring and the environment

Unit II Audio Editing

Recording Digital Audio, Recording audio for post production, Editing software's, Pre production for post production, Track planning and Post Production sequences, Digital Audio Transfers and Recording, Voice over perspectives,

Unit III Video Post Production

Technology, and techniques of video editing, TV Signals, time code, Digital video and video tape formats, video tape editing, preparing for post production, offline editing process, online editing Digital video effects, Audio post production for video

Unit IV High Definition Post Production

Frame recording method, bit depth, chromo sampling, compression, mixing SD and HD, computer file size for high definition video, conversion problems, off- line/online edit system compatibility, shoot, edit and deliver at one frame, LCD monitors, plasma screens, DLP monitors

Unit V Colour Correction

Colour theory, Perceptions, Colour monitors and tools, Common colour errors and techniques, Introduction to Advance colour correction

Text Books

1. Jay Rose, Audio Post Production for Digital Video, CMP Books 2002.
2. Gary H Anderson, Video Editing and post production, A Professional Guide, Focal Press, 1999.

References

1. Tim Amyes, Audio Post production in Video and Film, Focal Press, 2001.
2. Des Lyver, Basics of the Video Production Diary, Focal Press, 2001.
3. Steven E Browne, High Definition Post Production: Editing and Delivering HD Video, Focal Press 2007.
4. Steven Hullfish-Jaime Fowler, Colour Correction for Digital Video: Using Desk Top Tools to Perfect Your Image, CMP Books, 2003.

MT240 MICROPROCESSORS AND MICROCONTROLLERS

Credit: 3:1:0

Unit I: 8085 Microprocessor

Organization of 8085 microprocessor – Instruction set – Addressing modes – Assembly language programming – machine cycles – Read, Write – Bus cycles – states – Wait state – HALT and HOLD state.

Unit II: 8086 Microprocessor

Organization of 8086 microprocessor – memory segmentation – Addressing bytes and words – Address formation – Address modes in 8086 – Assembly language programming – minimum mode and maximum mode.

Unit III: Microprocessor Interfacing Techniques

Data transfer – Programmable parallel ports – 8255 PPI – Serial Communication – Asynchronous - Synchronous – 8251A Programmable communication interface – 8237 – Programmable DMA controller – 8259A Programmable interrupt controller.

Unit IV: Interfacing Memory and I/O Devices and Microprocessor Applications

Memory interface – Input / Output Interface – Keyboard/display interfacing – A/D and D/A interface – applications – DC motor controller.

Unit V: 8051 Microcontroller

Organization of 8051 Microcontroller – I/O Ports – External memory – Counters and timers – serial data input and output – interrupts – instruction set – addressing modes – assembly language programming – simple applications.

Text Books:

1. Ramesh. S.Gaonkar, Microprocessor Architecture, Programming & Applications with 8085/8080a, Penram International, Fifth Edition, 1999.
2. Rafiqzaman M., Microprocessor Theory and Application - Intel and Motorola, PHI, 2002.
3. Kenneth J. Ayala, The 8051 Microcontroller Architecture Programming and Applications, Penram International, 2nd Edition, 2004.

References:

1. D.V Hall, Microprocessor and Interfacing Programming and Hardware, McGraw Hill Publishing Company, 1990.
2. YuCheng Liu & Glenn A Gibson, Microcomputer System, 8086/8088 Family, PHI, 2003.
3. Ajit Pal, Microprocessor Principles and Applications, Tata McGraw Hill, 2003.
4. Avatar Singh and Walter A.Tribel, The 8088 and 8086 Microprocessor, Architecture, Software and Interface Techniques, PHI, 1985.

MT241 DIGITAL SIGNAL PROCESSING

Credit: 3:1:0

Unit I Linear System and Convolution

Signals and Systems, Requirements for Linearity, Static Linearity and Sinusoidal Fidelity, Examples of Linear and Nonlinear Systems, Special Properties of Linearity, Superposition: the Foundation of DSP, Common Decompositions, Delta Function and Impulse Response, Convolution: Input Side Algorithm, Output Side Algorithm, Sum of Weighted Inputs, Common Impulse Responses, Mathematical Properties, Correlation

Unit II Discrete Fourier Transform

Family of Fourier Transforms, Notation and Format of the real DFT, Frequency Domain's , Independent Variable, DFT Basis Functions, Synthesis, Calculating the Inverse DFT, Analysis, Calculating the DFT, Duality, Polar Notation, Polar Nuisances, Spectral Analysis of Signals Frequency Response of Systems, Convolution via the Frequency Domain

Unit III Fourier Transform Properties & Transform Pairs

Linearity, Characteristics of the Phase, Periodic Nature of the DFT, Compression and Expansion, Multirate methods, Multiplying Signals (Amplitude Modulation), The Discrete Time Fourier Transform, Parseval's Relation, Delta Function Pairs, Sinc Function, Gibbs Effect, Harmonics, Chirp Signals

Unit IV Fast Fourier Transform & Introduction to Digital Filters

Real DFT Using the Complex DFT, How the FFT Works, FFT Programs, Speed and Precision Comparisons, Filter Basics, Information is represented in Signals, Time Domain Parameters, Frequency Domain Parameters, High-Pass, Band-Pass and Band-Reject Filters

Unit V Digital Filters

Moving Average Filters: Implementation by Convolution, Noise Reduction vs. Step Response, Frequency Response, Relatives of the Moving Average Filter, Recursive Implementation, Strategy of the Windowed-Sinc, Designing the Filter, Recursive Method, Single Pole Recursive Filters, Narrow-band Filters, Phase Response, Chebyshev and Butterworth Responses, Designing the Filter

Text Book:

Steven W. Smith, The Scientist and Engineer's Guide to Digital Signal Processing, Elsevier, 1997.

References:

1. John G. Proakis and Dimitris G. Manolakis, Digital Signal Processing, Algorithms and Applications, PHI of India Ltd., 2000.
2. Openheim and Schafer, Digital Time Signal Processing, Prentice Hall of India, 2002.
3. Emmanuel C. Ifeachor and Barrie W. Jervis, Digital Signal Processing – A Practical Approach, Addison Wesley Longman Ltd., UK,

MT242 MEDIA ECONOMICS

Credit: 3:0:0

Unit I Introduction to Media Economics

Macroeconomics and microeconomics, economics of scale, economics of scope, Market structure, Key economics characteristics of the media, Economics of Advertising, Media

Economics and Public Policy, economic methodologies, Decision making, demand and supply

Unit II Media and PR

Introduction to media: Overview of media/ the media industry in India/ Types of Media/ role of each medium/ advantages and disadvantages of each medium. Role of PR in the success of a product /service. The relationship between marketing and Advertising and PR/ The relationship between sales and PR/ how sales benefits from PR

Unit III Print and Television Media

Economic characters of news paper and broadcasting, Ownership Structure, Publicly funded broadcasting, vertical supply chain for television, Impact of new distribution technologies. Television programme production-Economics of programme supply, International trade in audio visual contents

Unit IV New Media

Internet and E-commerce, Digitalized media contents, increasing economics of scale and scope interactivity, internet and mobile communication and possibilities; leveraging new media; Understanding value added services; understanding streaming video net and mobile; using SMS

Unit V Media Economics and Public Policy

Free market Vs interventions, support measures for media contents, concentrated media ownerships, Monopolies and technological change: Events and sponsorships; overview of how events are marketed; certain sponsorship proposals; structuring sponsorship deals, Understanding of common terminology and jargon in media.

Text Books

1. Gillian Doyle, Understanding Media Economics, Sage Publications, 2007.

References

1. Gillean Doyle, Understanding Media Economics, Sage Publication, 2004.
2. C.R.ColinHoskins, Media Economics-Appling Economics New and Traditional Media, Sage, 2003.
3. Newman, Bruce I, The Mass Marketing of Politics, Sage Publication, 1999.
4. Philip Kotler, Marketing Management, Prentice Hall, 2003.

MT243 MICROPROCESSOR AND MICROCONTROLLER LAB

Credit: 0:0:2

List of Experiments:

8085 Assembly Language Programming

1. Arithmetic Operations
2. Searching of Numbers
3. Code conversion

4. Square wave generation using 8255
8086 Assembly Language Programming

5. Arithmetic operations
6. Sorting
7. Digital to Analog Conversion
8. Block Transfer using 8085 and 8086

Program using 8051

9. DC motor Interface
10. Display interface
11. Serial Communication using RS-232 interface
12. Analog to digital conversion

MT244 POST PRODUCTION LAB

Credit: 0:0:2

List of Experiments:

Audio production

1. Basic procedures: Navigation, Meters, Markers and regions:
2. Recording,
3. Editing-Basic Edits,
4. Working with video, Audio for video,
5. Effects, restoration, Mastering music for CD, mp3, Burning a CD, MIDI and sampler tools

Video production

6. Trimming tools,
7. Timeline editing,
8. Track labels, Moving clips,
9. Dramatic effects, creating dynamic text and effects,
10. Audio Guidelines and Methods for adjusting Audio,
11. Adding Sound effects,
12. Transcoding and outputting

References:

1. Jeffrey P.Fisher, Instant Sound Forge, CMP Books, 2004.
2. Manuals of Pro Tools, Sound Forge, Neundo and Cubase
3. Lonzell Watson, Final Cut Pro.6 for Digital Video Editors, John Wiley, 2008
4. Donna L.Baker, Adobe Premiere Pro: Complete Course, Wiley, 2004.

MT245 TELEVISION AND VIDEO ENGINEERING

Credit: 4:0:0

Unit I: Fundamentals of Television

Characteristics of eye and television pictures – Resolution and brightness gradation. Theory of Scanning. Camera tubes – Vidicon and Silicon diode array vidicon. Monochrome picture tube, Composite video signal.

Unit II: Monochrome Television Receiver

Transmission and Propagation of TV signal, TV antenna, Receiver: VHF Tuners, Vision IF subsystem, Inter carrier sound system. Video amplifiers, Synchronous separation AFC and deflection Oscillators frame and line deflection circuits.

Unit III: Colour Television Systems

Color Characteristics – Color cameras, Color picture tubes, Color signal generation and encoding, NTSC, PAL and SECAM Systems.

Unit IV: Colour Television Receivers

Block diagram of PAL-D receivers, Luminance channel. Chrominance amplifier, Color burst separation and burst phase discriminator. Sub carrier Oscillator AGC circuits. Ident and color killer circuits. U and V demodulators. R, G, B matrix and drivers.

Unit V: Special Topics in Television

Digital tuning techniques, Remote control, cable television, CCTV, Video tape readers and recorders. Videodisc system, LCD Projectors. Fundamental of digital TV and high definition Television.

Text Book:

1. Gulati.R.R., Modern Television Practice, Principle of Technology and Servicing, New Age International Pvt., Ltd., 2002.

References:

1. Dhake.A.M, Television and Video Engineering, Tata McGraw-Hill, 1995.
2. Grob.B, Herndon.C.E., Basic Television and Video Systems, McGraw-Hill, 1999.

MT246 APPLICATION OF DSP FOR AUDIO AND IMAGE PROCESSING

Credit: 3:1:0

Unit I Introduction

Roots of DSP, Telecommunications, Audio Processing, Echo Location, Imaging Processing

Unit II Audio Processing

Sound Quality vs. Data Rate, High Fidelity Audio, Comanding Speech Synthesis and Recognition, Nonlinear Audio Processing

Unit III Image Formation & Display Linear Image Processing

Digital Image Structure, Camera and eye, Television Video Signals

Other Image Acquisition and Display, Brightness and Contrast Adjustments, Grayscale Transforms, Warping, Convolution, 3×3 Edge Modification, Convolution by Separability

Unit IV Special Imaging Techniques

Example of a Large PSF, Fourier Image Analysis, FFT convolution, Closer Look at Image Convolution, Spatial Resolution

Sample Spacing and Sampling Aperture, Signal-to-Noise Ratio, Morphological Image Processing

Computed Tomography

Unit V Data Compression

Data Compression Strategies, Run-Length Encoding, Huffman Encoding, Delta Encoding
LZW Compression, JPEG (Transform Compression), MPEG

Text Book:

1. Steven W. Smith, The Scientist and Engineer's Guide to Digital Signal Processing, Elsevier, 1997.

References

1. John G. Proakis and Dimitris G. Manolakis, Digital Signal Processing, Algorithms and Applications, PHI of India Ltd., New Delhi, 2000.
2. Oppenheim and Schaffer, Digital Time Signal Processing, Prentice Hall of India, 2002.
3. Emmanuel C. Ifeacheer and Barrie W. Jervis, Digital Signal Processing – A Practical Approach, Addison Wesley Longman Ltd., UK, 2004.

MT247 DIGITAL MUSIC

Credit: 4:0:0

Unit I Introduction, Waves and Harmonics

Sound, The human ear, sine waves, Harmonic motion, Vibrating strings, frequency spectrum, beats, Superposition, Damped harmonic motion, Resonance, Fourier's theory of harmonic analysis.

Unit II Mathematician's Guide to the Orchestra

Wave equation for strings, Initial conditions, bowed string, Wind instruments, The drum Eigenvalues of the Laplace operator, horn, THE BELL, Acoustics

Unit III Consonance and dissonance and Scales and temperament

Harmonics, Simple integer ratios, History of consonance and dissonance, Critical bandwidth, Complex tones, artificial spectra, Combination tones, Pythagorean scale

The cycle of fifths, Cents, Just intonation, Major and minor, the dominant seventh

Commas and schismas, Eitz's notation

Unit IV Digital Music

Digital signals, Dithering, WAV AND MP3 FILES, MIDI, Delta functions and sampling, Nyquist's theorem, The Z-transform, Digital filters, discrete Fourier transform

Unit V Synthesis

Envelopes and LFOs, Additive Synthesis, Physical modeling, The Karplus–Strong algorithm, Filter analysis for the Karplus–Strong algorithm, Amplitude and frequency modulation, The Yamaha DX7 and FM synthesis, Feedback, or self-modulation, CSound
FM synthesis using CSound, Simple FM instruments

Text Book:

Dave Benson, Music: A Mathematical Offering, Cambridge University Press,2006.

Reference:

Miller Puckette, The Theory and Technique of Electronic Music, World Scientific Publishing Co., 2007.

MT248 MEDIA AESTHETICS

Credit: 3:0:0

Unit I Light

Light-- Nature of light, Lighting purposes and functions, The nature of shadows, Attached and Cast shadows, Outer orientation functions: special orientation, tactile orientation, time orientation, Inner orientation functions: predictive lighting, light and lighting instruments. Lighting: Standard lighting techniques, Chiaroscuro lighting: analysis, functions, and types, flat lighting: functions, Silhouette lighting, Media -Enhanced and Media- Generated lighting, Single and Multiple camera lighting.

Unit II Colour

Colour perception, Physiological factor, and Psychological factor, Colour Mixing: additive mixing, subtractive mixing, mixed mixing, Relativity of Colour: light environment, surface reflectance, colour temperature, surrounding colours; colour juxtaposition, colour constancy, Colours and Feelings, Colour Energy. Structuring Colour --Function and Composition- Informational function of Colour, Colour symbolism, Compositional function of colour, Expressive function of colour : Expressing Essential quality of an event, Desaturation Theory, Colourising films

Unit III Timing and principal motions

Types of Objective Time: Timing - clock time, running time, sequence time, scene time, shot time, story time, Types of Subjective time: Pace, Rhythm, Principal motions and their functions.

Unit IV Continuity editing

Graphic vector continuity, Index vector continuity, Index vector line, Motion vector continuity, Motion vector line, Special continuity factors: action continuity, subject continuity, colour continuity, continuity of environment. Structuring the Four- Dimensional Field- Complexity Editing: Metric Montage, Analytical Montage sequential, sectional, Idea- Associative Montage, Comparison Montage, Collision Montage

Unit V Sound

Sound and Noise, Literal sound, Non-literal sound, Functions of sound, Information function of sound, Outer orientation functions of sound: space ,time, situation, external condition, Inner orientation of sound : mood, internal condition, energy, structure, Aesthetic factors. Structuring the Five-dimensional Field Sound Structures and Sound/Picture Combinations

Text Book

Herbert Zettl, Sight, Sound, Motion-Applied Media Aesthetics, Wadsworth Publications, 1999.

References

Michael Freeman, The Complete Guide to Photographic Techniques & Materials, Books Sales, February 1983.

Wolfgang Freiherr, Modern Photographic Techniques, J. Bartholomew, 1996.

MT249 MEDIA MANAGEMENT AND ENTREPRENEURSHIP

Credit: 3:0:0

Unit I Entrepreneurial Competence

Entrepreneurship concept – Entrepreneurship as a Career – Entrepreneur – Personality Characteristics of Successful. Entrepreneur – Knowledge and Skills Required for an Entrepreneur.

Unit II Entrepreneurial Environment

Business Environment - Role of Family and Society - Entrepreneurship Development Training and Other Support Organizational Services - Central and State Government Industrial Policies and Regulations - International Business- Screen writing- story board proposal for getting bank loan and identifying various sources to generate money.

Unit III Business Plan Preparation

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

Unit IV Media Industry

Print- Starting news paper- magazine- online journal – FM Radio- Community Radio – Television channels – Production house – setting the studios – Professional photographer Cinematographer – Cinema - Preproduction, production, publicity and distribution

Unit V Advertising and Animation

Advertising agency- idea-concept –media planning- identifying the problem- the budget pre-testing-target audience- media selection- language-Visual and the copy – timing and Duration – post testing - effects on sales – INS accreditation- .Animation and Graphics, creativity and technical – Intellectual Property Rights.

Text Books

Hisrich, Entrepreneurship, Tata- McGraw Hill, 2001.

S.S.Khanka, Entrepreneurial Development, S.Chand and Company Limited, 2001.

References

Prasama Chandra, Projects - Planning, Analysis, Selection, Implementation and Reviews, Tata McGraw-Hill Publishing Company Limited, 1996.

P.C.Jain (ed.), Handbook for New Entrepreneurs, EDII, Oxford University Press, 1999.

P. Saravanel, Entrepreneurial Development, Ess Pee Kay Publishing House, 1997.

MT250 SATELLITE COMMUNICATION

Credit: 4:0:0

Unit I: Communication Satellite - Orbit and Description

Kepler's laws- Orbital period and velocity – Azimuth and elevation - orbital patterns– Placement of satellite in a geo-stationary orbit – satellite description – transponder subsystem – Telemetry, Command and ranging subsystem – Attitude control and electrical power

Unit II : Earth Station

Earth Station Transmitters, Receivers-antenna types – Gain and radiated power – Poynting loss – Noise temperature – G/T ratio – High power amplifiers – Redundancy configurations – Carrier & power combining – Low noise amplifiers – Redundancy configuration and non-linearity – Up converter & down converter – Conversion process – Monitoring& control

Unit III: Satellite Link Analysis and Design

Basic link analysis – Interference analysis – Carrier to noise plus interference ratio – Terrestrial interference – Cross polarization interference – Adjacent channel and inter symbol interference – Rain Induced attenuation – Path diversity – Up link power control – Rain induced cross polarization interference – Satellite link design – Link without frequency reuse – Link design with frequency reuse.

Unit IV: Multiple Access Techniques

Frequency Division multiple access (FDMA) – Time division multiple access (TDMA) and code division multiple access (CDMA) – SPADE – Performance comparison of various multiple access schemes.

Unit V: Applications and Services

Very small aperture terminal (VSAT) networks – Technologies & configurations – Mobile satellite (MSAT) networks – Low orbital satellites – Domestic satellite systems-the INSAT System-International systems-INTELSAT / INMARSAT, DTH.

Text Books

1. Tri. T. Ha, Digital Satellite Communications, McGraw-Hill Publishing Co., 1990.

2. Wilbur L.Pritchard & Joseph A.Sciulli, Satellite Communication Systems Engineering, Prentice Hall Inc, 2003.

References

1. Timothy Pratt and Charles W. Bostian, "Satellite Communication", John Wiley And Sons, 1994
2. Agarwal.B.N., Design of Geosynchronous Spacecraft, Prentice Hall
3. Rody.D., Satellite Communication, McGraw Hill, 1991.

MT251 DSP AND DATA COMPRESSION LAB

Credit: 0:0:2

List of Experiments:

Programs using MATLAB

1. Representation of time series; computation of convolution.
2. Response of difference equations to initial conditions; stability.
3. DFT computation.
4. Computational experiments with digital filters.
5. DSP processor implementation
6. Sampling & waveform generation
7. FIR & IIR filters implementation.
8. Fast Fourier Transform.
9. Quantization noise.
10. Adaptive filters..
11. Digital modulation schemes.
12. Scrambler and unscrambler.
13. Shannon Binary, Shannon Fano Technique.
14. Huffmann coding, minimum redundancy Technique.

MT252 SPECIAL PRODUCTION LAB

(Audio or Video or Animation)

Credit: 0:0:2

Experiments:

Pre Production

Production

Post Production

Students have to produce individual production in any one of the area: Audio, Video, or Animation

MT253 MEDIA LAWS AND ETHICS

Credit: 3:0:0

Unit I Overview of Indian Constitution

Overview of the Indian Constitution, Fundamental rights, Duties of citizens, Directive principles of state policy, Functions of Executive, Judiciary, Legislative, Powers and Privileges of parliament, Provisions for declaring Emergency, Provision for amending the Constitution, Freedom of the Press and restrictions these upon, Centre-State relations

Unit II Media Laws in India

PRB Act 1867, The Press (Objectionable matters) Act 1957, The News paper (Prices and Pages) Act 1956, Defense of India Act, Delivery of Books and News paper (Public Libraries) Act, Press Council Act, Cable TV Networks (Regulations) Act, TRAI, BRAI. Cinematographic Act 1952, Drugs and magic remedies Act.

Unit III Civil and Criminal Laws

Laws of Libel and defamation, Contempt of courts Act 1971 and contempt of Legislative, Copy right Act and IPR, Trade Mark Act and patents Act, Right to information and Official Secrets Act, Right o information Act, Autonomy and Prasar Bharati Act, Broadcasting Bill. Cyber Laws, Digital signature, piracy, Domain name registration issues

Unit IV Code and Ethics

Recommendations of Press Commission I and II, Mac Bridge Report, Press council guide to Journalistic ethics, Self regulation and code of ethics, censorship and control of the press,, press ownership and monopolies, various committees of broadcasting, Broadcasting policies, Act regarding to working journalists.

Unit V Journalistic Ethics

Gathering the news, Libel, Invasion of privacy, Defamation, Use of the word *alleged* Apparent authority, Technology, Telephone recordings, Juveniles as News Sources, Subpoenas and Shield Laws, Access Laws, Definition of Ethics, Effects of Competition Situational Ethics , Case Studies in Ethical Dilemmas

Text Books

1. Basu, Law of the Press in India, Practice Hall of India, 2003.
2. Radha Krishna Murthi, Indian Press Laws, Indian Publishers, Distributors, 1997.
3. Philip Patterson, Lee Wilking, Media Ethics, Issues Capes, McGraw Hill, 2004.
4. Clifford G.Christians, Media Ethics, Cases and Moral Reasoning, Pearson, 2006.

References

1. Major Passdey & Askar Kedia, Fundamentals of Indian Constitution, Vikas Publishing House Pvt, Ltd., 1993
2. H.R. Luthra – Indian Broadcasting, Ministry of Information and Broadcasting, 1986.
3. Leslie, Mass Communication Ethics, Thomson Learning, 2004.
4. Basu, Introduction to Indian constitution, Practice Hall of India, 2003.

Credit: 3:0:0

Unit I Introduction

Research Procedures -Elements of research -Research ethics –Sampling - Population and sample-Probability and Non probability samples, Nature and scope of communication research, Literature review, Foot notes, End notes, Bibliography

Unit II Qualitative and Quantitative research methods

Field observations-Focus groups-Intensive Interviews: Quantitative methods- Content analysis - uses- limitations-steps in content analysis-Universe –sample-unit of analysis-constructing content categories-establishing a quantification system-coding the content-analyzing the data-interpreting the results .Reliability, Validity. Content analysis in Print and electronic media

Unit III Survey Research

Descriptive and analytical survey-advantages and disadvantages of survey-constructing questions-Questionnaire design-Question order, Layout, design. Gathering survey data-mail surveys –advantages –disadvantages -Telephone survey-Personal interviews-mail interviews-Internet surveys-Group administration.-Research in media effects.

Unit IV Experimental Research

Basic experimental designs-Pretest-posttest control group, Posttest-Only control group, Solomon four group designs, Factorial studies. Quasi experimental designs, Field experiments.

Unit V Basic Statistical Procedures Using SPSS

Nonparametric statistics - Chi-Square - Goodness of fit: Parametric statistics-the t-test-Analysis of variance-Two-way ANOVA-Correlation-Partial Correlation-Simple linear regression-multiple regression, Factor analysis.

Text Book:

1. Roger D Wimmer, Joseph R. Dominick, Mass Media Research , Wardsworth Publishing Company, 2000.

Reference

1. Ajai S. Gaur, Sanjaya S. Gaur Statistical Methods for Practice and Research, Sage Publications, 2006.

MT255 AUDIO PRESENTATION

Credit: 3:0:0

Unit I Characteristics of the Medium

Transient nature of radio, Radio signs and codes, Types of Audio – Video Programmes, - Characteristics of Drama, Music, Talk, Interview, Group Discussion, Documentary, Microphones: Characteristics and types, Directional Features

Unit II Presentation Techniques

Who are you talking to? Pace problems, making sense of intonation, Script problem, Breath Support and resonance, Are you sitting comfortably, Learning to love microphone, getting your breath, being conversational, Language and Performance

Unit III Sound and Picture

Sound Aesthetics, Sound design, elements of sound structure, Sound production, studio and live mixing speech, music, live shows, interviews; sound editing, scripting sound, dubbing, creative usage of special effects and its functions, functions off sound in relation to picture, strategies In designing sound

Unit IV Types of Presentation

News and current affairs, sport, Life style and features, Music, Children's programme, Business programme, Travel news Qualities of presenters: Performance, presence, Getting through the audience, Code of on-air talents, comparer, moderator, commentator, sign languages, Good Vocabulary, Need for complete neutrality, Moderating talk shows and discussions, voice over and narrations, training in pronunciation of names, .on-air check list

Unit V On Air Performance

Speed, Breathing, projection techniques, Corpsing, relaxation, using prompter, Voice, SFX, Echo, chorus, backgrounds. Presenting programme items: Travel news, weather, telling the time, station identity, Ad breaks. Phone in's: Choosing the topics, setting up the topics, screening the callers, scheduling the callers, recording the callers.

Text Books

1. Jenni Mills, The broadcast voice, Focal Press, 2001.
2. Trewin Janet, Presenting on TV and radio an insiders guide, Elsevier, 2003.

References

1. William Moylam , The Art of Recoding, Focal Press, 2003.
2. Carl Hausmanm Philip Benoit , Announcing, Broadcasting, Communicating Today, Thomson Publications, 2004.
3. Andrew Boyd, Broadcast Journalism Techniques of Radio and Television News, Elsevier, 2001.
4. Stewart Peter, Essential Radio Skills, How to Present and Produce a Radio Show, A&C Black Publications, 2006.

MT256 AUDIO PROGRAMME PRODUCTION

Credit: 3:0:0

Unit I Basics of Radio Programming

Brief history of broadcasting in India, Characteristics of radio, Assessment and analysis of Target audience; Basics of Radio programming: conception to execution of ideas; Research collection of background materials; Formats and styles in radio production. Inside the studio: Sources, lights, Talk back units, screens, phones, Studio etiquette, Studio fault log, competition log, studio bible and style book

Unit II Different types of Programmes

Microphone talent, talk programmes, News and current affairs programmes, Documentaries and magazine programmes, Educational programmes, Light entertainment programmes, Music programmes, commercials, Seven P's ,cues and links

Unit III Radio Programme Production

Basics of programme production, Principles of recording, portable sound recorders, Radio Jingle production; Radio Drama – Fiction and drama, drama audition; Discussion programme selection of subjects for discussion; phone-in programme. Radio Feature and Documentary – Difference between features and documentary, Day parting; Media Fusion; Planning and scripting for educational radio programme, programme for special audiences

Unit IV Script Writing

Broadcast styles, Basic rules for radio writing; Conversational writing, visualizing the words, Audio script – types of audio scripts; News – Concept and definition, elements of news values, news gathering and writing; Interview – Art of Interview, types of interviews. Use of effects; Use of background music; advanced radio production techniques using digital technologies. Creating audio special effects

Unit V Radio Station Organization and Management

On air studio, talk studio, Contribution studio and remote studio, Radio car, out side broadcasting vehicle, Portable telephones, and telephone reports. Programme evaluation and training Autonomy, Prasar Barathi, Commercial broadcasting, Radio Station Organization and Management.

Text Books

1. Robert Mc Leish, Radio Production, Focal Press, 2005.

References

1. Aspinall Richard, Programme Production a Manual for Training, UNESCO, Paris, 1971.
2. Stewart Peter, Essential Radio Skills, How to Present and Produce a Radio Show, A&C Black Publications, 2006.

MT257 LIGHTING TECHNIQUES

Credit: 3:0:0

Unit I Lighting Techniques

Lighting Variables: Measuring Light, Intensity Controlling Light Intensity, Light Character Color Temperature, Basic Lighting Triangle: 3-point Lighting, Ratios in the Lighting Triangle, 2-Point Lighting, Other Lighting Objectives

Unit II Lighting Instruments and Accessories

Spotlights, Accessories for Spot Lights, Fill Lights Spots, Reflectors and PAR Banks as Fills, Fill Light Accessories, Mounts and Connectors for Lighting Equipment, Light Control Consoles, Safety and Efficiency, Artistic or Mood Lighting

Unit III Ray Tracing Techniques

Ray tracing algorithm, backward ray tracing, extending ray tracing algorithm, Real time raytracing, Materials-Plastic, wood, Metals

Unit IV Lighting Reflectors Models

Rendering equation, Irradiations and luminance, Lamberts Law, Bidirectional reflectance distributions and functions, Diffuse materials, Specular materials, Diffuse reflection models, Specular and metallic reflections models.

Unit V Lighting Implementation

Basic lighting math's, Per-vertex warn Lights, per pixel warn lights, Basic set up and diffuse materials, Specular materials, Introduction to spherical harmonic lighting

Text Book

1. Kelly Dempski and Emmanuel Viale, Advanced Lighting and Materials with Shaders, Worldware Publishing, 2005.

Reference

1. Ralph Donald, Riley Maynard and Thomas Spann, Fundamentals of Television Production, Pearson, 2008.

MT258 TELEVISION PROGRAMME PRODUCTION

Credit: 3:0:0

Unit I Camera Basics

Camera's controls-Lens controls-Focal Length-Narrow-angle lens-wide-angle lens-Depth of field-Exposure-Neutral density filters- Camera mountings-Tripods-Pedestals-Cranes-Dollies-Different types of shots-Framing, composition and Pictorial Balance. Different types of camera-video recording formats.

Unit II Lighting

Light Intensity-Colour quality of Light-Light dispersion-Lighting a flat surface-Lighting an object-Lighting people-Key- fill- back-3/4 back light, Kicker, Rim or edge light, Side, Top, Hard and Soft light. Three point lighting-Five point lighting-Lighting Problems-Lighting and sound-Sound boom cast shadows-Subject position-Over bright surfaces-Precision Lighting-Chromo key lighting-Lighting for a feature.

Unit III PreProduction

Proposal-Treatment-Scene script-Shooting/Camera script-Location Script-Single- Column script-Dual column script-Location scouting-controlling the colour temperature-Editing- Art direction- choosing microphones-Budget

Unit IV Production

Single camera production -scripting -Continuous single camera shooting -Discontinuous single camera shooting - Segmented shooting. Multi -camera treatment-Visual variety-the illusion of relationships-planning the shot-program opening-subjective and objective approaches-focusing audience attention-creating tension-pace-timing-visual clarity-visual padding. In production unrehearsed formats -Pre-studio rehearsal -Studio rehearsal-the Floor manager-Guiding performers-Cuing-Prompting.

Unit V Postproduction

Video editing-editing basics-Cut, Fade-Mix, and Wipe- Superimpositions-order of shots-Montage-duration of shots- cutting rate-cutting Rhythm.Visual effects-Mirror effects- Rear projection- Front projection-Reflex Projection-Camera lens filters- Camera mattes-Electronic effects-Multi-split screen-Chromo-key insertion techniques-virtual settings-Digital video effects.

Text Book

1. Millerson Gerald, Television Production, Focal Press, 1999
2. Millerson Gerald, Effective TV production Focal Press, 2002

Reference

1. Ralph Donald, Riley Maynard, Thomas Spann, Fundamentals of Television Production, 2/E Allyn & Bacon, 2008

MT259 GAME PROGRAMMING WITH C++

Credit: 3:1:0

Unit I

Game Programming & 2D Games and ClanLibGame Development, Software Abstraction, GraphicsSound and Music, More Middleware, ClanLib, Downloading ClanLibBuilding ClanLib, First ClanLib Application, Games and the Message Loop, Graphics Rendering

Unit II

ClanLib-Core Classes & ClanLib-Scene Management, 2D Games and Images, Surfaces, Drawing Surfaces, Transformation, XML, Resources, Sprites, Input, Scenes, Scenes and Design, Scene Implementation, Layers, Painting a Layer, Overview -Using Scene Manager

Unit III

3D Games and OGRE 3D

3D Games, OGRE 3D, Downloading OGRE 3D, Installing OGRE 3D, Compiling the OGRE 3D Samples, Running the OGRE 3D Samples, Creating an OGRE Application Using a Wizard, Creating an OGRE Application Manually, OGRE Log, OGRE, Documentation

Unit IV

Exploring OGRE 3D, 3D Scenes, Creating 3D Scenes, Scene Node Properties and Methods, Lights, Cameras, Materials and Scripts, Billboards, Particle Systems
Frame Listeners, Input

Unit V

Other Gaming Libraries-Install and Sound, Sound and Music, FMOD, BASS, NSIS-Windows Installer, Scripting, Open-Source Software, Open Media Formats

Text Book

Alan Thorn, Introduction to Game Programming with C++, Wordware Publishing Inc, 2007.

References

Noel Llopis, C++ for Game Programmers, Charles River Media, 2003.

David Conger and Ron Little, Creating Games In C++, First Impression 2006

MT260 ARTIFICIAL INTELLIGENCE FOR GAMES

Credit: 3:0:0

Unit I Introduction

Artificial Intelligence, Model of game AI, Algorithms, data structures and representation, the kind of AI in games, speed and memory, AI engine

Unit II Movement

Basics of movement algorithms, kinetic movement algorithms, steering behaviors,

Unit III Prediction

Predicting physics, jumping, coordinated movement, motor control, movement in third dimension,

Unit IV Path finding

Path finding graph, dijkstra, A*, problem, - Algorithm, pseudo-code, data structures and interfaces

Unit V Fuzzy Logic

Introduction to fuzzy logic, Fuzzy logic decision making, fuzzy state machines

Text Book:

Ian Millington, Artificial Intelligence for Games, Morgan Kaufmann Publishers, 2006.

Reference:

1. Stuart Russell, Peter Norvig, Artificial Intelligence - A Modern Approach, Pearson Education, 2004.

MT261 AUDIO PRODUCTION AND PRESENTATION

Credit: 4:0:0

Unit 1: Sound Theory

Sound waves-Frequency - Wavelength - Amplitude - The velocity of sound waves - Sound waves and obstacles - Diffraction -Units used in sound - Decibels - Inverse Square Law - Effect of Boundaries - The response of the ear - Loudness - Fletcher and Munson Curves - Musical pitch - Timbre - The brain's perception of sound - Frequency ranges in music - Basic Acoustics - Reflection - Absorption - Refraction - Diffraction - Acoustic materials - STC - RT-60 - TL - CD.

Unit II: Analog Audio

Input Transducers - Microphones - Polar responses -Types of Microphones - Production of the different polar responses - Sensitivities of microphones - Phantom power - Balanced wiring - Specific applications of microphones - Reference voltages in audio signals-Metering - Technical monitoring - Aural monitoring - Output Transducers-Loudspeaker - Loudspeaker resonators - Loudspeaker cables - Professional and domestic standards - Stereo - Methods of producing inter - channel differences - Stereo listening-Stereo loudspeaker matching - Phase - Microphone techniques for stereo - Headphones for stereo monitoring.

Unit III: Audio Engineering Fundamentals

Sound mixers - The basic channel - Important features of a mixer - Output stage - Inputs and connections - Filters - Equalizers - Shelving EQ - Semi parametric Eq - Parametric EQ- Graphic EQ - Paraphonic EQ - Talkback-Manual control of levels - Electronic level control - Signal processors - Dynamic processors - Compressor - Limiter - Expander - Gate - Multiband compressor - Maximiser - Sidechain - Effect processors - Reverb - Delay - Chorus - Phaser - Flanger - Audio lines and Patchbays.

Unit IV: Analog Recording

Objectives and problems in recording - Analog Recording devices and systems - ATR - The fundamentals of magnetic recording - Tape standards - Cassette quality - Head and tape cleanliness - Noise reduction - Two track systems - Multi track systems - Tape speeds - Transport controls - TTL - Head alignment - General Maintenance - Routing - Recording - Punching - Auto punch - Editing - Basic Analog Mixing.

Unit V: Basics of Live Sound Engineering

Need for Sound Reinforcement - Technology - Basic PA systems - Full Range sound Reinforcement systems - Choice of Equipment - Signal flow - FOH - MOH - Indoor systems - Outdoor Systems - Applications - Safety - Ear safety - Electrical safety - Mechanical safety - Fire safety.

Text Book

Michael Talbot-Smith, Sound Engineering Explained, Focal Press, 2002.

Reference Books

1. F.Alton Everest, Master Handbook of Acoustics, McGraw Hill Publishing,2001.
2. Frederick N Martin, John Greer N Clark, Introduction to Audiology, Pai and Sons, 2003.
3. David Simons, Analog Recording, Backbeat Books, 2006.
4. Paul White, Basic Live Sound, Sanctuary Publications, 2003.

MT262 ADVERTISING AND PUBLIC RELATION

Credit: 4:0:0

Unit I

Understanding advertising today-The foundations of advertising -The advertiser Agency Partnership-The advertising Environment

Unit II

Audience Definition, Research, and Planning – Audience analysis and buyer behavior – Segmentation, Targeting and Positioning- Advertising Research- Objectives, Strategy and Plans- Intercultural and International Advertising

Unit III

The Creative Process – Creativity, Creative Strategy and Copywriting – Art Production – Print Production – Electronic Production

Unit IV

Media Choice- Media Objectives, strategy and planning –print media – electronic media-direct marketing and out of home advertising- Putting the campaign together- Sales promotion and supplementary media – public relations and special communications- local advertising –from plan to results: The complete campaign -

Unit V

Public relations – evolution and growth, definition and relevance of PR role – Mass media & PR; PR in Government, public and private sectors; PR and corporate Communications writing for PR; PR ethics and regulations.

Text Book

1. Courtland L. Bovee , Advertising Excellence : McGraw –Hill Inc. Publications, 2001

References:

- Sean Brierley, The advertising and hand book, 2000.
- McGraw hill, Principles of Advertising and IMC, 2000
- John McDonough, Encyclopedia of Advertising, Vol 1, 2000

MT263 VIDEO PRODUCTION AND EDITING

Credit 4:0:0

Unit I: Introduction to TV technology

Picture formation-T.V Scanning: Horizontal & FrameVertical- & field rate-Resolution video bandwidth, sync. Blanking signals, colour burst, sensitivity, linearity, Television standards

Unit II: Principle of Video Camera

Primary & Photosecondary colours- conduction, photo voltaic, photo emissive effect-Working principle of video various sizes of CCD cameras: Three CCD, single CCD colour camera-camera- pickup devices

Unit III: Components and Controls of Video Camera.

Parts of a video camera-Different controls on video camera-Power switch, preheat, genlock, white balance, gain, iris, pedestal etc.-Zoom control: servo, manual, remote, zoom extenders-Focus control : auto, manual , remote, back focus, macro focus.-Camera view finders (B/W and colour). Its indicators and control. Colour temperature-White balance: Process and need.-Camera filters-Camera control unit (CCU)-Waveform monitor for output level of video-Vectorscope

Unit IV: Video camera lenses.

Perspective-Types and use-normal lens, telephoto lens, wide-angle lens. Zoom lens-Tripod, types of tripod heads, dolly, trolley & other accessories-Different types of camera angles and use-Camera movements – types & use - Different Types of Television Cameras-NG camera - EFP camera - Studio cameras - Special cameras: underwater camera, Endoscopic camera, Aerial photography camera, remote control camera, high-speed video cameras - Types of microphones used on video camera - Types of audio & video connectors.

Unit V Video Editing

Editing equipment and control systems, Field production, Digital tools-Non linear editing, Visual effects, editing rough-Final drafts, Planning edits and transition

Text Book:

1. Peter ward “Studio and outside broadcast Camera”
2. BernardWilkie “Creating special effects for TV & Video”

References:

1. Roy Thomson “Grammar of the shot”
2. Der Lyur & Graham “Basics of Video Production”

MT264 MASS COMMUNICATION

Credit: 4:0:0

Unit I Fundamentals of Communication:

Origin of communication, Meaning & Elements/components of human communications; Concept of Communication, Communication as a social, human & universal process; seven C's of Communication, Communication - Objectives, Scope & Functions, Factors responsible for Growing importance of Communication, Effective communication & its Barriers. Functions of Mass Communication: To-Persuade, Inform, Educate, Entertain; Other functions; Impact & Influence of Mass Media

Unit II Process of Communication:

Transmission of ideas, Facts & feelings from one person to another-elements of Communication Process (message, Sender, Encoding, Channel, Receiver, Decoding, Acting & Feedback).Form of Communication: Intra Personal Communication, Interpersonal Communication Group Communication (Public, Crowd, Small Group), Mass Communication

Unit III Theories of Communication:

Hypodermic Needle Theory, Two-step & Multi-step Theory, Commercial Theory, Play Theory Uses & Gratification Theory, Selective Exposure, Selective Perception & Selective Retention Theory, Individual Difference Theory, Meaning of theories based on scientific study & analysis; Four major theories of Press, according to Fred Siebert, Theodore Peterson & Wilbur Schramm Authoritarian Theory, Libertarian Theory, Social Responsibility Theory, Soviet Communist/Workers Theory, Other Theories: Development Media & Democratic Participant Theory

Unit IV Models of Communication:

SMR Model, SMRc Model, Shannon & Weaver Model, Laswell Model, Osgood Model, Dance Model, Schramm Model, Gerbner's Model, New Comb Model, Convergent Model, Gate Keeping Model: Tools of Mass Communication: Newspapers, Magazines, Radio, TV, Films Records Internet, Advertising, Public Relations & Public Affairs, Traditional & Folk Media

Unit V Verbal & Non-Verbal Communication

Universals of Verbal Communication, Meaning & Barriers in Verbal Communication Language, Sub-Language & Culture, Elements of speech communication, on-Verbal behavior as communication, Body communication-Body movement, Facial Communication, Space Communication-Physical environment, Silence, Paralanguage & Temporal communication

Text Books

Mcquail, Dennis, Mass Communication Theories, Sage Publication, 2000
Asa, Berger, Essentials of Mass Communication, Sage Publication, 2000.

MT265 GRAHICS AND ANIMATION

Credit: 3:1:0

Unit I Principle of 2D Graphics

Basic geometric objects, Geometric transformations, Applications of transformations, Animation and movements based on transformations, Interpolators for continuous changes, implementations in Java 2D.Lines and pixel graphics, Structural algorithms, Drawing arbitrary curve, Antialiasing with Java 2D,Areas, texts and colours

Unit II Principles of 3D Graphics

Geometric transformations, Animational moving objects, Projections in Java 3D, modelling 3D objects, Surface modeling, Normal vectors for Java 3D

Unit III Visible Surface Determination

Clipping volumes, Algorithms for visible surface determination, Image precision techniques, Priority algorithms, Illumination and shading: Light sources, Reflections, shadings, textures, textures in Java 3D

Unit IV Special Effects and Virtual Reality

Fog and particle systems, Fog in Java 3D, Dynamic surfaces Interaction, Interaction in Java 3D, Collision detection, Collision detention in Java 3D, Sound effects, Sound effects in Java 3D, stereoscopic viewing

Unit V Introduction to Animation

Homogeneous coordinates and transformation, Description of transformation in the display pipeline, Interpolation-Controlling the motion along a curve, Interpolation of rotations

Text Books

Frank Klawonn, Introduction to Computer Graphics Using Java 2D and 3D, Springer, 2008

References

1. Rick Parent, Computer Animation Algorithms and Techniques, Morgan Kaufmann publishers, 2002
2. James D.Foley, et al Computer Graphics Principles and Practices, Addison Wesley, 1996
3. Peter Shirley, et al, Fundaments of Computer Graphics, AK Peters Ltd, 2005
4. Issac Victor Kerlow, The Art of 3D Computer Animation and Effects, John Wiley, 2004

ADDITIONAL SUBJECTS

| Code | Subject Name | Credit |
|-------------|---|---------------|
| MT218 | Communication Systems II | 4:0:0 |
| MT220 | Web Designing & Production | 4:0:0 |
| MT221 | Multimedia Lab | 0:0:2 |
| 09MT101 | Visual Art Lab | 0:0:2 |
| 09MT201 | Fundamentals of Mass Communication | 3:0:0 |
| 09MT202 | Graphics and Animation Lab | 0:0:2 |
| 09MT203 | Web Designing Lab | 0:0:2 |
| 09MT204 | Audio Engineering And Production | 3:0:0 |
| 09MT205 | Video Production | 3:0:0 |
| 09MT206 | Non Linear Editing | 3:0:0 |
| 09MT207 | Digital Photography | 3:0:0 |
| 09MT208 | Studio Management | 4:0:0 |
| 09VC201 | Dynamics of Visual Communication | 4:0:0 |
| 09VC202 | Computers In Communication Design – I | 4:0:0 |
| 09VC203 | Writing for Electronic Media | 4:0:0 |
| 09VC204 | Fundamentals of Mass Communication | 4:0:0 |
| 09VC205 | Computers In Communication Design – II | 4:0:0 |
| 09VC206 | Visualisation of Commercial Arts | 4:0:0 |
| 09VC207 | Basic Electronics and Computer Hardware | 3:0:0 |
| 09VC208 | Digital Photography | 4:0:0 |
| 09VC209 | Audio Engineering | 4:0:0 |
| 09VC210 | 2D Graphics And Animation | 4:0:0 |
| 09VC211 | Pre Production Techniques | 4:0:0 |
| 09VC212 | Elements of Video Production | 4:0:0 |
| 09VC213 | Media Laws And Ethics In India | 4:0:0 |
| 09VC214 | Non Linear Editing | 0:0:4 |
| 09VC215 | Visual Art Lab | 0:0:2 |
| 09VC216 | Creative Suit - Lab I – Corel Draw | 0:0:2 |
| 09VC217 | Applied Art Lab | 0:0:2 |
| 09VC218 | Creative Suit – Lab II –Photoshop | 0:0:2 |
| 09VC219 | Applied Photography Lab | 0:0:2 |
| 09VC220 | 2D Animation Lab | 0:0:2 |
| 09VC221 | Audio Production Lab | 0:0:2 |
| 09VC222 | Preproduction Technique Lab | 0:0:2 |
| 09VC223 | Video Production Lab | 0:0:2 |
| 09VC224 | Multimedia Lab | 0:0:2 |
| 09VC225 | Video Post Production Lab | 0:0:2 |
| 09VC226 | Web Designing Lab | 0:0:2 |
| 09VC227 | Principles of Web Designing | 3:0:0 |
| 09VC301 | Media Research Methods | 4:0:0 |
| 09VC302 | Dynamics of Visual Communication | 4:0:0 |
| 09VC303 | Elements of Video Production | 4:0:0 |
| 09VC304 | Instructional Design | 4:0:0 |

MT218 COMMUNICATION SYSTEMS II**Credit 4:0:0****Course objective:**

This course is used to understand the theories of transmission lines, electromagnetic energy radiation, antenna coupling, satellite communication and satellite TV, calculate the characteristic impedance, physical and electrical length of antenna system and analyse the importance of impedance matching.

Course Outcome:

Through the lectures and problems solved in this course the students are able to understand transmission lines, antenna coupling, they will be familiar with smith chart and its application, satellite system and its application on TV and radio and identify environmental effects on wave propagation.

Unit I Transmission Lines

Fundamentals of transmission lines – Characteristics impedance – losses in transmission lines – standing waves – quarter and half wavelength lines – reactance properties of transmission lines – fundamentals of the smith chart – application – the double stub – directional couplers – baluns – slotted line

Unit II Radiation and Propagation of waves

Fundamentals of Electromagnetic waves – Effects of the environment - Ground waves – Atmospheric absorption – tropospheric scatter – ionospheric layers – sky waves – skip distance – fading – echo scattering – space waves.

Unit III Antennas

Hertzian dipole – current and voltage distributions – resonant antennas – radiation patterns – length calculations – Antenna gain – effective radiated power – radiation measurement – field intensity – bandwidth – beam width – polarization – effects of ground on antennas – UHF and Microwave antennas – wideband and special purpose antennas.

Unit IV Satellite Communication

Introduction – Satellite communication system – satellite orbits – Basic components of satellite communication – Constructional features – commonly used frequencies – communication package – satellite communication in India

Unit V Direct Broadcast Satellite Television and Radio

C-Band and Ku – Band home satellite TV – Digital DBS TV – DBS-TV system design – DBS – TV link budget – Error control in Digital DBS TV – Master control station and uplink – Installation of DBS- TV antennas – Satellite Radio Broadcasting

Text Book:

1. *Electronic Communication Systems, Kennedy, Davis, Tata McGraw-Hill, (2008)*
2. *Principles of Communication Engineering, Anokh Singh, A.K. Chhabra S.Chand (2004)*

Reference Books:

1. *Satellite Communications*, Timothy Pratt, Bostian, Allnutt, Wiley (2002)
2. *Dennis John Roddy and Coolen, Electronic Communications*, PHI, (1995).
3. *Taub and Schilling – Principles of Communication Systems*, McGraw Hill, (2003).
4. *Communication Electronics*, Deshpande, Deshpande, Rangole (2001)

MT220 WEB DESIGNING & PRODUCTION**Credit: 4:0:0****Course Objective:**

To study the designing style of Web Designing and Production using HTML,XML, and CSS. It gives the basic knowledge about the designing way.

Course Outcome:

Basics of HTML,XML and CSS gives the basic knowledge for the students of construction of Web pages. So it gives an opportunity for the students to be a part of any web team or web designing company.

Unit I

Variables in the web Designing Environment-HTML,XML, and the future of markup languages. XML. an open standard for structuring data- XHTML. The future of HTML. How web browsers affect work-use an HTML Editor-Coding for multiple screen resolutions-Bandwidth Concern. Web Site Design Principles -Design for the medium-Design the whole site-Design for the user-Design for the screen

Unit II

Planning the site-Create a site specification-identify the content goal-analyze your audience-build a web site development team-filenames and URLs – Directory structure- Diagram the site-Planning Site navigation

Unit III

Creating Usable Navigation-Using Text based Navigation –using Graphics-based navigation-Creating page templates-Understanding table basics- Table Pointers-Creating a page template- template examples

Unit IV

Web Typography – type design principles- controlling typography with the font element-controlling typography with Cascading style sheets-Styling with CSS-Graphics and Color- File formats basics- Computer color basics-choosing a graphics tools-Using the IMG elements-working with Hexadecimal colors

Unit V

HTML Frames-understanding Frames-Frame Syntax-Targeting in Framesets-Planning frame Content-Publishing and maintaining your web site-Publishing web site-testing web site-refining & updating content-attracting notice to web site

Text book

1. Joel Sklar, Sklar, *Principles of Web Design, Course Technology; 1 edition (March 13, 2000)*

Reference :

1. Jakob Nielsen, *Designing web usability, The practice of simplicity, New Riders, 1st edition (December 1999).*
2. Deitel and Deitel, *Internet and World Wide Web how to programme, Prentice Hall, (2000).*

MT221 MULTIMEDIA LAB

Credit 0:0:2

Course objective:

To train the students in the area of 2D Animation and its software application. To make the students understand the process of 2d animation production in studios. The students will be trained the area of character designing and concept designing in 2D animation.

List of Experiments:

1. The Pre-production Phase
 - a. The lines
 - b. Basic formation of shapes
 - c. Basic formation of characters
 - d. Head formation
 - e. Expressions
 - f. Character actions
2. Basic animation & principles
 - a. Squash and Stretch
 - b. Follow through and overlapping actions
 - c. Timing
 - d. Exaggeration
3. Character designing
 - a. Concept drawing
 - b. Character creation
 - c. Model sheet
4. Story board
5. Software interface

- a. Screen layout
 - b. Basic drawing tools
 - c. Animating rough blue and planning red
 - d. Setup and Marking menus
 - e. Working with Layers
 - f. Light setup
6. Frame by frame animation
 7. Key frame, Inbetweens & Secondary actions
 8. Tweening
 9. Background & Compositing for animation & Camera movement
 10. Motion guide & Embedding video

09MT101 VISUAL ART LAB

Credit: 0:0:2

Course Objective:

To educate the students in drawing. This subject will enable the students to visualize of their own and will help them to create an appropriate visual through the application of perspective composition and light and shadow.

1. Elements of art
 - a. Line
 - b. Form
 - c. Shape
 - d. Colour
 - e. Space
 - f. Value
 - g. Texture
2. Perspective Drawing
 - a. Foundation
 - b. Basic shapes in perspective
 - c. Linear perspective
 - d. Aerial perspective
 - e. Point perspective
3. Composition
 - a. Light and shadow
 - b. Colour composition
 - c. Proportion
4. Drawing landscapes
5. Drawing still life
6. Drawing animals
7. Drawing birds

8. Drawing objects
9. Drawing architectures
10. Introduction to human figures

09MT201 FUNDAMENTALS OF MASS COMMUNICATION

Credit 3:0:0

Course Objective:

The fundamental of communication which is essential for an administrator or an entrepreneur to excel in his endeavour is outlined in this module. This will make the learner understand the concepts of communication and how effectiveness in oral, written, non-verbal & Mass communication work together to improves the productivity and efficiency of an organization.

Course Outcome:

The knowledge on various modes & use of channels of communication will help the learner to be an efficient manager in his business or job by effectively communicating among his subordinates, Peers, & Supervisors. The barrier & noise distort communication affecting many enterprises, which need to be identified & corrected. This module will help in this direction.

Unit I: Introduction to Communication

The Definition and Nature of communication - Process, Elements & Objectives of communication - Essentials of good communication - 7 Cs of communication - 6Ws & 1H of Communication - Functions and Classification of communication – Communication Noise, Source & Type of noise, Filtering & Distortion of Message, Communication Load. Barrier of Communication – Organizational, Semantic, Personal & Psychological - Overcoming barriers.

Unit II: Oral Communication

Human Language: Para & Sub Language – Principle of effective oral communication - Preparation of speech, Techniques & Guidelines – Interpersonal Communication - Media of oral communication, Style - Advantages & disadvantages of Oral Communication - Importance of listening – Who is a good listener & the reason for poor listening – Barriers to listening, ways for effective listening.

Unit III: Written & Formal Communication

Essentials of written communication – Media of Written communication – Merits & demerits of written communication - Classification and characteristics of formal communication - Downward, upward, diagonal & Horizontal communication channel - Organizational Patterns & Hierarchy of communication - Meaning, Nature, Characteristics and Kind of Feedback – Feedback in oral & written feedback - Effective feedback skills.

Unit IV: Non Verbal & Informal Communication

Meaning, Importance, functions & Forms of NV communication – Body Language - Proxemics, Kinesics, Artifacts, Haptics, & Chromics – Meaning & Nature of Informal Communication – Reasons for informal

communication - Distinctions between formal & informal communication - Rumours & Grapevine - Spread of rumours and control – Merits & demerits of informal communication.

Unit V: Mass Communication

Definition of Mass Communication - Classification of Mass Media – Top 10 Media Outlets - Factors for selecting right media – Advertising & Public Relation – Publicity & Propaganda – Theories & Models of Communication - Magic Bullet Theory, Two Step Theory – Berlo's SMRC Model, Lasswell Model, Gerbners's Model, Gate Keeping Model, Shannon & Weaver Model.

Test Book:

1. Communication by C.S.Rayudu published by Himalaya Publishing House – Edition July 2008.
2. Principles & Practices of Mass Communication by Ved Prakash Gandhi Kanishka Publishers, Distributors, New Delhi – Edition 2007

Reference:

1. Mass Communication in India by Keval J. Kumar published by Jaico Publishing House – Edition 2007

09MT202 GRAPHICS AND ANIMATION LAB

Credit: 0:0:2

Course Objective:

To understand pixel graphics and learn projections, textures, points and polygons, lighting and texture. This will help the students to do real time 3D character animation.

List of Experiments:

1. Implementations in Java 2D.Lines and pixel graphics,
2. Drawing arbitrary curve
3. Projections in Java 3D
4. Textures in Java 3D
5. Drawing points and polygons with open GL
6. Open GL lighting and texture
7. Importing geometry and animation from light wave 3D
8. Importing geometry and animation from 3DS Max

References

1. Lever Nik, Real time 3D Character Animation with Visual C++, Focal Press, 2002.
2. Kelly L.Murdock, 3ds Max 9 Bible, Wiley, 2007
3. Timothy Albee, Essential Light Wave 3D 8, Wordware Publishing, 2005.

09MT203 WEB DESIGNING LAB

Credit: 0:0:2

Course Objective:

To learn creation of web pages, scripting objects, application and special objects. To understand the usage of data bases. The students will be trained to programme ASP and XML.

List of Experiments:

ASP

1. Creation of Simple Web pages.
2. Usage of scripting objects
3. Usage of Application and session objects
4. Adding data entry features
5. Usage of databases in ASP
6. Usage of components in ASP
7. Usage of Cookies in ASP.

XML

8. Creating simple web pages using XML
9. Applying animations and multimedia effects through XML
10. Usage of databases in XML
11. Simple web page using XML
12. Web pages using XSL.

References

1. Richard Anderson, Dan Denault, Brian Francis, ASP 3.0 Programmer's Reference, IDG books India (P) Ltd., 2000.
2. Elliot Rusty Harold, XML Bible", IDG Books India (P) Ltd, 2000.
3. Vivek Sharma, Rajiv Sharma, Developing E-Commerce Sites – An Integrated Approach, Addison Wesley, First Edition, 2000.

09MT204 AUDIO ENGINEERING AND PRODUCTION

Credit :3:0:0

Course Objective:

The students will be taught about Sound and Audio Engineering fundamentals and the techniques involved in Audio production.

Course Outcome: -

This course will enable the students to be creatively and technically aware of the Technologies and Production systems in the Audio Industry.

Unit 1: Sound Theory

Sound waves-Frequency - Wavelength - Amplitude - The velocity of sound waves - Sound waves and obstacles - Diffraction -Units used in sound - Decibels - Inverse Square Law - Effect of Boundaries - The response of the ear - Loudness - Fletcher and Munson Curves - Musical pitch - Timbre - The brain's perception of sound - Frequency ranges in music - Basic Acoustics - Reflection - Absorption - Refraction - Diffraction - Acoustic materials - STC - RT-60 - TL - CD.

Unit II: Analog Audio

Input Transducers - Microphones - Polar responses -Types of Microphones - Production of the different polar responses - Sensitivities of microphones - Phantom power - Balanced wiring - Specific applications of microphones - Reference voltages in audio signals-Metering - Technical monitoring - Aural monitoring - Output Transducers-Loudspeaker - Loudspeaker resonators - Loudspeaker cables - Professional and domestic standards - Stereo - Methods of producing inter - channel differences - Stereo listening-Stereo loudspeaker matching - Phase - Microphone techniques for stereo - Headphones for stereo monitoring.

Unit III: Audio Engineering Fundamentals

Sound mixers - The basic channel - Important features of a mixer - Output stage - Inputs and connections - Filters - Equalizers - Talkback-Manual control of levels - Electronic level control - Signal processors - Dynamic processors - Effect processors - Audio lines and Patch bays - Analog Recording devices and systems - ATR - The fundamentals of magnetic recording - Tape standards - Cassette quality - Head and tape cleanliness - Noise reduction - Multi track systems - Tape speeds - Transport controls - Head alignment - Routing - Recording - Punching - Auto punch - Editing - Basic Analog Mixing.

Unit IV: Digital Audio

Basic Principles – Analog vs Digital – Analog to Digital Converter – Digital to Analog Converter – Application of Digital Audio – Digital audio hardware - formats - Storage medium – Digital mixers – Digital audio workstation –Editing – Mixing - Mastering – Audio Post production for Video.

Unit V: Basics of Live Sound Engineering

Need for Sound Reinforcement - Technology - Basic PA systems - Full Range sound Reinforcement systems - Choice of Equipment - Signal flow - FOH - MOH - Indoor systems - Outdoor Systems - Applications - Safety - Ear safety - Electrical safety - Mechanical safety - Fire safety.

Text Book

1. Michael Talbot-Smith, "Sound Engineering Explained", 2nd Edition, Focal Press, 2002.

Reference Books

1. Ken Pohlmann, "Principles of Digital Audio", 3rd edition, McGraw-Hill, 1995
2. David Simons, "Analog Recording", 3rd Edition, Backbeat Books, 2006.
3. Paul White, "Basic Live Sound", Sanctuary Publications, 2003.
4. F.Alton Everest, "Master Handbook of Acoustics", 4th Edition, McGraw Hill Publishing, 2001
5. Frederick N Martin, John Greer N Clark, "Introduction to Audiology", 9th Edition, Pai and Sons, 2003

09MT205 VIDEO PRODUCTION

Credit 3:0:0

Course Objective:

To provide basic technical knowhow on the working of television receiver, modern video camera and World Television Standards. Besides, the skill required to use the video camera and accessories to produce professional results are also discussed in this curriculum.

Course Outcome:

This module will enable the student to appreciate the functioning of various visual display units in the TV industry and the transmission of analogue & digital television signals over terrestrial & satellite communication systems. The student will also learn choosing & use of video cameras & its accessories for production of TV programme.

Unit I:**Introduction to TV Technology**

Scanning process of a Picture Tube - Progressive & Interlaced scanning - Frame, Field & Line Frequency - Active lines, Kell Factor - Resolution, Bandwidth, Synchronization, Blanking - Horizontal & Vertical Blanking Pulse - Composite Video Signal: Monochrome & Colour - Colour Burst - Construction of Colour Picture Tube - Analogue TV transmission standards - Basic of TV transmitting System & Satellite TV communication - Video Compression Standards, - Modern Visual Display Units- LCD, LED, Projection & DLP.

Unit II:**Introduction to Video Cameras**

Monochrome & Colour Video Camera Tubes - Image Pickup Devices – Photo Emissive & Conduction principles - 3 CCD, CMOS Cameras - Primary & Secondary Colours – Additive & Subtractive Mixing of colours – Hue, Saturation & Luminance – Grassman's Law – Tristimulus values - Visibility Curve of the eye – Characteristic of Sound – Intensity, Frequency Range – Video Storage devices & formats – Recording of Video Signals on Video Tape.

Unit III:**Video Camera & Controls**

Power Supply & Batteries – Electronic View Finder – Readouts given off by a View Finder - Diopter - Aperture – Shutter Speed – Gain Up – Lens – Auto & Manual focus – Manual & powered Zoom – White Balance – Tally Light – Camcorder Controls to Operate Recorder & Playback – Preview – CCU Cable – Audio & Video input/output connectors of a camera.

Image & Audio Quality

Colour Temperature – White & Black Balance – Process & Need – Camera Control Unit – Using Wave Form Monitor & Vector scope for ensuring image quality – Lighting: Available & Artificial - Hard & Soft Lighting – 3 Point Lighting – Contrast Ratio - Direction of light - Filters to alter Image - Built in & External Microphones – Monitoring Tonal Quality – Distortion – External Noise - Head Phones - 2 Channel Audio.

Unit IV:

Video Camera Accessories

Lenses – Normal, Zoom, Telephoto, Wide & Macro – Camera Mounts: Monopod, Tripod, Pan Heads, Dolley, Trolley, Crane, Jimmy Jib, Pedestal, Spreaders – Studio Lights: Soft Light Box, Umbrella, HMI, PAR Cans, Redheads, TOTA, Blondie - Caring for Camera & Lens, Different Types of cameras – Camcorders, Ariel, Underwater, Endoscopic, Lipstick, Time Lapse & High Speed Cameras – Types of Audio & Video cables & connectors.

Unit V:

Creative use of Camera

Composition – Framing - Balance – Perspective - Depth of Field - Rule of Thirds - Camera movement: Tilt, Pan, Tracks, Crane & Zooming - Action Axis Line – Camera Angles - Point of View - Single & Two Shot, Over the Shoulder – Eye Line – Multi Camera Shooting – On line & Off line Editing – Editing Transition & Effects – Vision Mixing.

Prescribed Text Books:

1. *Television Engineering & Video System* by R G Gupta, published by Tata McGraw-Hill Publishing Company Limited, New Delhi, Edition 2007.
2. *Producing Videos - A Complete Guide* by Martha Mollison published by Allen Unwin – South Asian Edition 2007.

09MT206 NON LINEAR EDITING

Credit: 3:0:0

Course Objectives:

1. *To know the different types of editing.*
2. *To understand the terminologies and concepts of Avid video editing software.*
3. *To acquire the editing and titling skills.*
4. *To learn adding special effects and mixing audio with the visuals in Avid.*

Course Outcome:

This 5 units give theory knowledge about Editing software AVID and workings of it. So with the basic knowledge about AVID, in the Video post production lab, This theory knowledge will create background knowledge for editing.

UNIT I

Introduction to Video Editing and Avid

Editing: Definition, Principles, Stages – EDL – Role of Editor – Continuity & Dynamic Editing – Linear & Non-Linear Editing – Physical & Electronic Editing –Control Track & SMPTE Editing – A/B Roll Editing- Introduction to Avid Xpress DV – Hardware and Software Requirements

UNIT II

Terminologies and Recording

Media files, Clips, Sub clips, Sequences, Bins, Projects – Timeline, Effect editor, Effect palette, Composer monitor, Source monitor – Tool palette – Bin Views –Importing, Copying, Moving and Deleting Clips in Bins IEEE 1394 – Selecting Deck/Tape, Target Drives, Audio and Video Channels – Controlling Decks

UNIT III

Editing and Titling

Customizing Monitor Displays – Playing Video in Client Monitor – Loading and Clearing Footage on Monitor – Controlling Playback – Marking and Sub-Cataloging Footage – Setting up a Sequence – Setting up Tracks – Undoing /Redoing Edits – Splice-in Edit & Overwrite Edit – Lifting, Extracting and Copying Segments – Slip Trim & Slide Trim – Finding Frames and Clips Titling: Editing, Removing, Replacing, Fading Titles, Replacing Fill Tracks

UNIT IV

Special Effects

Types of Transition Effects – Single and Multiple Effects (Transition & Segment)– Rendering – Key frameable and Non-Key frameable Effects – Defining Motion Paths using Key frames – Layered Effects – Nested Effects – Key Effects (Chroma, Luma, Matte) Freeze Frame – Variable Speed – Strobe Motion – Reverse Motion

UNIT V

Working with Audio and Exporting

Soloing Audio Tracks – Audio Scrubbing – Audio Effect Tool – Audio Mix Tool –Automation Gain Tool – Adjusting Volume in Timeline – Audio EQ Tool – Audio Suite Plug-Ins Mixing Video Tracks – Recording to Tape – Exporting Formats (MPEG-1, MPEG- 2, QuickTime, DV Stream, OMF)

Text book

1. *Video Field Production and Editing, Sixth Edition, Ronald J. Compessi, San Francisco State University*
2. *Avid Xpress DV User's Guide*

References:

Avid Xpress DV Effects Guide

09MT207 DIGITAL PHOTOGRAPHY**Credit: 3:0:0****OBJECTIVES:**

- To understand elements of **Photography**.
- To understand the Techniques **Photo Composition**
- To learn the **Digital Photography**
- To learn the **Applications and Areas of Photography**
- To understand **Digital Studio** and Commercial projects

OUTCOMES:

In order to assess the student's progress towards achieving the Learning Outcomes, a number of activities/ photography assignments may be assigned periodically. The students may be asked to apply the knowledge of all the concepts, methods, elements of photography and make them to demonstrate/take photograph and recoded it the same may be presented and analyzed. Make the student to apply all the components of this syllabus in various activities, finally all the works done by the student to be exhibited/performed and each student to be ranked by the instructor.

UNIT I**INTRODUCTION TO PHOTOGRAPHY**

Define Photography. Brief History and Development of Photography. Camera –Types- Usage. Lens-Types- Usage. Lights-Types- Usage. Filters –Types- Usage. Film – Types. Film- Speed and Size. Tripod –Types- Usage. Light Meter- Usage. Flash- Types-Usage- Electronic Flash – Selection of Right Flash Mode. Other Useful Accessories.

UNIT II**PHOTO COMPOSITION**

Basic Techniques for Better Image. Aperture-Usage. Shutter- Speed- Usage. Depth of Field. Focal Length. Basic Lighting- Key Light-Fill Light. Low Key and High Key Picture. Rule of Third. Angle of View. Picture Format.

UNIT III**INTRODUCTION TO DIGITAL PHOTOGRAPHY**

Define -Digital- Digital Still Camera. Digital SLR Camera – Types. Working with Digital Camera – Major Components and Functions, Camera Operation, Mode, Advantages. Setup for Digital Imaging- Windows and Macintosh. Desktop Computer Components- Data Storage and Transfer Options. Software for Digital Processes(Digital Dark Room) -Image Editor- File Formats –Converters. Working with

Scanner -Types - Scanning Techniques- Film Scanning. Photo Printers- How Printer works- Photo Quality. Printing Paper-Types

UNIT IV

AREAS OF PHOTOGRAPHY

Portrait-Architecture- Product- Fashion-Travel-Environmental –Action –Aerial-Macro-Panoramic-Sports-Indoor/Outdoor.

UNIT V

DIGITAL STUDIO

Photography Project, Assignments. Photo Power Point Presentation, Photo Documentary. Photo Essay. Small Budget Studio-Design, Equipments and Budget. Corporate Studio- Design, Equipments and Budget. Popular Photography Websites. Creating Photography Website. Connecting Images for Internet Use.

Text Book:

1. *Mastering Digital Photography and Imaging* (2001) – Peter K Burian – Publisher Sybex.USA. First edition.
2. *The Manual of Photography* (2000) by Ralph E Jacobson/Geoffrey G Attridge/Sidney F Ray,Focal Press, Ninth Edition.

Reference Book:

1. *The Basic Book of Photography* (Fourth Edition) by Tom Grimm and Michele Grimm
2. *Mastering the Basics of Photography* by Susan McCartney
3. *The Photographer's Handbook*. 1999 by John H edgecoe. Alfred A.Knopf Publisher,.
4. *Interior Shots* .2002. by Roger Hicks and Frames Schultz, Rotovision, Switzerland.
5. *Understanding Digital Photography* by Joseph A . Ippolito, Thomson Delmar Learning, 2003.USA.
6. *Digital Portrait Photography and Lighting: Take Memorable Shots Every Time 2005*. by Catherine Jamieson/ Sean McCormick -Publisher: Wiley Jamieson and McCormick. London .

09MT208 STUDIO MANAGEMENT

Credit 4:0:0

Course Objective:

To brief learners on the concept of various broadcast & non-broadcast studios for Radio & Television. To describe the designing & construction of studios, infrastructure such as lighting, power & air-conditioning, requirement of Audio, Video, Graphic, Storage & Broadcast equipments. Manpower and budget to run the studio are also explained.

Course Outcome:

Knowledge gained in this module will help the candidate to design, build & operate a broadcast or non-broadcast studio, taking care of intricate details. They will be able to manage the men, material & time efficiently to bring out a video programme and budget it economically. The learner will be able to

choosing the right technical equipments for each department and maintain them for skillful functioning of the studio.

Unit I: Essentials of a studio

Perception of a studio – Audio, Video, Modeling studios – Broadcast & Non Broadcast studio – Designing & constructing a studio – Layout – Infrastructural requirements of an ideal studio – Norms for planning Power, House Lighting, Air-conditioning & Data communication - Sound Proofing Techniques – Crafting a Shooting floor: Stage, Set, Blue/Green Screen, & Virtual studio – OB Van – Insight into Indian & Inter nation studios.

Unit II: Budgeting & Staffing

Scope for generating Income for a broadcast & non-broadcast studio – cost of operating & maintaining a studio – Budgeting for and marketing a TV program / Music Recording – Staff pattern & hierarchy in a mid & large size BS / NBS studio – Roles and responsibilities of creative & non creative staff : Administrative, Technical, Supervisory, Cast, Crew & Talents.

Unit III: Technical Gear requirement & Usage

Equipment for Audio: Different types of microphones, stand, cable, connectors, monitors, mixers, compressors, expanders, amplifiers, liner & non liner recorders. Video equipments: Cameras, Lens, Filters, Camera mounts, Cables, Connectors, CCU, WFM, Vector scope, Vision Mixer, Router switch – Patch Bay Monitors - Recording Medium & Formats - Liner & Non Liner Recorders – CAR Room - Studio Lighting Equipments: Studio Lights, Grid, Mounts, Accessories, Lighting Controls.

Unit IV: Recording & Post Production

Pre-shoots Technical Checks in Hot studio – Rehearsal & Blocking Technique – Set Etiquettes & Studio Procedure – Establishing Communication & Talkback system – Studio Calls - Shooting Floor & Control Room Dialogue – Non Verbal Cues during shoot - Audience Management – Stagecraft & Show Control - Graphic Station - AVG Chain from Studio to Storage - Tape & E-Library - Hardware & Software for Audio & Video NLE - Basic Transmission Equipments.

Unit V: Fire, Safety, Security & Legal Issues

Work Place Conditions - Fire Hazard & Risk Assessment – Prevention of Fire - Chemical Fire Extinguishers & Fire Fighting Methods - Electrical Shock – Means to prevent electricity related accidents – Medical Emergency & First Aid – Screening Audience for Security – Preventing Theft & Pilferage – Insurance Cover for Men, Material, Building and Vehicles - Mandatory Government Licenses for filming & broadcasting – Intellectual Property Right – Film Trade Unions – Crew Protocol - Contracts, Bonds & Agreements of Cast & Talents.

Text Books:

1. *Producing Videos - A Complete Guide by Martha Mollison published by Allen Unwin – South Asian Edition 2007.*

Reference Book:

1. *Film Production Management* by Bastian Cleve, published by Focal Press, Edition 2007.
2. *Studio management – Manual*, prepared by Tony M.Jawahar(E&MT-KU)

09VC201 DYNAMICS OF VISUAL COMMUNICATION

Credit 4:0:0

Course Objective:

- *To understand visual and visual communication fundamentals.*
- *To understand the principles of Principles of visual media communication*
- *To learn the **Visual Application** and visual design*
- *To understand **Visual language and culture***
- *To understand **important perspectives***

Course Outcome:

In order to assess the student's progress towards achieving the Learning Outcomes, a number of activities may be assigned periodically. The students may be asked to apply the knowledge of all the concepts, methods, elements of visuals and make design, programme to present and analyze the design. Make the student to apply all the components of this syllabus in various activities, Finally all the works done by the student (like design, models, any activity related to syllabus) to be exhibited and each student to be ranked by the instructor.

UNIT I INTRODUCTION TO VISUAL COMMUNICATION

Historical Development - Conceptual development - Visualisation process
Visualisation environment- Tools for visualization- Sensual and perceptual theories

UNIT II VISUAL MEDIA

Principles of visual media communication -Video medium Non Projected audio visuals -Scientific visual media Creative visualization

UNIT III VISUAL APPLICATION

Rendering and rasterisation -Visual perception -Information design Communication design -Graphic design -Cartoons

UNIT IV VISUAL LANGUAGE AND CULTURE

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.

UNIT V SIX IMPORTANT PERSPECTIVES

Image Analysis -Typography -Graphics design - Informational Graphics - Cartoon -Photography - Motion pictures Television and video -Computer graphics -World Wide Web

Text Book:

1. Visual communication images with messages by Paul Martin Lester (2008) Wordsworth – United States

REFERENCE:

1. Paul Martin, Visual communication (2008) Global Vision Publishing House – New Delhi.
2. Pradeep Mandav, Visual Media Communication (2001) – Authors Press – New Delhi

09VC202 COMPUTERS IN COMMUNICATION DESIGN – I**Credit 4:0:0****Course Objective:**

This course is useful for students

- To understand history software and hardware of computers
- To gain knowledge in communication design
- To understand the basic concepts of MS Office its applications and basics and features of Corel Draw

Course Outcome:

The students will have a sound knowledge on computers and its application such as MS- Office and Corel Draw

UNIT I Introduction to computers

History and generation of computers - Basics of computers -Hardware & Software - Operating systems. Multimedia – evolution, applications and advantages, hardware & software requirements. Application of computers in the media industry. DTP (Desk Top Publishing).

UNIT II Communication Design

Definition, nature & scope. Elements of design; Principles of design: Unity, balance, rhythm, proportion, movement ; Language of design: white space, fonts, pictures, page layout and design. Principles of design, Design process, Role of computers in designing. Fundamentals of layout- text & visuals, typography and drawing programs, working with colors.

UNIT III MS Office and its applications

MS Word – tools, word processing techniques, MS Excel – features & utility- PowerPoint- features & advantages. Quark Xpress – features, tools & applications. PageMaker- working with text, working with graphics & formatting. Differences in features of Quark Xpress and Page Maker.

UNIT IV Corel DRAW basics

Vector graphics and bitmaps - starting and opening drawings - finding content - acquiring images from scanners and digital cameras - undoing, redoing, and repeating actions - adding and accessing drawing information - zooming, panning, and scrolling - previewing a drawing - choosing viewing modes - working with views - backing up and recovering files - saving drawings - exploring basic tasks.

UNIT V Corel Draw- features

Corel Draw- features & tools, working with vector/raster images, special effects and other supporting components of CorelDraw - Corel DRAW workspace - Application window - Workspace tools - Standard toolbar - Exploring the toolbox .

Text Book:

1. *MS Office – Bible, Edward Willet, IDG Books, 2000*
2. *Corel Draw for Dummies, Deke Mc Celland, IDG Books, 1997*

REFERENCES :

Designing Effective Communications (2001): Creating Contexts for Clarity And Meaning .by Jorge Frascara (Editor) Publisher: Allworth Press.U.S.A. First edition

09VC203 WRITING FOR ELECTRONIC MEDIA

Credit4:0:0

Course Objective:

To introduce the students to the technique and aesthetics of writing for different forms of electronic media programmes.

Course Outcome:

Here the students learn the technique and aesthetic in writing for TV, Radio, and Internet. This helps in the other course that is related to productions stages.

Unit – I

Idea Vs Media, developing ideas and conceptualization, Presentation - instruction, mood and experience. Writing the script for electronic media - Ground rules for writing for different time chunks; afternoon programme, prime time programme, late night programme.

Unit –II

Spoken language writing -Writing for radio and TV commercials and announcements, Writing to inform, script format. News report, News writing, writing headlines, writing for radio commentary

Unit – III

Writing for both radio and TV - Features and documentaries, talk programmes, Writing jingles and radio commercial – Idea – Strategy – Brand Positioning – Preparing Creative blue print, to use celebrities – voice – over, narration, and using music. Interview/Discussions, corporate programmes, variety and comedy - for special audiences: programme for children, Women, farmers and Youth - script design, voiceover and narration.

Unit – IV

Writing for TV - commercials, serials, soap operas, other genres, big idea, TV spot techniques Idea presentation, treatments, Scripting, storyboard, terms used for camera movement and editing. Tele Writing scripts for TV Commercials – format for TV Commercials – preparing the story board and art direction.

Unit – V

Play writing - Narrative structure, conflict and resolution. Characterization, Structure variation, scenes and sequences, shot breakdown and film genre. Writing, treatment, script and its formats and storyboard. Production problems.

Text Book:

1. *Screen Writing for narrative Film and Television - William Miller - Columbus books – London - 1989.*
2. *Film Script Writing - Dwight Swan - Hastings House - New York -1976.*

Reference:

1. *Script Writing for Video and Audio media - Dwight Swan - Hastings House - New York -1976.*
2. *Video Script Writing - Barry Humps - Penguin U.S.A Inc - 1993.*
3. *Screenplay -The Foundations of Screen Writing - Syd Field - Dell Publishing Co.,*

09VC204 FUNDAMENTALS OF MASS COMMUNICATION

Credit 4:0:0

Course Objective:

The fundamental of communication which is essential for an administrator or an entrepreneur to excel in his endeavour is outlined in this module. This will make the learner understand the concepts of communication and how effectiveness in oral, written, non-verbal & Mass communication work together to improves the productivity and efficiency of an organization.

Course Outcome:

The knowledge on various modes & use of channels of communication will help the learner to be an efficient manager in his business or job by effectively communicating among his subordinates, Peers, & Supervisors. The barrier & noise distort communication affecting many enterprises, which need to be identified & corrected. This module will help in this direction.

Unit I: Introduction to Communication

The Definition and Nature of communication - Process, Elements & Objectives of communication - Essentials of good communication - 7 Cs of communication - 6Ws & 1H of Communication - Functions and Classification of communication – Communication Noise, Source & Type of noise, Filtering & Distortion of Message, Communication Load. Barrier of Communication – Organizational, Semantic, Personal & Psychological - Overcoming barriers.

Unit II: Oral Communication

Human Language: Para & Sub Language – Principle of effective oral communication - Preparation of speech, Techniques & Guidelines – Interpersonal Communication - Media of oral communication, Style - Advantages & disadvantages of Oral Communication - Importance of listening – Who is a good listener & the reason for poor listening – Barriers to listening, ways for effective listening.

Unit III: Written & Formal Communication

Essentials of written communication – Media of Written communication – Merits & demerits of written communication - Classification and characteristics of formal communication - Downward, upward, diagonal & Horizontal communication channel - Organizational Patterns & Hierarchy of communication - Meaning, Nature, Characteristics and Kind of Feedback – Feedback in oral & written feedback - Effective feedback skills.

Unit IV: Non Verbal & Informal Communication

Meaning, Importance, functions & Forms of NV communication – Body Language - Proximix, Kinesics, Artifacts, Haptics, & Chromics – Meaning & Nature of Informal Communication – Reasons for informal communication - Distinctions between formal & informal communication - Rumours & Grapevine - Spread of rumours and control – Merits & demerits of informal communication.

Unit V: Mass Communication

Definition of Mass Communication - Classification of Mass Media – Top 10 Media Outlets - Factors for selecting right media – Advertising & Public Relation – Publicity & Propaganda – Theories & Models of Communication - Magic Bullet Theory, Two Step Theory – Berlo's SMRC Model, Lasswell Model, Gerbners's Model, Gate Keeping Model, Shannon & Weaver Model.

Test Book:

1. *Communication* by C.S.Rayudu published by Himalaya Publishing House – Edition July 2008.
2. *Principles & Practices of Mass Communication* by Ved Prakash Gandhi Kanishka Publishers, Distributors, New Delhi – Edition 2007

Reference:

1. *Mass Communication in India* by Keval J. Kumar published by Jaico Publishing House – Edition 2007

09VC205 COMPUTERS IN COMMUNICATION DESIGN – II**Credit 4:0:0****Course Objective:**

- To understand the workings of image editing.
- To identify the application of Photoshop software.
- To learn the application of design, colour, and light & shadow in image editing.
- To learn the techniques of photoshop in image editing

Outcome:

Students should be equipped with photoshop application so that they may be able to edit the image appropriately. The important component of this programme is to enrich the knowledge of photoshop in image editing.

UNIT I DESIGN PROCESS

Conceptualization, stages involved; types of design; creativity in design; traditional and modern designs – technology in designing. Text and Images: typography- styles and features, application and techniques in design; Colour in design: colour theory, colour combinations, colours and meanings, psychology of colours, Logo design, illustration techniques, design and composition.

Unit II INTRODUCTION TO DIGITAL IMAGING

Define Photoshop. Photoshop Workspace. Palettes, Buttons. Choosing Color, Brush Shape. Operations and Usage of Tools- Pencil Tool, Paint Brush Tool, Air Brush Tool, Text Tool, Paint Bucket Tool, Gradient Tool, Smudge Tool, Focus Tool, Toning, Eye Dropper, Zoom Tool, Morgue Tool, Lasso Tool. Magi Wand.

Unit III DIGITAL IMAGE MANIPULATION

Features of Photoshop – Image editing – image selection – image resizing – image manipulation - Art Marks, Art Layers, Layer Mark, Create Layer, Fill Tool, Trashcan, Cloning, Clone Align, Art Filter, Plug ins, Rule of Thumb, Kerning, Leading. Digital Image on Various Media.

UNIT IV DIGITAL IMAGING TECHNIQUES

Working with layers – masking – filters – text editing – background – fore ground – colour palette selection – histogram in photographs – hue – saturation – value – modes & adjustments – saving files - Digital Image, Types, File Formats, Digital Inputs, Digital Workflow -Digital Press, Digital color Process

UNIT V ADOBE PHOTOSHOP ADVANTAGES

Photoshop Short cut keys and menus.

TEXT BOOKS:

1. *Dynamic Learning: Photoshop CS3* By Jennifer Smith, Aquent Graphics Institute (AGI) - July 2007
2. *Photoshop CS3 Photographer's Handbook* By Brad Hinkel, Stephen Laskevitch - July 2007

09VC206 VISUALISATION OF COMMERCIAL ARTS

Credit 4:0:0

COURSE OBJECTIVES:

1. To understand elements of visualization.
2. To understand the Process of **Visualisation**
3. To learn the **Applications** Commercial arts
4. To learn the **Layout Design**
5. To understand **Computers in Commercial Production**

COURSE OUTCOMES:

In order to assess the student's progress towards achieving the Learning Outcomes, a number of activities may be assigned periodically. the students may be asked to apply the knowledge of all the concepts , methods, elements of visuals and make design, programme to present and analyze the design. Make the student to apply all the components of this syllabus in various activities, Finally all the works done by the student (like design , models, any activity related to syllabus) to be exhibited and each student to be ranked by the instructor.

UNIT – I VISUALISATION

Mass media and creative – Creativity in Production – Need for Visualization – definition and elements of visualization-visual persuasion in advertising

UNIT- II PROCESS OF VISUALISATION

Creative process: Orientation, Preparation, Analysis, Ideation, Incubation, Synthesis, Evaluation – creative inputs – issues of plagiarism in creative production.

UNIT – III COMMERCIAL ARTS

Commercial art Vs Fine art – Fundamental elements of design – Line, Color, Texture, Shape, Size, Space – Design principles – Balance, Proportion, Sequence, Unity, Emphasis, Tension and surprise- application of creativity in designing.

UNIT – IV LAYOUT DESIGN

Structuring of message- Choosing a basic design, Layout - Steps in designing, Working with copy and visuals – Camera ready pages – Designing software.

UNIT – V COMPUTERS IN COMMERCIAL PRODUCTION

Managing cost and quality in commercial production – material inputs – Black and white and color – Pantone color matching system – Artist’s tool kit – Computer applications in creative industries.

Text Book:

1. *Richard Schlemmer. Handbook of Advertising Art Production, Prentice Hall, New York*

REFERENCE:

1. *Paul martin lester. ‘visual communication. wadsworth, Australia.2000.*
2. *Frank Ramano et al. Encyclopedia of Graphic Communication. Prentice Hall. NY. 1998.*

09VC207 BASIC ELECTRONICS AND COMPUTER HARDWARE**Credit 3:0:0****Course Objective:**

1. *To provide a thorough discussion of the fundamentals of computer architecture and basic electronics.*
2. *To discuss in detail the operation of the control unit and arithmetic operations.*

UNIT-I: Semiconductors

Semiconductor Theory: Introduction to semiconductor-energy band description of semiconductor-types of semiconductor (intrinsic and extrinsic)-p-n junction and its properties.

Semiconductor Devices: Semiconductor diode - p-n junction diode – photo diode and Zener diode.

UNIT - II: Transistors

Transistor: Basic operation and characteristics of Junction FET- characteristics of MOSFET– Enhancement MOSFET, Depletion MOSFET – Comparison of JFET and MOSFET.

Unit - III: Digital Systems

Number system – Boolean algebra – logic gates – semiconductor memory – Microprocessor. simplification of logic functions using karnaugh map.

Unit – IV Computer Hardware

Basic structure of computer hardware – Von Neumann Architecture – functional units – Instruction Formats and Instruction Types – Addressing Modes.

Unit – IV Arithmetic And Logic Unit

Fixed point arithmetic operation – addition, subtraction, multiplication, division – floating point arithmetic operation.

Text books

1. Robert Boylestad, “Electronic Devices & Circuit Theory”, Sixth Edition, PHI, 2001.
2. William Stallings, “Computer Organization & Architecture”, Sixth Edition, Pearson education.

Reference Books

1. Puri V.K., “Digital Electronics”, TMH, 1997.
2. John P.Hayes, Computer Organization and Architecture, McGraw Hill, Third Edition.
3. Floyd, “Digital Fundamentals”, PHI, 9th edition 2006.

09VC208 DIGITAL PHOTOGRAPHY

Credit 4:0:0

OBJECTIVES:

- To understand elements of **Photography**.
- To understand the Techniques **Photo Composition**
- To learn the **Digital Photography**
- To learn the **Applications and Areas of Photography**
- To understand **Digital Studio** and Commercial projects

OUTCOMES:

In order to assess the student’s progress towards achieving the Learning Outcomes, a number of activities/ photography assignments may be assigned periodically. The students may be asked to apply the knowledge of all the concepts, methods, elements of photography and make them to demonstrate/take photograph and recoded it the same may be presented and analyzed. Make the student to apply all the components of this syllabus in various activities, finally all the works done by the student to be exhibited/performed and each student to be ranked by the instructor.

UNIT I INTRODUCTION TO PHOTOGRAPHY

Define Photography. Brief History and Development of Photography. Camera –Types- Usage. Lens-Types- Usage. Lights-Types- Usage. Filters –Types- Usage. Film – Types. Film- Speed and Size. Tripod –Types- Usage. Light Meter- Usage. Flash- Types-Usage- Electronic Flash – Selection of Right Flash Mode. Other Useful Accessories.

UNIT II PHOTO COMPOSITION

Basic Techniques for Better Image. Aperture-Usage. Shutter- Speed- Usage. Depth of Field. Focal Length. Basic Lighting- Key Light-Fill Light. Low Key and High Key Picture. Rule of Third. Angle of View. Picture Format.

UNIT III INTRODUCTION TO DIGITAL PHOTOGRAPHY

Define -Digital- Digital Still Camera. Digital SLR Camera – Types. Working with Digital Camera – Major Components and Functions, Camera Operation, Mode, Advantages. Setup for Digital Imaging- Windows and Macintosh. Desktop Computer Components- Data Storage and Transfer Options. Software for Digital Processes(Digital Dark Room) -Image Editor- File Formats –Converters. Working with Scanner -Types - Scanning Techniques- Film Scanning. Photo Printers- How Printer works- Photo Quality. Printing Paper-Types

UNIT IV AREAS OF PHOTOGRAPHY

Portrait-Architecture- Product- Fashion-Travel-Environmental –Action –Aerial-Macro-Panoramic-Sports-Indoor/Outdoor.

UNIT V DIGITAL STUDIO

Photography Project, Assignments. Photo Power Point Presentation, Photo Documentary. Photo Essay. Small Budget Studio-Design, Equipments and Budget. Corporate Studio- Design, Equipments and Budget. Popular Photography Websites. Creating Photography Website. Connecting Images for Internet Use.

Text Book:

1. *Mastering Digital Photography and Imaging (2001)* – Peter K Burian – Publisher Sybex.USA. First edition.

REFERENCE:

1. *The Manual of Photography (2000)* by Ralph E Jacobson/Geoffrey G Attridge/Sidney F Ray,Focal Press, Ninth Edition.
2. *The Basic Book of Photography (Fourth Edition)* by Tom Grimm and Michele Grimm
3. *Mastering the Basics of Photography* by Susan McCartney
4. *The Photographer's Handbook.* 1999 by John H edgecoe. Alfred A.Knopf Publisher,.
5. *Interior Shots .2002.* by Roger Hicks and Frames Schultz, Rotovision, Switzerland.
6. *Understanding Digital Photography* by Joseph A . Ippolito, Thomson Delmar Learning, 2003.USA.
7. *Digital Portrait Photography and Lighting: Take Memorable Shots Every Time 2005.* by Catherine Jamieson/ Sean McCormick -Publisher: Wiley Jamieson and McCormick. London .

09VC209 AUDIO ENGINEERING

Credit 4:0:0

Course Objective:

The students will be taught about Audio related Engineering fundamentals and the techniques involved in Audio production.

Course Outcome

This course will enable the students to be creatively and technically aware of the Technologies and Production systems in the Audio Industry.

Unit I: Analog Audio

Input Transducers - Microphones - Polar responses - Types of Microphones - Production of the different polar responses - Phantom power - Balanced wiring - Specific applications of microphones - Reference voltages in audio signals - Technical monitoring - Aural monitoring - Output Transducers - Loudspeaker - Professional and domestic standards - Methods of producing inter - channel differences -Stereo loudspeaker matching - Phase - Microphone techniques for stereo - Headphones for stereo monitoring.

Unit II: Audio Engineering Fundamentals

Sound mixers - The basic channel - Important features of a mixer - Output stage - Inputs and connections - Filters - Equalizers - Shelving EQ - Semi parametric Eq - Parametric EQ-Graphic EQ - Paraphraphic EQ – Talkback - Manual control of levels - Electronic level control - Signal processors - Dynamic processors - Compressor - Limiter - Expander - Gate - Multiband compressor - Sidechain - Effect processors - Reverb - Delay - Chorus - Phaser - Flanger - Audio lines and Patchbays.

Unit III: Analog Recording

Objectives and problems in recording - Analog Recording devices and systems - ATR - The fundamentals of magnetic recording - Tape standards - Cassette quality - Head and tape cleanliness - Noise reduction - Two track systems - Multi track systems - Tape speeds - Transport controls - TTL - Head alignment - General Maintenance - Routing - Recording - Punching - Auto punch - Editing - Basic Analog Mixing.

Unit IV: Basics of Live Sound Engineering

Need for Sound Reinforcement - Technology - Basic PA systems - Full Range sound Reinforcement systems - Choice of Equipment - Signal flow - FOH - MOH - Indoor systems - Outdoor Systems - Applications - Safety - Ear safety - Electrical safety - Mechanical safety - Fire safety.

Unit V: Digital Audio

Basic Principles – Analog vs Digital – Analog to Digital Converter – Digital to Analog Converter – Application of Digital Audio – Digital audio hardware - formats - Storage medium –

Digital mixers – Digital audio workstation –Editing – Mixing – Mastering – Audio Post production for Video.

Text Book

1. Michael Talbot-Smith, “Sound Engineering Explained”, 2nd Edition, Focal Press, 2002.

Reference Books

1. Ken Pohlmann, “Principles of Digital Audio”, 3rd edition, McGraw-Hill, 1995
2. David Simons, “Analog Recording”, 3rd Edition, Backbeat Books, 2006.
3. Paul White, “Basic Live Sound”, Sanctuary Publications, 2003.

09VC210 2D GRAPHICS AND ANIMATION

Credit 4:0:0

Course Objective:

To learn the animation techniques. To make the students understand about the 2D animation production. To learn the types of animation compositing techniques and post production in 2D animation

Unit I : Types of Animation.

Types of animation: Traditional Animation – Cell Animation, Clay Animation , Stop motion Animation , Cutout Animation , Computer Generated Animation – 2D Animation Vs 3D Animation - Styles of animation – Principles of animation.

Unit II : Different Animation Styles.

Disney animation – Japanese animation – Russian animation – Comparative study of different animation styles – basic anatomy – proportions – staging – posing – timing – actions

Unit III : Preproduction

Scripting – storyboard screen play – timing – duration – Character design – Turn around – colour schemes – attitudes – props. Tools for 2D animation : Colour keys – background – layout – source of light – styles – paper sources – paper quality.

Unit IV : Software interface

Creating a document – creating accessible flash content - writing scripts – creating an application – working with layers – layout tools – drawing – creating symbols – adding animation and navigation – adding text – creating timeline action.

Unit V : Compositing

Special Effects – Foley – sound design – software packages – US animation – Flash animation – animation pass – compositing animation actions – compositing backgrounds – scanning images – compositing cels – compositing objects.

Reference Book:

1. *The Animator's Workbook: Step-By-Step Techniques of Drawn Animation [ILLUSTRATED]* (Paperback) by Tony White
2. *Timing for Animation* (Paperback) by Harold Whitaker, John Halas
3. *Cartoon Animation (The Collector's Series)* (Paperback) by Preston Blair
4. *Character Animation: 2D Skills for Better 3D*, Steve Roberts, Focal press, Second edition 2007.

09VC211 PRE PRODUCTION TECHNIQUES

Credit 4:0:0

Course Objective:

To learn pre production techniques in film production. To learn the art of script preparation. To create the concept for a production. Knowing the process of video production techniques and the various script formats.

Unit-I Basic - concept making

Idea-seed of the programme-creative inspiration-visual thinking-discussion with team-format of the programme-types of formats like-news- documentaries-interview-TV programme-ads-commercial-special programmes- daily soaps.

Unit II Basic elements in script

Script-visual writing-budget-target audience-steps of developing concept- plot-story-character-dialogue script formats –proposal-treatment-develop steps in script writing.

Unit- III Basic production technique

Basic shot ,angles& camera movements-introduction -lighting and colors-single camera –multi-camera production-indoor studio-outdoor -properties.

Unit IV Steps in pre production

Shooting script-story board-scene-sequence break up-character –main character-relief character-subsidary character-character introduction important of dialogues-dialogue writing - dramatic points in the story-twist in plot.

Unit-V Various script formats

Script writing- various formats –news-TV programme-ads-proms-commercial-special programme- daily soaps—documentaries-interview-film.

Text books

1. Antony Friedman” writing for visual media”-focal press
2. John Hart “the art of the story board”-focal press

Reference books

1. Dwight V Swain “film script writing”-focal press
2. Martha Mollison ” producing videos”-focal press

09VC212 ELEMENTS OF VIDEO PRODUCTION**Credit 4:0:0****Course Objective:**

- To understand the aesthetics of video production
- To identify the elements of shot.
- To learn the camera options and production techniques.
- To understand the continuity of shots
- To learn the editing principles

Outcome:

Students should be equipped with the video production skills so that they may be able to direct the production. The important component of this programme is to impart the aesthetics of film direction so that the student become capable of producing a show effectively.

UNIT I INTRODUCTION TO VIDEO EQUIPMENTS

DIGITAL VIDEO CAMERA – TYPES OF VIDEO CAMERAS – FORMAT – MAJOR ACCESSORIES – CAMERA FORMATS – CAMERA OPERATIONS AND FUNCTIONS – APERTURE – SHUTTER – WHITE BALANCE – FOCUSING METHODS - FOCAL LENGTH – DEPTH OF FIELD – VIDEO SIGNAL – VIDEO FORMAT.

UNIT II THE SHOT

ELEMENTS OF THE SHOT: THE SHOT – DEFINITION. MISE-EN-SCENE: ASPECTS OF MISE-EN-SCENE – LIGHTING IN A SHOT – SETTING ASPECT IN A SHOT – CHARACTER EXPRESSION AND MOVEMENT – COSTUME AND MAKEUP OF THE CHARACTER - THE REALISM OF MISE-EN-SCENE – THE POWER OF MISE-EN-SCENE – TIME AND SPACE IN MISE-EN-SCENE

UNIT III THE PRODUCTION

CINEMATOGRAPHY PROPERTIES – BASIC TYPES OF SHOT - CAMERA MOVEMENT – CAMERA FRAMING – CAMERA ANGLE – DURATION OF THE SHOT – LONG TAKE. LIGHTING FOR A SCENE – COLOUR TEMPERATURE – DOLLY – TROLLEY – GRIPS AND CAMERA ACCESSORIES – TRIPOD – MONTAGE – LIGHTING EQUIPMENTS.

UNIT IV TYPES OF PRODUCTION

SINGLE CAMERA PRODUCTION: THE SHOT, SCENE, SEQUENCE, STORY BOARD TYPES OF SCRIPT, LOCATION SCOUTING - THE PRODUCTION PHASE. MULTI CAMERA PRODUCTION – REHEARSAL – FLOOR MANAGER - THE CREW – DIRECTOR, CAMERAMAN, SCRIPT WRITER, LIGHTING DIRECTOR, ART DIRECTOR, MUSIC DIRECTOR, GAFFER, PRODUCTION ASSISTANT, ETC.,- DOCUMENTARY PRODUCTION – SHORT FILM PRODUCTION – ELECTRONIC FIELD PRODUCTION – TALK SHOWS- INTERVIEWS.

UNIT IV UNDERSTANDING THE POST PRODUCTION

ONLINE PRODUCTION – OFFLINE PRODUCTION – THE EDL – DIMENSIONS OF EDITING – SPATIAL – RHYTHMIC – GRAPHIC – TEMPORAL EDITING - CONTINUITY EDITING. DIMENSIONS OF FILM SOUND – VOICE OVER – DUBBING – RE-RECORDING – TITLING – ADDING SPECIAL EFFECTS.

TEXT BOOKS:

1. *DIGITAL CINEMATOGRAPHY – PAUL WHEELER, FOCAL PRESS – 2001*
2. *FILM ART – DAVID BOARDWELL – THIRTEENTH EDITION*

REFERENCE BOOK

1. *VIDEO PRODUCTION TECHNIQUES – ZETTL - 2002*

09VC213 MEDIA LAWS AND ETHICS IN INDIA

Credit 4:0:0

COURSE OBJECTIVES:

- *To understand Overview of the Indian constitution.*
- *To understand the Media Laws In India*
- *To learn the Civil And Criminal Laws related to Media*
- *To understand the Broadcasting Code And Ethics*
- *To understand the cyber laws in India*

COURSE OUTCOMES:

In order to assess the student's progress towards achieving the Learning Outcomes, a number of activities/assignments/face-to-face with advocates may be assigned periodically. The students may be asked to apply the knowledge of all the concepts, methods, and make them to discuss and record it the same programme may be presented and analyzed. Make the student to apply all the components of this syllabus in various activities, finally all the works done by the student to be exhibited/performed and each student to be ranked by the instructor.

UNIT I: INDIAN CONSTITUTION

Overview of the Indian constitution, Fundamental Rights, Duties of citizens, Directive principles of state policy, Functions of Executive, Judiciary, Legislative, Powers and Privileges of Parliament, Provisions for declaring Emergency, Provision for amending the constitution, freedom of the press and restrictions there upon, Centre-state relations

UNIT II: MEDIA LAWS IN INDIA

PRB Act 1867, the press (objectionable matters) Act 1957, The News Paper (prices and Pages) Act 1956, Defence of India Act, Delivery of Books and News paper (public libraries) Act, Press Council Act, Cable TV Networks (regulations) Act, The Cinematographic Act 1952, Drugs and magic remedies Act

UNIT III: CIVIL AND CRIMINAL LAWS

Laws of Libel and defamation, Contempt of courts Act 1971 and contempt of Legislative, Copy right Act and IPR, Trade Mark Act and patents Act, Right to Information and Official Secrets Act, Autonomy and Prasar Bharati Act, Broadcasting Bill.

UNIT IV: CODE AND ETHICS

Recommendations of press commission I and II, Mac Bridge report, Press council guide to Journalistic ethics, Self regulation and code of ethics, censorship and control of the press, press ownership and monopolies, Various committees of broadcasting, Broadcasting policies, Act regarding to working journalists.

UNIT V: CYBER LAWS IN INDIA

Nature and scope of cyber laws, The right to Publish and right to privacy, Digital signature, Piracy, Domain name registration issues, convergences bill, Media council and media ombudsman in the world. New IT Law IT 2000.

Text Book:

3. *Basu, Introduction to Indian Constitution, Practice hall of india(2003)*

REFERENCES

1. *Basu, Law of the Press in India, Practice Hall of India(2003)*
2. *Radha Krishna Murthi, Indian Press Laws*

3. R.K Ravindran, *Press in the Indian Constitution*, Indian Publishers, Distributors

09VC214 NON LINEAR EDITING

Credit 0:0:4

Course Objectives:

1. To know the different types of editing.
2. To understand the terminologies and concepts of Avid video editing software.
3. To acquire the editing and titling skills.
4. To learn adding special effects and mixing audio with the visuals in Avid.

Course Outcome:

This 5 units give theory knowledge about Editing software AVID and workings of it. So with the basic knowledge about AVID, in the Video post production lab, This theory knowledge will create background knowledge for editing.

UNIT I – Introduction to Video Editing and Avid

Editing: Definition, Principles, Stages – EDL – Role of Editor – Continuity & Dynamic Editing – Linear & Non-Linear Editing – Physical & Electronic Editing –Control Track & SMPTE Editing – A/B Roll Editing- Introduction to Avid Xpress DV – Hardware and Software Requirements

UNIT II – Terminologies and Recording

Media files, Clips, Sub clips, Sequences, Bins, Projects – Timeline, Effect editor, Effect palette, Composer monitor, Source monitor – Tool palette – Bin Views –Importing, Copying, Moving and Deleting Clips in Bins IEEE 1394 – Selecting Deck/Tape, Target Drives, Audio and Video Channels –Controlling Decks

UNIT III – Editing and Titling

Customizing Monitor Displays – Playing Video in Client Monitor – Loading and Clearing Footage on Monitor – Controlling Playback – Marking and Sub-Cataloging Footage – Setting up a Sequence – Setting up Tracks – Undoing /Redoing Edits – Splice-in Edit & Overwrite Edit – Lifting, Extracting and Copying Segments – Slip Trim & Slide Trim – Finding Frames and Clips
Titling: Editing, Removing, Replacing, Fading Titles, Replacing Fill Tracks

UNIT IV – Special Effects

Types of Transition Effects – Single and Multiple Effects (Transition & Segment)– Rendering – Key frameable and Non-Key frameable Effects – Defining Motion Paths using Key frames – Layered Effects – Nested Effects – Key Effects (Chroma, Luma, Matte) Freeze Frame – Variable Speed – Strobe Motion – Reverse Motion

UNIT V – Working with Audio and Exporting

Soloing Audio Tracks – Audio Scrubbing – Audio Effect Tool – Audio Mix Tool –Automation Gain Tool – Adjusting Volume in Timeline – Audio EQ Tool – Audio Suite Plug-Ins Mixing Video Tracks – Recording to Tape – Exporting Formats (MPEG-1, MPEG- 2, QuickTime, DV Stream, OMF)

Text book

1. *Video Field Production and Editing, Sixth Edition, Ronald J. Compessi, San Francisco State University*
2. *Avid Xpress DV User's Guide*

References:

1. *Avid Xpress DV Effects Guide*

09VC215 VISUAL ART LAB**Credit 0:0:2****Course Objective:**

To educate the students in drawing. This subject will enable the students to visualize of their own and will help them to create an appropriate visual through the application of perspective composition and light and shadow

1. Elements of art
 - a. Line
 - b. Form
 - c. Shape
 - d. Colour
 - e. Space
 - f. Value
 - g. Texture
2. Perspective Drawing
 - a. Foundation
 - b. Basic shapes in perspective
 - c. Linear perspective
 - d. Aerial perspective
 - e. Point perspective
3. Composition
 - a. Light and shadow
 - b. Colour composition

- c. Proportion
- 4. Drawing landscapes
- 5. Drawing still life
- 6. Drawing animals
- 7. Drawing birds
- 8. Drawing objects
- 9. Drawing architectures
- 10. Introduction to human figure

09VC216 CREATIVE SUIT - LAB I – COREL DRAW

Credit 0:0:2

Course Objective:

The course imparts the techniques and the application of the software coral draw so that the leaner will come across to produce an appropriate design. It will enable the students to learn various designing process and print production.

The practical will include

1. 2D Graphic – CorelDraw12 (Latest Version)
2. Adobe illustrator

Exercises

1. Design a 'logo' for an
 - a. Matriculation School
 - b. Hospital
 - c. Non Government organization
 - d. Visually impaired School
 - e. B. Tech-Electronics & Media Technology
2. Design the 'label' & package cover of any consumer product.
3. Design a 'visiting card' & 'letter head' for any five famous Banks Executives.
4. Design a 'calendar' to be published by Department of Electronics and Media Technology
5. Design the 'CD cover' to be brought out by our college Music Band.
6. Design a '2-fold greeting card' for an occasion of your choice.
7. Design a dangler using Corel Draw
8. Design a POP using Corel Draw
9. Design a single fold Menu card.
10. Design New Sign board for the following
 - a. Speed breaker
 - b. School Zone
 - c. Hospital Zone
 - d. Hotels
 - e. Blind curve

09VC217 APPLIED ART LAB

Credit 0:0:2

Course Objective:

To learn the anatomy of the human parts through the drawing principles and perspective.

1. Anatomy Drawing

- a. Proportion of the human body
- b. The skeleton
- c. The head and neck
- d. The torso
- e. The arm
- f. The hand
- g. The leg
- h. The foot
- i. The Ecorche and face
- j. Study of expressions.

2. Clay modelling

- a. Terracotta
- b. Modelling shapes
- c. Modelling human forms.

Text : *Drawing and Anatomy – Victor Perard*

09VC218 CREATIVE SUIT – LAB II –PHOTOSHOP

Credit 0:0:2

Course Objectives:

To provide opportunities to the students to prepare certain exercises for possible demonstration of skills acquired by them to the specific level of acceptable performance.

Course Outcome

With the basic knowledge of Photoshop, Here in the creating the twenty types of Visualization will be developing their skill in Photoshop and their creative in using Photoshop.

- *Need to Design 20 advertisements using any one the Types of Layout*

TYPES OF VISUALIZATION

1. Visual of the product alone.
2. Visual of the product in a setting where it is used.
3. Visual in use.
4. Visual of a benefit from using the product.
5. Visual showing the loss or disadvantage resulting from not using the advertised product.
6. Dramatization of the headline.
7. Dramatization of the evidence.
8. Dramatizing a detail (in the product)
9. Comparison between two brands.
10. Contrast between before and after using the product.
11. Visuals using Trade Characters.
12. Symbolism.

Abstract illustration. (logo)

Continuity strip

Mood setting visual.

Visual of the product in the package.

Visual of the product ingredients or raw materials.

Special effects.(freezing movements)

Montage

Visual with models.

TYPES OF LAYOUTS

Big picture

Big copy

Omni bus

Mortise

Free form

Scatter

Continuity strip

09VC219 APPLIED PHOTOGRAPHY LAB

Credit 0:0:2

Course Objective:

To learn the types of photography. To learn the lighting techniques. To learn the techniques of photographing various subjects.

LIST OF LAB WORKS:

1. Indoor photography
2. Outdoor photography
3. Portrait photography
4. Architecture photography
5. Product photography
6. Fashion photography

7. Travel photography
8. Environmental photography
9. Action photography
10. Aerial photography
11. Macro photography
12. Sports and Panoramic photography

09VC220 2D ANIMATION LAB

Credit 0:0:2

Course objective:

To train the students in the area of 2D Animation and its software application. To make the students understand the process of 2d animation production in studios. The students will be trained the area of character designing and concept designing in 2D animation

List of Practical

11. The Pre-production Phase
 - a. The lines
 - b. Basic formation of shapes
 - c. Basic formation of characters
 - d. Head formation
 - e. Expressions
 - f. Character actions
12. Basic animation & principles
 - a. Squash and Stretch
 - b. Follow through and overlapping actions
 - c. Timing
 - d. Exaggeration
13. Character designing
 - a. Concept drawing
 - b. Character creation
 - c. Model sheet
14. Story board
15. Software interface
 - a. Screen layout

- b. Basic drawing tools
 - c. Animating rough blue and planning red
 - d. Setup and Marking menus
 - e. Working with Layers
 - f. Light setup
16. Frame by frame animation
 17. Key frame, Inbetweens & Secondary actions
 18. Tweening
 19. Background & Compositing for animation
 20. Camera movement
 21. Motion guide
 22. Embedding video

09VC221 AUDIO PRODUCTION LAB

Credit 0:0:2

Course Objective:

The students will be practically taught to apply Audio production techniques involved in Radio Production, Music Production and Audio Post Production for Video using Digital Audio Workstations.

Course Outcome: -

This course will enable the students to be creatively and technically operational in the Audio Industry

List of Exercises:

1. Recording and editing narration with BGM
2. Interview Production (Indoor)
3. Interview Production (Outdoor)
4. Radio Edit
5. Live multi-tracking of one instrument and vocals using Zoom H4
6. Overdubbing of one instrument in stereo with vocals
7. Recording SFX using Zoom H4
8. Ambient Sound Sampling using Zoom H4
9. Automated Dialogue Replacement
10. Music and Effects

09VC222 PREPRODUCTION TECHNIQUE LAB

Credit 0:0:2

Course Objective:

To learn practically pre production techniques in film production. To learn the art of script preparation. To create the concept for a production. Knowing the process of video production techniques and the various script formats.

1. Plot
2. Treatment
3. Proposal
4. Basic shot, angles & camera movements.
5. Dialogue writing
6. Scene ,sequence breakup
7. Script writing.
8. Shooting script
9. Story board

Scripting and story board

1. Basics of Script
2. Formats of script
3. Concept & idea
4. Basic components of story board
5. Design & composition of color & light

09VC223 VIDEO PRODUCTION LAB**Credit 0:0:2****Course Objective:**

To introduce students to the profession of producing programme for TV.

Course Outcome:

Making of this seven Television programs in Two or single camera set-up is real hand on experience for the student in the TV Program process. They learn all the technical's that is related to making of a program in production stage and post production stages

PRODUCTION FOR TV

Types of TV Programme –

1. Indoor – Single Camera set-up Interview
2. Outdoor – Single Camera set-up Interview
3. Educational Shows- Two Camera Set -up
4. Drama

5. PSA
6. Game Shows
7. Anchor, News Reader. Grammar of Out-door Production.

Three phases of production should be included

- Formulating the concept and doing the research.
- Facing Production Problems - scheduling, budgeting,
- breakdown of scripts, developing the Plot,
- Writing the screenplay, prepare the storyboard and cue sheet etc.
- Making the choice of the crew, Teamwork and work ethics. Equipments and location – the shooting, contracts, some legal issues in production.
- Editing – Grammar of editing, Transitions, Editing the visual, editing the sound track.

09VC224 MULTIMEDIA LAB

Credit 0:0:2

Course Objective:

To create e-page, power point presentations and desktop publishing.

LIST OF LAB WORKS :

1. E-PAGE with visual aid
2. Preproduction & Presentation Graphics: Create a 5 slide presentation in your favorite presentation graphics application. (Powerpoint)
3. Typefaces and Graphics: Create 1 vector and 1 bitmap graphic
4. Desktop Publishing: Create a 2-page desktop-published "newsletter," Submit a PDF copy
5. Desktop Publishing: Create a 2-page desktop-published "newsletter," Submit a PDF copy.
6. Production Planning and Design: Create a proposal for your final project. Include summary, flowchart, element and resource lists. Submit a PDF copy.
7. User Interface Design & Graphics II: Create a user interface . Include 2 backgrounds and 1 button set. Aim for a cohesive look.
8. Multimedia Sound: Create 2 soundtracks and 2 EFX sounds
9. Video Production: Prepare storyboard and shoot a short video production

10. Digital Video: Use video capture to digitize your video shoot to another video source to create short production (20-30 seconds)
11. Create three basic Web pages using Dreamweaver

09VC225 VIDEO POST PRODUCTION LAB

Credit 0:0:2

Course Objective:

To introduce students to the profession of editing in NLE and give the professional exercise of basic editing.

Course Outcome:

Here its hand on experience in EDIT Suit for the students to edit the visuals according to the category. Its really a job oriented skill that can shape their future. AVID is been used here to edit the visuals.

List of experiments :

1. EDIT - Indoor – Single Camera set-up Interview(CUT TO CUT)
2. EDIT- Outdoor – Single Camera set-up Interview(CUT TO CUT)
3. EDIT- Educational Shows- Two Camera Set -up
4. ONLINE EDIT - Drama
5. EDIT -PSA
6. ONLINE EDIT _ Game Shows
7. EDIT-Music Album

NOTE: Edit note should be prepared and the visuals should be done accordingly.

09VC226 WEB DESIGNING LAB

Credit 0:0:2

Course Objectives:

To apply the skills learned to develop web pages using HTML tags.

Course Outcome: -

Basics of HTML helps and guides the student how to create a web page on own with sources code without the help of the other automatic software's. Its helps those to learn basic, so that it

can be really helpful in their other course related to web in the advance stages like VB, JAVA, etc...

Exercises

1. Developing a webpage using basic HTML tags and hyperlinks.
2. Creating web pages with transition and visual effects.
3. Creating a webpage which contains a set of images (minimum 10) in same size inserted in table.
4. Developing a webpage using TABLE tag to display class timetable.
5. Developing and integrating at least 4 instructional web pages using FRAMES and suitable hyperlinks.
6. Constructing a webpage using FORM tag to enter student bio-data.

09VC227 PRINCIPLES OF WEB DESIGNING

Credits 3:0:0

Course Objective:

Students will be allowed to design their own web page using basics of HTML .

Course Outcome:-

Basics of HTML helps and guides the student how to create a web page on own with sources code without the help of the other automatic softwares. Its helps them to learn basic, so that it can be really helpful in their other course related to web.

Unit – I

Introduction to web page design fundamentals. HTML: Introduction: what is HTML, Basic layout of HTML scripts. Head and Body Sections.

Unit – II

Head section: Title, Base HREF, LINK HREF, Meta tags, Body Section: Text formatting and alignment, Fonts, colours, ordered and unordered lists. Links Images, sounds, Video, Background.

Unit – III

Advance Elements: tables, Forms, Frames. Authoring Web Pages using editing. DHTML: Java Scripts: Introduction, Architecture of Java Script applications. Tags in Java Script. Data types and variables expressions and operation, Looping and Branching Events and Event handling. DHTML: Cascading style sheet (CSS).

Unit – IV

Core Java Script Elements: Array, Boolean, Data, Function, Math Number, Object String, Reg, and Exp.

Unit – V

Multimedia in the Web – Flash, Real Media MP 3 etc., Streaming audio and Video. Mouse over and other affects using JS. Using Java Applets: HTTP Servers and CGI concepts.

Text Books

1. *Create Web Animations in a Weekend (with CD)*, Steve Callahan 1990
2. *Web Classes from Scratch (with CD)*, Jesse Liberty 1999
3. *XML Web documents from scratch*, Jesse Liberty 2000

Reference:

1. *XML and Java Developing Web Application (With CD)*, Hiroshi Maruyama
2. *Web Design and Publishing Unleashed (with CD)*, Dave Brown 1997
3. *Web enable your small Business*, Richard Harrison 2000
4. *Adobe Seminars Web Page Design - Lopuck & Hampton - Adobe Press - California - 1997.*

09VC301 MEDIA RESEARCH METHODS**Credit : 4:0:0****COURSE OBJECTIVES:**

- *To understand research methods and statistical tools in education.*
- *To understand the principles of evaluation, research and statistics and computer application.*
- *To prepare model research proposals for research studies and report writing.*

COURSE OUTCOME:

To assess the Learning Outcomes, a number of minor project may be assigned. The students may be asked to apply the knowledge of all the concepts, methods, elements of Media Research and make them to do, and same may be presented and analyzed. Each student's work to be assessed and ranked by the team of instructor.

Unit 1 The Research Process

Meaning of Research - Media research methods - Importance and need of Media research - Characteristics of scientific research -Development of media research in India - Selection of research topic - Review of literature - Hypothesis/research question - Qualitative and quantities approaches – Variables – Measurement – Scales - Reliability and validity - Sampling and sample size - Population - Probability and no probability samples - Sampling error and weight

Unit 2 Research Approaches

Content analysis - Survey research - Longitudinal research - Experimental research - Descriptive research

Unit 3 Research Procedures

Steps in developing a research project - Selection of a research problem - criteria for selection - Defining objectives - Formulation of hypothesis - Definition of terms variables - Research design and sampling procedure - Data collection techniques - Research budget

Unit 4 Data Collection and Analysis

Questioner design - Interview technique- Content analysis procedure - Sampling design - Descriptive statistics - Sample distribution - Data transformation - Hypothesis testing - Application of appropriate statistical tools - Nonparametric statistics - chi square - parametric statistics - t test - analysis of variance - two way ANOVA - -simple correlation - -cluster analysis

Unit 5 Research Applications and Report

Research in electronic media - Research in media effect - Research in new media - Research report style and MLA style sheet - Characteristics of the research report - Structure of the research report - Documentation in a research report

Text Book:

1. *Fundamentals of Social Research, John Best,*

REFERENCES:

1. *Media Research methodology- J P Aluwaliya*
2. *Mass media research – An introduction, Roger D Wimmer & Joseph R Dominick*
3. *Foundations of Behavioral Research, Kerlinger, H. Fred,*
4. *Methods in Social Research, Goode & Hatt,*
5. *Scientific Social Survey and Research, Paulin Young*

09VC302 DYNAMICS OF VISUAL COMMUNICATION**Credit : 4:0:0****Course Objective:**

- *To understand visual and visual communication fundamentals.*
- *To understand the principles of Principles of visual media communication*
- *To learn the Visual Application and visual design*

- To understand **Visual language and culture**
- To understand **important perspectives**

Course Outcome:

In order to assess the student's progress towards achieving the Learning Outcomes, a number of activities may be assigned periodically. The students may be asked to apply the knowledge of all the concepts, methods, elements of visuals and make design, programme to present and analyze the design. Make the student to apply all the components of this syllabus in various activities, Finally all the works done by the student (like design, models, any activity related to syllabus) to be exhibited and each student to be ranked by the instructor.

Unit I Introduction to visual communication Historical Development - Conceptual development - Visualisation process - Visualisation environment - Tools for visualization - Sensual and perceptual theories

Unit II Visual Media

Principles of visual media communication - Video medium - Non Projected audio visuals - Scientific visual media - Creative visualization

Unit III Visual Application

Rendering and rasterisation - Visual perception - Information design - Communication design
Graphic design – Cartoons

Unit IV Visual language and culture

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.

Unit V Six important perspectives

Image Analysis – Typography - Graphics design - Informational Graphics - Cartoon
Photography - Motion pictures - Television and video - Computer graphics - World Wide Web

Reference books.

1. Paul martin, *Visual communication (2008)* Global vision publishing house – New Delhi.
2. Pradeep mandav- *visual media communication (2001)* – Authors press – New Delhi
3. *Visual communication images with messages by paul Mrtin lester(2008)* wordsworth – United states.

09VC303 ELEMENTS OF VIDEO PRODUCTION

Credit : 4:0:0

Elements of Video production

Course Objective:

- *To understand the aesthetics of video production*
- *To identify the elements of shot.*
- *To learn the camera options and production techniques.*
- *To understand the continuity of shots*
- *To learn the editing principles*

Outcome:

Students should be equipped with the video production skills so that they may be able to direct the production. The important component of this programme is to impart the aesthetics of film direction so that the student become capable of producing a show effectively.

Unit I Preproduction Planning Stage

Concept development

- Research
- The basic script

The role of writer for television

- location survey
- logistics crew
- budget
- Talents
- Script
- Story board

Roles of the production crew

- Production assistant
- Cameraman,
- studio crew
- outdoor crew

Set design backdrop and properties

- the role of the art director
- Set designer
- Wardrobe
- Makeup.

Unit II Media and Men

- Talk show,
- Short film
- Documentary,
- Feature film.
- Video game
- Computer game
- Location identification
- Role of Director,
- Art Director,
- Cinematographer,
- Film editor,
- Floor manager,

- Production manager.

Unit III Production Process

Digital video Production :

- Camera Movements
- Composition
- Angles.
- Mise-en-scene.
- Multi camera setup
- Lighting
- Color Temperature
- Basic and special Lighting setup
- Atmospheric lighting.
- ENG-Anchoring
- Compering,
- Montage.
- Documentaries and other electronic field productions.

Unit IV Post Production Technique

Digital video editing :

linear and Non-Linear editing.

Capturing and rendering techniques –

Editing Techniques

- continuity
- Sequence

- Dynamic .
- Method of transitions.
- EDL Preparations
- Titling
- Graphics
- Animation
- Storage Devices.

Unit V Animation

- Introduction to graphic and animation
- Video and animation
- Video signal,
- compression:
- Computer based animation,
 - Animation control
- Essentials of 3D Animation
- Architecture of 3D Animation
- Graphical user interface
- 3D through Maya

Text Books :

1. *Television Production* (1999) by Gerald Millerson, Focal press, . London.
2. *The Technique of Television Production* (2001) by Gerald Millerson. Focal press. London

Reference Book:

1. *Digital Cinematography* (2001). Paul Wheeler, Focal Press, London
2. *The essential of TV Director's Handbook* (3rd edn.) 1996. Peter Jarvis, Focal Press. London.
3. *An introduction to Digital Video* (1994). John Watkinson, Focal Press, London.
4. *Lighting Techniques for video Production* (1996) Tom Letourneau, McGrawHill.
5. *Digital Non-Linear Editing* (1998) Thomas A. Ohanian, Focal Press, London

09VC304 INSTRUCTIONAL DESIGN

Credit : 4:0:0

Course Objectives:

1. To understand the meaning and significance of Instructional Design
2. To learn the importance of instructional theories , models, materials and assessment of learning.

3. *To apply instructional methods to information communication technology based learning materials.*

UNIT I – INTRODUCTION

Definition

- Instructional Technology
- Concept of Systems Approach

System Analysis

- Curriculum Development and Process

Guideline for Instructional Design

Taxonomies of Educational Objectives

- Bloom's Cognitive Domain
- Dave's Psychomotor Domain
- Simpson's Psychomotor Domain

Writing Objectives

- Mager Method
- ABCD Method

UNIT II – INSTRUCTIONAL DESIGN

3-D objects and models

- Types of 3-D objects and models
- Materials of construction
- Teaching with Models

Instructional Development Models

- Kemp Model
- Instructional Development

Institute Model

- Inter-service Procedures for Instructional Systems

Development Model

- CRI Model
- ADDIE Model

UNIT III – INSTRUCTIONAL THEORIES

- Gropper's Behavioral Approach to Instructional Prescription
- Landa's Algo-Heuristic Theory
- Collins-Stevens' Cognitive Theory of Inquiry Teaching
- Merrill's Component Display Theory
- Reigeluth-Stein's Elaboration Theory of Instruction
- Keller's Motivation Design of Instruction

UNIT IV – INSTRUCTIONAL MEDIA & STRATEGIES

Preparation for programmed instruction

Instructional Methods and Media

- Instructional Strategies for Declarative Knowledge
- Concepts
- Procedures
- Principles
- Problem-Solving
- Cognitive Strategy
- Attitude
- Psychomotor Skill

UNIT V – EVALUATION AND ASSESSMENT

Evaluation of Instructional Materials

- Overview
- Evaluation Process
- Evaluation Models

Assessment of Learning

- Overview
- Purposes
- Types of Assessment

Models of Assessment of Learners' Achievement

Characteristics of Good Assessment

Elements and Formats of Assessment

Text Book:

1. *Educational technology: K L Kumar, New Age International Publishers, New Delhi.*
2. *Methods of Teaching: A Skills Approach, David Jacobsen, Paul Eggen, et al, Charles E. Merrill Publishing Company, 1985 (Unit II)*
3. *Instructional-Design Theories and Models: An overview of their current status, Charles M. Reigeluth, Lawrence Erlbaum Associates, 1983, ISBN 0898592755 (Unit III, V)*
4. *Instructional Design, Patricia L. Smith, Tillman J. Ragan, Wiley/Jossey-Bass Education, 2005 (Unit IV)*

Reference Book:

1. *Instructional Technology: A Systematic Approach to Education, Frederick G. Knirk, Kent L. Gustafson, Holt, Rinehart and Winston, Inc, 1986 (Unit I,II)*
2. *Task Analysis Methods for Instructional Design, Book by Wallace H.Hannum, David H. Jonassen, Martin Tessmer; Lawrence Erlbaum Associates, 1999 (Unit II)*
3. *Designing Effective Instruction , Gary R. Morrison, Steven M. Ross, Jerrold E. Kemp, Howard K. Kalman, Wiley Publication, 2006 (Unit I – V)*

4. *Evaluation of Instructional Materials, Assn for Educational, 1979 (Unit V)*
5. *Assessment and Evaluation of Developmental Learning: Qualitative Individual Assessment and Evaluation Models, Book by Robert M. Hashway, Praeger Publishers, 1998 (Unit V)*

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ELECTRONICS AND MEDIA TECHNOLOGY

ADDITIONAL SUBJECTS

| S. No. | Code | Subject | Credit |
|--------|---------|-------------------------------------|--------|
| 1 | 10MT201 | Introduction to Mass Communication | 3:0:0 |
| 2 | 10MT202 | Web Designing & Production | 3:0:0 |
| 3 | 10MT203 | Digital Signal Processing | 3:1:0 |
| 4 | 10MT204 | Equipment Maintenance and Servicing | 4:0:0 |
| 5 | 10MT205 | Community Radio | 4:0:0 |
| 6 | 10MT206 | Computer Based Music Production | 4:0:0 |
| 7 | 10MT207 | Signal Processing Application | 3:1:0 |
| 8 | 10MT208 | Television and Video Engineering | 4:0:0 |
| 9 | 10MT209 | Introduction to 3D Animation | 4:0:0 |
| 10 | 10MT210 | Visual Arts Lab | 0:0:2 |
| 11 | 10MT211 | Programme Production Lab | 0:0:2 |
| 12 | 10MT212 | Post Production Lab | 0:0:2 |
| 13 | 10MT213 | Script Writing for Media | 3:0:0 |
| 14 | 10MT214 | C++ and Data Structure | 3:1:0 |
| 15 | 10MT215 | Introduction to Film Studies | 4:0:0 |

10MT201 INTRODUCTION TO MASS COMMUNICATION

Credits: 3:0:0

Course Objectives:

- To understand the types and models of communication
- To understand the process communication
- To understand the applications of communication in advertising
- To understand the functions of mass media
- To understand the relationship between culture and communication

Course Outcome:

To assess the learning outcomes, a number of activities may be assigned, and the same may be presented and analyzed, each student's work to be assessed by the team of subject experts.

Unit 1 INTRODUCTION COMMUNICATION

Introduction: Communication, Definitions, Scope and purpose- Forms of Communication - Intra-personal Communication, Inter-personal Communication- Mass Communication-Organizational Communication - Verbal and Non Verbal Communication - Barriers of communication -Socio economic changes and the emerging trend in Communication.

Unit II COMMUNICATION PROCESS

Introduction: Process of Communication - Source, message, channel, receiver, feedback- Noise, Types of noise-Encoding and Decoding Process -Formal and Informal channel-Models of Communication, Berlo, Lasswell, Shannon and Weaver.

Unit III THEORIES AND MODELS OF COMMUNICATION

Hypodermic Needle Theory, Two-step & Multi-step Theory, Commercial Theory, Play Theory Uses & Gratification Theory, Selective Exposure, Selective Perception & Selective Retention Theory, Individual Difference Theory, Meaning of theories based on scientific study & analysis; Four major

theories of Press, according to Fred Siebert, Theodore Peterson & Wilbur Schramm Authoritarian Theory, Libertarian Theory, Social Responsibility Theory, Other Theories: Development Media & Democratic Participant Theory

Unit IV MASS MEDIA

Introduction -Characteristics of mass media-Functions of mass media - Inform –Entertain, Educate, Persuade-Dysfunction of mass communication-Communication and public opinion.

Unit V COMMUNICATION AND CULTURE

Introduction : Communication and culture -Global media – multi cultural content Mass media and developing countries -Cross cultural Communication, Problems and challenges- Policies and implications

Text Book :

1. Keval J. Kumar “Mass communication in India” Jeyco Publisher 2007.

Reference Books:

1. Karl E. Rosengren “Communication an introduction” Sage Publication 2006
2. Mc Quil “Mass communication theory” Sage Publicaiton 5th edition-2005

10MT202 WEB DESIGNING AND PRODUCTION

Credits: 3:0:0

Course Objective:

1. To understand elements of web design.
2. To understand and gain knowledge in different programming languages.
3. To understand the technologies behind any website.

Course Outcome:

In order to assess the student’s progress towards achieving the learning outcomes, a number of assignments may be assigned periodically. The students will be able to design basic web sites and gain basic knowledge about the latest technologies.

Unit I FUNDAMENTALS OF WEB DESIGNING

Basics of networking – protocols – TCP/IP-HTTP – History of Internet- ARPANET - History of HTML, XML, XHTML – W3C – future of Markup languages - Website design principles - File format basics.

Unit II PLANNING THE SITE

File naming & URL’s – Directory structure - diagram the site – planning the site navigation – colors and graphics- computer color basics – working with Hexa-decimal colors – Web typography.

Unit III BASICS OF MARKUP LANGUAGES & CSS

Basics of HTML – XML – XHTML – basics of MYSQL – Cascading style sheets – controlling typography with element – controlling typography with cascading style sheets – styling with CSS.

Unit IV FRAMES

HTML Frames – Frame syntax – Understanding frames – targeting in Frames – planning Frame content – basics of Java script – basics of PHP.

Unit V FUTURE OF WEB

Server side technologies – client side technologies – Data base types – emerging technologies – Applications on web – web editors – WYSIWYG editors -

Text Books:

1. Joel Sklar “Principles of Web Design”, Course Technologies, 2000.
2. Chris Bates “Web programming: Building Internet applications” by, Wiley dream tech India (p) Ltd, 2nd Edition 2002

Reference Books:

1. Thomas A Powell “The complete reference of web design, , The Mc Graw- Hill company, ” 2nd Edition 2002.
2. Luke welling and Laura Thomson “PHP and MYSQL web development”, 3rd Edition,, 2005

10MT203 DIGITAL SIGNAL PROCESSING

Credits: 3:1:0

Course Objective:

This course will introduce the basic concepts and techniques for processing signals on a computer. By the end of the course, you be familiar with the most important methods in DSP, including digital filter design, transform-domain processing and importance of Signal Processors. The course emphasizes intuitive understanding and practical implementations of the theoretical concepts.

Course Outcome:

By the end of the course the student will be able to:

- Represent discrete-time signals analytically and visualize them in the time domain.
- Understand the meaning and implications of the properties of systems and signals.
- Understand the Transform domain and its significance and problems related to computational complexity.

- Be able to specify and design any digital filters using MATLAB.

Unit I DISCRETE TIME SIGNALS AND SYSTEM

CT Signals-DT Signals-Representation of DT Signals in pulses-CT and DT Systems-Properties of Systems-Discrete time LTI Systems-Convolution Sum- Discretization of CT Signals-Sampling Theorem-Reconstruction of a signal-Effects of Under Sampling: Aliasing.

Unit II HARMONICS ANALYSIS OF SIGNALS

Fourier Series-Representation of Periodic signals and a periodic signals-Discrete Time Fourier transform –Properties of DTFT-DFT-Relation between DTFT and DFT-Properties of DFT-Radix2 FFT algorithms-Decimation in Time-Decimation in Frequency.

Unit III DIGITAL FILTER-IIR DESIGN

Review of analog filters-Design of IIR from analog filters- Bilinear transformation – Prewarping-Matched Z-transformation- impulse invariant transformation-frequency transformation-Realization of IIR

Unit IV DIGITAL FILTER-FIR DESIGN

Amplitude and Phase responses of FIR filters – Linear phase filters-Transversal filters – Windowing techniques –Rectangular-Hamming-Frequency sampling techniques-Realization of FIR

Unit V FINITE WORD LENGTH EFFECTS

Quantization noise – derivation for quantization noise power – Fixed point and binary floating point number representation – comparison – over flow error – truncation error – co-efficient quantization error - limit cycle oscillation – signal scaling – analytical model of sample and hold operations.

Text Books

1. Alan V Oppenheim, Alan S. Willsky with Hamid Nawab, “Signals & Systems”, Pearson Education, 2nd Edition (2000).
2. John Proakis, Dimitris G Manolakis, “Digital Signal Processing Principles”, Algorithms and Application”, PHI, 3rd Edition (2000).

Reference Books

1. S.K. Mitra, “Digital signal processing-A Computer based approach”, Tata McGraw-Hill, 3rd Edition (2004).
2. Simon Haykin and Barry Van Veen, “Signals & Systems”, John Wiley and Sons, 2nd Edition (2002).
3. S. Salivahana, A.Vallavaraj, Gnanapriya, “Digital Signal Processing”, McGraw-Hill, 2nd Edition (2000).

10MT204 EQUIPMENT MAINTENANCE AND SERVICING

Credits 4:0:0

Course Objectives:

- To provide a thorough understanding of the working of studio equipments.
- To introduce various techniques in maintaining and repairing of audio-visual equipments.

Course Outcome:

- After the course the students will be able to have an in-depth knowledge in maintaining equipments in the studio.
- Basic repair and services of equipments will be learned.

Unit I EXPLANATIONS AND CALCULATIONS

Electricity - Basic Electronics- DC Voltage, Current, and Resistance

Basic Electronics: AC Voltage, Current, and Reactance- Basic Formulas for Calculations-Decibels- Advanced Formulas for Calculations- Wire Sizes and Maximum Current for Each Wire- Technical Power and Current Requirements-

Unit II SIGNALS AND EQUIPMENT

Balanced and Unbalanced Signals- Metering-VU, RMS, PPM and Correlation-RF Transmissions -- AM and FM- Compressors and Limiters- Multitrack Recorders- Speakers and Microphones- Wireless - Microphones

Unit III AUDIO LINES

Cables and Connectors-Equipment and Rack Grounding- Patch Bay Wiring-Cable Routing- Tools-Test Equipment- A 48-Volt Phantom Power Supply Project

Unit IV MAINTENANCE

Cleaning Chemicals and Applications- Fixed Head Tape Recorders -- Analog- Analog Tape Recorder Calibration- Rotary Head Tape Recorders -- Digital- Amplifier Cleaning- Computer and Processor Cleaning- Mixing Console, Pot and Fader Cleaning-Lighting Equipment Cleaning

Unit V SERVICE AND REPAIRS

Speaker Damage and Repairs- Amplifier Diagnostics- Soldering, Cable Repair, and RF Interference Cures- Processors and Outboard Gear Service-

Text book:

1. Tom McCartney. "Recording Studio Technology, Maintenance, and Repairs". McGraw-Hill/TAB Electronics – 2004.

Reference Books:

1. Trevor Linsley. "Electronic Servicing and Repairs". Newnes - 2000
2. John Markus. "Television and Radio Repairing". Mc Graw Hill – 1960.

10MT205 COMMUNITY RADIO

Credits: 4:0:0

COURSE OBJECTIVE: Train the students in gaining knowledge on the functions, layout, equipments, operation and management of community radio station. Also to give them the knowledge of the rules and laws governing it.

COURSE OUTCOME: Students learn the functions, layout, equipments, operation, management, rules and laws of community radio station.

Unit I BASICS OF COMMUNITY RADIO

Introduction to CR – Characteristics – Principle of operation – Significance – Distinct features - Stimulating community participation – Layout of a CR station – Equipments used in a CR – Activities in setting up a CR – Legitimizing CR – Sustainability of CR

Unit II MANAGING CR STATION

Securing broadcast license – Levels of Managerial Responsibility – Managing finances – Managing Technical Resources – HR Management in CR station - Steps to be followed in conducting Broadcast – Ethics and Code of Conduct – Conduct within the CR station - Conduct outside the CR station – Economics of CR– Maintenance studio premises and acoustics

Unit III CR PROGRAMMING

Concept of content and form in CR, generation of program ideas and process of production, classification of CR programme formats and concept of creativity, presentation techniques of spoken word programs (talks, interviews, radio reports, chat-shows, reviews, discussions, debates, commentaries, magazines etc.) Conducting various types of interviews, planning and production of radio documentaries, presentation techniques of radio dramas, skits, family serials, quickies, jingles etc. writing of radio scripts, Production of infotainment programmes including science and health based folk music programmes, music appreciation, operas, listeners request, invited audience music programmes, etc.

Unit IV INTERACTIVE PROGRAMME FORMATS

Concept and significance of phone-in-programmes, Field generated and participatory programmes, special audience programs-youth, farmers, women, children, senior citizens etc., Special drives and campaigns including special topic programs (science, sports, family welfare, environment, development etc), Concept of Phone-out programmes

Unit V CR IN INDIA

Development of CR in India - Government rules and laws in setting CR station – World association of CR broadcasters – CRC – Community radio movement

Text Book:

Angela Wadia, “Broadcast Management in India”, Kanishka publication, 2007 Edition

Reference Books:

1. Michael C. Keith, "The Radio Station" Elsevier Publication, 7th edition.
2. Carole Fleming "the radio handbook" 2nd Edition, Routledge, 2002
3. Louie Tabing "How to do Community Radio", UNESCO Publication, 2002
4. Dr. R. Sreedher, "Radio Vision – Multimedia through Digital Radio" UNESCO Publication, 2002

10MT206 COMPUTER BASED MUSIC PRODUCTION

Credits: 4:0:0

COURSE OBJECTIVE: The students who are musically inclined will be taught the fundamentals involved in choosing the right components to make a digital audio workstation and to use MIDI and digital audio tools in music production.

COURSE OUTCOME: This course will enable the students to be creatively and technically aware of the technologies and production tools in the music production industry.

Unit I The DAW and it's peripherals

The Computer - Software - Audio and MIDI Interfaces - Mixer - Headphones and Monitors - Surface controller - Cables - Microphones - Miscellaneous equipment - Mac Vs PC debate - Desktop, Laptop and Tabletop computers and specific users - The need for speed - Computer options.

Unit I I Audio/MIDI hardware and software setup

PCI cards - USB - FireWire/ iLink - PCMCIA Cards - Audio interface considerations - Audio interface features - MIDI interface types and features - Driver installation basics - MAC and PC driver/software setup - Patch setup - Unlisted MIDI devices - Surface controller setup - Template setup - Test run.

Unit III Music production - MIDI

What is MIDI - MIDI connections - MIDI channels - MIDI modes - Status bytes and Data bytes - MIDI implementation charts - Creating a new song file - Setting up song parameters - Laying down MIDI tracks - Step recording - Punch-in recording - Common MIDI Recording Problems and their Solutions - Quantization options - Basic MIDI editing.

Unit IV Music Production - Digital audio

Recording fundamentals - Analog and Digital audio recording - Sample rates and resolutions - Recording in the computer room - Basic track recording - Overdubbing - Wet Vs Dry recording - Mix and individual track MIDI to digital audio conversion - Virtual MIDI instruments - Preparing tracks for audio editing - normalizing audio tracks - Trimming digital audio tracks - Creating comp takes.

Unit V Mixing, Mastering and Archiving

The Stereo field - A short mixing primer: Drums, bass, guitars and vocals - Additional instruments - volume - monitoring the mix - frequency, volume and overtones - EQ types - Dynamic Processors - Effect Processors - The Final mixdown - Mastering - Audio file preparation - side sequencing - Setting the index and gap - Burning and packaging the audio CD - Archiving the project.

Text Book:

1. Zack Price, "Beginner's guide to computer based music production", Cherry lane music company, 2004.

Reference Books:

1. Francis Rumsey, Tim McCormick, "Sound and Recording: An Introduction", 5rd edition, Focal Press, 2006
2. Andrea Pejrolo, "Creative sequencing techniques for Music Production", Focal Press, 2005.
3. Martin Russ, "Sound Synthesis and Sampling", Third Edition, Focal Press, 2009.
4. Bobby Owsinski, "The Mixing Engineer's Handbook", Mix Books, 1999.

10MT207 SIGNAL PROCESSING APPLICATIONS**Credits: 3:1:0****Course Objective:**

This course will treat a broad range of Digital Signal Processing (DSP) Applications. It will strengthen the student's understanding of the application of DSP principles; introduce the students to three major application areas: audio signal processing, image processing, plug-in developments for audio and video softwares, and provide extensive hands-on design experience.

Course Outcome:

After the successful completion of the course, the student should have an appreciation of the fundamentals of Digital Signal Processing as well as knowledge of some of its important applications. The students should then be familiar with audio signals processing image signals processing and plug-in development for audio and still image softwares.

Unit I Audio Signal Processing

Audio Signal-Spectrogram-Applications-Digital Transmission Systems-Storage media-Audio Components-Sampling-Quantization-Dither-Noise Shaping-AD/DA Conversion-Nyquist Sampling-Oversampling-Specification-Types of Converters-High Fidelity audio.

Unit II Digital Audio Effects

Audio processing Systems-Signal Processors.-fixed point-floating point-Digital audio interfaces-Filters-Basic Filters-Equalizers-Shelving filter-peak filters-Time Varying filters-Delay-Basic delay structures-Delay based audio Effects-Sample Rate Conversion-Basics.

Unit III Fundamentals of Digital Image

Elements of Visual Perception-Light and the Electromagnetic Spectrum-Image Sensing and Acquisition-Image Sampling and Quantization-Relationship between Pixels-Image Enhancement in Spatial Domain and Frequency Domain. Simulation Using Matlab Programming.

Unit IV Color Image Processing

Color Fundamentals-Color Models- Pseudo-color Image Processing-Color Transformations-Smoothing and Sharpening-Color Segmentation-Noise in Color Image Processing-Color image Compression.

Unit V Compression & Plug-in

Need for Compression-Types of redundancy-Lossless and Lossy Compression-Run length Encoding-Huffman Encoding-Delta Encoding-LZW Compression-JPEG-MPEG-Virtual Studio Technique-SDK for Photoshop.

Text Books

1. Udo Zolzer, "Digital Audio Signal Processing", Wiley & Sons Ltd Publications, 2nd Edition (2008).
2. Rafael C Gonzalez, Richard E Woods, "Digital Image Processing", Prentice hall, 2nd Edition (2000).

Reference Books

1. Udo Zolzer, "DAFX Digital Audio Effects", Wiley & Sons Ltd Publications, 1st Edition (2002).
2. S.K. Mitra, "Digital signal processing-A Computer based approach", Tata McGraw-Hill, 3rd Edition (2004).
3. Simon Haykin and Barry Van Veen, "Signals & Systems", John Wiley and Sons, 2nd Edition (2002).
4. Anil K Jain, "Fundamentals of Digital Image Processing", Prentice Hall, 1st Edition (1989).

10MT208 TELEVISION AND VIDEO ENGINEERING

Credits: 4:0:0

Course Objective:

1. To study the analysis and synthesis of TV Pictures, Composite Video Signal, Receiver Picture tubes and Television Camera Tubes.
2. To study the various Color Television systems with a greater emphasis on television standards.
3. To study the advanced topics in digital television and High definition television.

Course Outcome:

The learners will be able to understand the transmission of video signals and importance of television standards to effectively work with broadcasting applications. Also he acquires sound knowledge of latest topics in digital video transmission.

Unit I Television Fundamentals

Scanning-Interlaced-Progressive-Synchronizing Pulses-Composite video waveform-Common image format-Active line-Aspect ratio-Pixels & Bandwidth-Video Bandwidth-Television Broadcasting-Modulation-Frequency Spectrum-Channel allocation- Light and colour-The sensation of colour-Primary colours-The colour triangle-Saturation and hue-Colour temperature.

Unit II Color Television Signal and Systems

Color Characteristics-Chromaticity diagram-Color Cameras- Color Signal Generation and Encoding; Color Television Standards-NTSC-Encoder-Decoder-SECAM-Encoder-Decoder-PAL Systems-Encoder-Decoder;

Unit III Display Device Technologies.

Color picture display devices-Trinitron- -Plasma displays- Introduction to Flat panel display-Resolution: flat panel versus CRT-Plasma operation-Scanning: Sequential and Interlaced LCD displays- Polarization-Principles of operation of LC cell-Reflective and Transmissive-The TN Transmissive LCD- -TFT cell drive-Response time-Polarity inversion-Grayscale and colour generation

Unit IV Television Receivers

The analogue TV receiver-The front end-RF oscillator-Mixer-oscillator-Complete tuner-The phase-locked loop-Synthesized tuning-The IF stage-The IF response curve-The vision detector-Synchronous demodulator- Flat panel television receivers-Video formatting-Scan-rate conversion-Image scaling-De-gamma correction and error and diffusion -Digital video interface-High definition multimedia interface

Unit V Digital and High Definition Television

Principles of digital video broadcasting-Digitizing the TV picture-SDTV sampling rate-Video sampling-Sampling structure-The bit rate-HDTV common interface format-Intra-frame (spatial) prediction-Intra-blocks and modes-Size and mode selection-Intra-prediction operation-AVC motion compensation-Motion compensation block sizes-Motion vector prediction.

Text Books:

1. K.F Ibrahim, "Television and Video Technology", 4th Edition, Newnes Publications (2007).
2. M. Dhake,"Television and Video Engineering", 2nd Edition, Tata-McGraw Hill publications (2003).

Reference Books:

1. Herve Benoit, "Digital TV for Satellite Broadcasting", Elsevier Publication, 4th Edition (2005).
2. Lars Ingemar Lundstrom, "Understanding Digital Television", Elsevier Publications 1st Edition (2006).
3. Gulati.R.R, "Modern Television Practice", New Age International Publishers, 2nd Edition(2006)

10MT209 INTRODUCTION TO 3D ANIMATION

Credits: 4:0:0

Course Objective:

To present concepts required to understand the steps and procedures that lead to the completion of a fully rendered 3 Dimensional computer animation.

Course Outcome:

In order to assess the student's progress towards achieving the learning outcomes, a number of assignments may be assigned periodically. The students will be able to do basic 3D animation and gain basic knowledge about advanced modeling and rendering techniques.

Unit I Preproduction

Introduction – Storyboarding – character and model design - sound design –technical tests –Production scheduling.

Unit II Modeling basics

Introduction –polygonal modeling –splines and patches –coordinate systems –viewing windows – Geometric primitives –transformations –common modeling techniques –hierarchies –booleans and trims.

Unit III Rendering basics

The camera –Lights –Surface characteristics –shading algorithms –rendering algorithms –background images –Surface texture mapping –solid texture mapping –final rendering.

Unit IV Animation basics

Introduction –Key framing –interpolations –parameter curve editing –dope sheet editing –forward kinematics –inverse kinematics –motion plans –shape deformations –camera animation –animating lights and surface properties –pose based animation.

Unit V Re -touching and Postproduction techniques

Virtual sculpting –hair and fur –texturing polygons –more rendering algorithms –cloth dynamics – facial animation- compositing –Editing.

Text books:

1. Michael O'Rourke, "Principles of Three – Dimensional Computer animation", 3rd edition, W.W. Norton & company, 2003.
2. John Vince, "Essential Computer Animation", springer UK , 2000.

Reference books:

1. John Edgar Park, "Understanding 3D animation using Maya", Springer Science & business Media. Inc, 2005.
2. Marcia Kuperberg, Martin W. Bowman, "Guide To Computer Animation", Focal press ,2002.

10MT210 VISUAL ARTS LAB

Credits: 0:0:2

COURSE OBJECTIVE:

To educate the students in drawing as well as to enable the students to visualize of their own. It will help them to create an appropriate visual through the application of perspective composition and light and shadow.

COURSE OUTCOME:

The students will be able to draw and compose all the drawings in a right way. It increases the prestige of the student by making them a trained artist. The elements of art and principles of design is used in a variety of media, processes and visual resources.

List of Experiments:

1. Elements of Arts
2. Perspective Drawing
3. Composition
4. Drawing Objectives
5. Drawing Still Life
6. Drawing Landscapes
7. Drawing Architecture
8. Drawing Birds
9. Drawing Animals
10. Introduction to Human Figures

10MT211 PROGRAMME PRODUCTION LAB**Credits: 0:0:2****Course Objective:**

To describe the functions of production personnel and equipment

To define the organization of a production facility

To operate audiovisual equipment

Course Outcome:

Students will be able to produce Audio and Video Programmes using these equipments and techniques.

List of Experiments:**Audio Programme Production**

Study of microphones-Loud speakers, Mixers-Audio editing software's: Pro tools/Sound forge/Neundo-Plug in effects and virtual instruments-MIDI

Video Programme Production

Study of video cameras and studio equipments-Lighting techniques, the production process-Lighting preparation –Three point lighting-Rehearsing and preparing the talent-Framing principles and movements

References

1. Steve Wright,"Composing Visual Effects", Focal Press, 2008.
2. Cliff Truesdell," Mastering Digital Audio Production: The Professional Music Work Flow with Mac OSX", John Wiley, 2007.
3. Robert B.Manuals, "Single Camera Video Production", Focal Press, 2005.
4. Ronald J.Compesi," Video Field Production and Editing", Pearson, 2006.

10MT212 POST PRODUCTION LAB**Credits: 0:0:2**

Course Objective:

To study about compositing
To editing in audio as well as video.
To operate audiovisual equipment

Course Outcome:

Students will be able to produce Audio and Video Programmes of their own.

List of Experiments:**Digital Compositing**

Composing computer generated images-Blue screen compositing and creating masks-Rot scoping

Audio production

Basic procedures: Navigation, Meters, Markers and regions-Recording,-Editing-Basic Edits, Working with video, Audio for video-Effects, restoration, Mastering music for CD, mp3, Burning a CD, MIDI and sampler-Tools

Video production

Trimming tools- Timeline editing T rack labels, Moving clips-Dramatic effects, creating dynamic text and effects, Audio Guidelines and Methods for adjusting Audio-Adding Sound effects- Transcoding and outputting

Reference Books:

1. Jeffry P.Fisher, Instant Sound Forge, CMP Books, 2004.
2. Lonzell Watson, Final Cut Pro.6 for Digital Video Editors, John Wiley, 2008
3. Donna L.Baker, Adobe Premiere Pro: Complete Course, Wiley, 2004

10MT213 SCRIPT WRITING FOR MEDIA

Credits: 3:0:0

Course Objective : To introduce the students to the technique and aesthetics of writing for different forms of electronic media programmes.

Course Outcome: Here the students learn the technique and aesthetic in writing for TV, Radio and Internet. This helps in the other course that is related to productions stages.

Unit 1 Basics of Scriptwriting

Structure of script Units of Time, A, B and C Plots, Screenplay Nomenclature, Treatment, Plot, Character, Script Form, Writing Scripts for Television News, Minutes and Seconds, Script Form. Writing documentaries, Scripting Commercials, Commercial Formats, Steps in Creating a Commercial, PSAs, Promos, and Ads, Copyright Issues, Important Vocabulary Terms

Unit 2 Formats of Script

Features, Documentaries, Educational programmes, Short films, Fiction, Non-Fictions, Time Chunks, Children programmes, Women programmes, writing for special audience,

Farmers and youth.

Unit 3 Concept and Story Idea

Idea: What makes a good concept, idea for television, what are the elements necessary for character for your story, Create obstacles, and Dramatic points in the story. Plot: Its importance, twist in plots, Daily soap, Series story-the comedy, The thriller story, Story elements: Characters, How to create interesting characters, subsidiary characters, relief characters, character stories, polarization of characters in story, elements of Teleplay.

Unit IV Scenes and Dialogues

Scene: What is a scene? How to create scene for play? Types of scenes, breaking Individual tracks into scenes, the opening scene, the end scene, the filler scene, and target Audience consideration. Dialogue: Importance of dialogues, Dialogues for different genres like comedy, Soap, thrillers and TV films, preparation of shooting script, Story board writing.

Unit V Exercises

Write Script for 1 minute Add Promo, 2 minute Awareness Programme, Radio Spot, Commercials, 5 minute Scriptorama, Analysis of a scene script, Generate a script inclusive of all elements of a feature.

Text Book

1. Antony Friedman, Writing for Visual Media, Focal Press, April 2001

Reference

1. Jan Johnson Yopp and Katherine C. McAdams, Reaching Audiences: A Guide to Media Writing, 2002

10MT214 C++ & DATA STRUCTURES

Credit 3:1:0

Course Objective:

To have a basic understanding of the object oriented language c++ and data structure concepts and algorithms in c++

Course outcome:

The students will have a clear idea on the basic concepts and algorithms of data structures which will be helpful while the subjects of database management are dealt with.

Unit I Introduction to C++: Comparison of C++ with C - Console Input/ Output in C++ - Variables in C++- Reference Variables in C++ - Function Prototyping - Function Overloading - Default Values for Formal Arguments of Functions - Inline Functions - Class and Objects: Introduction to Classes and Objects - Member Functions and Member Data - Objects and Functions, Objects and Arrays, Namespaces, Nested Classes.

Unit II DYNAMIC MEMORY MANAGEMENT: Introduction, Dynamic Memory Allocation, Dynamic Memory Deallocation. The set_new_handler() function, Constructors and Destructors: Constructors, Destructors, The Philosophy of OOPS. **Inheritance:** Introduction to Inheritance - Base

Class and Derived Class Objects, Accessing Members of the Base Class in the Derived Class. The Protected Access Specifier - Deriving by Different Access Specifiers.

Unit III OPERATOR OVERLOADING: Operator Overloading - Overloading the Various Operators – Overloading the Increment and the Decrement Operators **TEMPLATES:** Introduction, Function Templates, Class Templates, The Standard Template Library (STL) **EXCEPTION HANDLING:** Introduction, C-Style Handling of Error generating Codes, C++ Style Solution – the try/throw/catch Construct, Limitation of Exception Handling

Unit IV DATA REPRESENTATION: Introduction, Linear list, Formula based representation, Linked representation, Indirect Addressing, Simulating Pointers, Applications. **STACKS:** The abstract data types, Derived Classes and inheritances, Formula based representation, Linked representation, Applications.

Unit V QUEUES: The abstract data Types, Formula based Representation, Linked Representation, Priority Queues, Applications. **BINARY AND OTHER TREES:** Trees, Binary Trees, Properties of binary Trees, Representation of Binary trees, Common binary tree operations Binary Tree traversal, The ADT Binary Tree, The Class Binary Tree, ADT and Class Extensions, Application

Text Books:

1. Object-Oriented Programming with C++ - by Sourav Sahay, Oxford University Press, 2006.
2. Data Structure, Algorithms, and Applications in C++ - by Sartaj Sahani, McGraw-Hill, 2000.

Reference Books:

1. Object-Oriented Programming with C++ by E Balaguruswamy, 2nd Edition, Tata McGraw Hill, 2004
2. Introduction to Data structures and algorithm with C++ - by Glenn.W.Rowe, PHI, 2000.

10MT215 INTRODUCTION TO FILM STUDIES

Credits: 4:0:0

Course Objectives:

1. To introduce History and major movements of cinema
2. To teach the students the film making process, elements of film and Genre.
3. To study about Indian and International film makers.

Course Outcome

By the end of the course students will learn the history and evolution and different forms / aspects of cinema. This knowledge will help them to step into film industry and produce good films.

Unit I Film History and Major Movements

Early Cinema(1893-1903),Development of classical Hollywood cinema (1903-1927),German expression (1919-1924),French Impression and Surrealism(1917-1930),Soviet Montage(1924-

1930),The Classical Hollywood Cinema after the coming of sound, Italian neo-realism(1942-1951),The French New Wave(1959-1964),Japanese cinema, Cinema in the third world, Indian (Hindi,Tamil & other languages),Contemporary trends.

Unit II Film making Process

Planning, Pre-production-Concept/Story development, Scripting/Screen play writing, Budgeting, Casting, Locations, Financing, Production-Shooting, Direction &Cinematography, Post production-Editing, Sound recording, Dubbing ,Special effects, Graphics and Final mixing, Distribution and Exhibition.

Unit III Elements of Film

Mise-en-scene, the power of mise-en-scene,aspects of mise-en-scene, Space and time, narrative functions of mise-en-scene, Cinematographer properties-the photographic image, framing, duration of the image, montage and long take. Editing-dimensions of film editing, continuity editing, alternative to continuity editing, Sound –the powers of sound, fundamentals of film sound, dimensions of film sound, functions of film sound, theatrical sound formats.

Unit IV Genre

Approaches to studying film, Narrative and Non Narrative films, Structure of a narrative film, Cinematic codes, The concept of form in films, principles of film, narrative form, non-narrative films, dividing a feature film into parts and Genres(language, style, grammar, syntax),Documentary genres.

Unit V Great Auteur

Study of Great Indian and International filmmakers like D.W. Griffith, Charlie Chaplin, Alfred Hitchcock, Akira kurusowa, Ingmar Bergman, Satyajith Ray, Adoor Gopalakrishnan and others.

Reference Books:

1. .Monoco,James.How to read a film,Routledge,London,2001
2. Thoraval,Yves(2000)The Cinema of India(1896-2000)
3. Roberge,Gasdton(19770:Films for an ecology of Mind
4. Turner,Graeme.Film as social practice,Routledge,London,1993
5. Nelmes,Jill.An introduction to film studies,Routledge,London,1996
6. Vasudev,Aruna.The new Indian cinema,Macmillan,Delhi,1986

**DEPARTMENT OF
ELECTRONICS & MEDIA
TECHNOLOGY**

Karunya University

NEW SUBJECTS

| Code | Subjects | Credit |
|---------|------------------------------------|--------|
| 10VC201 | Introduction to Mass Communication | 4:0:0 |
| 10VC202 | Graphic Production | 3:0:0 |
| 10VC203 | Corporate Communication | 3:0:0 |
| 10VC204 | Computer Fundamentals | 3:1:0 |

10VC201 INTRODUCTION TO MASS COMMUNICATION

Credit 4:0:0

Course Objectives:

- To understand the types and models of communication
- To understand the process communication
- To understand the applications of communication in advertising
- To understand the functions of mass media
- To understand the relationship between culture and communication

Course Outcome:

- To assess the learning outcomes, a number of activities may be assigned, and the same may be presented and analysed, each student's work to be assessed by the team of subject experts.

Unit I : Introduction Communication

Introduction: Communication, Definitions, Scope and purpose- Forms of Communication - Intra-personal Communication, Inter-personal Communication- Mass Communication- Organizational Communication - Verbal and Non Verbal Communication - Barriers of communication - Socio economic changes and the emerging trend in Communication.

Unit II : Communication Process

Introduction: Process of Communication - Source, message, channel, receiver, feedback- Noise, Types of noise- Encoding and Decoding Process - Formal and Informal channels- Models of Communication, Berlo, Lasswell, Shannon and Weaver.

Unit III : Theories And Models Of Communication

Hypodermic Needle Theory, Two-step & Multi-step Theory, Commercial Theory, Play Theory Uses & Gratification Theory, Selective Exposure, Selective Perception & Selective Retention Theory, Individual Difference Theory, Meaning of theories based on scientific study & analysis; Four major theories of Press, according to Fred Siebert, Theodore Peterson & Wilbur Schramm Authoritarian Theory, Libertarian Theory, Social Responsibility Theory, Other Theories: Development Media & Democratic Participant Theory

Unit IV : Mass Media

Introduction - Characteristics of mass media- Functions of mass media - Inform - Entertain, Educate, Persuade- Dysfunction of mass communication- Communication and public opinion.

Unit V : Communication And Culture

Introduction : Communication and culture -Global media – multi cultural content Mass media and developing countries -Cross cultural Communication, Problems and challenges- Policies and implications

Text Book :

1. Keval J. Kumar “Mass communication in India” Jeyco Publisher 2007.

Reference Book :

1. Karl E. Rosengren “Communication an introduction” Sage Publication 2006
2. Mc Quil “Mass communication theory” Sage Publicaiton 5th edition-2005

10VC202 GRAPHIC PRODUCTION

Credits 3:0:0

Course Objective:

- To Draft and execute layouts and graphics on existing web interfaces.
- To develop pre-press material for tradeshows, such as: posters, banners, folders.
- To learn computer aided print production and learn publishing software’s.

Course Outcome:

- The student will be familiar about page layouts,design,printing,publishing softwares.
- Advertisements,Newspaper and magazine design can be done on their own.

Unit I : Introduction to Commercial Arts

Design stage:Typography,Description of Types,Type face-Type styles,Characteristics of each style,font identification, Kerning-spacing techniques,measurement techniques.

Unit II : Pre Press

Design stage:Typography,Description of Types,Type face-Type styles,Characteristics of each style,font identification, Kerning-spacing techniques,measurement techniques-Comprehensive Layouts:Layout and design importance,principles of layout and design,elements of design,methods and techniques,Graphic Arts Photography,continous tone images,halftone photography,halftone principle,line art photography,Stripping,plate making-pre press proofs.

Unit III : Press Work Operations

Letterpress printing,Rotogravure,Offset litho printing,screen printing-process,advantages and disadvantages,application of each printing method,other modern techniques and technologies in printing industry

Unit IV: Desktop Publishing

Computer aided print production, Desktop system, hardware requirements, cost, Softwares: Quark Xpress-Page Maker, Scanners and Scanning process, use of graphic elements, printing applications, advantages and disadvantages.

Unit V : The Production

Designing and Production of a newspaper, design and graphic arts elements, printing applications, newsprint quality and cost; Magazine layout and design techniques, printing methods, Ink, paper and other materials-cost; Designing and printing of brochures, folders etc., Designing a print advertisement, graphic elements-production cost.

References:

1. Bruce Vanden Bergh and Helen Katz Advertising Principles, NTC Business Books, US, 1999.
2. Mario Garcia 'Contemporary Newspaper Design', Prentice Hall, NY. 1980
3. Edmund Arnold. 'Designing the total Newspaper', Harper Collins, NY. 1981
4. Harold Evans. 'Newspaper Design'. Heinemann. London, 1976
5. Moen, Daryl, Newspaper layout and design (4th edition) Surjeet Publications, Delhi, 2004
6. Mc Kay, Jenny. 'Magazine Handbook'. Routledge, London, 2000.
7. King, Stacey. 'Magazine Design That Works, 2001.
8. Frank Ramano et al. Encyclopedia of Graphic Communication. Prentice Hall. NY. 1998.
9. Peter Warlock. 'The desktop publishing Book', Heinemann, 1988.

10VC203 CORPORATE COMMUNICATION

Credits 3:0:0

Course Objective :

- To introduce the students to strategic planning and execution of media and people
- Able Stress Management and Exploring possible avenues
- Perspectives of Strategic Corporate communication

Course Outcome:

- Students are able to understand the significance of planning and execution. Understand key aspects of media relations. Organise strategies in Crisis and Understand the New Technology and its implications

Unit I : Introduction

Definition and meaning of corporate communication - Model of Corporate communication- Significance of community, employee, and media relations to an organization- Special communication functions, such as government and investor relations

Unit II : Planning and Research Functions

Define the key variables in a strategic communication plan- Importance and value of strategic planning - cost effective communication tactics and program execution –Role of

spokesperson source selection in communication problem solving -Communication research methods used to evaluate program effectiveness- Primary and secondary research:

Unit III : Media Relations

Distinguish between traditional and new methods of social and cultural communication- History and the viability of traditional media-Implications and impact of the “New Media”- interaction between age and media uses and gratifications-New media- impact - control and flow of news and information to external publics-Growth of new media and changes in Corporate Media Relations practices

Unit IV: Corporate Communication Technology

Changes in corporate communication practices driven by the rapid evolution of computer-based technologies-Costs and benefits of corporate intranet and Internet-based communication programs and tactics- Web sites and traditional relationships between external media representatives and internal media relations specialists-Impact of technology on employee communication programs and the resulting affects on workforce information flows-Impact of Electronic media in corporate decision making

Unit V : Crisis Communication

Definition and Meaning of Crisis communication -The value of rapid response communication planning -Importance of media relations training in terms of rapid and credible response-The need to invest in realistic crisis communication training scenarios-In-depth communication team training- Explore problem solving strategies associated with crisis communication

Text Book :

1. Clarke.L Caywood “The Handbook of Strategic Public Relations and Integrated Communications”:, McGraw-Hill 1997

Reference Book:

1. Joep Cornelissen “Corporate communication: theory and practice” SAGE, 2004
2. Brad Fitch, Mike McCurry”Media relations handbook for agencies, associations, nonprofits, and Congress : The Capitol Net Inc, 2004.

10VC204 COMPUTER FUNDAMENTALS

Credit :3:1:0

Course Objective:

The students will be taught about computer hardware and operating system fundamentals required to understand a PC workstation. Course

Outcome:

This course will enable the students to understand the possibilities and limitations of computer technology in the media industry. It will also pave way for the students to develop the ability to custom build PC workstations catering to the various production demands in the media industry.

Unit I : Understanding Computer hardware

Cabinet and power supply - Motherboard - CPU - RAM - CD drives and recorders - DVD drives and Recorders - Modems - Network adapter - USB - Firewire - I/O Ports - Soundcard and Speakers - Keyboard and Mouse - Video monitor - Video adapter - Selecting a CPU - Memory - IDE - SCSI - SATA - Comparing device performance - Printers and Scanners.

Unit II : Basic Hardware assembly

Handling parts - General assembly guidelines - Precautionary methods - standard peripheral connections - Building a basic system - Preparing the cabinet - Installing the CPU - Installing DDR2 RAM - Installing the motherboard - Motherboard connections - Installing two drive array - Installing adapters - Installing the Hard drive array - Installing the DVD recorder - CMOS setup.

Unit III: Advanced Hardware assembly

Building a Pentium 4 LGA in a mid tower case - Building an Athlon 64/64FX in a mid tower case - Building a Pentium 4 in a tower case - IDE RAID assembly - SCSI RAID assembly - SATA RAID assembly.

Unit IV: Operating system installation and tweaking

Booting - Optical disk booting - Hard Disk booting - USB booting - Ethernet booting - Installing Windows XP - Installing Windows Vista - Installing Windows 7 - Installing Ubuntu Studio - Tweaking OS for Audio, Video and Graphics.

Unit V: Testing and Troubleshooting

Power up problems - POST - Beep codes - Booting problems - Problems during and after OS installation - Problems during system run - Hard drive errors - Optical drive errors - Network problems - Soundcard errors - Video errors - Printers and Scanners errors - External Peripheral errors.

Text Book

1. Morris Rosenthal, "Build Your Own PC", 4th Edition, The McGraw-Hill companies, 2004.

Reference Books

1. Ron White, "How computers work", 8th edition, QUE Publishing, 2005
2. Barbara Fritchman Thompson, Robert Thompson, "Building the Perfect PC", 2nd Edition, O'Reilly, 2006.

SCHOOL OF MEDIA

Karunya University

ADDITIONAL SUBJECT

| Subject Code | Subject Name | Credit |
|--------------|--------------------|--------|
| 10VC205 | Graphic Production | 4:0:0 |

10VC205 GRAPHIC PRODUCTION

Credits 4:0:0

Course Objective:

- To Draft and execute layouts and graphics on existing web interfaces.
- To develop pre-press material for tradeshows, such as: posters, banners, folders.
- To learn computer aided print production and learn publishing software's.

Course Outcome:

- The student will be familiar about page layouts, design, printing, publishing softwares.
- Advertisements, Newspaper and magazine design can be done on their own.

Unit I-Introduction to Commercial Arts

Design stage: Typography, Description of Types, Type face-Type styles, Characteristics of each style, font identification, kerning-spacing techniques, measurement techniques.

Unit II - Pre Press

Design stage: Typography, Description of Types, Type face-Type styles, Characteristics of each style, font identification, kerning-spacing techniques, measurement techniques-Comprehensive Layouts: Layout and design importance, principles of layout and design, elements of design, methods and techniques, Graphic Arts Photography, continuous tone images, halftone photography, halftone principle, line art photography, Stripping, plate making-pre press proofs.

Unit III - Press Work Operations

Letterpress printing, Rotogravure, Offset litho printing, screen printing-process, advantages and disadvantages, application of each printing method, other modern techniques and technologies in printing industry

Unit IV- Desktop Publishing

Computer aided print production, Desktop system, hardware requirements, cost, Softwares: Quark Xpress-Page Maker, Scanners and Scanning process, use of graphic elements, printing applications, advantages and disadvantages.

Unit V - The Production

Designing and Production of a newspaper, design and graphic arts elements, printing applications, newsprint quality and cost; Magazine layout and design techniques, printing methods, Ink, paper and other materials-cost; Designing and printing of brochures, folders etc., Designing a print advertisement, graphic elements-production cost.

References:

1. Bruce Vanden Bergh and Helen Katz Advertising Principles, NTC Business Books, US, 1999.
2. Mario Garcia 'Contemporary Newspaper Design', Prentice Hall, NY. 1980
3. Edmund Arnold. 'Designing the total Newspaper', Harper Collins, NY. 1981
4. Harold Evans. 'Newspaper Design'. Heinemann. London, 1976
5. Moen, Daryl, Newspaper layout and design (4th edition) Surjeet Publications, Delhi, 2004
6. Mc Kay, Jenny. 'Magazine Handbook'. Routledge, London, 2000.
7. King, Stacey. 'Magazine Design That Works', 2001.
8. Frank Ramano et al. Encyclopedia of Graphic Communication. Prentice Hall. NY. 1998.
9. Peter Warlock. 'The desktop publishing Book', Heinemann, 1988.

ADDITIONAL SUBJECTS

| Code | Name of the Subject | Credits |
|-------------|---|----------------|
| 11MT201 | AUDIO SIGNAL PROCESSING | 4:0:0 |
| 11MT202 | ANALOG ELECTRONICS CIRCUITS I | 4:0:0 |
| 11MT203 | ELECTRONIC DEVICES | 4:0:0 |
| 11MT204 | INTRODUCTION TO MASS COMMUNICATION | 2:0:0 |
| 11MT205 | STUDIO ACOUSTICS | 3:0:0 |
| 11MT206 | ELECTRONICS DEVICES AND CIRCUITS LAB | 0:0:2 |
| 11MT207 | PHOTOGRAPHY LAB | 0:0:2 |
| 11MT208 | AUDIO ENGINEERING AND PRODUCTION | 3:0:0 |
| 11MT210 | DIGITAL ELECTRONICS | 3:1:0 |
| 11MT211 | LINEAR INTEGRATED CIRCUITS | 4:0:0 |
| 11MT212 | ANALOG ELECTRONIC CIRCUITS II | 4:0:0 |
| 11MT213 | DIGITAL ELECTRONICS LAB | 0:0:2 |
| 11MT214 | PROGRAMME PRODUCTION LAB | 0:0:2 |
| 11MT215 | DIGITAL COMPOSITING | 4:0:0 |
| 11MT216 | ELECTRONIC COMMUNICATION SYSTEMS | 4:0:0 |
| 11MT217 | MICROPROCESSOR AND MICROCONTROLLER | 4:0:0 |
| 11MT218 | POST PRODUCTION TECHNIQUES | 3:0:0 |
| 11MT219 | COMMUNICATION CIRCUITS LAB | 0:0:2 |
| 11MT220 | MICROPROCESSOR AND MICROCONTROLLER LAB | 0:0:2 |
| 11MT221 | POST PRODUCTION TECHNIQUES LAB | 0:0:2 |
| 11MT222 | SIGNAL TRANSMISSION AND RADIATION | 4:0:0 |
| 11MT223 | PRINCIPLES OF ADVERTISING | 3:0:0 |
| 11MT224 | MULTIMEDIA COMMUNICATION | 4:0:0 |
| 11MT225 | COMPUTER ANIMATION | 4:0:0 |
| 11MT226 | 3D MODELING AND RENDERING | 4:0:0 |
| 11MT227 | VIRTUAL REALITY TECHNOLOGY | 4:0:0 |
| 11MT228 | COMPUTER NETWORKS | 4:0:0 |
| 11MT229 | COMPUTER GRAPHICS | 4:0:0 |
| 11MT230 | SOFTWARE RADIO | 4:0:0 |
| 11MT231 | IP TV AND INTERNET VIDEO | 4:0:0 |
| 11MT232 | MICROCONTROLLERS AND ITS APPLICATIONS | 4:0:0 |
| 11MT233 | DIGITAL IMAGE PROCESSING | 4:0:0 |
| 11MT234 | TELEVISION PROGRAMME FORMATS | 4:0:0 |
| 11MT235 | 3D LIGHTING | 4:0:0 |
| 11MT236 | 3D TEXTURING | 4:0:0 |
| 11MT237 | DIGITAL AUDIO | 4:0:0 |
| 11MT238 | DIGITAL AUDIO EFFECTS | 4:0:0 |
| 11MT239 | 3D ANIMATION LAB | 0:0:2 |
| 11MT240 | MEDIA ECONOMICS | 3:0:0 |
| 11MT241 | APPLICATION OF DSP FOR AUDIO AND IMAGE PROCESSING | 3:1:0 |
| 11MT242 | MEDIA MANAGEMENT AND ENTREPRENEURSHIP | 3:0:0 |

| | | |
|---------|----------------------------|-------|
| 11MT243 | MEDIA LAWS AND ETHICS | 3:0:0 |
| 11MT244 | MEDIA RESEARCH | 3:0:0 |
| 11MT245 | AUDIO PROGRAMME PRODUCTION | 3:0:0 |
| 11MT246 | LIGHTING TECHNIQUES | 3:0:0 |
| 11MT247 | GAME PROGRAMMING WITH C++ | 3:1:0 |

11MT201 AUDIO SIGNAL PROCESSING

Credits 4:0:0

Course Objective:

To learn about the basics principles of acoustics and coding standards highlighting audio signal processing.

Course Outcome:

On successful completion of the subject, students will know the coding frequencies and the band for audio signal processing.

Unit I Introduction

Signal Processing essentials, Quantization and Entropy Coding, Linear prediction in narrow band and wide band coding

Unit II Psychoacoustic Principles

Absolute Threshold of Hearing, Critical Bands, Simultaneous Masking, Masking Asymmetry, and the Spread of Masking, Non simultaneous Masking, Perceptual Entropy, Example Codec Perceptual Model: ISO/IEC 11172-3 (MPEG - 1) Psychoacoustic Model

Unit III Time-Frequency Analysis: Filter Banks and Transforms

Analysis-Synthesis Framework for M-band Filter Banks, Filter Banks for Audio Coding: Design Considerations, Pre-echo Distortion, Pre-echo Control Strategies, Optimum Coding in the Frequency Domain, Perceptual Transform Coder

Unit IV Subband and Sinusoidal Coders

Subband Algorithms, DWT and Discrete Wavelet Packet Transform (DWPT), Adapted WP Algorithms, Sinusoidal Model, Analysis/Synthesis Audio Codec (ASAC), Harmonic and Individual Lines Plus Noise Coder (HILN), FM Synthesis, The Sines + Transients + Noise (STN) Model, Hybrid Sinusoidal Coders

Unit V Audio Coding Standards, Algorithms and Quality Measures

MIDI Versus Digital Audio, Multichannel Surround Sound, MPEG Audio Standards, Adaptive Transform Acoustic Coding (ATRAC), Dolby Audio Coding Standards, DTS – Coherent Acoustics Subjective Quality Measures, Confounding Factors in Subjective Evaluations

Text Book:

1. Andreas Spanias, Ted Painter, Venkatraman Atti, Audio Signal Processing and Coding, Wiley Interscience, 2007.

Reference Book

1. Yiteng Huang and Jacob Benesty, Audio Signal processing for Next Generation MultiMedia communication systems, Springer, 2004.

11MT202 ANALOG ELECTRONICS CIRCUITS I**CREDITS: 4:0:0****COURSE OBJECTIVE**

The aim of this course is to familiarize the student with the analysis and design of basic transistor amplifier circuits and power supplies.

COURSE OUTCOME

On completion of this course the student will understand the

- i. Methods of biasing transistors & Design of simple amplifier circuits
- ii. Mid – band analysis of amplifier circuits using small - signal equivalent circuits to determine gain input impedance and output impedance
- iii. Method of calculating cutoff frequencies and to determine bandwidth
- iv. Design of power amplifiers and heat sinks
- v. Analysis and design of power supplies and power control using SCR.

UNIT I TRANSISTOR BIASING

BJT – Need for biasing - Fixed bias circuit, Load line and quiescent point. Variation of quiescent point due to h_{FE} variation within manufacturers tolerance. Stability factors. Different types of biasing circuits. Method of stabilizing the Q point to the extent possible. Advantage of Self bias (voltage divider bias) over other types of biasing. Use of Self bias circuit as a constant current circuit. Source self bias and voltage divider bias for FET. Use of JFET as a voltage variable resistor.

UNIT II MIDBAND ANALYSIS OF SMALL SIGNAL AMPLIFIERS

CE, CB and CC amplifiers. Method of drawing small-signal equivalent circuit. Midband analysis of various types of single stage amplifiers to obtain gain, input impedance and output impedance. Miller's theorem. Comparison of CB, CE and CC amplifiers and their uses. Darlington connection using similar and Complementary transistors. Methods of increasing input impedance using Darlington connection and bootstrapping. CS, CG and CD (FET) amplifiers. Multistage amplifiers. Basic emitter coupled differential amplifier circuit. Bisection theorem. Differential gain. CMRR. Use of constant current circuit to improve CMRR. Derivation of transfer characteristic, Transconductance. Use as Linear amplifier, limiter, amplitude modulator.

UNIT III FREQUENCY RESPONSE OF AMPLIFIERS

General shape of frequency response of amplifiers. Definition of cut off frequencies and bandwidth. Low frequency analysis of amplifiers to obtain lower cut off frequency Hybrid – pi equivalent circuit of BJTs. High frequency analysis of BJT amplifiers to obtain upper cut off frequency. High frequency equivalent circuit of FETs. High frequency analysis of FET amplifiers. Gain-bandwidth product of FETs. General expression for frequency response of multistage amplifiers. Calculation of overall upper and lower cut off frequencies of multistage amplifiers. Amplifier rise time and sag and their relation to cut off frequencies.

UNIT IV LARGE SIGNAL AMPLIFIERS

Classification of amplifiers (Class A, B, AB, C&D), Efficiency of class A, RC coupled and transformer-coupled power amplifiers. Class B complementary-symmetry, push-pull power amplifiers. Calculation of power output, efficiency and power dissipation. Crossover distortion and methods of eliminating it. Heat flow calculations using analogous circuit. Calculation of actual power handling capacity of transistors with and without heat sink. Heat sink design.

UNIT V RECTIFIERS AND POWER SUPPLIES

Half-wave, full-wave and bridge rectifiers with resistive load. Analysis for V_{dc} and ripple

voltage with C, CL, L-C and C-L-C filters. Voltage multipliers Zenerdiode regulator. Electronically regulated d.c power supplies. Line regulation, output resistance and temperature coefficient. Switched mode power supplies. Power control using SCR.

TEXT BOOKS

- i. Millman J. and Halkias .C., " Integrated Electronics ", 2nd Edition, Tata McGraw-Hill, 2001.

REFERENCE BOOKS

- i. Robert L. Boylestad and Louis Nashelsky, "Electronic Devices and Circuit Theory", 8th Edition., PHI, 2002.
- ii. S.Salivahanan, et.al, "Electronic Devices and Circuits", TMH, 2008.
- iii. Floyd, Electronic Devices, Sixth edition, Pearson Education, 2003.
- iv. I.J. Nagrath, Electronics – Analog and Digital, PHI, 2009.

11MT203 ELECTRONIC DEVICES

CREDITS: 4:0:0

COURSE OBJECTIVE

The aim of this course is to familiarize the student with the principle of operation, capabilities and limitation of various electron devices so that he will be able to use these devices effectively.

COURSE OUTCOME

On completion of this course the student will understand the

1. Basics of electron motion in electric field and magnetic field
2. Mechanisms of current flow in semi-conductors
3. Diode operation and switching characteristics
4. Operation of BJT, FET, and MOSFET metal semiconductor rectifying and ohmic contacts and power control devices.

UNIT I ELECTRON BALLISTICS AND INTRINSIC SEMICONDUCTORS

Force on charge in electric field – Motion of Charge in uniform and time varying electric fields – Force on a moving charge in a magnetic field – calculation of cyclotron frequency – calculation of electrostatic and magnetic deflection sensitivity. Energy band structure of conductors, semiconductors and insulators – Density distribution of available energy states in semiconductors – Fermi- Dirac probability distribution function at different temperatures – Thermal generation of carriers – Calculation of electron and hole densities in intrinsic semiconductors – Intrinsic concentration – Mass Action Law.

UNIT II EXTRINSIC SEMICONDUCTOR AND PN JUNCTIONS

N and P type semiconductors and their energy band structures – Law of electrical neutrality – Calculation of location of Fermi level and free electron and hole densities in extrinsic semiconductors – Mobility, drift current and conductivity – Diffusion current – Continuity equation - Hall effect. Band structure of PN Junction – Current Component in a PN Junction – Derivation of diode equation – Temperature dependence of diode characteristics.

UNIT III SWITCHING CHARACTERISTICS OF PN JUNCTION AND SPECIAL DIODES

Calculation of transition and diffusion capacitance – Varactor diode – charge control description of diode – switching characteristics of diode – Mechanism of avalanche and

Zener breakdown – Temperature dependence of breakdown voltages – Backward diode – Tunneling effect in thin barriers Tunnel diode – Photo diode – Light emitting diodes.

UNIT IV BIPOLAR JUNCTION TRANSISTORS AND FIELD EFFECT TRANSISTORS

Construction of PNP and NPN transistors – BJT current components – Emitter to collector and base to collector current gains – Base width modulation CB and CE characteristics – Breakdown characteristics – Ebers – Moll model – Transistor switching times. Construction and Characteristics of JFET – Relation between Pinch off Voltage and drain current – Derivation. MOSFETS – Enhancement and depletion types.

UNIT V METAL SEMICONDUCTOR CONTACTS AND POWER CONTROL DEVICES

Metal Semiconductor Contacts - Energy band diagram of metal semiconductor junction Schottky diode and ohmic contacts. Power control devices: Characteristics and equivalent circuit of UJT - intrinsic stand off ratio. PNP diode – Two transistor model, SCR, TRIAC, DIAC.

TEXT BOOKS

- i. Jacob. Millman, Christos C.Halkias, 'Electronic Devices and Circuits', Tata McGraw Hill Publishing Limited, New Delhi, 2003.
- ii. David A.Bell, 'Electronic Devices and Circuits', Prentice Hall of India Private Limited, New Delhi, 2003.

REFERENCE BOOKS

- i. Donald A.Neaman," Semiconductor Physics and Devices" 3rd Ed., Tata McGraw-Hill, 2002.
- ii. S.Salivahanan, N.Sureshkumar and A.Vallavaraj, Electronic Devices and Circuits, TMH, 2008.
- iii. S.M.Sze, Semiconductor Devices – Physics and Technology, 2nd edn. John Wiley, 2002.
- iv. Ben G.Streetman and Sanjay Banerjee, Solid State Electronic Devices, Pearson Education, 2000.
- v. Nandita Das Gupta and Amitava Das Gupta, Semiconductor Devices – Modelling and Technology, Prentice Hall of India, 2004.

11MT204 INTRODUCTION TO MASS COMMUNICATION

Credits 2:0:0

Course Objective:

- To understand the types and models of communication
- To understand the process of communication
- To understand the applications of communication in advertising
- To understand the function of mass media
- To understand the relationship between culture and communication

Course Outcome:

To assess the learning out comes, a number of activity may be assigned, and the same may be presented and analyzed, each student's work to be assessed by the team of subject experts.

UNIT I INTRODUCTION COMMUNICATION

Introduction: Communication Definitions, Scope and purpose – forms of Communication - Intra personal Communication, Interpersonal communication – Mass Communication – Academic Information

Organizational Communication – Verbal and Non Verbal Communication – Barriers of Communication – Socio economic changes and emerging trends in Communication.

UNIT II COMMUNICATION PROCESS

Introduction: Process of Communication – source, message, channel, receiver, feedback – Noise, Types of noise – encoding and Decoding Process – Formal and Informal Channel.

UNIT III MODELS OF COMMUNICATION

What is a Model -The Advantages of Models -Limitations of Models -Classical Communication Models -Aristotle's definition of rhetoric - Early Linear Models- The Shannon-Weaver Mathematical Model, 1949- Berlo's S-M-C-R, 1960- Schramm's Interactive Model, 1954-Non-linear Models-Dance's Helical Spiral, 1967-Westley and MacLean's Conceptual Model, 1957-Becker's Mosaic Model, 1968-Multidimensional Models-Ruesch and Bateson, Functional Model, 1951-Barnlund's Transactional Model, 1970-Suggestions for Communication Models-Systemic Model of Communication, 1972-Brown's Holographic Model, 1987-A Fractal Model-Suggested Readings

UNIT IV MASS MEDIA

Introduction – Characteristics of Mass Media – Functions of Mass Media – Inform – Entertain – Educate, Persuade – Dysfunction of Mass Communication and Public Opinion.

UNIT V COMMUNICATION AND CULTURE

Introduction: Communication and culture – Global Media- Multi Cultural Content – Mass Media and Developing countries – Cross cultural Communication, Problems and challenges, Policies and implications.

Text Book:

1. Keval J. Kumar “ Mass Communication in India” Jeyco Publisher 2007.

Reference Book:

1. Karl E. Rosengren “ Communication an Introduction: Sage Publication 2006.
2. Mc Quil “ Mass Communication Theory” Sage Publication 5th edition- 2005

11MT205 STUDIO ACOUSTICS

CREDITS 3:0:0

Course objective:

- To Understand Sound and it's properties
- To gain knowledge about acoustics
- Enlightening on the various technicalities involved in acoustic design of studios

Course Outcome:

- The students will have thorough understanding about acoustics and sound-proofing, which will enable them in acoustic design of studios.

Unit-1-Sound

Sound source-Propagation of sound-Sound waves-Sound in free space-Sound and obstacles-Wavelength-frequency-Complex waves-Pitch-Timbre-harmonics-phase-partials-octaves-Linear and Logarithmic measures-Understanding Decibel -Units of sound- Sound Pressure level-Sound Intensity level –Acoustics-Reverberation-Sound transmission class-Echo-Effect of boundaries-Absorbers-Diffusers-Adjustable acoustics-Reverb Time and it's techniques-Acoustic properties of materials-The human ear

Unit-2-Acoustics of a small recording studio

Acoustical characteristics of a studio-reverb-studio design-studio volume-room proportions-reverberation time-diffusion-noise-studio design procedure-studio features-elements common to all studios-Air handlers-Sound isolation-Minimising structure-borne sound

Unit-3-Acoustics for control room

Initial time delay gap-live end-specular reflections vs diffusion-low frequency resonances-managing reflections-control room frequency range-outer shell of the control room-inner shell of the control room-representative control rooms-study of designs-consultants

Unit-4-Acoustics for listening room

Acoustical link-peculiarities of small room acoustics-room size-room proportions-reverb time-low frequencies-control of modal resonances-bass traps-modal colorations-mid-high frequencies-identification and treatment of reflecting points-lateral reflections-control of spaciousness

Unit-5- Acoustics for Multitracking

Flexibility-Advantages and disadvantages of multitracking-Achieving track separation-studio acoustics-distance between artists-microphone management-barriers for separation-electronic separation- electronic instruments and separation

Text Book:

F. Alton Everest, Master Handbook for Acoustics- V Edition, MCGraw-Hill, 2010.

Reference Book :

Michael Talbot Smith, 'Sound Engineering explained', Focal Press, 2001

11MT206 ELECTRONICS DEVICES AND CIRCUITS LAB

Credits: 0:0:2

Course Objectives:

The main objective of this curriculum/course is to make the students well versed with basic electronic components and circuits. The students can

- Understand the nature and scope of modern electronics.
- Describe physical models of basic components.
- Design and construct simple electronic circuits to accomplish a specific function, e.g., designing amplifiers, ADC converters etc.
- Understand their capabilities and limitations and make decisions regarding their best utilization in a specific situation.

Course Outcome:

The combination of lecture and laboratory sessions provides learning opportunities that should enable the student to do the following upon completion of this course:

- Set up a bias point in a transistor.
- Verify the working of diodes, transistors and their applications.
- Build a common emitter/base/collector amplifier and measure its voltage gain.
- Understand the use of RPS and CRT.
- Explore the operation and advantages of operational amplifiers.
- Learn to design different types of filters and apply the same to oscillators and amplifiers.
- Exploring the circuitry which converts an analog signal to digital signal.

List of Experiments:

1. Characteristics of PN diode, Zener diode and Photo diode
2. Rectifiers (diode application)
3. NPN-PNP Transistors Biasing
4. Design of UJT/BJT amplifier
5. Characteristics of BJT in common emitter/base/collector configuration
6. Input and Output Characteristics of FET/JFET
7. Filters (R-C/ L-C / R-L-C)
8. Clippers and Clampers
9. RC coupled Amplifier
10. Op-Amp Inverter/Non Inverter
11. Op-Amp Differentiator and Integrator
12. Analog to Digital Conversion

11MT207 PHOTOGRAPHY LAB**Credits: 0:0:2****Course Objective:**

To train the students in the basics of framing artistically with photography and its software applications. To introduce the students the process of photography in studios.

Course Outcome:

Students will be well equipped with all the basics of framing artistically with photography and its software applications practically which helps them in doing photography.

List of experiments**Introduction**

Basics of photography-The still camera-Accessories and equipments-Rules for composition-Lighting

1. Framing and composition
2. Pictures under different light conditions
3. Black and White photography
4. Portrait photography
5. Texture/ Pattern photography
6. Travel/Architecture photography
7. Product photography
8. Fashion photography
9. Abstract photography
10. Sports/Action Photography
11. Nature/Wildlife photography
12. HDR photography

References 1. Dan Simson, Digital Photography Bible, Wiley, 2004

11MT208 AUDIO ENGINEERING AND PRODUCTION**Credits 3:0:0****Course Objectives:**

- For the student to understand the various aspects of the Audio studio

- Understanding production workflow
- To acquire In-Depth knowledge on consoles and Digital audio workstations

Course Outcome:

The student will be well versed in the technologies in Audio and Music production at the end of this subject

Unit I Microphones and Audio

Capturing Sound Electronically-Magnetic and Electronic Principles, Dynamic Transducers, Ribbon Transducers, Carbon Particle Transducers, Piezoelectric Transducers Reversed Transducers. Microphones-Technical Features, Pickup Patterns, Microphone Usage, Specialized Microphones, Microphone Placement, Miking techniques, Off-axis Coloration, Proximity Effect ,Acoustic Phase Relationships, Distant Miking.

Unit II Mixers and Recorders

Pre-amplification, Peak Indicators, Faders and Potentiometers Level Indicators, Headroom, Signal Routing Signal Sends, Split and Inline Mixers, Control Room Monitoring, Mute and Solo, Pan Potentiometers, Channelized Mixers, Mixer Automation, Digital Consoles, Broadcast Consoles, Automatic Consoles, Digital Audio Workstations and Computers

Unit III Post production Systems

Audio post production equipments, Pre production for post production, Track planning and Post Production sequences, Transmission and reproduction of audio post production materials, Digital Audio Transfers, Synchronizing and controllers, sound effects, stereo, music, monitoring and the environment

Unit IV Editing and Processing

Purposes of Editing, Foundations of Editing: Adjusting Levels, Control Surfaces in Editing. Audio Processors and Processing-Amplification and Level Control, Dynamic Processors, Frequency Processors, Temporal Processing, Digital Signal Processing, Noise Reduction Processors, Forensic Sound, Monitors and Loudspeakers, Transporting Sounds

Unit V Music Production

Genres in music, music production workflow, MIDI, Sampling, Quantization, MIDI automation, Synchronization, MIDI clock, MIDI timecode.

Text Book:

1. David Miles Huber, Modern Recording Techniques, Sixth edition, Focal Press,2005.
2. Zack Price, Computer based music production, Cherry lane music, 2005.

Reference Books:

1. Michael Talbot Smith, Sound Engineering explained, Focal Press,2001.
2. Bobby Owsinski, The mixing engineers handbook, 2nd edition, Thomas Course Technology,2006.
3. Jay Rose,Audio Post production for digital video,CMP books,2002.

11MT209 VIDEO PRODUCTION

Credits 3:0:0

Course Objectives:

- The students will learn about the working of a professional camera.
- They will also learn the various aspects of lighting for television production
- In-depth study on the various phases of production

Course outcome:

The students will be well read about the various aspects and people involved in a production and they will be empowered to produce shows themselves.

Unit-1 The camera

Types of cameras-parts of a camera-camera controls-lens-Exposure-Shutter-Shutter speed-White balance-Focusing-Filters-Camera mounts-Shot-Composition-Rules for composition-Framing-Depth of field-Camera angles-Camera movements-scene-sequence-Continuity

Unit-2 Lighting for television

Need for lighting-Technical reasons-Artistic reasons-Nature of light-Light intensity-Color quality of light-Color Theory-Color temperature-light temperature -light dispersion-direction of light-light sources-types of lights used in production-lighting techniques-lighting instruments-lighting accessories-controllers for lights-lamp care-safety-lighting on location-lighting and camera rehearsal-gaffer

Unit-3 Television production- An overview

Equipment-Production Team- role of director-role of producer -Production crew-Talent-Freelance crew-Production Methods-Venue-Television Studio-Remote production facilities-Production Switcher-Production Process-Three stages of production-Planning-Idea-goals and objectives-target audience-budget-limitations-production plan-production methods-schedule-coverage-outline-research-scripting-treatment-pacing the program-camera plan-story board-location survey

Unit-4 Before the shoot-

Background-Sets-semi permanent sets-virtual sets-pictorial backgrounds-Props-Make up-costumes-Basic organization-Studio plan-floor plan-lighting plot-cyclorama-camera height-foreground pieces-creating depth-set problems- setup-rehearsal- cues

Unit-5-Production techniques

Single camera techniques-Multi camera techniques-visual clarity-Studio production-floor manager-cueing-recording the production-tape formats-production style-remote production vehicles-OB van-live transmission and event coverage-test equipments

Textbook

Gerald Millerson, Jim Owens ,Television production handbook,Focal Press,2008

Reference Books

1. Martha Mollisson, Producing Videos, Black Inc books, 2010.
2. Paul Wheeler, Practical Cinematography, New Riders Press, 2002.

11MT210 DIGITAL ELECTRONICS

Credits: 3:1:0

Course Objectives:

- To introduce number systems and codes
- To introduce basic postulates of Boolean algebra and shows the correlation between Boolean expressions
- To introduce the methods for simplifying Boolean expressions
- To outline the formal procedures for the analysis and design of combinational circuits and sequential circuits
- To introduce the concept of memories, programmable logic devices and digital ICs.

Course Outcome:

On completion of this course, the students can design combinational and sequential digital logic circuits. Also they will have knowledge on Programmable Logic devices and its usage.

Unit I: Number Systems and Boolean algebra

Binary, octal, hexadecimal number systems, Complements, representation of signed numbers, floating point numbers -BCD-ASCII-EBCDIC-Excess 3 code-gray code-error detecting and correcting codes. Boolean Algebra: Postulates and theorems of Boolean Algebra –canonical forms – simplification of logic functions using Karnaugh map.

Unit II: Combinational Logic Design

Logic gates –implementation of combinational logic functions – encoders & decoders – multiplexers & demultiplexers –code converters – comparator - half adder, full adder – parallel adder – binary adder – parity generator/checker – implementation of logical functions using multiplexers.

Unit III: Counters and Registers

RS, JK, Master–slave, D&T flip flops – level triggering and edge triggering – characteristic tables, characteristic equations, excitation tables –asynchronous & synchronous counters – modulus counters–shift register –Johnson counter- ring counter – timing waveforms

Unit IV: Sequential Logic Design

Basic models of sequential machines – concept of state table – state diagram – state reduction implementation of synchronous sequential circuits – asynchronous sequential logic – Fundamental mode operation – Transition Table, Flow Table, Race, Primitive Flow Table, Reduction of primitive flow table, Reduction of state and flow tables, Race free assignment.

Unit V: Programmable Logic and Digital Integrated Circuits

Semicustom design – Introduction to PLD's – ROM – PAL – PLA – FPGA.
Digital IC – Characteristics - Logic Families: RTL, TTL, ECL, CMOS, Comparison of performance of various logic families.

Text Books:

1. Morris Mano, Digital Design, Prentice Hall of India, 2002.

Reference Books:

1. John M. Yarbrough, 'Digital Logic, Application & Design', Thomson, 2002.
2. Thomas L. Floyd, "Digital Fundamentals", PHI, 2003.

11MT211 LINEAR INTEGRATED CIRCUITS**CREDITS: 4:0:0****Course Objectives**

- To introduce the basic building blocks of linear integrated circuits.
- To teach the linear and non-linear applications of operational amplifiers.
- To introduce the theory and applications of analog multipliers and PLL.
- To teach the theory of ADC and DAC
- To introduce a few special function integrated circuits.

Course Outcome

On completion of this course, the students will have a thorough understanding of operational amplifiers with linear integrated circuits. Also students will be able to design circuits using operational amplifiers for various applications.

UNIT I CIRCUIT CONFIGURATION FOR LINEAR ICs

Current sources, Analysis of difference amplifiers with active loads, supply and temperature independent biasing, Band gap references, Monolithic IC operational amplifiers, specifications, frequency compensation, slew rate and methods of improving slew rate.

UNIT II APPLICATIONS OF OPERATIONAL AMPLIFIERS

Linear and Nonlinear Circuits using operational amplifiers and their analysis, Inverting and Non inverting Amplifiers, Differentiator, Integrator, Voltage to current converter, Instrumentation amplifier, Sine wave Oscillator, Low-pass and band-pass filters, Comparator, Multivibrators and Schmitt trigger, Triangular wave generator, Precision rectifier, Log and Antilog amplifiers, Non-linear function generator.

UNIT III ANALOG MULTIPLIER AND PLL

Analysis of four quadrant (Gilbert cell) and variable transconductance multipliers, Voltage controlled Oscillator, Closed loop analysis of PLL, AM, PM and FSK modulators and demodulators, Frequency synthesizers, Componder ICs.

UNIT IV ANALOG TO DIGITAL AND DIGITAL TO ANALOG CONVERTERS

Analog switches, High speed sample and hold circuits and sample and hold ICs, Types of D/A converter, Current driven DAC, Switches for DAC, A/D converter-Flash, Single slope, Dual slope, Successive approximation, Delta Sigma Modulation, Voltage to Time converters.

UNIT V SPECIAL FUNCTION ICs

Astable and Monostable Multivibrators using 555 Timer, Voltage regulators-linear and switched mode types, Switched capacitor filter, Frequency to Voltage converters, Tuned amplifiers, Power amplifiers and Isolation Amplifiers, Video amplifiers, Fiber optic ICs and Opto-couplers.

TEXT BOOKS

1. D.Roy Choudhry, Shail Jain, "Linear Integrated Circuits", New Age International Pvt. Ltd., 2000.
2. Sergio Franco, 'Design with operational amplifiers and analog integrated circuits', McGraw-Hill, 2002.

REFERENCE BOOKS

1. J.Michael Jacob, 'Applications and Design with Analog Integrated Circuits', Prentice Hall of India, 2002.
2. Ramakant A.Gayakwad, 'OP-AMP and Linear IC's', Prentice Hall / Pearson Education, 2000.
3. Taub and Schilling, Digital Integrated Electronics, McGraw-Hill, 2000.
4. Millman.J. and Halkias.C.C. 'Integrated Electronics', McGraw-Hill,2001.
5. William D.Stanely, 'Operational Amplifiers with Linear Integrated Circuits'. Pearson Education, 2004.

11MT212 ANALOG ELECTRONIC CIRCUITS II

CREDITS: 4:0:0

COURSE OBJECTIVE

The aim of this course is to familiarize the student with the analysis and design of

feedback amplifiers, oscillators, tuned amplifiers, wave shaping circuits, multivibrators and blocking oscillators.

COURSE OUTCOME

On completion of this course the student will understand the

- Advantages and method of analysis of feedback amplifiers
- Analysis and design of RC and LC oscillators, tuned amplifiers, wave shaping circuits, multivibrators, blocking oscillators and time based generators.

UNIT 1 FEEDBACK AMPLIFIERS

Block diagram. Loop gain. Gain with feedback. Desensitivity of gain. Distortion and cut off frequencies with feedback. The four basic feedback topologies and the type of gain stabilized by each type of feedback. Input and Output resistances with feedback. Method of identifying feedback topology, feedback factor and basic amplifier configuration with loading effect of feedback network taken into account. Analysis of feedback amplifiers. Nyquist criterion for stability of feedback amplifiers.

UNIT II OSCILLATORS

Barkhausen Criterion. Mechanism for start of oscillation and stabilization of amplitude. Analysis of Oscillator using Cascade connection of one RC and one CR filters. RC phase shift Oscillator. Wienbridge Oscillator and twin-T Oscillators. Analysis of LC Oscillators, Colpitts, Hartley, Clapp, Miller and Pierce oscillators. Frequency range of RC and LC Oscillators. Quartz Crystal Construction. Electrical equivalent circuit of Crystal. Crystal Oscillator circuits.

UNIT III TUNED AMPLIFIERS

Coil losses, unloaded and loaded Q of tank circuits. Analysis of single tuned and synchronously tuned amplifiers. Instability of tuned amplifiers. Stabilization techniques. Narrow band neutralization using coil. Broad banding using Hazeltine neutralization. Class C tuned amplifiers and their applications. Efficiency of Class C tuned Amplifier.

UNIT IV WAVE SHAPING AND MULTIVIBRATOR CIRCUITS

RL & RC Integrator and Differentiator circuits. Diode clippers, clampers and slicers. Collector coupled and Emitter coupled Astable multivibrator. Monostable multivibrator. Bistable multivibrators. Triggering methods. Storage delay and calculation of switching times. Speed up capacitors. Schmitt trigger circuit.

UNIT V BLOCKING OSCILLATORS AND TIMEBASE GENERATORS

Monostable and Astable Blocking Oscillators using Emitter and base timing. Frequency control using core saturation. Pushpull operation of Astable blocking oscillator i.e., inverters. Pulse transformers. UJT sawtooth generators. Linearization using constant current circuit. Bootstrap and Miller saw-tooth generators. Current time base generators.

Text books:

1. Millman and Halkias. C., "Integrated Electronics", Tata McGraw-Hill 2001
2. Schilling and Belove, "Electronic Circuits", TMH, Third Edition, 2002
3. Millman J. and Taub H., "Pulse Digital and Switching waveform", McGraw-Hill International 2000

Reference Books

1. Sedra Smith, "Micro Electronic Circuits" Oxford university Press, 2004.
2. David A. Bell, " Solid State Pulse Circuits ", Prentice Hall of India, 1992.
3. Robert L. Boylestead and Louis Nasheresky, 8th edn., PHI, 2002.

11MT213 DIGITAL ELECTRONICS LAB**Credits: 0:0:2****Course Objective:**

To impart the concepts of digital electronics practically and train students with all the equipments which will help in improving the basic knowledge.

Course Outcome:

The students will have good knowledge about the concepts of digital electronics and they will be able to apply all these concepts practically.

List of Experiments:

1. Logic gates
2. Half adder and Full adder
3. Multiplexer and De-multiplexer
4. Code converter
5. Encoder and Decoder
6. Flip-flops
7. Counters
8. Shift registers
9. IC timer
10. Parity generation and checking
11. Analog to digital converter
12. Digital to analog converter

11MT214 PROGRAMME PRODUCTION LAB**Credits: 0:0:2**

Course Objective: The students will be practically taught to apply Programme production techniques involved in Radio Production and TV Production.

Course Outcome: - This course will enable the students to be creatively and technically operational in broadcast production Industry.

List of Exercises:

1. Basic Radio Production
2. Radio Edit
3. Music production- Digital Audio MIDI
4. Outdoor sound sampling
5. Location sound

6. Basic shots
7. Camera Movements
8. Camera angles
9. Lighting
10. Linear editing using multi camera production
11. Project 1- Indoor production
12. Project 2- Outdoor production

11MT215 DIGITAL COMPOSITING**Credits: 4:0:0**

Course Objective:

The objective is to teach students about different concepts involved in digital compositing which will help them to apply these entire concepts practically.

Course Outcome:

The students will have good knowledge about the latest trends and technologies involved in digital compositing and they will be able to apply all these concepts practically.

Unit I Digital Representation of Visual Information

Image Generation, Pixels, Components, Channels, Spatial Resolution, Bit Depth, Normalized Values, Additional Channels, HSV and YUV Color Representation, Image Input Devices, Digital Image File Formats, File Format Features, Vendor –specific File Format Implementations, Compression, Choosing a File Format, Nonlinear Color encoding.

Unit II Basic Image Manipulation and Compositing

Terminology, Color Manipulations, Spatial filters, geometric transformations, Expression Language, Filtering Algorithms, motion blur, Multi source Operators, Matte Image, The Integrated Matte Channel, Masks, Compositing With Pre multiplied Images, Morphing, Matte creation and manipulation: Rotoscoping, Procedural matte extraction, matte manipulations, Time and Temporal Manipulations: Apparent Motion, Temporal Resolution, Temporal Artifacts, Changing the Length or Timing of a Sequence, Key Framing.

Unit III Image Tracking and Stabilization

Tracking an Element into a Plate, Choosing the Feature to Track, Limiting the Search Area, Human Intervention, Using Tracking Curves Manually, Tracking Multiple Points, Stabilizing a Plate, Camera tracking, Interface Interactions: Workflow, the evolution of Interactivity, Methods of representing the compositing process, Timelines, Curve Editors, Working With Proxy Images, Image Viewing and Analysis Tools

Unit IV Film Formats

Aspect Ratio: Non square Pixels, Deciding on a Resolution for an Aspect Ratio, Format Conversion Pipeline, Format Conversion Example, Film Formats: 35mm Formats, 16mm Formats, Specialized Film Formats, Video Formats: Fields, Color Resolution, Gamma, Common video formats, Other Formats, Working with non square pixels, converting and combining formats

Unit V Creating Elements and Integration techniques

Lighting, Interactive Lighting, Matched Cameras, Reference Stand-in, Clean Plates, Film Stock, Filters, Choosing a Format, Lighting and Shooting with Blue screens, Blue screen versus Green screen, Shooting Order, Integration Techniques: Scene Continuity, Color and lighting, Lighting, light wrapping, Shadows, digital color matching, spill suppression, Atmosphere, camera characteristics: Camera Mismatches, Camera Movements, scale and perspective, Focus, Motion Blur, lens flares, Film Grain and sensor noise.

Text Book:

Ron Brinkmann, The Art and Science of Digital Compositing, second edition, Morgan Kaufmann, 2008.

Reference Books:

1. Steve Wright, Digital Compositing for Film and Video, Focal Press, 2006
2. Dough Kelly, Digital Compositing in-Depth, Coriolis, 2000.

Credits: 4:0:0

Course Objectives:

- To understand basic signals, analog modulation, demodulation and radio receivers.
- To understand source digitization, digital multiplexing and modulation.
- To understand the various noises in communication systems.

Course Outcome: This course will provide a clear understanding of various communication system techniques, their operation and performance evaluation.

Unit-I Waveform Spectra and Noise

Waveforms, spectrum, Energy signals, Power signals, Noise, Sources of noise, Thermal noise, shot noise, partition noise, low frequency noise, Signal to noise ratio, Noise factor, Noise temperature.

Unit-II Amplitude Modulation

Amplitude modulation – Modulation Index, Frequency spectrum, Power, DSBSC, Modulator demodulator circuits, AM transmitters, Super heterodyne receiver, tuning range, Image rejection, Adjacent channel selectivity, AGC, double –conversion receivers, Single-sideband principles, balanced modulator, SSB generation, SSB reception.

Unit-III Frequency and Phase Modulation

Frequency modulation – Frequency spectrum, power, Deviation ratio, Phase modulation, Equivalence between FM and PM, Angle modulator, FM transmitter, Angle modulation Detectors , AFC, Amplitude limiters, Noise in FM, Pre-emphasis and De-emphasis, FM broadcast and stereo receivers.

Unit-IV Pulse Modulation

Pulse amplitude modulation, Sampling, Time division multiplexing, Pulse code modulation – Compression, Differential PCM, Delta modulation, Pulse Position Modulation, Pulse Width Modulation.

Unit-V Digital Communication

Symbol. Bit, Baud, Line codes and waveforms, Basic digital communication systems, probability of error, digital carrier systems, ASK, FSK, PSK, QPSK.

Text Book:

1. Dennis John Roddy and Coolen, Electronic Communications, PHI, 2000.

Reference Books

1. Taub and Schilling, Principles of Communication Systems, McGraw Hill, 2003.
2. G.Kennedy, “Electronic Communication Systems”, McGraw Hill, 2003.

11MT217 MICROPROCESSOR AND MICROCONTROLLER

Credits: 4:0:0

COURSE OBJECTIVE:

To introduce and learn the architecture, programming and interfacing of microprocessors and microcontrollers.

COURSE OUTCOME

Academic Information

The students will gain adept knowledge in Microprocessor terminologies.

UNIT I 8085 CPU

8085 Architecture – Instruction set – Addressing modes – Timing diagrams – Assembly language programming – Counters – Time Delays – Interrupts – Memory interfacing – Interfacing I/O devices.

UNIT II PERIPHERALS INTERFACING

Interfacing Serial I/O (8251)- parallel I/O (8255) –Keyboard and Display controller (8279) – ADC/DAC interfacing – Inter Integrated Circuits interfacing (I2C Standard)- Bus: RS232C- RS485-GPIB

UNIT III 8086 CPU

Intel 8086 Internal Architecture – 8086 Addressing modes- Instruction set- 8086 Assembly language Programming– Interrupts.

UNIT IV 8051 MICROCONTROLLER

8051 Micro controller hardware- I/O pins, ports and circuits- External memory –Counters and Timers- Serial Data I/O- Interrupts-Interfacing to external memory and 8255.

UNIT V 8051 PROGRAMMING AND APPLICATIONS

8051 instruction set – Addressing modes – Assembly language programming – I/O port programming -Timer and counter programming – Serial Communication – Interrupt programming –8051 Interfacing: LCD, ADC, Sensors, Stepper Motors, Keyboard and DAC.

TEXT BOOKS:

1. Ramesh S Gaonkar, Microprocessor Architecture, Programming and application with 8085, 4th Edition, Penram International Publishing, New Delhi, 2000.
2. John Uffenbeck, The 80x86 Family, Design, Programming and Interfacing, Third Edition. Pearson Education, 2002.
3. Mohammed Ali Mazidi and Janice Gillispie Mazidi, The 8051 Microcontroller and Embedded Systems, Pearson Education Asia, New Delhi, 2003.

REFERENCE BOOKS:

1. A.K. Ray and K.M.Burchandi, Intel Microprocessors Architecture Programming and Interfacing, McGraw Hill International Edition, 2000
2. Kenneth J Ayala, The 8051 Microcontroller Architecture Programming and Application, 3rd Edition, Penram International Publishers (India), New Delhi, 2004.
3. M. Rafi Quazzaman, Microprocessors Theory and Applications: Intel and Motorola prentice Hall of India, Pvt. Ltd., New Delhi, 2003

11MT218 POST PRODUCTION TECHNIQUES

Credits: 3:0:0

Course Objective:

To do a detailed study on post production

To gain knowledge about the technologies involved in various post production aspects

Course Outcome:

The students will gain comprehensive knowledge about post production

Unit I Editing Systems

Audio post production equipments, mixing consoles and audio processing equipments, Transmission and reproduction of audio post production materials, Synchronizing and controllers, sound effects, Audio workstations, stereo, music, monitoring and the environment

Unit II Audio Editing

Editing software's, Planning for post production, Track planning and Post Production sequences, Digital Audio Transfers and Recording, Voice over perspectives, Audio post production for video

Unit III Video Post Production

Technology, and techniques of video editing, TV Signals, time code, Digital video and video tape formats, video tape editing, preparing for post production, offline editing process, online editing Digital video effects, working with multiple video tracks and layers

Unit IV High Definition Post Production

Frame recording method, bit depth, chromo sampling, compression, mixing SD and HD, computer file size for high definition video, conversion problems, off- line/online edit system compatibility, shoot, edit and deliver at one frame, LCD monitors, plasma screens, DLP monitors

Unit V Colour Correction

Colour theory, Perceptions, Colour monitors and tools, Common colour errors and techniques, Introduction to Advance colour correction

Text Books

- 1 Jay Rose, Audio Post Production for Digital Video, CMP Books 2002.
- 2 Gary H Anderson, Video Editing and post production, A Professional Guide, Focal Press,1999.

Reference Books

1. Tim Amyes, Audio Post production in Video and Film, Focal Press, 2001.
2. Des Lyver, Basics of the Video Production Diary, Focal Press, 2001.
3. Steven E Browne, High Definition Post Production: Editing and Delivering HD Video, Focal Press 2007.
4. Steven Hullfish-Jaime Fowler, Colour Correction for Digital Video: Using Desk Top Tools to Perfect Your Image, CMP Books, 2003.

11MT219 COMMUNICATION CIRCUITS LAB

CREDITS 0:0:2

COURSE OBJECTIVE

To learn circuit design and understand the theoretical concepts by hands on with circuit connections in breadboard for communication and Audio application.

COURSE OUTCOME

On Completion of this lab the Student will be able to:

- Implement properly any constructed circuits.
- Correctly operate standard electronics test equipment such as CRO, DSO, Signal analyzers and Function Generators to test electronics Circuits
- Correctly analyze a circuit and compare its theoretical performance to actual performance.

LIST OF PRACTICALS

1. Equalizer
2. Active Filters Design
 - a. Low pass filter
 - b. High pass filter
 - c. Band pass filter
 - d. Band elimination filter
3. Amplitude Modulation & Diode Detector
4. Frequency Modulation & Demodulator
5. Classes of Amplifiers Design
6. Pre-emphasis and De-emphasis Circuits Design
7. IF amplifier, Mixer
8. Multivibrator Circuits Design
9. Study of Sampling Theorem
10. Time Division Multiplexing
11. PLL applications
12. Radiation Pattern of Antennas
 - a) Inverse Square Law of Propagation
 - b) Reciprocity Theorem

11MT220 MICROPROCESSOR AND MICROCONTROLLER LAB**Credits: 0:0:2****Course Objective:**

To introduce to students the basics of microprocessor and microcontroller Programming and their applications.

Course Outcome:

The students will be equipped with the basic knowledge of microprocessor and microcontroller interfacing and their applications.

List of Experiments:

1. Arithmetic and Logical operations using 8085
2. Data Transfer operation using 8085
3. Code conversions using 8085
4. Programs on finding largest/smallest number using 8085
5. Parallel port Interfacing using 8255
6. ADC Interfacing using 8085
7. DAC Interfacing using 8085
8. Arithmetic and Logical operations using 8086
9. Arithmetic and Logical operations using 8051
10. Programs on finding largest/smallest number using 8051
11. Programs on ascending/descending order using 8051
12. Stepper motor interfacing using 8051

11MT221 POST PRODUCTION TECHNIQUES LAB**Credits :0:0:2**

Course Objective: The students will be practically taught to apply post production techniques and procedures involved in TV and Film Production.

Course Outcome: - This course will enable the students to be creatively and technically operational in TV and Film Industry

List of Exercises:

1. Research & reference
2. Script breakdown & script
3. Production-Shooting the concept
4. Editing-Rough cut
5. Editing-First cut
6. Editing-Final cut with effects, Titling
7. ADR/Voice over track

8. Foley
9. SFX track
10. Re-recording
11. Music track
12. Music Video

11MT222 SIGNAL TRANSMISSION AND RADIATION

CREDITS: 4:0:0

Course Objective:

The students will learn about transmission lines and the latest technologies in signal transmission systems

Course Outcome:

The course aims at training the students to become broadcast engineers.

UNIT-I TRANSMISSION LINES AND CABLES

Primary line constants, phase velocity and line wavelength, characteristic impedance, propagation coefficient, phase and group velocities, standing waves, lossless lines at radio frequencies, VSWR, slotted-line measurements at radio frequencies, transmission lines as circuit elements, smith chart, time-domain reflectometry.

UNIT-II WAVEGUIDES RESONATORS & COMPONENTS

Rectangular Waveguides, Circular Waveguides, Modes in Waveguides, Waveguide Coupling, Matching & Attenuation, Cavity Resonators, Auxillary Components

UNIT-III RADIO-WAVE PROPAGATION

Propagation in free space, Tropospheric propagation, ionospheric propagation, surface wave, LF propagation and VLF propagation, Extremely low-frequency propagation, summary of radio-wave propagation

UNIT-IV ANTENNAS

Antenna Equivalent circuits, coordinate system, radiation fields, polarization, Isotropic radiator, power gain of an antenna, effective area & effective length of an antenna, Hertzian dipole, vertical antennas, folded elements, loop and ferrite-rod receiving antennas,

nonresonant antennas, driven arrays, parasitic arrays, VHF-UHF antennas, microwave antennas

UNIT-V FIBER OPTIC COMMUNICATION

Principles of light transmission in a fiber, losses in fibers, dispersion, light sources for fiber optics, photo detectors, connectors and splices, fiber optic communication systems

TEXT BOOK

1. Dennis John Roddy and Coolen, Electronic Communications, PHI, 2004.
2. G. Kennedy, Davis Electronic Communication Systems, McGraw Hill, 2003

REFERENCE BOOKS

1. Taub and Schilling – Principles of Communication Systems, McGraw Hill, 2003
2. William L. Schweber, Electronic Communication Systems, Prentice Hall, 2002
3. Roy Blake, Electronic Communication Systems, Delmar/Thomson Learning, 2002
4. Louis E Frenzel, Communication Electronics, McGraw Hill Higher Education, 2000

11MT223 PRINCIPLES OF ADVERTISING

Credits: 3:0:0

COURSE OBJECTIVES:

- To understand the purpose and meaning of advertising
- To understand advertising as an industry
- To understand the process of communication in advertising
- To evaluate the need of Public Relation and PR function as a Mass Media

COURSE OUTCOME

To assess the learning outcomes, activities based on developing and making of an advertisement may be assigned, and the same may be presented and analyzed. Students can be made into groups and conduct an advertising and PR Campaigns, the same be assessed by subject experts.

UNIT I : INTRODUCTION

Understanding advertising today-The foundations of advertising -The advertiser Agency Partnership-The advertising Environment.

Unit II Audience and Advertising

Audience Definition, Research, and Planning – Audience analysis and buyer behavior – Segmentation, Targeting and Positioning- Advertising Research- Objectives, Strategy and Plans- Intercultural and International Advertising

Unit III Creative Process

The Creative Process – Creativity, Creative Strategy and Copywriting – Art Production – Print Production – Electronic Production

Unit IV Media

Media Choice- Media Objectives, strategy and planning –print media – electronic mediadirect marketing and out of home advertising- Putting the campaign together- Sales promotion and supplementary media – public relations and special communications- local advertising –from plan to results: The complete campaign -

Unit V Public Relations

Evolution and growth, definition and relevance of PR role – Mass media & PR; PR in Government, public and private sectors; PR and corporate Communications, writing for PR; PR ethics and regulations.

Text Book

Courtland L. Bovee, Advertising Excellence: McGraw Hill Publications.
Delhi,(2001).

Reference Books:

1. Sean Brierley, The Advertising and Hand book, New York, 2000.
2. McGraw Hill, Principles of Advertising and IMC, McGraw Hill, 2000.
3. John McDonough, Encyclopedia of Advertising”, Vol 1, 2000.

11MT224 MULTIMEDIA COMMUNICATION

Credits: 4:0:0

Course Objective:

To introduce to the students theory, design, implementation and operation of multimedia communication and signal processing systems and their applications.

Course Outcome:

The students will be well equipped with the knowledge of Multimedia Communication Systems

Unit I:

Multimedia Communications – Introduction – Model – Requirements – Audio-Visual Integration – Media interaction – Lip reading – Lip synchronization – Lip tracking – Audio to visual mapping – Multimedia processing in communication – Digital media – Signal processing elements – Challenges – Perceptual coding of audio – Transform audio coders – Subband coders – Image coding – Video coding – Watermarking – Organization storage and retrieval issues – Signal processing for networked multimedia(NN) – NN for multimedia processing – Multimedia processors.

UNIT II:

Distributed multimedia systems – Features – Resource management – Networking – Multimedia operating systems – Distributed multimedia servers – Distributed multimedia applications – Multimedia Communication Standards – MPEG – MPEG 2 – MPEG 4 – DMIF – MPEG 4 Video, Audio –MPEG 7 – MPEG 21.

UNIT III:

ITU-T Standardization of Audio visual communication system – IETF and Internet Standards – Multimedia Communications across networks – Packet Audio/Video in the network environment – Video transport across generic networks

UNIT IV:

Multimedia transport across ATM networks – Multimedia across IP networks – Multimedia across DSLs – Internet access networks – Multimedia across wireless

UNIT V:

Mobiles Networks – Broadcasting networks – Digital Television infrastructure for interactive multimedia servers.

Text book:

K.R. Rao, Zaron S. Bojkovic, Dragorad A. Milocanovic, Multimedia Communication Systems, Prentice Hall India, 2002. ISBN 81-203-2145-6.

Reference books:

1. Fred Halsall, Multimedia Communications, Pearson Education, 2001. ISBN 81-7808-532-1.
2. Steve Heath, Multimedia and Communication Technology, Second Edition, Focal Press, 2003. ISBN 81-8147-145-8

11MT225 COMPUTER ANIMATION

Credits: 4:0:0

Course Objective:

To make the students know animation in detail starting from preproduction till postproduction with modeling, rendering and advanced animation techniques.

Course Outcome:

Students will be clear with each and every working of animation software.

UNIT I: Preproduction and Modeling Basics

Preproduction:Introduction-Storyboarding-Character and Model Design-Sound Design – Technical Tests-Producton Scheduling Modeling Basics:Introduction-Polygon Modeling-Splines and Patches-Coordinate Systems-Viewing Windows-Geometric Primitives-Transformations-Common Modeling Techniques-Hierarchies-Booleans and Trims-Basic Deformations

UNIT II: Rendering Basics

Introduction-The Camera-Lights-Surface Characteristics-Shading Algorithms-Rendering Algorithms-Background Images-Surface Texture Mapping-Solid Texture Mapping-Final Rendering

UNIT III: Animation Basics and Advanced Modeling

Animation Basics:Introduction-Keyframing-Interpolations-Parameter-curve Editing-Dope Sheet Editing-Forward Kinematics-Inverse Kinematics-Motion Paths-Shape Deformations-Camera Animation-Animating Light and Surface Properties-Pose-based Animation. Advanced Modeling:Introduction-Virtual Sculpting-Digitizing Techniques-Procedural Modeling-Stitched Patches-Subdivision Surfaces-Displacement Mapping-Hair and Fur-Paintbased Modeling-Higher-level Primitives

UNIT IV: Advanced Rendering

Introduction-Atmospheric Effects-Fractals-Lighting Subtleties-Advanced Texturing-Texturing Polygons-Background Shaders-Non-Photorealistic Rendering-Reflection Maps and Environment Procedures-More Rendering Algorithms-Rendering for Output

UNIT V: Advanced Animation and Postproduction

Introduction-Animated Fillets-Limits and Constraints-Metaballs-Expressions and Driven Keys-Motion Dynamics:Principles,Rigid Bodies-Soft-Body Dynamics-Particle Systems-Cloth Dynamics-Motion Capture-Camera-Motion Matching-Character Rigging:Movement Controls,Deformation Controls-Facial Animation –Nonlinear Animation Postproduction: Introduction-Compositing-Editing.

Text Book:

Academic Information

Michael O'Rourke, Principles of Three-Dimensional Computer Animation, Third Edition, W.W. Norton & Company Ltd., 2003. ISBN 0-393-73083-2.

Reference Books:

1. John Vince, Essential Computer Animation, Springer-Verlag, 2000. ISBN 1-85233-141-0.
2. Marcia Kuperberg, A Guide to Computer Animation, Focal Press, 2002, ISBN 0-240-51671-0.
3. Daniel Cunliffe, Geoff Elliott, Multimedia Computing, Crucial, 2003. ISBN 1-903337-18-6.

11MT226 3D MODELING AND RENDERING

Credits: 4:0:0

Course Objective:

To make the students know animation in detail about modeling and rendering in 3D animation which plays a vital role in any animation.

Course Outcome:

Students will be clear with every detail behind the concept of modeling and rendering.

UNIT I

Rendering faces for visual realism - Introduction to shading models - Flat shading and smooth shading - Removing hidden surfaces - Adding texture to faces - Adding shadows of objects - Tools for raster displays – Introduction - Manipulating pixmaps – Combining pixmaps - Bresenham's line drawing algorithms - Defining and filling regions of pixels - Manipulating symbolically defined regions - Filling polygon defined regions - Aliasing and antialiasing technique - Creating more shades and colors.

UNIT II

Curve and surface design – Introduction - Describing curves by means of polynomials - Interactive curve design - Bezier curves for curve design - Finding better blending functions - The B-Spline basis functions and useful properties- BSpline for design - Rational Splines and NURBS curves - A Glimpse at interpolation – Modeling curved surfaces.

UNIT III

Color theory - Introduction-describing colors - The international commission on Illumination standard - Color spaces - Color quantization - Uniform quantization - The popularity algorithm - Median cut algorithm - Octree quantization.

UNIT IV

Hidden surface removal – Introduction - The depth buffer algorithm revisited - List priority HSR method - Scan line HSR method - Area subdivision approaches - On hidden line removal methods - HSR method for curved surfaces.

UNIT V

Ray tracing – Introduction - Setting up the geometry of ray tracing - Overview of the ray tracing process - Intersection of a ray with an object - Organizing a ray tracer application - Intersecting rays with other primitives - Drawing shaded pictures of scenes - Adding surface texture – Extents - Adding shadows for greater realism - Reflections and transparency - Compound objects: Boolean operations on objects

Text Book:

F.S.Hill, JR, Computer graphics using Open GL, Second Edition, Prentice Hall, 2001. ISBN 81-203-2813-2.

Reference Book:

Edward Angel, Interactive Computer Graphics –A Top Down approach with OpenGL, Addison Wesley, 2000. ISBN 0-201-38597-X.

11MT227 VIRTUAL REALITY TECHNOLOGY**Credits: 4:0:0****Course Objective:**

The sole objective of virtual reality technology is to study the technology behind an environment as realistic as possible.

Course Outcome: Students will know the technology behind rapidly advancing virtual reality.

UNIT I

Introduction-Input devices-Three dimensional position trackers-Navigation and Manipulation Interfaces-Gesture Interfaces

UNIT II

Output Devices-Graphic displays- Sound displays-Haptic Feedback

UNIT III

Computing Architecture of VR-The Rendering Pipeline-PC Graphic Architecture-Work station based Architectures-Distributed VR Architectures

UNIT IV

Modelling – Geometric modelling- Kinematics Modelling- Physical Modelling-Behavior Modelling-Model management-VR Programming-Toolkits and Scene Graphs-World Toolkit-Java 3D-General Haptic open Software Toolkit-People shop.

UNIT V

Human Factors in VR-Methodology and Terminology-User Performance Studies-VR health and safety Issues-VR and Society

Textbook:

Grigore C.Burdea and Philippe Coiffet, Virtual Reality Technology, Second Edition, Wiley Interscience, 2003.ISBN 0-471-36089-9. (Chapters 1-7).

Reference Book

William R Sherman,Alan B Cranig,Understanding Virtual Reality-Interface,Application and Design, Morgan Kaufmann Publishers,2003.

11MT228 COMPUTER NETWORKS**Credits: 4: 0: 0****Course Objective:**

1. To introduce key trends on network principles and practices.
2. To provide a top down approach which focus on the internet and its accessible styles.

Course Outcome:

Academic Information

Students will be able to manage networks and the applications behind it.

UNIT I

Introduction: Computer Networks and the Internet-The network edge-The Network Core-Access networks and physical media-ISPs and Internet backbones- Delay and loss in packet switched networks- Protocol layers and their service models

UNIT II

Application Layer: Principles of network applications- The web and the HTTP- File transfer: FTP- Electronic mail in the internet- DNS- The Internet's Directory Service- P2P file sharing- Socket Programming with TCP, Socket Programming with UDP

UNIT III

Transport Layer: Introduction to transport layer services- Multiplexing and De-Multiplexing- Connectionless transport: UDP- Principles of reliable data transfer- Connection-oriented transport: TCP-Principles of congestion control-TCP congestion control

UNIT IV

Network Layer: Introduction-Virtual circuit and datagram networks- What's inside a router?- The Internet protocol (IP): Forwarding and addressing in the internet- Routing algorithms- Routing in the Internet

UNIT V

Link layer: introduction and services- Error detection and correction techniques- multiple access protocols-Link layer addressing-Ethernet, Network Management: Introduction-The Infrastructure for Network Management- the Internet standard management framework-ASN 1

Text Book:

1. J. F. Kurose, K. W. Ross, Computer Networking, A Top-Down Approach Featuring the Internet, 4th Ed, Addison-Wesley,2007, ISBN 0321497708.

Reference Books

1. William Stallings, Data and Computer Communications, Prentice Hall, Eighth Edition, 2007,ISBN9780132433105
2. Andrew S.Tanenbaum, Computer Networks, Prentice Hall of India, fourth edition, 2002 ISBN 0130661023.
3. Lillian N Cassel,Richard H Austing,Computer Networks and Open Systems,Jones and Bartlett Publishers,2001.

11MT229 COMPUTER GRAPHICS

Credits: 4:0:0

Course Objective:

The aim of this course is to give the fundamentals of graphics and animation. The concept of Principles of 2D Graphics, 3D Graphics, Visible Surface Determination, are studied in detail for a competitive computer professional.

Course Outcome:

Students will be able to apply these principles in 2D,3D graphics and virtual reality.

UNIT I

Basic principles of two dimension graphics: Raster versus vector graphics-The first java 2D program-Basic geometric objects-Geometric transformations-Homogenous coordinates-Applications of transformations-Geometric transformations in java 2D-Animation and movements based on transformations- Interpolators for continuous changes- implementations of interpolators in Java 2D-Single or double precision

UNIT II

Drawing lines and curves: Lines and pixel graphics-The midpoint algorithm for lines-Structural algorithms-Pixel densities and line styles-Lineclipping-Midpoint algorithm for circles- Drawing arbitrary curves-Antialiasing-Drawing thick lines-Filling areas-Buffered images in java 2D-Displaying text-Text in java 2D-Grey images and intensities-Colour Model-Colour Interpolation with java 2D.

UNIT III

Basic principles of three-dimensional graphics :Geometric transformations-The scenegraph- Elementary geometric objects in java 3D-The scenegraph in java 3D-Animations and moving objects- Projections in Java 3D-Modelling Three dimensional objects-Three Dimensional objects and their surfaces-Topological notions-Modelling techniques-Surface Modeling with polygons in java 3D-importing geometric objects in to java3D-Parametric curves and freedom surfacesnormal vectors for surfaces.

UNIT IV

Visible surface determination: Clipping volumes-Algorithms for visible surface determination-Image precision techniques-Priority algorithms-Illumination and shading-Light sources-Light sources in java 3D-Reflection-Shading in java 3D-Shading-Shadows-Transparency-Textures-Textures in java 3D-The radiosity model-Ray tracing.

UNIT V

Special effects and virtual reality: Fog and particle systems- Fog in Java 3D- Dynamic surfaces- Interaction-Interaction in Java 3D-Collision detection-Collision detention in Java 3DSound effects-Sound effects in Java 3D- stereoscopic viewing

Text Book:

1. Frank Klawonn, Introduction to Computer Graphics Using Java 2D and 3D, Springer, 2008, ISBN: 978-1-84628-847-0

Reference Books:

1. Rick Parent, Computer Animation Algorithms and Techniques, Morgan Kaufmann publishers, 2002, ISBN 1558605797
2. F.S.Hill,jr ,Computer graphics using Open GL,Prentice Hall of India,2006,iSBN—81-203- 2813-2
3. Peter Shirley, et al, Fundamentals of Computer Graphics, AK Peters Ltd, 2005, ISBN: 978-1- 56881-269-4.
4. Issac Victor Kerlow, The Art of 3D Computer Animation and Effects, John Wiley,2004, ISBN:0471430366 .

11MT230 SOFTWARE RADIO

Credits: 4: 0: 0

Course Objective:

1. To introduce the key concepts of software radio design
2. To cover every issues and techniques that an engineer must understand to successfully utilize DSP in their radio systems and subsystems

Course Outcome:

Students will be able to implement these concepts while designing a software radio and other related project works with DSP concepts.

UNIT I

Introduction: Need for Software Radio-Characteristics-Benefits-Design Principles-RF Implementation issues: Purpose of RF front end-Dynamic range-RF receiver front-Enhanced flexibility of the RF chain with software radios-Importance of components to overall performance-transmitter architecture and their issues-noise and distortion in RF chain-Flexible RF systems with micro electro mechanical systems.

UNIT II

Multi Rate Signal Processing: Introduction-sample rate conversion principles-poly phase filters-digital filter banks-time recovery in digital receivers.

UNIT III

Digital Generation of Signals: Direct digital synthesis-approaches to direct digital synthesis analysis of spurious signals-spurious components due to periodic jitter-band pass signal generation-performance of direct digital synthesis systems-hybrid DDS PLL Systems applications of direct signal synthesis-generation of random sequences-ROM compression techniques.

UNIT IV

Analog to Digital and Digital to analog conversion: Parameters of ideal data converters parameters of practical data converters-common ADC and DAC architectures

UNIT V

Smart antennas: vector channel modeling- benefits of smart antennas-structures of beam forming systems-smart antennas algorithms-diversity and space time adaptive signal processing hardware implementation of smart antennas. Digital Hardware Choices: Key hardware elements-DSP processors-field programmable gate arrays-trade off using DSPs FPGAs and ASICs-Networks-Object oriented programming-Object brokers-mobile application environments.

Text Books:

1. Jeffrey H. Reed,"Software Radio: A Modern Approach to Radio Engineering", Prentice Hall PTR, 2002. ISBN 0-13-081158-0

Reference Books:

1. Jouko Vankka, "Digital Synthesizers and Transmitters for software Radio", Springer Verlag, 2005
2. Dillinger, Madani, Alonistioti., "Software defined radio : architectures, systems, and functions" Wiley, 2003, ISBN-13: 9780470851647
3. Bruce Fette, "Cognitive Radio Technology", Elsevier Science & Technology Books, 2006. ISBN-13: 9780750679527
4. Burns, "Software Defined Radio for 3G", Artech House, 2002. ISBN 1-58053-347-7

11MT231 IP TV AND INTERNET VIDEO

Credits: 4: 0: 0

Course Objective:

1. To provide an overview of hardware, software, and Internet technologies.

2. To introduce key trends and drivers transforming the world of broadcast television and the Web.

Course Outcome:

Students will know the working of internet protocol and other characteristics like video compression, their bandwidths etc

UNIT I

Introduction: Internet Protocol-Market for IP Video-Characteristics of IPTV-Internet video-IPTV versus internet video-constructing an IPTV network-constructing an internet video system

UNIT II

Internet Protocol & video compression: Packet – types of IP Networks-IP Addresses-key parts of an IP network-Transport protocols-Multicasting-video compression-groups of pictures-MPEGMicrosoft Windows Media and VC-1-Other compression techniques

UNIT III

Video Quality& servers: Maintaining video quality and security-video servers-video on demand servers-advertising servers-live streaming servers-encryption and right management.

UNIT IV

Bandwidth: DSL technologies-DSLAM-Home gateway-multiple televisions-Calculate Bandwidth

UNIT V

Set top boxes & Internet video technologies: Basic functions-middleware-STB selection issues internet video technologies-types of internet streaming-commercial players-content creation workflows

Text Book:

1. Wes &Howard Greenfield, IPTV and Internet Video: New markets in television Broadcasting, Focal Press,2007. ISBN: 0240809548

Reference Books:

1. Howard J. Gunn, The Basics of IPTV, Intl. Engineering Consortium, 2007, ISBN 9781931695589
2. Gerard O'Driscoll, Next Generation IPTV Services and Technologies, Wiley-Interscience, 2007.ISBN :0470163720
3. Gilbert Held, Understanding IPTV, CRC Press, 2006. ISBN: 0849374154

11MT232 MICROCONTROLLERS AND ITS APPLICATIONS

Credits: 4:0:0

Course Objective:

To learn about the basics of PIC Interfacing and ARM Processor.

Course Outcome:

On successful completion of the subject, students can able to write the assembly language coding for Various application in Linux Environment.

UNIT I: Introduction to PIC Microcontroller:

Overview of PIC18 MCU – Architecture - PIC18 Memory Organization- CPU Registers – Pipelining- Instruction Format- Addressing Modes- Instruction Sets.

UNIT II: PIC Interfacing:

PIC Interrupts- Parallel Ports – Interfacing with simple output Devices- D/A Converter- Timers- USART- SPI- I2C- A/D converter.

UNIT III: ARM Processor Fundamentals:

ARM Design philosophy - Embedded System Hardware - Embedded System Software - Registers, Program Status Register – Pipeline – Exceptions – Interrupts - and the Vector table - Core Extensions - Architecture revisions - ARM Processor families.

UNIT IV: Introduction to the ARM and Thumb Instruction Set:

Data processing Instructions - Branch Instructions – Load - store instructions – Software Interrupt Instruction - Program Status Register Instructions - Loading Constants - ARM V5E Extensions - Conditional Executions.

Thumb Register usage - ARM Thumb Interworking - Data Processing Instructions - Single – Register Load – Store Instructions - Multiple Register Load - Store Instructions – Stack Instructions - Software Interrupt Instructions.

UNIT V: Exception and Interrupt Handling:

Interrupts - Interrupt Handling Schemes - Non-nested Interrupt Handler - Nested Interrupt Handler - Reentrant Interrupt Handler - Prioritized Simple Interrupt Handler – Prioritized Standard Interrupt Handler

TEXT BOOKS

1. Han-Way Huang, “ PIC Microcontroller- An Introduction to Software and Hardware Interfacing”, First Indian Reprint CENGAGE Learning – 2008.
2. Andrew N. Sloss, Dominic Symes & Chris Wright, “ARM System Developer’s Guide – Designing and Optimizing System Software”, Morgan – Kaufmann Publishers,2004.

REFERENCE BOOK

1. David Seal,ARM Architecture Reference Manual,2nd edition,Addison Wesley Professional,2001.

11MT233 DIGITAL IMAGE PROCESSING

Credits: 4:0:0

Course Objective:

To learn the fundamental concepts of Image processing techniques.

Course Outcome:

Can develop simple algorithms for image processing.

UNIT I**Introduction**

Fundamental steps and applications of digital image processing – Elements of visual perception – Image sensing and acquisition – Image sampling and quantization - Basic relationship between pixels – 2D DFT and its properties – Computing inverse Fourier transform - Need for padding – Convolution and correlation

UNIT II**Image Enhancement**

Basic gray level transformations – Histogram Equalization and matching – Arithmetic and logic operations – Spatial averaging – Directional smoothing – Median filtering – Unsharp

masking – Gradient and Laplacian operators - Zooming - Smoothing and sharpening
frequency domain filters – Homomorphic filtering

UNIT III

Image Restoration & Color image Processing

Image degradation/restoration model – Restoration in the presence of noise only spatial filtering – Periodic noise reduction by frequency domain filtering - Inverse and Wiener filtering concept – Color models – Pseudocolor image processing – Color transformations – Smoothing and sharpening

UNIT IV

Image Compression

Fundamentals – Image compression models – Elements of information theory – Variable length coding – LZW coding – Bit plane coding – Lossless predictive coding – Lossy predictive coding – Transform coding

UNIT V

Image Segmentation

Detection of discontinuities – Edge linking based on local processing and Hough transform – Thresholding: local, global, Adaptive and multispectral – Region based segmentation

TEXT BOOK

1. Rafael C.Gonzalez and Richard E. Woods, “Digital Image Processing”, PHI 2nd edition, 2002

REFERENCE BOOKS

1. Anil K.Jain, “Fundamentals of Digital Image Processing”, Prentice Hall of India, 9th edition, Indian Reprint, 2002
2. William, K.Pratt, “Digital Image Processing”, John Wiley and Sons, 3rd edition,2002

11MT234 TELEVISION PROGRAMME FORMATS

Credits 4:0:0

Course Objective:

The objective of this module is to describe the process of producing a programme for television. The production planning and the production techniques are addressed in detail along with the TV broadcasting prerequisites.

Course Outcome:

The students will understand the programming techniques of making a video film for television and will be able to present it different approved formats that can communicate the message intended, in lucid style & interest.

Unit I: Production Planning & Studio Practice

Pre Production Planning - Production Planning Tools – Post Production Methods - Studio Staff: Talents, Crew & Cast - Shooting Floor - Recording studio - Master Control Room - CAR & Server Room - Play out & transmission Room - OB Van – Equipments in Video, Audio, Lighting & Power departments - Presenting Programme - Audience preference - TRP rating.

Unit II: TV Programme Format – Entertainment Segment

Telecine Films – Drams - Tele serial – Comedy – Reality – Music - Dance shows – Soap Operas – Game Shows - Commercials.

Unit III: TV Programme Format – Educational & Children Segment

Quiz Programme – Talent Shows - Documentary - Docudrama – Health, Agricultural & Awareness Programme – Reality Shows – Puppet & Crafts – Cartoons.

Unit IV: TV Programme Format – News & Current affairs Segment

Live & Recorded News – Interviews – News Documentaries – Talk Shows - Investigative - Candid & Hidden Camera Source.

Unit V: TV Programme Format – Science & Sports Segment

Nature – Wild Life – Space – Scientific Experiments – Live Sports – Teleshopping – Interactive Shows -

Text Books:

1. The Video Maker Guide to Video Production by the Editors of Video maker Magazine. Focal Press - 4th Edition 2008.

Reference Books:

1. Film Production Management by Bastian Cleve Focal Press – 3rd Edition 2007
2. Producing Video – A complete Guide by Martha Mollison. Allan Unwin publication (Australian Film Television and Radio school) Edition 2007.

11MT235 3D LIGHTING

Credits 4:0:0

Course Objective:

To make students know all the lighting techniques and options available in Maya.

Course Outcome:

Students will be able to apply lighting options effectively.

UNIT – I Introduction to Lighting:

Lighting in real world - Lighting equipments - Lighting quality - Lighting direction -Lighting source - Lighting color - Color temperature - Principles of light and shadow -Absorption, reflection, refraction of light.

UNIT – II Light & Shadow in Maya:

Sources of direct light - Default lighting in Maya - Light decay - Light linking - Shadow linking – Glows – Halos - Lens flair - Shadow in Maya - Depth map and retraced shadows - Shadow catching - Creating a Maya light source - Light source attributes.

UNIT III Lighting Menus:

Show, hide, resize light manipulator - Centre of interest - Pivot point - Cone radius - Penumbra radius - Decay regions - Barn doors - Determining a light's area of illumination-Linking light sources to surfaces-Illuminating specific object-Control a spot light's circle boundary

UNIT IV Types of Light in Maya

Directional light - Ambient light - Area light - Point light - Spot light - Volume light -Light links - Light linking editor - Shadow links - Light attributes editing menus - Optical FX Attributes.

UNIT V Mental Ray for Maya Lighting:

Lighting concepts - Ray tracing concepts - Global illumination – Caustics - Final gathering- Ambient occlusion - Mental ray area light-Native light linking in mental ray -Color bleed - Photon maps - Photon tracing - High dynamic range imaging HDRI - Image based lighting - Sun and sky simulating - Mental ray shadow maps.

Text book:

Lee Laniel,Advanced Maya Texturing and Lighting,Sybex,2006.

Reference Book

Jeremy Bion,Digital lighting and Rendering,2nd edition,New Riders Press,2000.

11MT236 3D TEXTURING

Credits: 4:0:0

Course Objectives:

- To understand the texturing for 3d models
- To identify the difference in application of 2d & 3d textures
- To learn matching the environment light, colour, and shadow.
- To understand the ray file options
- To learn the techniques texturing the background

Course Outcome:

Students should be equipped with texturing skills so that they may be able to apply the colours and light & shadow. The important component of this programme is to enrich the knowledge of texturing models appropriately.

UNIT – I Shading and Texturing Surfaces:

Shading - Surface Shading - Surface Texture - Render Nodes - Shading networks - Render node attributes - Render node connections.

Maya materials: Surface - displacement-Volumetric materials - Layered Shaders - Double sided shaded surface.

UNIT – II Maya textures:

2D and 3D textures - Procedural textures - File textures-Texture filtering - Texture mapping - Mapping methods - Texture placement vs. Label mapping - 2D and 3D texture positioning. Menus: Lighting and shading - Texturing-Hyper shade - Material nodes -Texture node - Environment textures - Layered textures.

UNIT – III Applying colors, shading and textures:

Customizing hyper shade - Navigating hyper shade - Hyper shade tabs - Creating nodes - Changing default connections - Duplicating nodes - Creating nodes - Deleting nodes -Import and export shading - Adjusting node attributes - Animating node attributes -Working with shader libraries - Assigning shading group - Creating and assigning materials to surfaces - Mapping and positing textures - Using layered textures -Converting texture shading to a file texture - Creating texture reference object.

UNIT IV Working with Mental Ray Shaders

Using custom mental ray for Maya shader - Loading shaders - Editing maya.rayrc file -Using mental ray-Specifying light parameters - Working with phenomenon - Working with custom mental ray text - Assigning text to entities - Mental ray for Maya shaders -Mental ray connections - Custom mental ray text - custom vertex data - Advanced information.

UNIT – V Shading Backgrounds:

Backgrounds - Basic color and texture backgrounds - Image file backgrounds - Creating backgrounds - Creating textured backgrounds - Creating, Editing, Positioning image plane - Static image file - Animated file - 3D image file - Image planes.

Creating reflections: True reflections - Simulated reflections - Reflections on basic shapes - Creating fog – smoke – dust - Volume primitives - Baking illumination and colors - Baking textures and vertices - Baking global illumination - Baking textures and vertices with mental ray - Rendering menu set - Using color utilities, render node utilities, general utilities, switch utilities.

Text book:

Andrew and Russell Hazelden, Maya Shading Networks, 2nd edition, Dover Studios Professional, 2006.

Reference Book:

Art_link, Hard Surface shading and texturing, New Riders Press, 2010 (e-book)

11MT237 DIGITAL AUDIO

Credits: 4:0:0

Course Objective:

To learn the fundamentals of digital audio, their interfaces and error control.

Course Outcome:

Students will be able to know every details while working in audio digitally with error correcting strategy.

Unit I Digital Audio Fundamentals

Samplers, Time compression, Channel coding, hard disc recorders, Dither, Pulse code modulation, over sampling A/D converter.

Unit II Error Correction and Coding

Digital mixing, Sampling rate conversion, Sub-band coding Transform coding, sources of errors, cyclic Redundancy check code, convolution code, Red Solomon codes, error concealment

Unit III Digital Audio Interfaces and Tape Recorders

Introduction to the AES/EBU Interface, multi channel audio digital interface, Asynchronous operation, Digital audio tape Hardware, Error correction, Interfacing and time code

Unit IV Optical Disc

Types of optical discs, Focus and tracking systems, CD readout, Channel code of CD and mini disc, Error correction strategy, player's structure: DVD video and audio Coding

Unit V PC Audio

PC Buses and interfaces, sound cards, Digital audio extractions, hard disc recording, PC Audio software applications, Internet audio- computer networks and file transfers.

Text Book

1. John Watkinson, An introduction to Digital audio, Focal Press 1994.

Reference Books

1. Ken C. Pohlmann, Principles of Digital Audio, McGraw- Hill, 2000.
2. Udo Zolzer, Digital Audio Signal Processing, John Wiley, 1997.

11MT238 DIGITAL AUDIO EFFECTS**Credits: 4: 0:0****Course Objective:**

To learn the fundamental concepts of Digital audio effects using DSP.

Course Outcome:

Students will know all the effects, filters used the timing and their implementations.

Unit I Review of Digital Signal Processing

Fundamentals of Digital signal processing-Digital signals, spectrum analysis of digital signals, Digital systems. Filters- Lowpass, Parametric, AP, LP, BP Filters, FIR Filters, Equalisers, Time varying Filters

Unit II Delay and Modulation Effects

Basic delay structures, Delay based audio effects, modulators-Ring, Amplitude, single Side band, Frequency and phase modulators. Demodulators. Typical Applications

Unit III Non Linear Processing

Introduction, Dynamics processing-Limiter, Compressor and expander, Noise gate, De-esser, Infinite Limiters. Linear Processors-Basics of non linear modeling, Valve simulation, Overdrive, Distortion and fuzz, Harmonic and sub harmonic generations, Exciters and enhancers

Unit IV Spatial Effects

Introduction, Basic effects, 3D with head phones, 3D with loud speakers, Reverberation, Spatial enhancements, Stereo enhancement, Sound radiation and simulation

Unit V Time-Segment and Time Frequency Processing

Variable speed reply, time stretching, Pitch shifting, Time shuffling and Granulation, Phase vocoder basics-Filter bank summation model. Phase vocoder implementations

Text Book

1. Udo Zolzer, DAFX: Digital Audio Effects, John Wiley Sons, Ltd., 2002.

Reference Books

1. Udo Zolzer, Digital Audio Signal Processing, John Wiley sons Ltd, 2008.
2. Ken Cpholmann, Principles of Digital Audio, McGraw-Hill, 2000.
3. Maina Bosi, Richard E Goldberg, Introduction to Digital Audio Coding and Standards, Kluwer Academic Publishers, 2003

11MT239 3D ANIMATION LAB**Credits: 0:0:2****Course objective:**

To train the students in the area of 3D Animation and its software application. To make the students understand the process of 3D animation production in studios. The students will be trained the area of character designing and concept designing in 3D animation.

Course outcome:

Students will be well equipped with all the basic animation concepts practically which helps them in doing character modeling, lighting, texturing and animations.

List of Experiments:

1. MAYA interface.
2. Polygon modeling
3. NURBS modeling
4. Surface modeling
5. Lighting
6. Shading and Texturing surfaces
7. Dynamics.
8. nCloth
9. Paint Effects
10. Camera Movements
11. Animation in Maya.
12. Rendering

11MT240 MEDIA ECONOMICS**Credits: 3:0:0****Course Objective:**

To learn the economic policies and practices of media companies and disciplines including journalism and the news industry, film production, entertainment programs, print, broadcast, mobile communications, Internet, advertising and public relations.

Course Outcome:

The students will be well versed with all the economic policies and practices of media companies.

Unit I Introduction to Media Economics

Macroeconomics and microeconomics, economics of scale, economics of scope, Market structure, Key economics characteristics of the media, Economics of Advertising, Media Economics and Public Policy, economic methodologies, Decision making, demand and supply.

Unit II Media and PR

Introduction to media: Overview of media/ the media industry in India/ Types of Media/ role of each medium/ advantages and disadvantages of each medium. Role of PR in the success of a product /service. The relationship between marketing and Advertising and PR/ The relationship between sales and PR/ how sales benefits from PR.

Unit III Print and Television Media

Economic characters of news paper and broadcasting, Ownership Structure, Publicly funded broadcasting, vertical supply chain for television, Impact of new distribution technologies. Television programme production-Economics of programme supply, International trade in audio visual contents.

Unit IV New Media

Internet and E-commerce, Digitalized media contents, increasing economics of scale and scope interactivity, internet and mobile communication and possibilities; leveraging new media; Understanding value added services; understanding streaming video net and mobile; using SMS.

Unit V Media Economics and Public Policy

Free market Vs interventions, support measures for media contents, concentrated media ownerships, Monopolies and technological change: Events and sponsorships; overview of

how events are marketed; certain sponsorship proposals; structuring sponsorship deals, Understanding of common terminology and jargon in media.

Text Books

1. Gillian Doyle, Understanding Media Economics, Sage Publications, 2007.

Reference Books:

1. C.R.ColinHoskins, Media Economics-Applying Economics New and Traditional Media, Sage, 2003.
2. Philip Kotler, Marketing Management, Prentice Hall, 2003.

11MT241 APPLICATION OF DSP FOR AUDIO AND IMAGE PROCESSING**Credits: 3:1:0****Course Objective:**

To teach about DSP and its applications in the field of audio and image processing. Students will be well equipped with all the DSP concepts and its applications.

Course Outcome:

Students will get the basic knowledge of digital signal processing and its application in the field of audio and image processing.

Unit I Introduction

Roots of DSP, Telecommunications, Audio Processing, Echo Location, Imaging Processing

Unit II Audio Processing

Sound Quality vs. Data Rate, High Fidelity Audio, Comanding Speech Synthesis and Recognition, Nonlinear Audio Processing

Unit III Image Formation & Display Linear Image Processing

Digital Image Structure, Camera and eye, Television Video Signals Other Image Acquisition and Display, Brightness and Contrast Adjustments, Grayscale Transforms, Warping, Convolution, 3×3 Edge Modification, Convolution by Separability

Unit IV Special Imaging Techniques

Example of a Large PSF, Fourier Image Analysis, FFT convolution, Closer Look at Image Convolution, Spatial Resolution Sample Spacing and Sampling Aperture, Signal-to-Noise Ratio, Morphological Image Processing Computed Tomography

Unit V Data Compression

Data Compression Strategies, Run-Length Encoding, Huffman Encoding, Delta Encoding LZW Compression, JPEG (Transform Compression), MPEG

Text Book:

1. John G. Proakis and Dimitris G.Manolakis, Digital Signal Processing, Algorithms and Applications, PHI of India Ltd., New Delhi, 2000.

References

1. Openheim and Schafer, Digital Time Signal Processing, Prentice Hall of India, 2002.
2. Emmanuel C. Ifeather and Barrie W. Jervis, Digital Signal Processing – A Practical Approach, Addison Wesley Longman Ltd., UK, 2004.

11MT242 MEDIA MANAGEMENT AND ENTREPRENEURSHIP**Credits: 3:0:0****Course Objective:**

This subject is to equip the students with the management skills improving their personality. To make them know how to plan and implement the concepts in media industry.

Course Outcome:

This will help the students to know and develop skills and become a successful entrepreneurial in media industry in the future.

Unit I Entrepreneurial Competence

Entrepreneurship concept – Entrepreneurship as a Career – Entrepreneur – Personality Characteristics of Successful. Entrepreneur – Knowledge and Skills Required for an Entrepreneur.

Unit II Entrepreneurial Environment

Business Environment - Role of Family and Society - Entrepreneurship Development Training and Other Support Organizational Services - Central and State Government Industrial Policies and Regulations - International Business- Screen writing- story board proposal for getting bank loan and identifying various sources to generate money.

Unit III Business Plan Preparation

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

Unit IV Media Industry

Print- Starting news paper- magazine- online journal – FM Radio- Community Radio – Television channels – Production house – setting the studios – Professional photographer Cinematographer – Cinema - Preproduction, production, publicity and distribution

Unit V Advertising and Animation

Advertising agency- idea-concept –media planning- identifying the problem- the budget pretesting- target audience- media selection- language-Visual and the copy – timing and Duration – post testing - effects on sales – INS accreditation- .Animation and Graphics, creativity and technical – Intellectual Property Rights.

Text Books

- 1.Hisrich, Entrepreneurship, Tata- McGraw Hill, 2001.
- 2.S.S.Khanka, Entrepreneurial Development, S.Chand and Company Limited, 2001.

References

- 1.P.C.Jain (ed.), Handbook for New Entrepreneurs, EDII, Oxford University Press, 2000.
- 2.P. Saravanavel, Entrepreneurial Development, Ess Pee Kay Publishing House, 2001.

11MT243 MEDIA LAWS AND ETHICS**Credits: 3:0:0****Course Objective:**

This will give an overall idea about the Indian constitution .The media laws and ethics followed in newspapers, journals, Broadcasts are highlighted.

Course Outcome:

Students when studies the laws and ethics to be followed in media they will start applying it in their media works and this will make them a successful media professionals in the society.

Unit I Overview of Indian Constitution

Overview of the Indian Constitution, Fundamental rights, Duties of citizens, Directive principles of state policy, Functions of Executive, Judiciary, Legislative, Powers and Privileges of parliament, Provisions for declaring Emergency, Provision for amending the Constitution, Freedom of the Press and restrictions these upon, Centre-State relations

Unit II Media Laws in India

PRB Act 1867, The Press (Objectionable matters) Act 1957, The News paper (Prices and Pages) Act 1956, Defense of India Act, Delivery of Books and News paper (Public Libraries) Act, Press Council Act, Cable TV Networks (Regulations) Act, TRAI, BRAI.Cinematographic Act 1952, Drugs and magic remedies Act.

Unit III Civil and Criminal Laws

Laws of Libel and defamation, Contempt of courts Act 1971 and contempt of Legislative, Copy right Act and IPR, Trade Mark Act and patents Act, Right to information and Official Secrets Act, Right o information Act, Autonomy and Prasar Bharati Act, Broadcasting Bill. Cyber Laws, Digital signature, piracy, Domain name registration issues

Unit IV Code and Ethics

Recommendations of Press Commission I and II, Mac Bridge Report, Press council guide to Journalistic ethics, Self regulation and code of ethics, censorship and control of the press,, press ownership and monopolies, various committees of broadcasting, Broadcasting policies, Act regarding to working journalists.

Unit V Journalistic Ethics

Gathering the news, Libel, Invasion of privacy, Defamation, Use of the word *alleged* Apparent authority, Technology, Telephone recordings, Juveniles as News Sources, Subpoenas and Shield Laws, Access Laws, Definition of Ethics, Effects of Competition Situational Ethics , Case Studies in Ethical Dilemmas

Text Books

1. Basu, Law of the Press in India, Practice Hall of India, 2003.
2. Radha Krishna Murthi, Indian Press Laws, Indian Publishers, Distributors, 2001.
3. Philip Patterson, Lee Wilking, Media Ethics, Issues Capes, McGraw Hill, 2004.
4. Clifford G.Christians, Media Ethics, Cases and Moral Reasoning, Pearson, 2006.

References

1. Leslie, Mass Communication Ethics, Thomson Learning, 2004.
2. Basu, Introduction to Indian constitution, Practice Hall of India, 2003.

11MT244 MEDIA RESEARCH

Credits: 3:0:0

Course Objective:

To make the student know the procedures, elements and the nature of different types of researches in detail.

Course Outcome:

This will help the students to apply these research methods in their project works and other related works which lies as the starting point of a successful project.

Unit I Introduction

Research Procedures -Elements of research -Research ethics –Sampling - Population and sample-Probability and Non probability samples, Nature and scope of communication research, Literature review, Foot notes, End notes, Bibliography

Unit II Qualitative and Quantitative research methods

Field observations-Focus groups-Intensive Interviews: Quantitative methods- Content analysis - uses- limitations-steps in content analysis-Universe –sample-unit of analysis constructing content categories-establishing a quantification system-coding the contentanalyzing the data-interpreting the results .Reliability, Validity. Content analysis in Print and electronic media

Unit III Survey Research

Descriptive and analytical survey-advantages and disadvantages of survey-constructing questions-Questionnaire design-Question order, Layout, design. Gathering survey data-mail surveys –advantages –disadvantages -Telephone survey-Personal interviews-mail interviews-Internet surveys-Group administration.-Research in media effects.

Unit IV Experimental Research

Basic experimental designs-Pretest-posttest control group, Posttest-Only control group, Solomon four group designs, Factorial studies. Quasi experimental designs, Field experiments.

Unit V Basic Statistical Procedures Using SPSS

Nonparametric statistics - Chi-Square - Goodness of fit: Parametric statistics-the t-test-Analysis of variance-Two-way ANOVA-Correlation-Partial Correlation-Simple linear regression-multiple regression, Factor analysis.

Text Book:

1. Roger D Wimmer, Joesph R.Dominick, Mass Media Research, Wardsworth Publishing Company, 2000.

Reference Book

1. Ajai S.Gaur, Sanjaya S.Gaur Statistical Methods for Practice and Research, Sage Publications, 2006.

11MT245 AUDIO PROGRAMME PRODUCTION

Credits: 3:0:0

Course Objective:

This is to learn about different types of programmes done with audio especially radio programmes. Starting from postproduction till broadcasting is covered.

Course Outcome:

This will make the students do different varieties of audio programmes on their own starting from writing script to managing the whole production.

Unit I Basics of Radio Programming

Brief history of broadcasting in India, Characteristics of radio, Assessment and analysis of Target audience; Basics of Radio programming: conception to execution of ideas; Research collection of background materials; Formats and styles in radio production. Inside the studio: Sources, lights, Talk back units, screens, phones, Studio etiquette, Studio fault log, competition log, studio bible and style book

Unit II Different types of Programmes

Microphone talent, talk programmes, News and current affairs programmes, Documentaries and magazine programmes, Educational programmes, Light entertainment programmes, Music programmes, commercials, Seven P's, cues and links

Unit III Radio Programme Production

Basics of programme production, Principles of recording, portable sound recorders, Radio Jingle production; Radio Drama – Fiction and drama, drama audition; Discussion programme selection of subjects for discussion; phone-in programme. Radio Feature and Documentary – Difference between features and documentary, Day parting; Media Fusion; Planning and scripting for educational radio programme, programme for special audiences

Unit IV Script Writing

Broadcast styles, Basic rules for radio writing; Conversational writing, visualizing the words, Audio script – types of audio scripts; News – Concept and definition, elements of news values, news gathering and writing; Interview – Art of Interview, types of interviews. Use of effects; Use of background music; advanced radio production techniques using digital technologies. Creating audio special effects

Unit V Radio Station Organization and Management

On air studio, talk studio, Contribution studio and remote studio, Radio car, out side broadcasting vehicle, Portable telephones, and telephone reports. Programme evaluation and training Autonomy, Prasar Barathi, Commercial broadcasting, Radio Station Organization and Management.

Text Books

1. Robert Mc Leish, Radio Production, Focal Press, 2005.

Reference Book

1. Stewart Peter, Essential Radio Skills, How to Present and Produce a Radio Show, A&C Black Publications, 2006.

11MT246 LIGHTING TECHNIQUES

Credits: 3:0:0

Course Objective:

To learn all the lighting techniques in detail including different instruments, accessories, reflectors used and the implementation of it.

Course Outcome:

This will enable the students to do creative lightings for their production with all the techniques they learnt bringing the best output.

Unit I Lighting Techniques

Lighting Variables: Measuring Light, Intensity Controlling Light Intensity, Light Character Color Temperature, Basic Lighting Triangle: 3-point Lighting, Ratios in the Lighting Triangle, 2-Point Lighting, Other Lighting Objectives

Unit II Lighting Instruments and Accessories

Spotlights, Accessories for Spot Lights, Fill Lights Spots, Reflectors and PAR Banks as Fills, Fill Light Accessories, Mounts and Connectors for Lighting Equipment, Light Control Consoles, Safety and Efficiency, Artistic or Mood Lighting

Unit III Ray Tracing Techniques

Ray tracing algorithm, backward ray tracing, extending ray tracing algorithm, Real time raytracing, Materials-Plastic, wood, Metals

Unit IV Lighting Reflectors Models

Rendering equation, Irradianations and luminance, Lamberts Law, Bidirectional reflectance distributions and functions, Diffuse materials, Specular materials, Diffuse reflection models, Specular and metallic reflections models.

Unit V Lighting Implementation

Basic lighting math's, Per-vertex warn Lights, per pixel warn lights, Basic set up and diffuse materials, Specular materials, Introduction to spherical harmonic lighting

Text Book

1. Kelly Dempski and Emmanuel Viale, Advanced Lighting and Materials with Shaders, Worldware Publishing, 2005.

Reference Book

1. Ralph Donald, Riley Maynard and Thomas Spann, Fundamentals of Television Production, Pearson, 2008.

11MT247 GAME PROGRAMMING WITH C++

Credits: 3:1:0

Course Objective:

To learn 2D and 3D game programming using c++ programming language in detail. Drawing, painting, development of surfaces, sound ,images ,making scenes are all learnt.

Course Outcome:

At the end of this course students will be able to develop their own games using c++ programming language.

Unit I

Game Programming & 2D Games and ClanLibGame Development, Software Abstraction, GraphicsSound and Music, More Middleware, ClanLib, Downloading ClanLibBuilding ClanLib, First ClanLib Application, Games and the Message Loop, Graphics Rendering

Unit II

ClanLib-Core Classes & ClanLib-Scene Management, 2D Games and Images, Surfaces, Drawing Surfaces, Transformation, XML, Resources, Sprites, Input, Scenes, Scenes and Design, Scene Implementation, Layers, Painting a Layer, Overview -Using Scene Manager

Unit III

3D Games, OGRE 3D, Downloading OGRE 3D, Installing OGRE 3D, Compiling the OGRE 3D Samples, Running the OGRE 3D Samples, Creating an OGRE Application Using a Wizard, Creating an OGRE Application Manually, OGRE Log, OGRE, Documentation

Unit IV

Exploring OGRE 3D, 3D Scenes, Creating 3D Scenes, Scene Node Properties and Methods, Lights, Cameras, Materials and Scripts, Billboards, Particle Systems Frame Listeners, Input

Unit V

Other Gaming Libraries-Install and Sound, Sound and Music, FMOD, BASS, NSISWindows Installer, Scripting, Open-Source Software, Open Media Formats

Text Book

1. Alan Thorn, Introduction to Game Programming with C++, Wordware Publishing Inc, 2007.

Reference Books

1. Noel Llopis, C++ for Game Programmers, Charles River Media, 2003.
2. David Conger and Ron Little, Creating Games In C++, First Impression, 2006.

SCHOOL OF MEDIA

Karunya University

ADDITIONAL SUBJECTS

| Subject Code | Name of the Subject | Credits |
|---------------------|--|----------------|
| 11VC201 | Film Studies | 4:0:0 |
| 11VC202 | Production Planning and Management | 4:0:0 |
| 11VC203 | Commercial Broadcasting | 4:0:0 |
| 11VC204 | Radio Programming | 3:0:0 |
| 11VC205 | Television Production | 4:0:0 |
| 11VC206 | E - Content Writing | 3:0:0 |
| 11VC207 | Radio Production Lab | 0:0:2 |
| 11VC208 | Television Production Lab | 0:0:2 |
| 11VC209 | Commercial Production Lab | 0:0:2 |
| 11VC210 | Media Research | 4:0:0 |
| 11VC211 | Corporate Communication | 4:0:0 |
| 11VC212 | Advertising | 4:0:0 |
| 11VC213 | Professional Photography | 4:0:0 |
| 11VC215 | Introduction to Social Psychology | 4:0:0 |
| 11VC216 | Advertising – I | 4:0:0 |
| 11VC217 | Web Designing | 4:0:0 |
| 11VC218 | Advertising – II | 4:0:0 |
| 11VC219 | Audio Visual Media | 4:0:0 |
| 11NM301 | Visual media and Communication | 3:0:0 |
| 11NM302 | Web Designing | 4:0:0 |
| 11NM303 | Scripting and Audio – Video production | 4:0:0 |
| 11NM304 | Multimedia Technologies | 4:0:0 |
| 11NM305 | Introduction to E - Technology | 4:0:0 |
| 11NM306 | Multimedia lab | 0:0:2 |
| 11NM307 | Video Production lab | 0:0:2 |
| 11NM308 | Web designing lab | 0:0:2 |
| 11NM309 | Interactive Multimedia applications | 4:0:0 |
| 11NM310 | Graphics and Animation | 4:0:0 |
| 11NM311 | Media convergence and management | 3:0:0 |
| 11NM312 | Digital video editing in Avid | 4:0:0 |
| 11NM313 | E learning management systems | 4:0:0 |
| 11NM314 | Graphics and Animation lab | 0:0:2 |
| 11NM315 | Avid lab | 0:0:2 |
| 11NM316 | E – learning lab | 0:0:2 |
| 11NM317 | Instructional Technology | 4:0:0 |
| 11NM318 | Knowledge Management | 4:0:0 |
| 11NM319 | E – Content Writing | 4:0:0 |
| 11NM320 | Media Research | 4:0:0 |
| 11FT301 | Screenplay Writing (Level I) | 4:0:0 |
| 11FT302 | Digital Photography | 4:0:0 |
| 11FT303 | Pre Production Techniques | 4:0:0 |

| | | |
|---------|--|-------|
| 11FT304 | Television Studies | 4:0:0 |
| 11FT305 | Elements of Video production | 4:0:0 |
| 11FT306 | Photography lab | 0:0:2 |
| 11FT307 | Pre production technique lab | 0:0:2 |
| 11FT308 | Experimental video/ short video production lab | 0:0:2 |
| 11FT309 | Film appreciation | 4:0:0 |
| 11FT310 | Non linear editing theory | 4:0:0 |
| 11FT311 | E - Commercials | 4:0:0 |
| 11FT312 | Film theory | 4:0:0 |
| 11FT313 | Introduction to Social Psychology | 4:0:0 |
| 11FT314 | Video Commercial lab | 0:0:2 |
| 11FT315 | Video post production lab | 0:0:2 |
| 11FT316 | Advertising lab | 0:0:2 |
| 11FT317 | Study of Film makers | 4:0:0 |
| 11FT318 | Directorial practice | 4:0:0 |
| 11FT319 | Research Methods & Statistics | 4:0:0 |
| 11FT320 | Acting theory | 4:0:0 |
| 11FT321 | Documentary theory | 4:0:0 |
| 11FT322 | Documentary production lab | 0:0:2 |
| 11FT323 | Digital film production lab | 0:0:2 |
| 11FT324 | Film analysis lab | 0:0:2 |

11VC201 FILM STUDIES

Credits 4:0:0

Course Objectives:

- To make the learners know about the different genres of films, its types and the methods of digital film production.
- To enable the students to practice in writing scripts for international films, knowing about great film script writers in India and at international level.

Course Outcomes:

- After completing this paper the students will be able to discuss the parameter of genre as an aspect of film.
- They can identify and analyze the key criticism of both genre films and the industry that greets them.

Unit I

Cinema as an institution- The origin of cinema- Film review- Appreciation- Criticism- Definitions -Qualities of film critic- Responsibilities of a film critic - Film and society- Film and politics- Shaping society- Film as an experience, Environment, Commodity and Communication Media.

Unit II

Approaches to studying film- Narrative and Non Narrative films- Structure of a narrative film - Cinematic codes - Mise-en-scene- Setting – Props – Costume- Performance and movement. Lighting - Camera and Camera movement – Editing - Sound Narrative.

Unit III

Genre, star and auteur - French new wave - Neo Realism - German Expressionism - Third world Cinema -Political Cinema - Representation of gender and sexuality - Soviet montage cinema

Unit IV

Film audience - Audience positioning - Audience as the meaning makers - Hero worship - Fan clubs - Problematising the film audience.

Unit V

Study of Great Indian and International filmmakers like Satyajit Ray, Adoor Gopalakrishnan, Akira Kurosawa, Ingmar Bergman and others.

Text Book

1. Oxford guide to world cinema, Oxford, London, 2000

Reference Books:

1. Turner, Graeme. Film as social practice, Routledge, London, Fourth edition 2006
2. Monaco, James. How to read a film, Routledge, London, Third edition 2000

11VC202 PRODUCTION PLANNING AND MANAGEMENT

Credits 4:0:0

Course Objectives:

- To familiarize the learners in managing the studio production and managing the equipments in meeting the schedules of production management.
- To learn the application of studio operations, it's set up and design.
- To know the basics of studio management department and crews.

Course Outcome:

- Students can acquire skills in basic studio set up.
- The students will be able to study how to manage the studio and project planning for a professional set up.

Unit-1

Need for production planning- Elements of Production planning - Pre production and Post production planning - Duties and responsibilities of producer/director - Production Package, Production Designers. Production office - Best laid plans.

Unit-2

Planning of Studio operations - Set designing and make up – visualization and composition - aesthetics-directing the actors - directing the crew planning in career. Costing and budgeting of programme -Commissioned and sponsored programme.

Unit-3:

Planning in career - Planning and Production of indoor and outdoor shootings - Planning and management of live shows - Functions, roles, and skills of media managers in broadcast, cable and corporate facilities, with emphasis on financial management, personnel management, programming, physical systems, and regulations.

Unit-4

An overview of management theory - Financing a production - Moving the budget down. Markets and marketing - Digital Asset Management - Rich Media - Streaming management - Repurposing of assets - Storage management and archiving - Rights management - Contracts management - Anti-piracy measures.

Unit-5

Project planning - Project Development Life cycle - Sample business plan for a fictional company.

Text Book

1. Media Organization and Production, Simon Cottle, Sage Publications, New Delhi, 2003

Reference Books:

1. Filmmakers and Financing, Louise Levison, Focal Press, Fourth edition, 2003
2. Raindance Producers Lab: Lo-to-No Budget filmmaking, Elliot Grove, Focal Press, 2004
3. Digital Asset Management, David Austerberry, Focal Press, 2006

11VC203 COMMERCIAL BROADCASTING**Credits 4:0:0****Course Objectives:**

- The course imparts the techniques and the application of the commercial production in preparing the script, to create a concept for commercial production.
- To learn about the various scripting formats in producing a commercial.
- To know the about the advertising strategies, media department and client approach in the media industry.

Course Outcomes:

- The students will be familiar about the production techniques involved in commercial industry.
- The learners will be able to produce the commercials for television can be done on their own.

UNIT I

Development of ideas- brief from client, agency interpretation, advertising strategy, creative work- idea/ concept development, popular TV ad formats, script/ story board, client approval, media approval- creative potential of TV.

UNIT II

Pre production- film formats, film stocks, planning of special elements- choosing the production team, crew, cast- sources of casting, importance of casting director. Pre production meeting- the agenda.

UNIT III

Production of the commercial- set shooting/ location shooting- recording the sound track and creating the special effects - Pre scoring and Post scoring.

UNIT IV

Editing the commercial- traditional film editing/ non linear editing- finishing the audio elements- confirming the picture- special effects and animations.

UNIT V

Economics of commercial production- Budgeting, factors affecting budgeting, problems with in-house production- finding production companies for bidding specialization of production companies, reviewing the production company cassettes future of TV commercial production.

Text Books

1. Kelsey, Gerald. Writing for Television, Unistar, 2004
2. Zettl, Herbert. Television Production Handbook (7th edn.) Belmont: Wadsworth Publishing, 2000.

Reference Books

1. Simon, Mark. Storyboards Motion in Action (2nd edn.) Oxford: Focal Press, 2007
2. Wright, Steve. Digital compositing for Film and Video, Oxford; Focal Press, 2001

11VC204 RADIO PROGRAMMING

Credits 3:0:0

Course Objectives:

- To provide an understanding of radio programming and different types of programme formats.
- To equip the students in knowing about the functioning of a community radio.
- To impart the programming skills in news gathering and reporting for various radio programmes.

Course Outcomes:

- After learning this paper the students can plan and execute creative radio programme.
- The learners will also be technically aware of the production tools in radio production industry.

Unit 1:

History of Radio: ALL INDIA RADIO – its growth & reach - Broadcast management – Public & Private Radio Stations / Laws & regulations / Community Radio / Audience research

Unit II:

Radio Programming Skills: Writing for Radio – News gathering and reporting skills / Other genre of radio programmes

Unit III:

Radio Presentation Skills: Effective speaking skills – announcements – news reading / Interview skills / Voice culture

Unit IV:

Radio Production Techniques: Nature of sound / Sound recording techniques – indoor & outdoor / Post-production techniques – voice, music and special effect

Unit V:

Broadcasting Techniques: Equipments / Studio operations / OB operations Workshops on Voice Culture, Recording techniques etc and Radio - Station visits are part of the course module. Evaluation will be based on theoretical knowledge as well as production of radio content.

Text Book

1. Mencher. M., Basic News Writing, Sharma Books, 2008

Reference Books

1. Srivatsava, Broadcasting, Vigyan Publication, New Delhi
2. Lesiler & Flat lay, Basic Business communication, Tata Mc Graw Hill, 2004

11VC205 TELEVISION PRODUCTION

Credits 4:0:0

Course Objectives:

- The students will be taught to apply the production techniques involved in the television production industry.
- The students who are technically inclined in television production will be taught the fundamentals of a television workstation.

Course Outcomes:

- The course will enable the learners to produce their own television programme.
- This paper helps the students understand the process of television production.

Unit – I

Genre of Studio based productions and target audience. TV production- Music shows, dance shows, reality shows, quiz, personality interview, Political discussion, current affairs, election campaign, Election Results & analysis, News Presentation, weather report.

Unit-II

Genre of Single camera Production- Documentary, Tele film, Experimental video, Outdoor, Soft stories, Teleserials, Crime subjects enacted.

Unit-III

Advantages and Disadvantages of various distribution systems- Terrestrial, cable with & without CAS (set top box), Direct to home, web streaming. IPTV

Unit IV

Public service TV, Commercial TV, Religious TV, Sports TV, Discovery channel / National Geographic Channel, Cartoon Network etc.,

Unit V

How audience are influenced by TV Programmes and commercials- Children, Youth, women, Political leaders and senior citizen.

Text Book

1. An Introduction to Television Studies - Jonathan Bignell -: Routledge, 2004

Reference Books:

1. The Television Studies Book- David Lusted and Christine Geraghty (2009)
2. TELEVISIONS: An Introduction to Television Studies Glen Creeber British Film Institute, 2006

11VC206 E CONTENT WRITING

Credits 3:0:0

Course Objectives:

- To familiarize the basics of online writing techniques
- To learn the skills required for a multimedia/web writer.

Course Outcomes:

- The learners will be aware of the styles of writing for different types of documents.
- The students will gain knowledge about the architecture of multimedia/web content writing.

UNIT I – Basics of Writing

Language Varieties – Skills – Writing – Basics of Content Writing – Sub skills for Content Writing – Traditional Content Vs E-Content – Language Use in ELearning – Advantages and Limitations – Coherence – Cohesion – Accuracy – Brevity – Clarity – Style Guides: Microsoft Manual of Style for Technical Publications, American Psychological Association (APA) Format Content Writing: Roles of Content Writer, Subject Matter Experts, Instructional Designer.

UNIT II – Interactivity and Writing

Interactive Multimedia – Interactive Writer – Interactivity and Control – Thinking Interactively – Interactive Devices Information and Interactive Architecture – Narrative Design – Content Expertise and Strategy – Writing for Search Engines Technical Skills: Flowcharting – Other Organizational Tools.

UNIT III – Formats

Defining Goals – Techniques to Achieve Common Goals – Audience – User Prism - E - Rhetoric's – Writing/Editing Nuts and Bolts – Script and Proposal Formatting: Outlines – Proposals – Storyboards – Scripts – Final Documents

UNIT IV – Writing Narration

Architecture: Linear – Linear with Section Branching – Hierarchical Branching – Parallel/Multiple Path Architecture – Dynamically Generated Websites – Active and Passive Information Delivery Writing Non-Narrative, Linear Narrative, Interactive Narrative – Interactive Narration: Character and Role of the Player – Structure and Navigation – Exposition

UNIT V – Case Studies

Writing a corporate website
 Writing a museum kiosk
 Writing interactive lessons
 Writing learning content for a simulation
 Writing classic lessons to a computer game

Text Books

1. Writing for the Media, Sunny Thomas, Vision Books Pvt. Ltd., 2000
2. Writing for Multimedia & the Web: A Practical Guide to Content Development for Interactive Media, Timothy Garrand, Elsevier Inc, 2006

Reference Books

1. Developing Online Content: The Principles of Writing and Editing for the Web, Irene Hammerich, Claire Harrison, John Wiley & Sons Inc, 2002
2. Effective Writing for E-Learning Environments (Cases on Information Technology), Katy Campbell, Information Science Publishing, 2004

11VC207 RADIO PRODUCTION LAB**Credits 0:0:2****Course Objectives:**

- To train the students in gaining knowledge on various formats of radio programme production.
- To impart technical knowledge in broadcasting various radio programmes.

Course Outcomes:

- Students will be able to produce radio programmes on their own.

List of Exercises:

1. Produce radio programmes for
 - News
 - Interview
2. Script writing for radio programmes – Standard Script forms
3. Writing for Radio – Style grammar – format writing tools, creative writing & editing
4. Sound recording Editing – Sound effects
5. Style of radio announcements – Compeering – Narration – Voice Modulation
6. Methods of Interviews, Location of recording, Music recording, Magazines, Remote broadcast.

7. News reading and presentation methods, pronunciation, vocals stressing, Inflection, quotation marks,
Errors and emergencies.
8. Making commercials and discussion programmes.
9. Produce a radio programme for a radio documentary
10. Produce a radio programme for a radio drama.
11. Produce a radio programme for a radio group discussion
12. Produce a radio programme for music talk.

11VC208 TELEVISION PRODUCTION LAB

Credits 0:0:2

Course Objectives:

- To train the students in gaining knowledge on various formats of television production.
- To impart technical knowledge in broadcasting various television programmes.

Course Outcomes:

Students will be able to produce various television programmes on their own.

List of Exercises

Topic/theme based programme will be based on producing

1. Current affairs type programme
2. Drama Practical (simple drama exercise)
3. Mime type programme and Studio Live (a live studio exercise)
4. Interviewing
5. Shoot a 5 min to 25 min duration Tele Play
6. Shoot a 5 min to 25 min duration Song Picturization
7. Shoot a 5 min to 25 min duration TV Documentary.
8. Shoot a 5 min to 25 min duration a Quiz programme.
9. Shoot video on any genre including Animation
10. Shoot video on a testimonial television commercial
11. Produce and shoot a television talk show programme
12. Produce and shoot a television live show.

11VC209 COMMERCIAL PRODUCTION LAB

Credits 0:0:2

Course Objectives:

- To make the learners train in various types of commercial production.
- To impart the students in making them know about the production techniques of both radio and television commercials.

Course Outcomes:

It enhances the students to produce various types of commercials on their own.

List of Exercises:

1. Produce a Radio commercial

2. Produce a Radio jingle
3. Produce a signature tune for a radio programme
4. Record a celebrity endorsement commercial for a product
5. Produce a TV commercial
6. Produce a script and story board for a TV commercial
7. Produce a Public service TV advertisement
8. Produce a live product demo for a commercial
9. Produce a TV commercial with animation effects
10. Produce a Television news bulletin.
11. Produce a commercial for an emotional appeal ad.
12. Produce a commercial for a rational appeal ad

11VC210 MEDIA RESEARCH

Credits 4:0:0

Course Objectives:

- To understand research methods and statistical tools in media field.
- To understand the principles of evaluation, research and statistics and computer application.
- To prepare model research proposals for research studies and report writing.

Course Outcomes:

- After learning this paper the learners will be able to know the research methods and statistics applied in media industry.
- The students will also be able to initiate new media research proposals in their respective field.

Unit I

Introduction to research – nature of scope and distinction between research in natural and social sciences – nature and scope of communication research – review of research related to effects research – limitations of effects research – basic parameters of media related studies.

Unit II

Designing a research study – the problems and the method – preparing a research proposal – sources of research – primary and secondary etc.

Unit III

Types of research design – Exploratory studies – descriptive studies – diagnostic studies – experimental studies – their relevance and use in communication research.

Unit IV

Methods of data collection – field studies – Holistic approach – observation – Interviews – Questionnaires – structured and unstructured schedules – sampling – content analysis – approach, method and use – techniques basic – data analysis techniques.

Unit V

Writing a research project – organization – chapterization – citation – footnotes.

Text Book

1. Research Methodology – Kothari, (2008) New Age Publication

Reference Texts:

1. Research Methods in Mass Communication by Stempell and Westley Prentice Hall, 1989
2. Communication Theories: Origins, Methods and Uses' by Severin and Tankard, Hastings House Publishers, 1999
3. 'Mass Media Research – An Introduction' by Roger Wimmer and Joseph Dominick, Wadsworth Pub., 2006.

11VC211 CORPORATE COMMUNICATION

Credits 4:0:0

Course Objectives

- To understand the elements of workplace communication.
- To enable the students to learn the basic communication skills in the usage of communication technology in the modern workplace.

Course Outcome:

It enhances the learners to maintain good work team communication.

It also helps them to plan and execute the business documentation used in corporate culture.

Unit I

Communication basics – Business Communication – components – Types – formal communication network – Work team communication – variables – goal – conflict resolution – non – verbal communication – Cross cultural communication – Business meetings – Business Etiquette.

Unit II

Understanding Corporate Communication – Employee Communication – Managing Government Relations – Writing for Media and Media Relations

Unit III

Corporate communication in brand promotion – Financial communication – Crisis communication.

Unit IV

Report writing: Characterizing & business reports – Types and forms & reports – Project proposals – collection of data – table's constitution – charts – writing the report – documenting the sources – proof reading.

Unit V

Business Presentation: Written and oral presentation – work – team presentation – Delivering the business presentation visual aids – Slides – electronic presentation – Hand-outs – Delivering the presentation – career planning – preparing Resume – job applications – preparation for a job interview – employment interviews – follow-up.

Text Book

A guide to Corporate communication, A guide to theory and practice, second edition , (2008)

Reference Book

Scot Ober, Contemporary business communication, Fifth edition, biztantra, 2007
Excellence in Business Communication, 8th edition, 2008

11VC212 ADVERTISING

Credits 4:0:0

Course Objectives:

- To enhance the learners in making them to learn the types and different phases of advertising.
- To make the learners in developing creative campaigning strategies for ads.

Course Outcome:

- The learners will be able to know the different types of advertisement campaigns.
- The students will also be able to promote various advertising and marketing strategies with respect to various media industry.

UNIT – I

Advertisers – Leading National and International Clients — Advertising campaigns – other promotional campaigns – Advertising and PR Department of the clients– Role, responsibilities and functions of Advertising and PR managers – planning and execution – coordination with advertising and agency.

UNIT – II

Advertising departments in Media: Print and Electronic media – Advertising policy and regulations of newspapers, radio stations and TV channels – tariff – space and time allocation – schedule preparation - agency relations – client relations – coordination with other departments – advertising revenue generation

UNIT-III

Media for Advertising: Newspapers and Magazines – Characteristics, reach and ad. exposure — Cost ; Radio advertising – jingles – spots – production cost – reach and effectiveness - tariff; TV advertising: effectiveness – reach- products and advertisers on TV – channel competition – tariff – production cost – creativity; cost- effectiveness in advertising.

UNIT – IV

Rural Advertising: Rural market characteristics – growth – penetration of brands – brand competition – media and rural market – nature of products and services for rural markets – media

planning – use of outdoor media – successful rural advertising and marketing campaigns – Rural advertising agencies- economics of rural advertising.

UNIT-V

Multinational Brands – Multinational Advertising Agencies – Indian Agencies with Foreign Agencies – Multinational campaign strategies and cost considerations – creativity and content in International advertisements – cultural differences and global advertising campaigns – implications – regulations.

Text Book

1. Fundamentals of Advertising', Otto Kleppner, Prentice Hall, New Jersey, 2000.

Reference Book

1. The Practice of Advertising' Norman Hart, Heinemann Pub. London, 2000
2. Advertising worldwide Marieke de Mooij, Prentice Hall, UK, 2000
3. Advertising Management concepts and cases' M. Mohan, Tata Mc Graw Hill, 2008

11VC213 PROFESSIONAL PHOTOGRAPHY

Credits 4:0:0

Course Objectives:

- To learn the applications and thrust areas in digital photography
- To understand the digital studio set up and commercial projects undergone in photography industry.
- To introduce the students to the profession of digital photography.

Course Outcomes:

- The learners will acquire the basic photography skills and techniques adopted in the industry.
- The students will come to know about the various types and recent trends in the photographic industry.

Unit 1

The equipments – cameras, lenses, light meters, filters, flashes and accessories, Understanding - exposure and lighting techniques – indoor and outdoor, Black & white and colour photography – films, chemicals, processing and printing.

Unit 2

Still life, Close-up, macro and microphotography, Special effects Techniques and Manipulation of images, Photomicrography - study by magnification, close-up lenses and devices.

Unit 3

Photography as a mirror of reality and symbol - realism, surrealism and expressionism, Photo essay and documentary - expression of idea and emotion, Photo feature, editorial reportage, people and events, action and sports, Thematic presentation of nature, landscape, architecture, city life and people.

Unit 4

Advertising - visualizing - copy and illustrations - use of drawing and photographs, Consumer and industrial products - sets props, casting, studio, indoors and outdoors locations, Fashion Photography - studio and location, editorial, advertising, beauty and portrait.

Unit 5

Video Photography - compact camcorder techniques, scoreboard, production for advertising. Digital Photography- Digital Camera functions and techniques, computer aided applications and creativity.

Text Book

1. Michael Langford, Basic Photography, Focal Press, London, 2007

Reference Book

1. Mastering Digital Photography and Imaging, Peter K Burian - 2004
2. Mitchell Bearley, John Hedgeese's New Introductory Photography Course, Reed consumer Books Ltd, London, 2008

11VC215 INTRODUCTION TO SOCIAL PSYCHOLOGY

Credits 4:0:0

Course Objectives:

- To identify the mob and group behavior of media audience.
- To learn the applications of psychological principles applied for different mass media.

Course Outcomes:

- The students will be able to understand the target media audience psychology.
- It enhances the students to maintain the relationship in workplace environment.

UNIT I:

The Nature and Scope of Social Psychology. - The Methods of Social Psychology- The Development of Social Psychology: Early Beginnings – the Contributions of Sociologists and Psychologists : Comte; Le Bon; Durkheim; Cooley; G h Mead; Mc Doughall;

UNIT II:

Specialization : Social Learning Process - Socialization and Motivation; dependency; Aggression; Need Achievement; affiliation; etc - Social Factors in perception - Society and Personality.

UNIT III:

Attitudes and Opinions The Nature and Dimensions of Attitudes - The Formation and Change of Attitudes - Communication and Persuasion - Public opinion –Nature, measurement, formation and change - Role of Mass communication in Public Opinion Formation and change.

UNIT IV:

Groups and group Processes; Nature and Types of groups- Conditions Conclusive to Development of Groups; group Dynamics - Group norms and conformity; Social Facilitation - Group structure and group performance - Cooperation and competition.

UNIT V:

Mass Psychology - Audiences and Collective Behaviour - Classification of Collective masses - Casual Audiences - Intentional Audiences and Audiences and Mass Media. - Collective Behaviour – the mobs and the different kinds of Mobs - The Psychology of Mass Movements.

Text Book

1. Introduction to Mass communication – Keval J.Kumar, 2005, Jaico Publishers

Reference Books

1. Mc David and Harris ; “An Introduction to Social Psychology” . Harper & Row, 2000
2. Handbook of Social Psychology - John D DeLamater – 2003, Springer Pub.
3. Applied social psychology, Frank V. Schneider, Jamie Gruman, Sage publications, 2005

11VC216 ADVERTISING – I

Credits 4:0:0

Course Objectives

- To enhance the learners in making them to learn the advertising promotions.
- To make the learners in developing creative campaigning strategies for ads.

Course Outcome:

- The learners can produce their own advertisement campaigns
- The students will be able to promote various advertising and marketing strategies with respect to various media industry.

UNIT-I

Advertising and its role in the market place, advertising industry in India – advertising as a process of communication - Social effects of advertising.

UNIT II

Types of advertising : consumer, corporate, industrial, retail, cooperative and Public service advertising.- tone and content; reading the advertisement - review with current ad campaigns.

UNIT III

Advertising agency: Structure and functions; Leading agencies in India- Diversification and competition – full service agencies – multinational clients – challenges and opportunities.

UNIT IV

Advertising campaign: objectives, creative strategy: message, appeals, target market, level of response, Media planning, advertising budget, pre testing and post testing.

UNIT-V

Professional ethics in advertising- cases of ethical violations -Advertising Standards Council – Social and cultural issues – Global regulations and Future trend.

Text Books

Fundamentals of Advertising’, Otto Kleppner, Prentice Hall, New Jersey, 2000.

Reference Books

1. Gupta, Sen, Brand Positioning; Tata McGraw Hill; New Delhi, 2003
2. Hart, Norman; The practice of advertising; Heinemann Pub.; London, 2002
3. Chunnawalla and K.C. Sethia ; “Foundations of Advertising: Theory and practice (1997)

11VC217 WEB DESIGNING

Credits 4:0:0

Course Objectives:

- To understand and use HTML tags for designing web pages.
- To learn Dreamweaver and its features to design web pages.
- To learn Javascript to develop dynamic pages.

Course Outcome:

- The students will be able to design their own web page using basics of HTML

UNIT I – HTML

Anatomy of HTML file – Lists – Nested Lists – Font – Anchor – Image – Sound – Colors – Horizontal rules – Borders – Alignment – mail to – Preformatted text – Title, Base, HREF, Meta tags – Transition effects – Visual Filters

UNIT II – Programming Principles

Table: Table Alignment – Cell Alignment – Colors – Adding Images

Frame: Multiple frames – Inline frames Form: Label – Text – Text Areas – Password Input – Buttons (Button, submit, reset) – Checkbox – Radio Button – List Box – Hidden Input in Forms

UNIT III – Designing Core Pages in Dreamweaver

HTML Editors – Features of Dreamweaver – Accessing the Code – Building Style Sheets – Working with Text – Inserting Images – Establishing Web Links

UNIT IV – Advanced Design Features in Dreamweaver

Working with Div and Layer – Using Behaviors – Setting Tables – Interactive Forms – Creating Lists – Using Frames and Framesets – Using Templates – Using Library Elements

UNIT V – Javascript

Introduction – keywords – Data types – Variables – Operators – Comments – Arrays – Expressions – Control Structures – Functions (calling a function, returning values, integrating function & HTML)

Text Book

1. Internet & World Wide Web – How to program, 3rd Ed., H.M. Deitel, P.J. Deitel, et al., Prentice Hall, 2003

Reference Books

1. HTML 4.0 Sourcebook, Ian S. Graham, Wiley Publications, 2000
2. Web Design with HTML/Flash/Javascript & Ecommerce BIBLE, David Crowder and Rhona Crowder, Wiley DreamTech India Pvt. Ltd , 2002

11VC218 ADVERTISING – II

Credits 4:0:0

Course Objectives

- To enhance the learners in making them to learn the contribution of advertisements.
- To make the learners in developing creative campaigning strategies for ads.

Course Outcome:

- The learners can produce their own advertisement campaigns
- The students will be able to promote various advertising and marketing strategies with respect to various media industry.

UNIT – I

Advertisers – Leading National and International Clients – Ad Spend – Advertising campaigns – other promotional campaigns – Advertising and PR Department of the clients– Role, responsibilities and functions of Advertising and PR managers – planning and execution – coordination with advertising and marketing agencies.

UNIT – II

Advertising departments in Media: Print and Electronic media – Advertising policy and regulations of newspapers, radio stations and TV channels – tariff – space and time allocation – schedule preparation - agency relations – client relations – coordination with departments – advertising revenue generation – ad. executives/representatives.

UNIT-III

Media for Advertising: Newspapers and Magazines – Characteristics, reach and ad.exposure – Products and advertisers of Print media – Cost ; Radio advertising – jingles – spots – production cost – reach and effectiveness – radio audience – tariff; TV advertising: effectiveness – reach-products and advertisers on TV – channel competition – tariff – production cost – creativity; Out-door media characteristics –cost- effectiveness in advertising.

UNIT – IV

Rural Advertising: Rural market characteristics – growth – penetration of brands – brand competition – media and rural market – nature of products and services for rural markets – media planning – use of outdoor media – successful rural advertising and marketing campaigns – Rural advertising agencies- economics of rural advertising.

UNIT-V

Multinational Brands – Multinational Advertising Agencies – Indian Agencies with Foreign Agencies – Multinational campaign strategies and cost considerations – creativity and content in International advertisements – cultural differences and global advertising campaigns – implications – regulations.

Text Book

Advertising worldwide (2nd Edn). Marieke de Mooij, Prentice Hall, UK., 2002

Reference Books

1. Fundamentals of Advertising, Otto Kleppner, Prentice Hall, New Jersey, 2008
2. The Practice of Advertising' 3rd Fdn. Norman Hart, Heinemann Pub. London. (1995)
3. Successful advertising research methods' Haskins & Kendrick, NTC Busin, 2008

11VC219 AUDIO VISUAL MEDIA

Credits 4:0:0

Course objectives:

- To make the learners know about the development of radio and television broadcasting
- To make them aware of the types of programmes targeted to the different type of audience segmentation

Course Outcome:

- This paper explores on the current audio visual trends which enhances the students to know about the basics of radio and television broadcasting.

Unit 1

Development of Radio Broadcasting in India – Ownership – Control – Autonomy for Radio – Types of Radio services- Radio as a source of News – Broadcast News – Value – Radio Language – News Bulletin – News Source for Radio – Reporters, Editors and Agencies – External News Services Interviews – Features – Writing for Radio.

Unit 2

Special Audience Programmes – Rural and Farm Broadcasting – Educational Programmes – Programmes for Children, Women and Youth. Women Welfare – Children Welfare – Health and Family Planning – Rural Development – Urban problems

Unit 3

Cinema and Society – Influence over Society- Effects – Cinema as Main Source of Entertainment – Powerful Media to Spread Message – Cinema for Political supremacy. Film Censor – Film Censor Enquiry Committee – Documentary Film – Newsreels – National and International Film Festivals – Film Awards – Future of Indian Cinema.

Unit 4

Development of Television in India – News Programmes: a) News cast b) News Review – Formats of TV Programmes – Documentary – Special Features – Interviews. TV as a powerful Audio – Visual Media – Commercial and Sponsored Programme – Educational Service (ETV) – Satellite Instructional Television Experiment (SITE) – Role of TV in Social Changes – Cultural Exchanges – Economic Uplift – Advertisement in TV – Specialist causes and consequences –

TV News and Agencies.

Unit 5

Governments policy on AIR to inform, educate, entertain and elevate a common man – Government Control over AIR in functioning – Competition among the Audio-Visual Media – Development of Videography – Cable TV. Audio-Visual Media in Developing Countries – Future of Audio-Visual Media in India – Research in Audio-Visual Media – Implications of Press Media over Audio-Visual Media.

Text Book

1. Kumar, Keval J, Mass Communication in India, Jaico Publishing House, Bombay, Delhi, Bangalore, Calcutta, Madras, 2005

Reference Books

1. Mehra Massani, Broadcasting and the People, National Book Trust, New Delhi, 2000
3. Luthra, H.R, Indian Broadcasting, Publications Division, New Delhi 1986

11NM301 VISUAL MEDIA AND COMMUNICATION

Credits 3:0:0

Course Objectives

- To know about the different types of communication applied in media.
- To know about the elements of visuals and basics of photography and fine art.
- To know about the application point of view of new media technologies.

Course Outcomes:

- This paper makes the learners to know about the basics of communication, its application and development.

Unit-I

Evolution of Human Communication. Definition, history and background of communication. Functions and objects of communication. Kinds of mass communication. Elements of communication. Barriers to communication. Mass media and functions of mass media. Listening. Group dynamics. Educational Media. Traditional media. Fine arts, theatre arts. Introduction to Media, culture and society.

Unit-II

Visual Elements. Visual culture. Visual Pleasure and Visual Disruption. Reading Pictures. Vocabulary of color. Drawings. Portraits. Landscapes. Photo-features. Photographs and their communication. Visual thinking and Designing of Visual media. Illustration- Conceptual approach. Qualities of a good illustration. Illustration problems. Illustration techniques. Types of illustrations.

Unit-III

Evolution of Visual communication. Art Direction. Applications of visual communications in commercial contexts. Kinds of films and their impact on society. Films divisions. Role of NGOs. Panorama of twentieth century cinema. History of Films in India.

Unit-IV

History of Television. Technology Evolution. Television transmission. TV picture resolution. Component and Composite Video. Ku- band, c-band, S- band and telecast channels. TV reception methods. Receiver plans and devices. Remote control systems. Global and National TV viewers. Growth of TV in India.

Unit-V

Modern methods of Visual Communication including mobile systems, cell phones. Digital Television-Transmission and Reception. Cable Television. Role of reach by visual media communications. Imax and 3D movies. Awards and recognition for visual media

Text Books

1. Theories of Mass Communication, Melvin D. Flour and Evelette Dennis, 2000
2. Film production, Steven Bernstein, Focal Press, 2004.

Reference Books:

1. Media and Communication management-C.S.Raghu, Himalaya Publishing House, Mumbai, 2006
2. Mass media and Communication Theory, Ved Prakash Gandhi, Vol-3., Kanishka Publications, New Delhi-2000.
3. TV Journalism, K.M.Srivastava, Sterling Publishers Pvt. Ltd., New Delhi, 2004
4. Media Education, Communication and Public Policy, K.S.Kumar, Himalay Publishing House, New Delhi, 1995
5. Visual methodologies, Gillian Rose, Sage publications, 2001

11NM302 WEB DESIGNING**Credits 4:0:0****Course Objectives**

- To know the basics of networks and the network devices.
- To understand and use basic HTML tags for designing web pages.
- To know the design of table, frame and form using HTML tags.

Course Outcomes:

- It makes the students to know about the basic and advanced features of Dreamweaver in order to design web.

UNIT I – Introduction to Networks

Computer networks: LAN, WAN, MAN, Internet, Intranet, Extranet – Client-Server Networks – History of Internet – DNS – ISP – Internet Connections – Network Devices: Cables, Hubs, Repeaters, Bridges, Routers, Gateways, Modems – FTP

UNIT II – HTML

Anatomy of HTML file – Lists – Nested Lists – Font – Anchor – Image – Sound – Colors – Horizontal rules – Borders – Alignment – mail to – Preformatted text – Title, Base, HREF, Meta tags – Transition effects – Visual Filters

UNIT III – Programming Principles

Table: Table Alignment – Cell Alignment – Colors – Adding Images Frame: Multiple frames – Inline frames Form: Label – Text – Text Areas – Password Input – Buttons (Button, submit, reset) – Checkbox Radio Button – List Box – Hidden Input in Forms

UNIT IV – Designing Core Pages in Dreamweaver

HTML Editors – Features of Dreamweaver – Accessing the Code – Building Style Sheets – Working with Text – Inserting Images – Establishing Web Links

UNIT V – Advanced Design Features in Dreamweaver

Working with Div and Layer – Using Behaviors – Setting Tables – Interactive Forms – Creating Lists – Using Frames and Framesets – Using Templates – Using Library Elements.

Text Books

1. Internet & World Wide Web – How to program, 3rd Ed., H.M. Deitel, P.J. Deitel, et al., Prentice Hall, 2003
2. Dreamweaver 8 Bible, Joseph W. Lowrey, Wiley Publication, 2006

Reference Books

1. Dreamweaver MX: The Complete Reference, Ray West, Tom Muck, Mc Graw Hill Publications, 2002
2. The HTML, Web development Sourcebook by Ian Graham, Wiley publications, 2000
3. Web design with HTML/Flash? Javascript &E – Comm. Bible, David Crowder, 2000

11NM303 SCRIPTWRITING AND AUDIO-VIDEO PRODUCTION**Credits 4:0:0****Course Objectives**

- To know the types of scripts and know-how of audio and video scripting.
- To familiarize the equipments used in audio and video production.
- To understand the procedures to follow in producing audio and video programs.

Course outcomes:

- The learners will be able to develop scripts of various formats.
- They will also be able to apply and correlate this with the audio and video production.

Unit I

Introduction to Production and Script Writing - Phases of Production: Preproduction – Production – Postproduction – Audio Vs Video Scripts – Visual Writing – Role of Scriptwriter – Script Format: Master Scene, Dual-Column – Concepts, Formats and Types of Storyboard Stages of Script Development – Creative Concept Development – Copywriting Vs Scriptwriting – Script for Fiction and Non-Fiction – Types of Documentaries – Writing Commentaries – Writing for Long-Form Scripts Script for Training and Educational Video: Show and Tell – Job and Task Description – Dramatization – Instructional Video How-to-do Videos

Unit II

Basics of Audio-Video Production- Types of Audio & Video Studio – Control Room – Studio Maintenance – Stage – Set: Props, Dressing - History of Audio & Video Recording – Audio Formats – Audio Tape Formats – Video Formats – Video Tape Formats – Digital Audio & Video – Roles of Video Production Team – Roles of Audio Production Team

Unit III

Audio Systems and Production - Types of Sound – Types of Recording – Recording Systems – Microphones – Cables and Connectors – Monitoring Equipments – Mixing Equipments – Remote - Audio Production Equipments – MIDI – Acoustics

Unit IV

Video Systems and Production - Types of Camera – Parts of Camera – Mounting Equipments – Lenses: Types, Optical Characteristics – Filters – Camera Operation Techniques – Color Balancing – Camera Movements – Multiple Camera Production – Types of Shots – Working the Camera: Do's & Don'ts

Unit V

Lighting in Video Production - Types of Lighting – Types of Lamps – Studio Lighting Instruments – Field - Lighting Instruments – Lighting Control Equipments – Quality of Light – Color Temperature – Light Intensity – Light Balancing – Lighting Techniques – ENG/EFP Lighting- Legal and Ethical Issues of Production.

Text Books

1. Writing For Visual Media, Second Edition, Anthony Friedmann, Focal Press, 2006
2. TV Production Modules, www.cybercollege.com

Reference Books

1. Television Production Handbook, Eighth Edition, Herbert Zettl, Thomson Wadsworth Publication, 2007
2. Practical Recording Techniques, Fourth Edition, Bruce Bartlett, Jenny Bartlett, Elsevier Publication, 2005
3. Video Camera Techniques, Gerald Millerson, Focal Press, 2000

11NM304 MULTIMEDIA TECHNOLOGIES

Credits 4:0:0

Course Objectives

- To know the design issues of multimedia in communication networks.
- To learn the graphics, audio and video file formats and various devices used for multimedia storage.

Course Outcomes:

- It makes them to understand the interfaces and its importance towards the design and use of multimedia elements.
- It also helps them to involve their concept in relation to the applications of virtual reality.

Unit I: Introduction

Introduction to Multimedia and Hypermedia – History of Multimedia – Applications and Challenges – Multimedia and learning – Communication Network and Multimedia: Bandwidth, Session Management, Security, Support for Mobility and Traffic

Unit II: Formats

Raster Graphics – Vector Graphics – Image File Formats: Windows Formats, Macintosh Formats, Cross Platform Formats – Audio & Video File formats – Audio & Video Streaming Formats – Graphics and Animation for Web – Web File Formats – CODEC: Lossy Vs Lossless, Compression Techniques

Unit III: Interfaces

Multimedia Search: Text, Speech, Audio, Image and Video Based Indexing – API: Open GL, Direct X, Direct3D – Interfaces: Parallel, Serial, IDE/ATA, SATA, SCSI, USB, Firewire, PCI, AGP, PCI Express – Graphics Cards – TV Tuners

Unit IV: Storages

Multimedia Servers – Removal Storage: Floppy, ZIP, Jazz, Flash Drive, iPod, Removal HDD – Optical Storage: Characteristics of CDs & DVDs – CD Formats – DVD Formats – Replication and Duplication Process – Blu-ray Discs

Unit V – Virtual Reality

Definition – Applications – Real-Time Computer Graphics – Animation and Virtual Reality – Input Devices – Output Devices – Immersive Vs Non- Immersive – Physical Simulation – The Future

Text Books

1. Strategies of Multimedia Communication, Girish Saxena, Vista International Publishing House, 2005
2. Multimedia: Making it Work, Seventh Edition, Tay Vaughan, McGraw Hill Osborne Media, 2006

Reference Books

1. Encyclopedia of Graphic File Formats, James D. Murray, William Vanryper, O'Reilly Publication, 2004
2. Virtual Reality Systems, John Vince, Addison Wesley Longman, 2000
3. Encyclopedia of Graphics File Formats, Second Edition by James ... Watkinson, (2004).

11NM305 INTRODUCTION TO E- TECHNOLOGY

Credits 4:0:0

Course Objectives:

- To understand the basic concepts of e-learning.
- To understand the technology mediated communication in e-learning.

Course Outcomes:

- To learn the services that manage e-learning environment.
- To know the teaching and learning processes in e-learning environment.

Unit I – Introduction

Evolution of Education – Generations of Distance Educational Technology – Role of E-Learning – Components of e-learning: CBT, WBT, Virtual Classroom – Barriers to e-Learning Roles and Responsibilities: Subject Matter Expert – Instructional Designer – Graphic Designer – Multimedia Author Programmer – System Administrator – Web Master

Unit II – Technologies

Satellite Broadcasting – Interactive Television – Call Centers – Whiteboard Environment Teleconferencing: Audio Conferencing – Video Conferencing – Computer Conferencing Internet: E-mail, Instant Messaging, Chat, Discussion Forums, Bulletin Boards, Voice Mail, File Sharing, Streaming Audio and Video

Unit III – Management

Content: E-Content, Dynamic Content, Trends – Technology: Authoring, Delivery, Collaboration – Services: Expert Service, Information Search Service, Knowledge Creation Service – Learning Objects and E-Learning Standards Process of E-Learning: Knowledge acquisition and creation, Sharing of knowledge, Utilization of knowledge – Knowledge Management in E-Learning

Unit IV – Teaching-Learning Process

Interactions: Teacher-Student – Student-Student – Student-Content – Teacher-Content – Teacher-Teacher Content-Content Role of Teachers in E-Learning – Blended Learning – Cooperative Learning – Collaborative Learning – Multi Channel learning – Virtual University – Virtual Library

Unit V – Development Issues

Assessment in E-Learning – Quality in E-Learning – Tools for Development – Costs for Developing and Using E-Learning Environments – Challenges and Careers – Future of e-Learning

Text Books

1. E-Learning: An Expression of the Knowledge Economy, Gaurav Chadha, S.M. Nafay Kumail, Tata McGraw-Hill Publication, 2002
2. Michael Allen's Guide to E-Learning, Michael W. Allen, Michael Allen, Wiley Publication, 2002.

Reference Books

1. E-Learning: New Trends and Innovations, P.P. Singh, Sandhir Sharma, Deep & Deep Publications, 2006
2. E learning standards: A Guide to Purchasing, Developing and Deploying Standards – Conformant E – learning, Carol Fallon, Sharon Brown, CRC Press, 2002

11NM306 MULTIMEDIA LAB

Credits 0:0:2

Course Objectives:

- To create e-page, power point presentations and desktop publishing.

- It imparts the techniques the multimedia so that the students will come across to produce an appropriate design.

Course Outcome:

- The students will be aware of various designing process in multimedia production.

LIST OF LAB WORKS

1. E-PAGE with visual aid
2. Preproduction & Presentation Graphics: Create a 5 slide presentation in your favorite presentation graphics application. (PowerPoint)
3. Typefaces and Graphics: Create 1 vector and 1 bitmap graphic
4. Desktop Publishing: Create a 2-page desktop-published "newsletter," Submit a PDF copy
5. Desktop Publishing: Create a 2-page desktop-published "newsletter," Submit a PDF copy.
6. Production Planning and Design: Create a proposal for your final project. Include summary, flowchart, element and resource lists. Submit a PDF copy.
7. User Interface Design & Graphics II: Create a user interface. Include 2 backgrounds and 1 button set. Aim for a cohesive look.
8. Multimedia Sound: Create 2 soundtracks and 2 EFX sounds
9. Video Production: Prepare storyboard and shoot a short video production
10. Digital Video: Use video capture to digitize your video shoot to another video source to create short production (20-30 seconds)
11. Create three basic Web pages using Dreamweaver
12. Audio Production: Prepare an audio package and shoot an audio production

11NM307VIDEO PRODUCTION LAB

Credits 0:0:2

Course Objective

To introduce students to the profession of producing programme for TV. Making of these television programs in two or single camera set-up is real hand on experience for the student in the TV Program process.

Course Outcome:

They learn all the technical details that is related in making of a program in production stage and post production stages for TV.

Types of TV Programme

1. Indoor – Single Camera set-up Interview
2. Outdoor – Single Camera set-up Interview
3. Educational Shows- Two Camera Set -up
4. Drama
5. PSA
6. Game Shows
7. Anchor, News Reader. Grammar of Out-door Production.
8. Writing the screenplay, prepare the storyboard and cue sheet etc.

9. Breaking down the scripts develop a plot
10. Formulate a script and coin a concept and do the research on any particular theme.
11. Using a particular concept bring out the grammar of editing visual and sound track.
12. Making the choice of the crew, Teamwork and work ethics. Equipments and location
 - the shooting, contracts, some legal issues in production.

11NM308 WEB DESIGNING LAB

Credits 0:0:2

Course Objectives

- To apply the skills learned to develop web pages using HTML tags.
- To make the learners know the basics of HTML helps and guides the student how to create a web page on own with sources code without the help of the other automatic software's.

Course Outcomes:

- It helps the learners to learn the basics, so that it can be really helpful in their other course related to web in the advance stages like VB, JAVA, etc

List of Exercises

1. Developing a webpage using basic HTML tags and hyperlinks.
2. Creating web pages with transition and visual effects.
3. Creating a webpage which contains a set of images (minimum 10) in same size inserted in table.
4. Developing a webpage using TABLE tag to display class timetable.
5. Developing and integrating at least 4 instructional web pages using FRAMES and suitable hyperlinks.
6. Constructing a webpage using FORM tag to enter student bio-data.
7. Create a webpage for social awareness
8. Create a webpage for with visual effects
9. Create a webpage using basic hyperlinks
10. Create a website for banner ads
11. Design an academic website
12. Design a website using HTML, CSS.

11NM309 INTERACTIVE MULTIMEDIA APPLICATIONS

Credits 4:0:0

Course Objectives:

- To know the basics of multimedia and tools used to develop multimedia.
- To understand the project management and responsibilities of team members.

Course Outcomes:

- They will learn the phases of instructional designing and interactivity in designing.
- They will also learn the proper use of media technological environment.
- To know the process involved in delivering multimedia products.

Unit I – Introduction to Multimedia

Benefits of Multimedia in Instruction – Media and Motivation – Issues - Surrounding Multimedia
 Multimedia Hardware: Platforms – Peripherals - Creation Tools: Painting and Drawing Tools – Image Editing Tools – 3-D - Modeling and Animation Tools – Audio and Video Editing Tools
 Authoring Tools: Card and Page Based Tools – Icon Based Tools – Time Based Tools – Cross-Platform Authoring – Evaluating Authoring Tools.

Unit II – Project Management and Instructional Design

Project Management Issues – Roles of Project Managers, Instructional -Designers, Subject-Matter Experts, Content Writers, Programmers, Media - Producers
 Instructional Development Phases: Analysis & Planning – Design – Development – Implementation – Evaluation & Revision.

Unit III – Media

Text: Guidelines for Creating Text – Spacing – Justification – Fonts – Variable - Spacing – Scrolling – Scrolling – Display Speed – Screen Focus Points – Hypertext and Hypermedia
 Images: Images and Learning – Displaying Images – Appearance – Costs – Digitization
 Animation: Animations and Learning Displaying Animations – Costs
 Audio: Audio and Learning – Scriptwriting Guidelines – Speech – Sounds – Music – Audio Quality – MIDI – Digitization -Video: Video and Learning – Strengths of Video Difficulties with Professional Quality Video.

Unit IV – Designing Interactivity

Interactivity: Definition – Purpose – Process of Interactive Design
 Information Design: Product Definition – Audience and Environment – Development Choices – Organizing Information – Information Flowchart
 Interaction Design: Orientation – Image Maps and Metaphors – Navigation – Usability – Functionality – Storyboard
 Presentation Design: Tasks of Presentation Design – Resolution – Anti-aliasing – Color and Palettes – Interface Style – Layout – Interface Elements (Background, Panels, Buttons & Controls, Images, Text, Video, Sound, Animation) – Feedback and Error Messages

Unit V – Delivery

Testing: Alpha Testing – Beta Testing
 Delivery: freezing the Product – Archiving – Project Debrief – Licensing, Copyright and Support Agreements – Copyright Issues – Legal and Ethical Issues – Packaging.

Text Books

1. Multimedia: Making it Work, Seventh Edition, Tay Vaughan, McGraw Hill Osborne Media, 2006
2. Principles of Interactive Multimedia, Mark Elsom-Cook, McGraw-Hill, 2000

Reference Books

1. Creating Instructional Multimedia Solutions: Practical Guidelines for the Real

- World, Peter Fenrich, Informing Science Publication, 2000
2. Interactivity by Design: Creating & Communicating with New Media, Ray Kristof, Amy Satran, Pearson Education Publication
 3. Principles of Interactive Multimedia, Mark Elsom-Cook, McGraw-Hill Publishing Co, 2000.

11NM310 GRAPHICS AND ANIMATION

Credits 4:0:0

Course Objectives

- To know the basics of graphics and animation principles and techniques to design.
- To create effective visual communication by incorporating design techniques, visual thinking, concept development.

Course Outcomes:

- They will be able produce the rendering technology involved in designing 2D & 3D animation.
- They will also be able to produce the concept and applications of virtual reality.

Unit I – Graphics

Definitions – Print Design Vs Digital Design – Elements of Graphic Design – Tools of Organization – Architecture of Type/Font – Building Blocks of Graphic - Design: Whitespace, Rules, Borders, Boxes, Shadows, Bleeds – Illustrations – Working with Photographs – Working with Color Designing for Print: Newsletters – Newspapers – Magazines – Brochures – Pamphlets – Posters

Unit II – Animation

Definition – Types of Animation: Cel Animation, Stop Motion Animation, - Computer Animation, Frame by Frame, Keyframe Animation – Applications – Hardware – Software – Considerations for selecting tool Animation Techniques: Transformation – Compositing – Color Correction – Modeling – Lighting – Masking – Layering – Shading – Particles

Unit III – Rendering and Career Prospects

Rendering: Types – Features – Techniques – Real-Time Rendering – Software - Creators: Visual Development artist, Layout artist, Character animator, Clean up artist, Color stylist, Graphic Designer, Animator, Effects animator, Compositor

Unit IV – Image Processing

Raster Graphics – Vector Graphics – Image File Formats: Windows Formats, Macintosh Formats, Cross Platform Formats – Audio & Video File formats – Audio & Video Streaming Formats – Graphics and Animation for Web – Web File - Formats – CODEC: Lossy Vs Lossless, Compression Techniques.

Unit V – Virtual Reality

Definition – Applications – Real-Time Computer Graphics – Animation and Virtual Reality – Input Devices – Output Devices – Immersive Vs Non- Immersive – Physical Simulation – The Future.

Text Book

1. Guide to Computer Animation (Focal Press Visual Effects and Animation), Focal Press, 2002

Reference Books

1. 3D Graphics & Animation, Mark Giambruno, New Riders Press, 2002
2. Encyclopedia of Graphic File Formats, James D. Murray, William Vanryper, O'Reilly Publication
3. Virtual Reality Systems, John Vince, Addison Wesley Longman, 2003

11NM311 MEDIA CONVERGENCE AND MANAGEMENT

Credits 3:0:0

Course Objectives:

- To brief the learners about the concept of various studio and media management techniques employed in media industry.
- To familiarize the learners in managing the studio production and managing the equipments in meeting the schedules.
- To learn the application of studio operations, it's set up and design.

Course Outcomes:

- Students can acquire skills in basic studio set up.
- The students will be able to study how to manage the studio, project planning in professional set up.

Unit I

An overview of media: global, national & local scene; Media economics- media industry analysis - Ownership patterns- sole proprietorship, partnership, private limited companies, public limited companies; Management functions- planning, organizing, directing, controlling; Organizational structure of different departments, its functions and synergy.

Unit II

Media convergence- genesis, paradigm shift in social space - impact, convergence regulation- Advertising, and media planning for cross platform media - Branding and media- property creation; Understanding media exposure – internet conversion rates, hits, Alexa, television ratings, (TRPs, Reach, Frequency)- Media pricing- Rate cards, sponsored contents, developing spot rates-integrated branding approach across different media- Understanding the consumer-buying behavior models, market segmentation, targeting, profiling and positioning.

Unit III

Cross media interactivity in television-Using twitter, emails and SMS to interact with hosts in television - Planning and execution of programme production – production terms, control practices and procedures - Administration and programme management in media – scheduling, transmitting, record keeping, quality control and cost effective techniques - Budget control

Unit IV

Diffusion of innovation: new media and its influence on Indian consumer; Internet conversion ratios and related evaluation; Delivering digital media entertainment over the Web and mobile; Digital Interactive marketing- Cross media promotion of films through games-Digital Audio broadcasting – Digital Multimedia broadcasting – WiMAX mobile environment- – Mobile social networking- New media project management - Online production and broadcasting- Identifying unconventional media spaces and business opportunities.

Unit V

Understanding worldwide customer bases- developing a niche sphere - Planning for international campaigns - Business process outsourcing and the challenges; International media houses and their business model - Issues in intellectual property rights - Ethical issues in entertainment and content regulation - Broadcasting regulations-licensing and content, foreign equity in Indian media- issues and challenges- piracy and legal disputes: an overview.

Text Books

1. Balancing on the Wire – The Art of Managing Media Organizations: James Redmond & Robert Trager, Atomic Dog, 2004.
2. Management of Electronic Media: Alan B. Albarran, Wadsworth, 2002.

Reference books

1. Breach of Faith – A Crisis of Coverage in the Age of Corporate Newspapering: ed Gene Roberts, University of Arkansas Press, 2002.
2. Leaving Readers Behind – The Age of Corporate Newspapering: ed, Gene Roberts, University of Arkansas Press, 2001.
3. The Business of Media: David Croteau & William Hoynes, Pine Forge Press, 2001.

11NM312 DIGITAL VIDEO EDITING IN AVID**Credits 4:0:0****Course Objectives**

- To know the different types of editing.
- To understand the terminologies and concepts of Avid video editing software.

Course Outcomes:

- The learners will acquire full knowledge on editing and titling skills.
- They will also be able to know about adding special effects and mixing audio with the visuals in Avid.

UNIT I – Introduction to Video Editing and Avid

Editing: Definition, Principles, Stages – EDL – Role of Editor – Continuity & Dynamic Editing – Linear & Non-Linear Editing – Physical & Electronic Editing – Control Track & SMPTE Editing – A/B Roll Editing- Introduction to Avid Xpress DV – Hardware and Software Requirements.

UNIT II – Terminologies and Recording

Media files, Clips, Sub clips, Sequences, Bins, Projects – Timeline, Effect editor, Effect palette, Composer monitor, Source monitor – Tool palette – Bin Views – Importing, Copying, Moving

and Deleting Clips in Bins IEEE 1394 – Selecting Deck/Tape, Target Drives, Audio and Video Channels – Controlling Decks.

UNIT III – Editing and Titling

Customizing Monitor Displays – Playing Video in Client Monitor – Loading and Clearing Footage on Monitor – Controlling Playback – Marking and Sub- Cataloging Footage – Setting up a Sequence – Setting up Tracks – Undoing / Redoing Edits – Splice-in Edit & Overwrite Edit – Lifting, Extracting and Copying Segments – Slip Trim & Slide Trim – Finding Frames and Clips Titling: Editing, Removing, Replacing, Fading Titles, Replacing Fill Tracks

UNIT IV – Special Effects

Types of Transition Effects – Single and Multiple Effects (Transition & Segment) – Rendering – Keyframeable and Non- Keyframeable Effects – Defining Motion Paths using Keyframes – Layered Effects – Nested Effects – Key Effects (Chroma, Luma, Matte) Freeze Frame – Variable Speed – Strobe Motion – Reverse Motion

UNIT V – Working with Audio and Exporting

Soloing Audio Tracks – Audio Scrubbing – Audio Effect Tool – Audio Mix Tool – Automation Gain Tool – Adjusting Volume in Timeline – Audio EQ Tool – Audio Suite Plug-Ins Mixing Video Tracks – Recording to Tape – Exporting Formats (MPEG-1, MPEG- QuickTime, DV Stream, OMF)

Text Book

1. Avid Xpress DV User's Guide, 2004

Reference Books

1. Video Field Production and Editing, Sixth Edition, Ronald J. Compessi, San Francisco State University, 2002
2. Avid Xpress DV Effects Guide, 2004

11NM313 E LEARNING MANAGEMENT SYSTEMS

Credits 4:0:0

Course Objectives

- To understand the basics of e-learning.
- To enable the students to understand about Learning Management Systems.

Course Outcomes:

- The students will know about the format and structure of content management systems.
- They will also know the importance of security in e-learning systems.

Unit I – Introduction

E-Learning: Definition, Advantages, Characteristics, Barriers, Future and Careers – Components of e-learning: CBT, WBT and Virtual Classroom – E-Learning Tools Learning Management Systems: Definition – Components – LMS Vs LCMS – LMS Products.

Unit II – Introduction to Content Management

Data – Information – Content – Format and Structure of Content Content Management: Parts of CMS – Composition Management – Schema- Driven Systems – Principles of Document Management – Limits of IT Groups – Legacy of Multimedia Industry – Challenges of Communication – Personalization.

Unit III – Entities of CMS

Metadata: Definition – Types of Metadata Entities of CMS: Audiences – Publications – Content Types – Authors – Acquisition Sources – Content Access Structure – Templates CMS Team: Managers – Information Architects – Infrastructure Staff – Software Developers – Publication Staff – Content Processing Staff – Content Creation Staff

Unit IV – Systems in Content Management

Collection Systems: Authoring System – Conversion System – Acquisition System – Aggregation System Repository Interface Management Systems: Repository – Versioning System – Source Control System – Localization System – Workflow System – CMS Administration System Publishing Systems: Templating System – Personalization System – Deployment System – Web System – Print System – E-Mail System – Syndication System

Unit V – Content Security

Introduction: Categories of Security – Security Requirements for Authors and Teaching - Content Protection: Texts, Images, Audio, Video Security Risk Analysis: Purposes, Standard Method, Quantitative and Qualitative Risk Analysis – Access Control – Authentication.

Text Books

1. Content Management Bible, Bob Boiko, Wiley Publishing Inc., 2005
2. E-Learning: An Expression of the Knowledge Economy, Gaurav Chadha, S.M Nafay Kumail, Tata McGraw-Hill Publishing, 2002

Reference Books

1. E-learning Tools and Technologies: A consumer's guide for trainers, teachers, educators, and instructional designers, William Horton, Katherin Horton, Wiley Publishing Inc, 2003
2. Security in e-Learning, Edgar R. Weippl, Springer Publication, 2005
3. Online Education and Learning Management Systems, Global E-learning in a Scandinavian Perspective, Morten Flate Pauls, 2007

11NM314 GRAPHICS AND ANIMATION LAB

Credits 0:0:2

Course objectives

- To train the students in the area of animation and its software application.
- To make the students understand the process of animation production in studios.

Course Outcome:

- The students will have knowledge in the area of character designing and concept designing in animation.

List of Practical Exercises

1. The Pre-production Phase
 - a. The lines
 - b. Basic formation of shapes
 - c. Basic formation of characters
 - d. Head formation
 - e. Expressions
 - f. Character actions
2. Basic animation & principles
 - a. Squash and Stretch
 - b. Follow through and overlapping actions
 - c. Timing
 - d. Exaggeration
3. Character designing
 - a. Concept drawing
 - b. Character creation
 - c. Model sheet
4. Story board
5. Software interface
 - a. Screen layout
 - b. Basic drawing tools
 - c. Animating rough blue and planning red
 - d. Setup and Marking menus
 - e. Working with Layers
 - f. Light setup
6. Frame by frame animation
7. Key frame, Inbetweens & Secondary actions
8. Tweening
9. Background & Compositing for animation
10. Camera movement
11. Motion guide
12. Embedding video

11NM315 AVID LAB

Credits 0:0:2

Course Objectives

- To produce an educational video by applying the skills learned to operate about the video editing system.
- To experience the importing and exporting in Avid.
- Developing the following materials and preparing a record which explains the steps followed to develop.

Course Outcome:

- The learners will be able to know about the entire practical applications of Avid software.

AVID

1. Importing the selected shots from tape/CD/DVD in to avid editing system.
2. Preparing a sequence that plays for at least 3 minutes by editing and applying suitable transition effects.
3. Applying suitable motion and other special effects to the video.
4. Making a VCD/VDVD for the above video sequence.
5. Advertisement editing
6. Program trailer
7. News editing
8. Shortfilm editing
9. Documentary editing
10. Speed effects
11. One frame shot
12. Public service advertisement

11NM316 E - LEARNING LAB

Credits 0:0:2

Course Objectives

- To apply the skills learned to develop an instructional material using Macromedia Flash.
- To construct an instructional material adding different media.

Course Outcome:

It enables the students to have an in – depth knowledge in designing story boards and instructional text.

List of Exercises

Developing the following materials and preparing a record which explains the steps followed to develop.

1. Develop a program learning material using linear method
2. Develop a program learning material using branching method
3. Designing storyboards and developing an interactive instructional material which contains text and images for a variety of concepts and courses
4. Extending the above instructional material by including audio options wherever possible.
5. Creating an interactive video based instructional material after designing suitable storyboards.
6. Create a CBT package for car company
7. Develop an instructional material of any of the media subject to your choice.
8. Create an E-learning package using flash for Biodiversity
9. Develop a story board and design a e-learning package for Karunya Univeriy
10. Using Blooms taxonomy design a study material for KG level of education

11. Prepare an e-learning package for social awareness programme
12. Prepare an e-learning package to promote an FMCG product

11NM317 INSTRUCTIONAL TECHNOLOGY

Credits 4:0:0

Course Objectives

- To understand the meaning and significance of Instructional Technology.
- To relate instructional objectives to instructional technology.

Course Outcomes:

- The learners will know the importance of instructional theories and models in Instructional System Design which is applied in the e – learning industry.
- They will also understand how to evaluate the instructional materials and assessment of learning.

Unit I – Introduction to Instructional Technology

Definition – History of Instructional Technology – Concept of Systems Approach – System Analysis – Curriculum Development and Process – Need Assessment – Task Analysis - Taxonomies of Educational Objectives: Bloom’s Cognitive Domain, Krathwohl’s Affective Domain, Dave’s Psychomotor Domain, Harrow’s Psychomotor Domain, Simpson’s Psychomotor Domain – Writing Objectives: Mager Method, Gagne and Briggs Method, ABCD Method.

Unit II – Instructional Models

Instructional Development Models: Kemp Model – Instructional Development Institute Model – Inter service Procedures for Instructional Systems Development Model – CRI Model – ADDIE Model

Unit III – Instructional Theories

Gagne-Briggs’ Instructional Events – Gropper’s Behavioral Approach to Instructional Prescription – Landa’s Algo-Heuristic Theory - Scandura’s Structural Learning Theory – Collins-Stevens’ Cognitive Theory of Inquiry Teaching – Merrill’s Component Display Theory – Reigeluth-Stein’s Elaboration Theory of Instruction – Keller’s Motivation Design of Instruction.

Unit IV – Instructional Media & Strategies

Instructional Methods and Media – Instructional Strategies for Declarative Knowledge, Concepts, Procedures, Principles, Problem-Solving, Cognitive Strategy, Attitude, Psychomotor Skill.

Unit V – Evaluation and Assessment

Evaluation of Instructional Materials: Overview – Evaluation Process – Evaluation Models - Assessment of Learning: Overview – Purposes – Types of Assessment – Models of Assessment of Learners’ Achievement – Characteristics of Good Assessment Instruments – Formats of Assessment.

Text Books

1. Instructional Technology: A Systematic Approach to Education, Frederick G. Knirk, Kent L. Gustafson, Holt, Rinehart and Winston, Inc Publication, 1999
2. Methods of Teaching: A Skills Approach, David Jacobsen, Paul Eggen, et al, Charles E. Merrill Publishing Company, 2002

Reference Books

1. Instructional Technology: Foundations, Robert Mills Gagné, Lawrence Erlbaum Associates, 1997
2. Task Analysis Methods for Instructional Design, Book by Wallace H. Hannum, David H. Jonassen, Lawrence Erlbaum Am, Inc Publication, 1999
3. Martin Tessmer; Lawrence Erlbaum Associates Publication, 1992
4. Instructional-Design Theories and Models: An overview of their current status, Charles M. Reigeluth,
5. Lawrence Erlbaum Associates, ISBN 0898592755.

11NM318 KNOWLEDGE MANAGEMENT

Credits 4:0:0

Course Objectives

- To understand the applications of Knowledge Management in Education.
- To familiarize the students about knowledge capturing and sharing.

Course Outcomes:

- They will be having knowledge in models of Knowledge Management.
- They will also learn about the application of Knowledge Management tools in learning environment.

Unit I – Introduction and KM Cycle

Knowledge Management: Introduction – History – Knowledge Hierarchy – KM Team – Future Challenges
 KM Cycle: Knowledge Creation - Knowledge Storage and Retrieval - Knowledge Transfer - Knowledge Application

Unit II – Models

KM Models: Von Krogh and Roos Model – Nonaka and Takeuchi Spiral Model – Choo Model – Wigg Model – Boisot I-Space Model

Unit III – Knowledge Capturing

Contents: Types – Structure – Quality – Media and Size - Knowledge Capture and Codification: Tacit Knowledge – Explicit Knowledge- Methods to Capture Tacit Knowledge: Interviewing – Learning by Told – Learning by Observation - Methods to Capture Explicit Knowledge: Cognitive Maps – Decision Trees – Knowledge Taxonomies - Knowledge Capture, Creation and Management Tools.

Unit IV – Knowledge Sharing

Knowledge Sharing: Social Nature of Knowledge – Knowledge Sharing Communities – Obstacles of Knowledge Sharing -Systems: Centralized and Distributed Architecture - Knowledge Sharing and Dissemination Tools.

Unit V – Knowledge Application

Knowledge Application at Individual Level: Characteristics of Individuals – Bloom’s Taxonomy in Knowledge Application – Task Analysis and Modeling Knowledge Application at Group Level: Knowledge Reuse – Knowledge Repositories – Knowledge Application Tools

Text Books

1. Knowledge Management in Theory and Practice, Kimiz Dalkir, Elsevier Publication, 2005
2. Knowledge Management Systems: Information and Communication Technologies for Knowledge Management, Ronald Maier, Springer Publication, 2004

Reference Books

1. Key Issues in the New Knowledge Management, Mark W McElroy, Joseph M Firestone, Elsevier Publication, 2003
2. Knowledge Management in Education, Edward Sallis, Gary Jones, Routledge Publication, 2002

11NM319 E CONTENT WRITING

Credits 4:0:0

Course Objectives

- To familiarize the basics of writing.
- To learn the skills required for a multimedia/web writer.

Course Outcomes:

- They will know about the styles of writing for different types of documents.
- They will also understand the architecture of multimedia/web.

UNIT I – Basics of Writing

Language Varieties – Skills – Writing – Basics of Content Writing –Traditional Content Vs E-Content – Language Use in E-Learning – Advantages and Limitations – Coherence – Cohesion – Accuracy – Brevity – Clarity –Content Writing: Roles of Content Writer, Subject Matter Experts, Instructional Designer.

UNIT II – Interactivity and Writing

Interactive Multimedia – Interactive Writer – Interactivity and Control – Thinking Interactively – Interactive Devices -Information and Interactive Architecture – Narrative Design – Content Expertise and Strategy – Writing for Search Engines- Technical Skills: Flowcharting – Other Organizational Tools

UNIT III – Formats

Defining Goals – Techniques to Achieve Common Goals – Audience – User Prism –Script and Proposal Formatting: Outlines – Proposals – Storyboards – Scripts – Final Documents

UNIT IV – Writing Narration

Architecture: Linear – Linear with Section Branching – Hierarchical Branching – Parallel/Multiple Path Architecture – Dynamically Generated Websites – Active and Passive Information Delivery - Writing Non-Narrative, Linear Narrative, Interactive Narrative – Interactive Narration: Character and Role of the Player – Structure and Navigation – Exposition

UNIT V – Case Studies

Writing a corporate website - Writing a museum kiosk - Writing interactive lessons - Writing learning content for a simulation - Writing classic lessons to a computer game

Text Books

1. Writing for the Media, Sunny Thomas, Vision Books Pvt. Ltd.2000
2. Writing for Multimedia & the Web: A Practical Guide to Content Development for Interactive Media, Timothy Garrand, Elsevier Inc, 2006

Reference Books

1. Developing Online Content: The Principles of Writing and Editing for the Web, Irene Hammerich, Claire Harrison, John Wiley & Sons Inc, 2002
2. Effective Writing for E-Learning Environments (Cases on Information Technology), Katy Campbell, Information Science Publishing, 2004

11NM320 MEDIA RESEARCH

Credits 4:0:0

Course Objectives

- To understand research methods and statistical tools in media field.
- To understand the principles of evaluation, research and statistics and computer application.
- To prepare model research proposals for research studies and report writing.

Course Outcome:

- After learning this paper the learners will be able to know the research methods and statistics applied in media industry.
- The students will also be able to initiate new media research proposals in their respective field.

Unit I – Research Methods

Research: Meaning, Nature and Scope and agencies of Educational research - Research Trends in Education, Educational Communication and Educational Technology - Qualitative Research Methods: Historical Research, Case Study, Participatory and Ethnography Research Methods - Quantitative Research Methods: Survey, Experimental, Action and Longitudinal Research Methods.

Unit II – Tools, Variables and Scales of Measurement

Tools for Data Collection: Observation, Interview, Schedule, Checklist, Questionnaire, Achievement test, Socio-metric, Attitude Scale and Content Analysis – Construction and Standardization of Tools. Variables: Discrete and Continuous Variables, Independent and

Dependent Variables, Intervening and Manipulating Variables- Scales of Measurement: Nominal, Ordinal, Interval and Ratio Scales

Unit III – Sampling Techniques and Hypotheses

Meaning of Population and Samples – Sampling Method: Purposive Sampling, Simple Random Sampling, Multi Stage Sampling, Systematic Sampling, Stratified Random Sampling and Cluster Sampling, Levels of Confidence, Degrees of Freedom and Sampling Error - Hypotheses: Meaning, Scope and Types – Hypotheses Formulation and Testing: Statistical Significance, One-Tailed and Two-Tailed Tests

Unit IV – Advanced Statistical Techniques for Research

Introduction to Statistics: Meaning, Scope, Importance and Limitations of Statistics and Data – Descriptive and Inferential Statistics, Parametric and Non-Parametric Statistics - Normal Probability Curve: Practical Application of Normal Probability Curve and Characteristics of Normal Probability Curve- Skewness and Kurtosis - Range, Variance, Frequency, Percentile, Standard Scores/'Z' Scores, Type-I and Type-II error, Sampling error, Statistical Significance - Diagrammatic Graphical Presentations: Bar Diagrams, Pie Diagrams, Histogram, Frequency Polygon, Smoothed Frequency Polygon, Cumulative Frequency Graph or Ogive - Univariate Analysis: Mean, Median, Mode – Measures of Central Tendency and Standard Deviation – Bivariate Analysis: Correlation Methods, Chi-Square, T-test, and ANOVA

Unit V – Computer Application and Report Writing

Computer applications: Statistical Package for Social Sciences (SPSS), Microsoft word, Excel, etc - Writing Research Proposal and Research Report

Text Books

1. Research Methodology – Kothari, 2004
2. Foundations of Behavioral Research, Kerlinger, H. Fred, Harcourt College Publisher, 2000

Reference Books

1. Methods in Social Research, Goode & Hatt, McGraw Hill Edition, 2000
2. Fundamentals of Social Research, John Best, Thomson Learning Inc., 2007

11FT301 SCREENPLAY WRITING (LEVEL I)

Credits 4:0:0

Course Objectives

- To know the level of understanding of writing script at a basic level.
- To know about the level of understanding of story treatment and scripting techniques adopted for different categories of films.

Course Outcome

- The learners will be able to write their own script for producing a film

UNIT –I

Introduction to the Art of writing – One line story - Novel - Play and screenplay - Transitions of action : Motive - Intention – Goal – Conflict - The undisturbed story – the disturbance - the struggle - the adjustment - Adaptation of novel and drama for TV and Film -Audience participation - Suspense - Surprise.

UNIT - II

The sources of information – Combination - Co-ordination – Duplication - Exposition of time and place – Plot and sub-plot - Plot patterns - Narrative structure - Theme-Ideas-Complex structure of a story - Causes and effect - Conflict - Development-Climax (Beginning, middle, end) – Synopsis – basic story - Exposition and preparation - Point of view.

UNIT - III

Characterization - Biography or Bone structure of a character - External and internal aspects of a character - Orchestration and unit of opposites-Dialectical approach - Understandability – Probability – Identification – Art of Confrontation

UNIT - IV

How to get ideas - Outline - Step outline - Treatment – Screenplay – Master scene - Script – Shooting script – Writing scripts with computers.

UNIT - V

Melodrama - Writing for TV-comedy and tragedy - Writing comic sequences - dialogues.

Reference Books

1. The Art of Dramatic Writing, Wildside Press, 2007 - Lajos Egri
2. Screen writing for Narrative film and Television, Hastings House Book Publishing, 1980 - William Miller
3. Film script writing, Focal Press, 1988 - Dwight V.Swain
4. Aspects of the Novel, Roretta Books, 2002 - E.M.Forstar
5. Screenplay writing, Grosset, Duplap Publishers 1972 - Eugen vale.

11FT302 DIGITAL PHOTOGRAPHY

Credits 4:0:0

Course Objectives

- To understand elements of Photography.
- To understand the Techniques of Photo Composition.

Course Outcomes

- The students can be aware of the basic applications in the areas of digital Photography
- The learners can be able take up their own commercial projects and work with par to the industry standard.

UNIT I INTRODUCTION TO PHOTOGRAPHY

Define Photography. Brief History and Development of Photography. Camera –Types- Usage. Lens-Types- Usage. Lights-Types- Usage. Filters –Types- Usage. Film – Types. Film- Speed and

Size. Tripod–Types- Usage. Light Meter- Usage. Flash- Types-Usage- Electronic Flash – Selection of Right Flash Mode. Other Useful Accessories.

UNIT II PHOTO COMPOSITION

Basic Techniques for Better Image. Aperture-Usage. Shutter- Speed- Usage. Depth of Field. Focal Length. Basic Lighting- Key Light-Fill Light. Low Key and High Key Picture. Rule of Third. Angle of View- Picture Format.

UNIT III INTRODUCTION TO DIGITAL PHOTOGRAPHY

Define -Digital- Digital Still Camera. Digital SLR Camera – Types. Working with Digital Camera – Major Components and Functions, Camera Operation, Mode, Advantages. Setup for Digital Imaging - Windows and Macintosh. Desktop Computer Components- Data Storage and Transfer Options. Software for Digital Processes(Digital Dark Room) -Image Editor- File Formats – Converters. Working with Scanner -Types - Scanning Techniques- Film Scanning. Photo Printers- How Printer works- Photo Quality. Printing Paper-Types

UNIT IV AREAS OF PHOTOGRAPHY

Portrait-Architecture- Product- Fashion-Travel-Environmental –Action –Aerial-Macro-Panoramic- Sports-Indoor/Outdoor.

UNIT V DIGITAL STUDIO

Photography Project, Assignments. Photo Power Point Presentation, Photo Documentary. Photo Essay- Small Budget Studio-Design, Equipments and Budget. Corporate Studio- Design, Equipments and Budget. Popular Photography Websites. Creating Photography Website. Connecting Images for Internet Use.

Text Book:

1. Mastering Digital Photography and Imaging (2001) – Peter K Burian – Publisher Sybex.USA.First edition.

Reference Books

1. The Manual of Photography (2000) by Ralph E Jacobson/Geoffrey G Attridge/Sidney F Ray,Focal Press, Ninth Edition.
2. The Basic Book of Photography (Fourth Edition) by Tom Grimm and Michele Grimm, A Plume Book, 2003
3. Mastering the Basics of Photography by Susan McCartney, ALL Worthi Press, 2000
4. The Photographer’s Handbook. 1999 by John H edgecoe. Alfred A.Knopf Publisher, Alfred A. Knopt Inc.
5. Interior Shots .2002. by Roger Hicks and Frames Schultz, Rotovision, Switzerland.

11FT303 PRE PRODUCTION TECHNIQUES

Credits 4:0:0

Course Objectives

- To learn pre production techniques in film production.
- To learn the art of script preparation.

- To create the concept for a production of a film and knowing the process of video production techniques and the various script formats.

Course Outcomes

- The students gain knowledge about the basics of pre production in film making.
- It enable the students to work on scripts creatively.

Unit-I Basic - concept making

Idea-seed of the programme-creative inspiration-visual thinking-discussion with team-format of the programme-types of formats like-news- documentaries-interview-TV programme-ads commercial- special programmes- daily soaps.

Unit II Basic elements in script

Script-visual writing-budget-target audience-steps of developing concept- plot-story character dialogue - script formats –proposal-treatment-develop steps in script writing.

Unit- III Basic production technique

Basic shot ,angles& camera movements-introduction -lighting and colors-single camera – multicamera production-indoor studio-outdoor -properties.

Unit IV Steps in pre production

Shooting script-story board-scene-sequence break up-character –main character-relief character subsidiary character- character introduction important of dialogues-dialogue writing - dramatic points in the story twist in plot.

Unit-V Various script formats

Script writing- various formats –news-TV programme-ads-proms-commercial-special programme- daily soaps—documentaries-interview-film.

Text Books

1. Antony Friedman” writing for visual media”-focal press, 2010
2. John Hart “the art of the story board”-focal press, 2007

Reference Books

1. Dwight V Swain “film script writing”-focal press, 2010
2. Martha Mollison ” producing videos”-focal press, 2010

11FT304 TELEVISION STUDIES

Credits 4:0:0

Course Objectives

- To provide an understanding of different levels of television production.
- To know about the functioning of different types of television channels and its production facilities.

Course Outcomes:

- The students gain knowledge about the types of shows and classification of programmes in television.

Unit – I

Genre of Studio based productions and target audience. TV production- Music shows, dance shows, reality shows, quiz, personality interview, Political discussion, current affairs, Election Results & analysis, News Presentation, weather report.

Unit-II

Genre of Single camera Production- Documentary, tele film, Experimental video, Outdoor, Soft stories, Teleserials, Crime subjects enacted.

Unit-III

Advantages and Disadvantages of various distribution systems- Terrestrial, cable with & without CAS (set top box), Direct to home, web streaming. IPTV

Unit IV

Public service TV, Commercial TV, Religious TV, Sports TV, Discovery channel / NGC, Cartoon Net etc.,

Unit V

How audience are influenced by TV Programmes and commercials- Children, Youth, women, Political leaders and senior citizen.

Reference Books

1. The Television Studies Book- David Lusted and Christine Geraghty, 2009
2. An Introduction to Television Studies - Jonathan Bignell -: Routledge 2007
3. The Television Studies Reader-Edited by Robert C. Allen, Annette Hill, Routledge, Taylor & Francis Group, 2004
4. TELEVISIONS: An Introduction to Television Studies Glen Creeber British Film Institute, 2006

11FT305 ELEMENTS OF VIDEO PRODUCTION

Credits 4:0:0

Course Objectives

- To identify the elements and continuity of shots.
- To learn the camera options and production techniques.
- To learn the editing principles

Course Outcomes

The students will be able to understand the aesthetics of video production

UNIT I INTRODUCTION TO VIDEO EQUIPMENTS

Digital video camera – types of video cameras – format – major accessories – camera formats – camera operations and functions – aperture – shutter – white balance – focusing methods - focal length – depth of field – video signal – video format.

UNIT II THE SHOT

Elements of the shot: the shot – definition. mise-en-scene: aspects of mise-enscene – lighting in a shot – setting aspect in a shot – character expression and movement – costume and makeup of the character - the realism of mise-en-scene – the power of mise-en-scene – time and space in mise-en-scene

UNIT III THE PRODUCTION

Cinematography properties – basic types of shot - camera movement – camera framing + camera angle – duration of the shot – long take. lighting for a scene – colour temperature – dolly – trolley – grips and camera accessories – tripod – montage – lighting equipments.

UNIT IV TYPES OF PRODUCTION

Single camera production: the shot, scene, sequence, story board types of script, location scouting - the production phase. multi camera production – rehearsal – floor manager - the crew – director, cameraman, script writer, lighting director, art director, music director, gaffer, production assistant, etc.,- documentary production – short film production – electronic field production – talk shows interviews.

UNIT IV UNDERSTANDING THE POST PRODUCTION

Online production – offline production – Edit Decision List – dimensions of editing – spatial – rhythmic – graphic – temporal editing - continuity editing. Dimensions of film sound – voice over – dubbing – re recording – titling – adding special effects.

TEXT BOOKS

1. Digital cinematography – Paul Wheeler, focal press – 2001
2. Film art – David Boardwell – thirteenth edition, 2009

REFERENCE BOOK

1. Video production techniques – Zettl – Thomson Learning Publication, 2002

11FT306 PHOTOGRAPHY LAB

Credits 0:0:2

Course Objectives

- To learn the types of photography and lighting techniques.
- To learn the techniques of photographing various subjects.

Course Outcomes:

- The learners will able to work with various types of photography on par with industry standard.

LIST OF LAB WORKS

1. Indoor photography

2. Outdoor photography
3. Portrait photography
4. Architecture photography
5. Product photography
6. Fashion photography
7. Travel photography
8. Environmental photography
9. Action photography
10. Aerial photography
11. Macro photography
12. Sports and Panoramic photography

11FT307 PRE PRODUCTION TECHNIQUE LAB

Credits 0:0:2

Course Objectives

- To learn practically pre production techniques in film production.
- To learn the art of script preparation.

Course Outcome

- The learners will be able to create concept and produce scripts for producing a film.

1. One Line Story
2. Plot
3. Treatment
4. Proposal
5. Basic shot, angles & camera movements.
6. Dialogue writing
7. Scene ,sequence breakup
8. Script writing.
9. Shooting script
10. Story board
11. Scripting and story board
 - a. Basics of Script
 - b. Formats of script
 - c. Concept & idea
 - d. Basic components of story board
12. Design & composition of color & light

11FT308 EXPERIMENTAL VIDEO/ SHORT VIDEO PRODUCTION LAB

Credits 0:0:2

Course Objective

- To get a deep understanding of producing short a short video production including all the three phases of the production work

Course Outcome

- The learners would be able to gain knowledge of various video production techniques in a fast pace.
- The learners would be able to gain knowledge of various video production techniques in a fast pace.

List of Experiments:

1. Brainstorming
2. Choosing a topic
3. Thinking at random
4. Concealing number of ideas
5. Concretizing to one single idea
6. Visualization of the elected idea
7. Interpreting those visual into number of shots along with compositions
8. Writing story board
9. Video shooting
10. Editing
11. Sound mixing
12. Final screening and getting the feedback

11FT309 FILM APPRECIATION

Credits 4:0:0

Course Objectives

- To know about the different genres of films, its styles and their method of production.
- To know about the various film styles, its narration and different case studies of film reviews.

Course Outcome

- The learners will be aware of internationally renowned film contributions to the industry.

UNIT- I

Definition and need for film Appreciation - How to read and understand cinema- Inductive approach and Deductive approach – Social, Political, Economical, Cultural, Technical and Aesthetic aspects of Cinema - A comparative study of Cinema and other aesthetic expressions - The types of films to be appreciated - subject content, structural characteristics – Factors to be appraised while appreciating films - The narrative and stylistic elements.

UNIT II

Appreciation of Neo-realistic films with a detailed analysis of Vittorio-Desica's Bicycle Thieves (1948). The structure of the film - the social criticism - Camera work - Editing style use of non-actors.

UNIT-III

Appreciation of thrillers with special reference to Alfred Hitchcock's films: Psycho (1960) - its structure - Dramatic development - Psychological thrills - Camera work – Lighting - Editing style - use of sound effects - North by North west (1959) - its structure - Camera work -editing style with emphasis on chase sequences - use of sound effects and music.

UNIT -IV

Analysis of Orson Wells' film "Citizen Kane" – Its structure camera work - The use of long takes and deep focus technique - editing style - use of actors - Art Direction-Appreciation of Epic films of David Lean with special reference to the Bridge on the River Kwai (1959) scripting - study of the characters - The prison commander and the British Colonel – The camera work - Editing style and the creative use of sound – Doctor Zhivago (1966) structure-Visual appeal and Artiste performance.

UNIT V

Appreciation of Kriztof Kieslowski films with special reference to the Colour Trilogy - "Blue", "White", "Red" - The dramatic structure - Study of the style - Fragmented narrative - Mobility of camera. Appreciation of Yasujiro Ozu's films with special reference to Tokyo Story (1953) - Study of the style and craft - "Shomingeki" tradition - Depiction of domestic culture - Use of low angles and long takes.

Reference Books:

1. How to read a film - JAMES MONACO, 2009, Oxford University
2. Film as Art, 2006, Deluxe Edition - ERNEST LINDGREN
3. Cinema as Graphic Art Studio Pubication -VLADIMIR WILSEN
4. Art of the Film, 1985, - STEPHENSON AND DEBRIX

11FT310 NON LINEAR EDITING**Credits 4:0:0****Course Objectives**

- To know the different types of editing.
- To understand the terminologies and concepts of Avid video editing software.
- To acquire the editing and titling skills.

Course Outcome

- The learners will be aware of adding special effects and mixing audio with the visuals in Avid, which enables them to work to industry standard.

UNIT I – Introduction to Video Editing and Avid

Editing: Definition, Principles, Stages – EDL – Role of Editor – Continuity & Dynamic Editing – Linear & Non-Linear Editing – Physical & Electronic Editing –Control Track & SMPTE Editing – A/B Roll Editing- Introduction to Avid Xpress DV – Hardware and Software Requirements

UNIT II – Terminologies and Recording

Media files, Clips, Sub clips, Sequences, Bins, Projects – Timeline, Effect editor, Effect palette, Composer monitor, Source monitor – Tool palette – Bin Views –Importing, Copying, Moving and Deleting Clips in Bins IEEE 1394 – Selecting Deck/Tape, Target Drives, Audio and Video Channels –Controlling Decks

UNIT III – Editing and Titling

Customizing Monitor Displays – Playing Video in Client Monitor – Loading and Clearing Footage on Monitor – Controlling Playback – Marking and Sub-Cataloging Footage – Setting up

a Sequence – Setting up Tracks – Undoing /Redoing Edits – Splice-in Edit & Overwrite Edit – Lifting, Extracting and Copying Segments – Slip Trim & Slide Trim – Finding Frames and Clips
 Titling: Editing, Removing, Replacing, Fading Titles, Replacing Fill Tracks

UNIT IV – Special Effects

Types of Transition Effects – Single and Multiple Effects (Transition & Segment)– Rendering – Key frameable and Non-Key frameable Effects – Defining Motion Paths using Key frames – Layered Effects – Nested Effects – Key Effects (Chroma, Luma, Matte) Freeze Frame – Variable Speed – Strobe Motion – Reverse Motion

UNIT V – Working with Audio and Exporting

Soloing Audio Tracks – Audio Scrubbing – Audio Effect Tool – Audio Mix Tool –Automation Gain Tool – Adjusting Volume in Timeline – Audio EQ Tool – Audio Suite Plug-Ins Mixing Video Tracks – Recording to Tape – Exporting Formats (MPEG-1, MPEG- 2, QuickTime, DV Stream, OMF)

Text Books

1. Video Field Production and Editing, Sixth Edition, Ronald J. Compessi, San Francisco State University, 2006, ABACom INC
2. Avid Xpress DV User's Guide, 2004, Avidtechnology Inc.

Reference Book

Avid Xpress DV Effects Guide

11FT311 E - COMMERCIALS

Credits 4:0:0

Course Objectives:

- To train the students in knowing about the types of commercials, kinds of appeals and market segmentation of the target audience.
- To understand the Economics and future of advertising industry.

Course Outcomes:

- The students will be able to produce their own video commercials

UNIT I

Development of ideas- brief from client, agency interpretation, advertising strategy, creative work- idea/ concept development, popular TV ad formats, script/ story board, client approval, media approval- creative potential of TV and Radio, Internet radio.

UNIT II

Pre production – radio commercial production - film formats, planning of special elements- choosing the production team, crew, cast- sources of casting, role and responsibilities of casting director.

Pre production meeting- agenda.

UNIT III

Production of TV commercial - set shooting/ location shooting- recording the sound track and creating the special effects- Pre scoring and Post scoring.

UNIT IV

Editing the commercial for radio and TV - traditional film editing/ non linear editing finishing the audio elements- confirming the picture- special effects and animations.

UNIT V

Economics of radio and television commercial production- Budgeting and other factors affecting production - choosing production companies - specialization of production companies - future of TV and radio commercial production – mobile radio and digital audio broadcast.

Reference Books

1. Simon, Mark. Storyboards Motion in Action (2nd edn.). Oxford: Focal Press. 2000
2. Zettl, Herbert. Television Production Handbook (7th edn.). Belmont: Wadsworth Publishing, 2000.
3. Wright, Steve. Digital compositing for Film and Video. Oxford; Focal Press, 2005.
4. Hooper White. How to produce effective TV commercials (3rd edn.). NTC Business Books. Chicago, 2001
5. The Audio- Visual handbook- a complete guide to the world of audio- visual techniques. Alan MCPHERSON & Howard Timms. Pelham books, London, 1988
6. Mathur, C. Advertising Management; Text and Cases. New Age International: New Delhi. 2005.

11FT312 FILM THEORY

Credits 4:0:0

Course objectives

- To know about the different types of film theories applied for film production.
- To know about the various aspects of world level film theories.

Course Outcome:

- The students will be aware of realism in film production and will gain knowledge about different film makers.

UNIT-I

Introduction to film theory – Dichotomies of film theory – 4 Aristotelian categories – Transposition – Interdependence of questions – Expressionism and Realism – Realism and Formalism – Russian formalism – Formative film theory – Hugo Munsterberg : Matter and means – Form and function – Rudolf Arnheim : Material – The creative use of medium – Film form – The purpose of film.

UNIT – II

Sergi M. Eisenstein – The raw material of film – Cinematic means: Creation through montage – Russian philosophy and Piaget – Film form – The final purpose of film – Montage – Typage: Battleship Potemkin and its five chapters – V.I. Pudovkin: Relational editing.

UNIT – III

Realistic film theory – Siegfried Kracaur – Matter and means – Compositional forms – The purpose of cinema – Rebuttals - Andre Bazin : The raw material – Cinematic means and form – The plastic image – Deep focus – The resources of montage – The use and misuse of montage – Cinematic purpose – The function of cinema.

UNIT – IV

Contemporary French film theory – Jean Mitray : Raw material – Creative potential in film – The form and purpose of cinema.

UNIT – V

Semiology – Christian Metz and Semiology of cinema – Raw material of Semiology of film – The means of signification in cinema – Film is not a true language nevertheless film is like a language – Code / message – Text / system – The form and possibilities of film – Semiology and purpose of film.

Reference Books:

1. Film theory – Focal press, 2000
2. Film theory – Robert Lapsley and Michael Westlekil, 2000 Focal Press
3. Film Form, Film Sense – Sergi Eisenstein, Harcourt Publ. 1977
4. What is Cinema? – Andre Bazin,
5. Film Language – Christian Metz
6. Sign and meaning- Dudley Andrew, Wiley Inc, 1973
7. The major film theories - Introductory Readings, Oxford University Press, 1976
8. Film theory and criticism Introductory readings - Lee Brandy and Marshall Cohen, Oxford University Press, 2009
9. Movies and methods volume I & II - Bill Nicholas, California Press, 1985

11FT313 INTRODUCTION TO SOCIAL PSYCHOLOGY

Credits 4:0:0

Course Objectives

- To identify the mob and group behavior of the film and television audience
- To learn the applications of psychological principles applied for different mass media

Course Outcomes

- The students will be able to understand the audience psychology
- It enhances the students to maintain the relationship in workplace environment.

UNIT I

The Nature and Scope of Social Psychology - The Methods of Social Psychology. The Development of Social Psychology : Early Beginnings – the Contributions of Sociologists and Psychologists : Comte; Le Bon; Durkheim; Cooley; Gh Mead; Mc Doughall

UNIT II

Specialization : Social Learning Process. Socialization and Motivation; dependency; Aggression; Need Achievement; affiliation; etc. Social Factors in perception. Society and Personality.

UNIT III

Attitudes and Opinions - The Nature and Dimensions of Attitudes. The Formation and Change of Attitudes. Communication and Persuasion. Public opinion – Nature, measurement, formation and change. Role of Mass communication in Public Opinion Formation and change.

UNIT IV

Groups and group Processes; Nature and Types of groups; Conditions Conclusive to Development of Groups; group Dynamics; Group norms and conformity- Social Facilitation. Group structure and group performance; Cooperation and competition.

UNIT V

Mass Psychology; Audiences and Collective Behaviour. Classification of Collective masses. Casual Audiences, Intentional Audiences and Audiences and Mass Media. Collective Behaviour – the mobs and the Different kinds of Mobs. The Psychology of Mass Movements.

Reference Books

1. D Crytchfold, RS and Ballachey, E L “Individual in Society”. McGraw Hill. New York, 1999
2. Sherif, N and Sherif C.W. ”An Outline of Social Psychology” Harper & Row. New York, 2007

11FT314 VIDEO COMMERCIAL LAB

Credits 0:0:2

Course Objective

- This helps the students in developing an understanding of producing various kinds of video commercials

Course Outcomes

- The students can be able to produce their own television commercials.

LIST OF PRACTICALS

1. Produce a Social service television commercial
2. Produce a commercial of emotional and rational appeal
3. Produce a signature tune for a TV programme
4. Record a celebrity endorsement for a product
5. Produce a TV commercial
6. Produce a script and story board for a TV commercial
7. Produce a Public service TV advertisement
8. Produce a live product demo for a commercial
9. Produce a TV commercial with animation effects
10. Produce a Television news bulletin.
11. Produce a talkshow
12. Produce a presentation show

11FT315 VIDEO POST PRODUCTION LAB

Credits 0:0:2

Course Objectives

- To introduce students to the profession of editing in NLE and give the professional exercise of basic editing.

Course Outcomes

- The learners can be able to do editing and post production techniques with par to the industry standard.

List of Experiments

1. EDIT - Indoor – Single Camera set-up Interview (CUT TO CUT)
2. EDIT- Outdoor – Single Camera set-up Interview (CUT TO CUT)
3. EDIT- Educational Shows- Two Camera Set -up
4. EDIT - Drama
5. EDIT -PSA
6. EDIT _ Game Shows
7. EDIT-Music Album NOTE: Edit note should be prepared and the visuals should be done accordingly.
8. Talk shows- Debate
9. Consumer product advertisement
10. Docudrama
11. Promotional video
12. Group discussion

NOTE: Edit note should be prepared and the visuals should be done accordingly.

11FT316 ADVERTISING LAB

Credits 0:0:2

Course Objective

- It provides a deeper understanding in writing story boards, developing concepts and producing different kinds of advertisements for both commercial and social service promotion.

Course Outcome

- The learners will be aware of different advertisement production formats

List of Exercises:

- 1 Produce a visual dominant advertisement
2. Produce a social service advertisement
3. Produce an ad for a consumer product

4. Produce a corporate advertisement
 5. Produce a 55 sec testimonial advertisement
 6. Produce a 15 or 10 sec advertisement
 7. Produce and develop a comparative advertisement
 8. Produce an ad for brand promotion of any consumer product
 9. Produce an ad with emotional appeal
 10. Produce an ad with fear appeal
 11. Produce an ad with humor appeal
 12. Produce an ad for FMCG product
- (Record should contain the thumbnail, rough and comprehensive artwork and copy for all the items listed above)

11FT317 STUDY OF FILM MAKERS

Credits 4:0:0

Course objectives

- To know about the different types of film theories applied for film production.
- To know about the various aspects of world level film theories.
- The students will understand the realism in film production and will gain knowledge about different film makers.

Course Outcome

- It enables the user to understanding about renowned film makers and their contribution in developing different themes, plots and other aspects of film making techniques

UNIT – I

A brief life history of Akira Kurosowa – His first directorial venture – Sanshiro Sugata (1943) – Kurosowa’s style – His script work – Sonata form – Circular form – Metamorphosis – His camera techniques – Editing style – Handling of artists – Creative use of sound and music – Ikiru: The search for affirmation – story- Treatment- Production.

UNIT – II

Detailed study of Kurosowa’s films – Rashomon (1950) – Seven Samurai (1954) – Throne of Blood (1957) with special reference to his style – Red Beard (1960): The story – Characterization – Treatment – Production – Introduction to study film makers – Abbas Kiarostami - Mohsen Makhmalbaf, Majid Majidi – Content and Form.

UNIT – III

A brief life history of Satyajit Ray – Ray as a graphic artist – Ray’s development of interest in cinema – The Calcutta film society – His first directorial venture – The detailed study of Satyajit Ray’s Film Trilogy : Pather Panchali (1955), Aparajitho (1964) and Apur Sansar (1959).

UNIT – IV

Parash Pather (The philosopher’s stone) – A compilation of comedy – Fantasy – Fares – Satire – Touch of pathos – Jalsaghur (The music room) – A Chekhovian theme – Devi (Goddess): The strong resonance of India – His television films.

UNIT – V

Study of contemporary Indian film makers – Shyam Benegal – Adoor Gopalakrishnan - Mahesh Butt – Debaki Bose and their style – Study of contemporary Tamil film makers with special reference to C.V. Sridhar, Bharthiraja, Manirathinam, Mahendran, Balu Mahendra, & K. Balachander.

Reference Books

1. Satyajit Ray (Inner Eye) – Andrew Robinson, 2009, I BTauris and Co. Ltd.
2. Cinema of Satyajit Ray – Chandra Das Gupta, 2001, Signet Publisher
3. Akira Kurosowa – Donald Richie, 1987, Liveright Publisher

11FT318 DIRECTORIAL PRACTICE

Credits 4:0:0

Course Objective:

- It helps to understand the techniques of film direction.
- The learner will understand the aesthetic aspects of producing a film.

Course Outcome

- The students will gain knowledge about film making techniques which includes details of lighting and direction.

UNIT – I

Filmic space and Filmic time – Film structure: External structure - Internal structure – Filmic material and its organization – Use of chance material – Film as an art: Film and painting – Film and Novel – Film and Theatre – Film and Music.

UNIT – II

Director and the camera – Diachronic and Syntax - Composition – Movement within the frame – Camera angles – Camera movements and lenses – Special effects in camera – Special effects : Miniatures – Matte shots – Computer aided effects – Front and Back projection – Principles of narrative construction – Narration : The flow of story information.

UNIT –III

Screen direction – Dynamic and Static – Constructive and relational editing – Parallel cutting – Editing pattern for static dialogue scene – Cutting after the movement – Motion inside the screen – Motion in and out of the shot – 20 basic rules for camera movements – Unconventional camera movements for creativity.

UNIT –IV

Mise-en-Scene – The power and aspects of Mise-en-Scene – Mise-en-Scene in time and space - Break down into shots – Mise-en-shot – Filmic technique – Master scene – Triple take technique – Directing the actor – Make up - various types - Directing the crew – Composition – Symmetrical – Asymmetrical –Vertical – Horizontal – Dutch/Slanting –Diagonal composition – Set: Plan – Section view – Elevation and Projection – Story board.

UNIT – V

Lighting: Flat lighting – Rembrandt lighting – Chiaroscuro lighting – Silhouette – Cameo – Limbo – Creative uses of sound in films: Synchronous – Asynchronous – Role of film music – Realistic and functional music – Dialogue: Comparative study of film and theatre – New technical developments: Use of computers in various aspects of film making - Digital film making and its creative possibilities - Wide screen – 3 D – Dolby system – DTS – IMAX.

Reference Books:

1. How to read a film – James Monaco, 2009, Oxford University Press
2. Directing-Film techniques and aesthetics – Michael Rabiger, Focal Press, 2007
3. Film as Art – Rudolf Arnheim, University of California Press, 2006
4. Lessons with Eisenstein – Nizany, 1979, Da Capo Press
5. 5 C's of Cinematography – Joseph V. Mascelli, Cine / Grafic Publication, 1965
6. Technique of Film make-up – Vincent J.R. Kehoe, 1969, Hasting House Pub.

11FT319 RESEARCH METHODS AND STATISTICS

Credits 4:0:0

Course Objectives

- To understand research methods and statistical tools in education.
- To understand the principles of evaluation, research and statistics and computer application.
- To prepare model research proposals for research studies and report writing.

Course Outcome

- The students can apply the knowledge of statistics and research in professional media work place

Unit I – Research Methods

Research: Meaning, Nature and Scope

Research Trends in Education, Educational Communication and Educational

Technology Qualitative Research Methods: Historical Research, Case Study, Participatory and Ethnography Research Methods Quantitative Research Methods: Survey, Experimental, Action and Longitudinal Research Methods.

Unit II – Tools, Variables and Scales of Measurement

Tools for Data Collection: Observation, Interview, Schedule, Checklist,

Questionnaire, Achievement test, Socio-metric, Attitude Scale and Content Analysis – Construction and Standardization of Tools. Variables: Discrete and Continuous Variables, Independent and Dependent Variables, Intervening and Manipulating Variables Scales of Measurement: Nominal, Ordinal, Interval and Ratio Scales

Unit III – Sampling Techniques and Hypotheses

Meaning of Population and Samples – Sampling Method: Purposive Sampling, Simple Random Sampling, Multi Stage Sampling, Systematic Sampling, Stratified Random Sampling and Cluster Sampling, Theories of Probability, Levels of Confidence, Degrees of Freedom and Sampling Error Hypotheses: Meaning, Scope and Types – Hypotheses Formulation and Testing: Statistical Significance, One-Tailed and Two-Tailed Tests and Uncorrelated Data.

Unit IV – Advanced Statistical Techniques for Research

Introduction to Statistics: Meaning, Scope, Importance and Limitations of Statistics and Data – Descriptive and Inferential Statistics, Parametric and Non- Parametric Statistics Normal Probability Curve: Practical Application of Normal Probability Curve and Characteristics of Normal Probability Curve Range, Variance, Frequency, Percentile, Standard Scores/'Z' Scores, Type-I and Type-II error, Sampling error, Statistical Significance Diagrammatic Graphical Presentations: Bar Diagrams, Pie Diagrams, Histogram, Frequency Polygon, Ogive Univariate Analysis: Mean, Median, Mode – Measures of Central Tendency and Standard Deviation – Bivariate Analysis: Correlation Methods, Chi-Square, T- test, ANOVA and MANOVA

Unit V – Computer Application and Report Writing

Computer applications: Statistical Package for Social Sciences (SPSS), Microsoft word, Excel, Stat Graph etc - Preparation of Research Studies, Preparation of Review of Related Studies and Preparation of the Review of Research Proposals and Reports

Reference Books

1. Foundations of Behavioral Research, Kerlinger, H. Fred., Harcourt College Pub.,2000
2. Methods in Social Research, Goode & Hatt., McGraw-Hill, 1952
3. Scientific Social Survey and Research, Paulin Young, Prentice – Hall INC 1966
4. Fundamentals of Social Research, John Best, Allyn and Bacon, 1993
5. Experimental Design in Psychology and Education, Edwards A. L., 2004, Taylors & Francis group
6. Computer Programming in Basic, Madras Allied Publishers Ltd, Covers P.S., 1988

11FT320 ACTING THEORY**Credits 4:0:0****Course Objectives**

- It helps to understand the history of acting and the techniques employed for the artists in making a film.
- To know about the dramatic and aesthetics aspects of acting

Course Outcome

- The students will gain knowledge about different aspects related to acting.

UNIT – I

Acting – Definition – Origin and development of acting – Allied forms of acting – Mime – Dance – Music and Martial arts – Acting in different genres and styles – Content and form formulate the style of acting - Classic, Romantic, Expressionistic, Realistic and Formalistic acting – Personal and experimental style.

UNIT – II

Important theories on acting – Bharatha Muni – Tholkappiyar – Meyer Hold (Bio-mechanism) – Bertold Brecht (Alienation Theory) – Stanislavsky (Method acting) – Acting in different media and orientation of those techniques – Stage - Radio – Television – Film – Basic requirements for an artiste – Physical, Mental, Vocal, Social, Moral – Three dimensions of a character – Straight acting and Character acting

UNIT –III

Basic principles of casting and handling of artiste – Voice - Speech – Diction – Emotional expression – Body language – Improvisation – Flat-round character – Static-developing character – Cast to the type and cast against the type – Consistency – Motivation.

UNIT -IV

Relationship of artiste with other artiste and technicians – Rehearsals and monitors – “Writer creates, Director interprets and Actor recreates” – proving this axiom – How to analyse acting – Analysing the great artiste of World, India and Tamilnadu.

UNIT – V

Artiste: The psycho-physical examination – Schematic elements of personality – Mechanics of film acting: Space – Time and Edited images – Influence of cinematic elements on character image: Camera angles – shots – Camera set-up and movements – Actor’s technique: Use of self – Film characterization – Conduct and expression – Aids to characterization – Analysis of film performances – Character actor – Personality actor – Physical actor – Mental actor – Dynamics of acting: Skills, process and style.

Reference Books

1. Building a character – Stanislavsky, Routledge 1979
2. An actor prepares – Stanislavsky, Routledge, 1989
3. Techniques of acting – Ronald Heyman, Holt, Rineharts Winston, 1971
4. Improvisation – John Hodgson Harper and Row Pub. INC, 1974
5. Technique of Film acting – V.I. Pudovkin Grove Press, 1960
6. Nadigarkalukku oru kaiyedu (Tamil) – O. Madan Gabriel

11FT321 DOCUMENTARY THEORY

Credits 4:0:0

Course Objectives

- It familiarizes the students with concepts and practices of developing a documentary.
- To understand the types and styles of documentary production.

Course Outcome

- The students will acquire knowledge about documentary making and styles involved in the production

UNIT – I

The definition of documentary- The difference between Fact film and Fiction film –Brief study of different types of factual films – Educational films, Instructional films, Travel films, Newsreel films, Publicity films.

UNIT – II

Traditions in documentary films: Naturalist – Realist – News reel – Propagandist – Detailed study of Louisiana Story, Berlin – “The Symphony of a city” – Kino-eye- Theory – Night Mail – Song of Ceylon – Principle of documentary films – The documentary idea today – The different style of documentary film making – Journalist approach – The Impressionist approach – Types of documentaries.

UNIT – III

Contemporary documentaries – Chris Marker – Special reference to “LE Joli Me” – Study of documentary films of Mani Kaul and Anand Patwardhan – Experimental approach in Non-Fiction films – The style of Norman Mc. Lauren – Evaluation of video documentaries.

UNIT –IV

Development of documentaries in India – The Government approach to sponsorship – The Film Division of India – The independent documentary filmmaker – Television documentary films and educational films – U.G.C’s TV programmes.

UNIT –V

The proposal outline – Fact film treatment – The information line – Interesting line – The presentation line – The sequence outline – Shooting script – Writing narration for non-fiction script.

Reference Books

1. Directing the Documentary - MICHAEL RABIGER, 2009, Focal Press, Gulf Pub. 1983
2. How to make Documentary for video and Film - MIKE WOLVERTON
3. The Technique of Television Production - GERALD MILLERSON, Focal Press, 2009
4. News interview - AKIBA. A, COHEN, Sage Pub. 1987

11FT322 DOCUMENTARY PRODUCTION LAB

Credits 0:0:2

Course Objective

- It helps the students in getting to know about producing different kinds of documentaries.

Course Outcome

- The students will produce a documentary using single camera

List of Experiments:**Choice Production in single camera**

1. Brainstorming
2. Pre production Planning- Forming an Idea, Thinking in Visuals,
3. Writing Story
4. Board, Deciding on Audio on the script- Final Script
5. Choosing locations- Indoor- out door, deciding on actors.
6. Properties and set or Set or real locations.
7. Writing Shooting Script – Order of shooting logistics, Special equipment Requirement, Fixing the artists and rehearsal
8. Actual Shooting
9. writing log sheet for editing
10. Video editing

11. Sound Mixing.
12. Special title work to suit the themes and final finished product.

11FT323 DIGITAL FILM PRODUCTION LAB

Credits 0:0:2

Course Objectives

- To understand the process involved in pre production.
- To understand the working atmosphere in production and post production stage.

Course Outcome

- The students will produce project work which involves all stages of production.

List of Exercises

1. Pre production Planning- Forming an Idea, Thinking in Visuals.
2. Writing Story Board.
3. Deciding on Audio script- Final Script
4. Choosing locations- Indoor- out door, deciding on actors.
5. Set Designing - Selection of Properties or real locations.
6. Writing Shooting Script – Order of shooting logistics, Special equipment Requirement
7. Fixing the artists and rehearsal
8. Actual Shooting.
9. Writing log sheet for editing
10. Digital editing.
11. Sound Mixing.
12. Special title work to suit the themes and final finished product

11FT324 FILM ANALYSIS LAB

Credits 0:0:2

Course Objective

- It helps the learners in understanding the techniques of analyzing a movie and writing a brief analysis on it.

Course Outcome

- The students will be aware of trends in world cinema and be able to review the movies.

List of Exercises ; Analyzing and writing a review of

1. French movie
2. Italian movie
3. Indian movie
4. American movie

5. Japanese movie
6. European movies
7. Italian movies
8. Swedish movies
9. Other country movies
10. World all time favourite movies
11. Oscar winning movies
12. Asian movies

Karunya University

LIST OF SUBJECTS

| Sub. Code | Name of the Subjects | Credits |
|------------------|---|----------------|
| 12VC201 | Audio Visual Media | 4:0:0 |
| 12VC202 | Dynamics of Visual Communication | 4:0:0 |
| 12VC203 | Writing for Electronic Media | 4:0:0 |
| 12VC204 | Computers in Communication design – I | 4:0:0 |
| 12VC205 | Creative Suite Lab - I | 0:0:2 |
| 12VC206 | Visual Arts Lab | 0:0:2 |
| 12VC207 | Computers in Communication design – II | 4:0:0 |
| 12VC208 | Introduction to Social Psychology | 4:0:0 |
| 12VC209 | Visualisation of Commercial arts | 4:0:0 |
| 12VC210 | Introduction to Mass Communication | 4:0:0 |
| 12VC211 | Creative Suite – Lab - II | 0:0:2 |
| 12VC212 | Applied Arts lab | 0:0:2 |
| 12VC213 | Digital Photography | 4:0:0 |
| 12VC214 | Media laws and Ethics | 4:0:0 |
| 12VC215 | Elements of Video production | 4:0:0 |
| 12VC216 | Pre Production Techniques | 4:0:0 |
| 12VC217 | Advertising – I | 4:0:0 |
| 12VC218 | Video Production lab | 0:0:2 |
| 12VC219 | Applied Photography Lab | 0:0:2 |
| 12VC220 | Audio Engineering | 4:0:0 |
| 12VC221 | Non linear editing | 4:0:0 |
| 12VC222 | 2D Graphics and Animation | 4:0:0 |
| 12VC223 | Web designing | 4:0:0 |
| 12VC224 | Radio programming | 3:0:0 |
| 12VC225 | Web designing lab | 0:0:2 |
| 12VC226 | Audio Production lab | 0:0:2 |
| 12VC227 | Video Post Production lab (FCP) | 0:0:2 |
| 12VC228 | Film Studies | 4:0:0 |
| 12VC229 | Production planning and Management | 4:0:0 |
| 12VC230 | Commercial Broadcasting | 4:0:0 |
| 12VC231 | Television Production | 4:0:0 |
| 12VC232 | Corporate Communication | 4:0:0 |
| 12VC233 | Radio production lab | 0:0:2 |
| 12VC234 | Television production lab (Computer Graphics) | 0:0:2 |
| 12VC235 | Commercial Production lab | 0:0:2 |
| 12VC236 | Media research | 4:0:0 |
| 12VC237 | Advertising II | 4:0:0 |
| 12VC238 | Professional Photography | 4:0:0 |
| 12VC239 | Studio Management | 4:0:0 |
| 12VC301 | Broadcast Journalism | 4:0:0 |
| 12VC302 | Principles of Cinematography | 4:0:0 |
| 12VC303 | Advanced Multimedia Lab | 0:0:2 |
| 12VC304 | Non Liner Editing using FCP | 4:0:0 |

| | | |
|---------|---|-------|
| 12VC305 | Event and Media management | 4:0:0 |
| 12VC306 | Video Post Production Lab using FCP | 0:0:2 |
| 12VC307 | Multi Camera Production Lab | 0:0:2 |
| 12VC309 | Direction & Production | 4:0:0 |
| 12VC310 | Interactive Multimedia Technologies | 4:0:0 |
| 12VC311 | Research Methodology | 4:0:0 |
| 12VC312 | Research Methodology - Lab | 0:0:2 |
| 12VC313 | Digital Music Production | 4:0:0 |
| 12VC314 | Digital Audio Production - Lab | 0:0:2 |
| 12VC315 | Authoring and Virtual Reality | 4:0:0 |
| 12VC316 | Introduction to 3D Animation | 4:0:0 |
| 12VC317 | Media Technology | 4:0:0 |
| 12VC318 | Streaming Media | 4:0:0 |
| 12VC319 | Blogging and Podcasting Lab | 0:0:2 |
| 12VC320 | Introduction to Visual Design and Culture | 4:0:0 |
| 12VC321 | Video SFX Lab using AE Combustion | 0:0:2 |
| 12VC322 | 3D Animation lab | 0:0:2 |

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12VC201 AUDIO VISUAL MEDIA

Credits: 4:0:0

Course objective:

- To make the learners know about the development of radio and the types of programmes targeted to the different type of audience segmentation.

Course Outcome:

- The students will know the role of Radio, TV and Cinema in Media.

Unit I

INTRODUCTION RADIO BROADCAST: Development of Radio Broadcasting in India – Ownership – Control – Autonomy for Radio – Types of Radio services- Radio as a source of News – Broadcast News – Value – Radio Language – News Bulletin – News Source for Radio – Reporters, Editors and Agencies – External News Services Interviews – Features – Writing for Radio.

Unit II

RADIO PROGRAMMS: Special Audience Programmes – Rural and Farm Broadcasting – Educational Programmes – Programmes for Children, Women and Youth. Women Welfare – Children Welfare – Health and Family Planning – Rural Development – Urban problems

Unit III

CINEMA: Cinema and Society – Influence over Society- Effects – Cinema as Main Source of Entertainment – Powerful Media to Spread Message – Cinema for Political supremacy. Film Censor – Film Censor Enquiry Committee – Documentary Film – Newsreels – National and International Film Festivals – Film Awards – Future of Indian Cinema.

Unit IV

TELEVISION: Development of Television in India – News Programmes: a) News cast b) News Review – Formats of TV Programmes – Documentary – Special Features – Interviews. TV as a powerful Audio – Visual Media – Commercial and Sponsored Programme – Educational Service (ETV) – Satellite Instructional Television Experiment (SITE) – Role of TV in Social Changes – Cultural Exchanges – Economic Uplift – Advertisement in TV – Specialist causes and consequences – TV News and Agencies.

Unit V

BROADCASTING NORMS: Governments policy on AIR to inform, educate, entertain and elevate a common man – Government Control over AIR in functioning – Competition among the Audio-Visual Media – Development of Videography – Cable TV. Audio-Visual Media in Developing Countries – Future of Audio-Visual Media in India – Research in Audio-Visual Media – Implications of Press Media over Audio-Visual Media.

Text Books:

1. Mehra Massani, Broadcasting and the People, National Book Trust, New Delhi, 1985
2. Luthra, H.R, Indian Broadcasting, Publications Division, New Delhi, 1986
3. Warren K. Agee, Introduction to Mass Communication, 6th Edition, Oxford &IBH, Calcutta

4. Kumar, Keval J, Mass Communication in India, Jaico Publishing House, Bombay, Delhi,

Reference Books:

1. Chatterji, P.C, Broadcasting in India, Sage Publications, New Delhi, 1987
2. Krishna Sondhi, Problems of Communication in Developing Countries, Vision Books, New Delhi 1980
3. Jag Mohan, Documentary Films and National Awakening, Publications Divisions, Delhi, 1990
4. John Wyver, The Moving Image: An international History or Film Television & Video. Brazil
5. Blackwell, BFI Publishing, Oxford 1989
6. Andrew Boyd, Broadcast Journalism, Techniques of Radio and TV News, Heinemann Professional Publication.
7. Ivor Yorke, The Techniques of Television News, Focal Press
8. Robert Tyrell, The Work of the Television Journalism, Sugeet Publication.
9. Ahuja B.N, Audio Visual Journalism, Sugeet Publication.
10. Shrivastava K.M., Radio and TV Journalism, Sterling publishing Pvt. Ltd., New Delhi, 1989.
11. Mankekar, D.R., One-Way Free Flow

12VC202 DYNAMICS OF VISUAL COMMUNICATION

Credits 4:0:0

Course Objective:

- To understand visual and visual communication fundamentals.
- To understand the principles of Principles of visual media communication
- To learn the Visual Application and visual design
- To understand Visual language and culture
- To understand important perspectives

Course Outcome:

- The students will get know the impact of visual communication and use of visual language in the media industry.

Unit I

INTRODUCTION TO VISUAL COMMUNICATION: Historical Development - Conceptual development - Visualization process - Visualization environment- Tools for visualization- Sensual and perceptual theories.

Unit II

VISUAL MEDIA: Principles of visual media communication -Video medium Non Projected audio visuals -Scientific visual media - Creative visualization

Unit III

VISUAL APPLICATION: Rendering and rasterisation -Visual perception -Information design
Communication design –Graphic design –Cartoons

Unit IV

VISUAL LANGUAGE AND CULTURE: 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.

Unit V

SIX IMPORTANT PERSPECTIVES: Image Analysis –Typography -Graphics design -
Informational Graphics - Cartoon –Photography -

Text Book:

1. Visual communication images with messages by paul Mrtin lester(2008) wordsworth –
United states

Reference Books:

1. Paul martin, Visual communication (2008) Global vision publishing house – New Delhi.
2. Pradeep mandav- visual media communication (2001) – Authors press – New Delhi

12VC203 WRITING FOR ELECTRONIC MEDIA

Credits:4:0:0

Course Objective:

- To introduce the students to the technique and aesthetics of writing for different forms of electronic media programmes.

Course Outcome:

- the students will learn the techniques and aesthetics of writing for TV, Radio and Internet.

Unit I

IDEA VS MEDIA: Developing ideas and conceptualization, Presentation - instruction, mood and experience. Writing the script for electronic media - Ground rules for writing for different time chunks; afternoon programme, prime time programme, late night programme.

Unit II

SPOKEN LANGUAGE WRITING: -Writing for radio and TV commercials and announcements, Writing to inform, script format. News report, News writing, writing headlines, writing for radio commentary.

Unit III

WRITING FOR BOTH RADIO AND TV: - Features and documentaries, talk programmes, Writing jingles and radio commercial – Idea – Strategy – Brand Positioning – Preparing Creative blue print, to use celebrities – voice – over, narration, and using music. Interview/Discussions, corporate programmes, variety and comedy - for special audiences: programme for children, Women, farmers and Youth - script design, Voice over and narration.

Unit IV

WRITING FOR TV: - commercials, serials, soap operas, other genres, big idea, TV spot techniques Idea presentation, treatments, Scripting, storyboard, terms used for camera movement and editing. Tele Writing scripts for TV Commercials – format for TV Commercials – preparing the story board and art direction.

Unit V

PLAY WRITING: - Narrative structure, conflict and resolution. Characterization, Structure variation, scenes and sequences, shot breakdown and film genre. Writing, treatment, script and its formats and storyboard. Production problems.

Text Books:

1. Screen Writing for narrative Film and Television - William Miller - Columbus books – London - 1989.
2. Film Script Writing - Dwight Swan - Hastings House - New York -1976.

Reference Books:

1. Script Writing for Video and Audio media - Dwight Swan - Hastings House - New York -1976.
2. Video Script Writing - Barry Humps - Penguin U.S.A Inc - 1993.
3. Screenplay -The Foundations of Screen Writing - Syd Field - Dell Publishing Co.,

12VC204 COMPUTERS IN COMMUNICATION DESIGN – I

Credits 4:0:0

Course Objective:

- To understand history software and hardware of computers
- To gain knowledge in communication design
- To understand the basic concepts of Ms Office its applications and basics and features of Corel draw.

Course Outcome:

- The students will get a sound knowledge on computer and its applications such as MS Office and CorelDraw!

Unit I

INTRODUCTION TO COMPUTERS: History and generation of computers - Basics of computers -Hardware & Software - Operating systems. Multimedia – evolution, applications and advantages, hardware & software requirements. Application of computers in the media industry. DTP (Desk Top Publishing).

Unit II

COMMUNICATION DESIGN: Definition, nature & scope. Elements of design; Principles of design: Unity, balance, rhythm, proportion, movement; Language of design: white space, fonts, pictures, page layout and design. Principles of design, Design process, Role of computers in designing. Fundamentals of layout- text & visuals, typography and drawing programs, working with colors.

Unit III

MS OFFICE AND ITS APPLICATIONS: MS Word – tools, word processing techniques, MS Excel – features & utility- PowerPoint- features & advantages. Quark Xpress – features, tools & applications. PageMaker- working with text, working with graphics & formatting. Differences in features of Quark Xpress and Page Maker.

Unit IV

COREL DRAW BASICS: Vector graphics and bitmaps - starting and opening drawings - finding content - acquiring images from scanners and digital cameras - undoing, redoing, and repeating actions - adding and accessing drawing information - zooming, panning, and scrolling - previewing a drawing - choosing viewing modes - working with views - backing up and recovering files - saving drawings - exploring basic tasks.

Unit V

COREL DRAW- FEATURES: Corel Draw- features & tools, working with vector/raster images, special effects and other supporting components of CorelDraw - Corel DRAW workspace - Application window - Workspace tools – Standard toolbar - Exploring the toolbox .

Text Books:

1. MS Office – Bible, Edward Willet, IDG Books, 2000
2. Corel Draw for Dummies, Deke Mc Celland, IDG Books, 1997

Reference Book:

1. Designing Effective Communications (2001): Creating Contexts for Clarity and Meaning .by Jorge Frascara (Editor) Publisher: Allworth Press. U.S.A. First edition

12VC205 CREATIVE SUITE – LAB - I

Credits: 0:0:2

Course Objective:

- The course imparts the techniques and the application of the software coral draw so that the leaner will come across to produce an appropriate design. It will enable the students to learn various designing process and print production.

Course Outcome:

- The students will get hands-on experience in using graphics software (CoreDraw!) for prepress output.

The practical will include

1. 2D Graphic – CorelDraw12 (Latest Version)

2. Adobe illustrator

List of Exercises:

1. Design a 'logo' for an academic institution
2. Design a poster for any event of your choice
3. Design a brochure
4. Design the 'label' & package cover of any consumer product.
5. Design a 'visiting card' & 'letter head' for any five famous Banks Executives.
6. Design a 'calendar'
7. Design a 'CD cover' to be brought out by a music band.
8. Design a '2-fold greeting card' for an occasion of your choice.
9. Design a dangler using Corel Draw
10. Design a POP using Corel Draw
11. Design a single fold Menu card.
12. Design New Sign board for the following
 - a. Speed breaker
 - b. School Zone
 - c. Hospital Zone
 - d. Hotel
 - e. Blind curve

12VC206 VISUAL ARTS LAB

Credits: 0:0:2

Course Objective:

- To educate the students in drawing. This subject will enable the students to visualize of their own and will help them to create an appropriate visual through the application of perspective composition and light and shadow

Course Outcome:

- The learners will experience practical training in visualizing and creating and drawing.

List of Experiments:

List of Exercises

1. Elements of art
 - a. Line
 - b. Form
 - c. Shape
 - d. Colour
 - e. Space
 - f. Value
 - g. Texture

2. Perspective Drawing
 - a. Foundation
 - b. Basic shapes in perspective
 - c. Linear perspective
 - d. Aerial perspective
 - e. Point perspective
3. Composition
 - a. Light and shadow
 - b. Colour composition
 - c. Proportion
4. Drawing landscapes
5. Drawing still life
6. Drawing animals
7. Drawing birds
8. Drawing objects
9. Drawing architectures
10. Portrait drawing
11. Cartoons and caricatures
12. Designing of fonts

12VC207 COMPUTERS IN COMMUNICATION DESIGN – II

Credits 4:0:0

Course Objective:

- To understand the workings of image editing.
- To identify the application of Photoshop software.
- To learn the application of design, colour, and light & shadow in image editing.
- To learn the techniques of Photoshop in image editing

Course Outcome:

- The students would get an experience in using graphical software (Photoshop) for TV and Print.

Unit I

DESIGN PROCESS: Conceptualization, stages involved; types of design; creativity in design; traditional and modern designs – technology in designing. Text and Images: typography- styles and features, application and techniques in design; Colour in design: colour theory, colour combinations, colours and meanings, psychology of colours, Logo design, illustration techniques, design and composition.

Unit II

INTRODUCTION TO DIGITAL IMAGING: Define Photoshop. Photoshop Workspace. Palettes, Buttons. Choosing Color, Brush Shape. Operations and Usage of Tools- Pencil Tool, Paint Brush Tool, Air Brush Tool, Text Tool, Paint Bucket Tool, Gradient Tool, Smudge Tool, Focus Tool, Toning, Eye Dropper, Zoom Tool, Morgue Tool, Lasso Tool. Magic Wand.

Unit III

DIGITAL IMAGE MANIPULATION: Features of Photoshop – Image editing – image selection – image resizing – image manipulation – Art Marks, Art Layers, Layer Mark, Create Layer, Fill Tool, Trashcan, Cloning, Clone Align, Art Filter, Plug ins, Rule of Thumb, Kerning, Leading. Digital Image on Various Media.

Unit IV

DIGITAL IMAGING TECHNIQUES: Working with layers – masking – filters – text editing – background – fore ground – colour palette selection – histogram in photographs – hue – saturation – value – modes & adjustments – saving files - Digital Image, Types, File Formats, Digital Inputs, Digital Workflow -Digital Press, Digital color Process.

Unit V

ADOBE PHOTOSHOP ADVANTAGES: Photoshop Short cut keys and menus.

Text Book:

1. Dynamic Learning: Photoshop CS3 By Jennifer Smith, Aquent Graphics Institute (AGI) – July 2007

Reference Book:

1. Photoshop CS3 Photographer's Handbook By Brad Hinkel, Stephen Laskevitch - July 2007

12VC208 INTRODUCTION TO SOCIAL PSYCHOLOGY

Credits: 4:0:0

Course objective:

- To identify the mob and group behavior.
- To learn the application of psychological principles applied for different mass media

Course Outcome:

- The students will know about the format and structure of content management system.
- They will know importance of instructional theory model of system design in e-learning industries.

Unit I

THE NATURE AND SCOPE OF SOCIAL PSYCHOLOGY. The Methods of Social Psychology. The Development of Social Psychology : Early Beginnings – the Contributions of Sociologists and Psychologists : Comte; Le Bon; Durkheim; Cooley; G h Mead; Mc Doughall;

Unit II

Specialization : Social Learning Process. Socialization and Motivation; dependency; Aggression; Need Achievement; affiliation; etc. Social Factors in perception. Society and Personality.

Unit III

Attitudes and Opinions The Nature and Dimensions of Attitudes. The Formation and Change of Attitudes. Communication and Persuasion. Public opinion –Nature, measurement, formation and change. Role of Mass communication in Public Opinion Formation and change.

Unit IV

Groups and group Processes; Nature and Types of groups; Conditions Conclusive to Development of Groups; group Dynamics; Group norms and conformity; Social Facilitation. Group structure and group performance; Cooperation and competition.

Unit V

Mass Psychology; Audiences and Collective Behaviour. Classification of Collective masses. Casual Audiences, Intentional Audiences and Audiences and Mass Media. Collective Behaviour – the mobs and the Different kinds of Mobs. The Psychology of Mass Movements.

Text Books:

1. Mc David and Harris ; “An Introduction to Social Psychology” . Harper & Row, 1968
2. D Crytchfold, RS and Ballachey, E L “Individual in Society”. McGraw Hill. New York

Reference Book:

1. Sherif, N and Sherif C.W. ”An Outline of Social Psychology” Harper & Row. New York

12VC209 VISUALISATION OF COMMERCIAL ARTS

Credits 4:0:0

Course Objective:

- To understand elements of visualization.
- To understand the Process of Visualization
- To learn the Applications Commercial arts
- To learn the Layout Design
- To understand Computers in Commercial Production

Course Outcome:

- The students will learn to visualize and convert their creativity into visual art.

Unit–I

VISUALISATION: Mass media and creative – Creativity in Production – Need for Visualization – definition and elements of visualization-visual persuasion in advertising

Unit II

PROCESS OF VISUALISATION: Creative process: Orientation, Preparation, Analysis, Ideation, Incubation, Synthesis, Evaluation –creative inputs – issues of plagiarism in creative production.

Unit III

COMMERCIAL ARTS: Commercial art Vs Fine art – Fundamental elements of design – Line, Color, Texture, Shape, Size, Space– Design principles – Balance, Proportion, Sequence, Unity, Emphasis, Tension and surprise- application of creativity in designing.

Unit IV

LAYOUT DESIGN: Structuring of message- Choosing a basic design, Layout - Steps in designing, Working with copy and visuals – Camera ready pages – Designing software.

Unit V

COMPUTERS IN COMMERCIAL PRODUCTION: Managing cost and quality in commercial production – material inputs – Black and white and color – Pantone color matching system – Artist’s tool kit – Computer applications in creative industries.

Text Book:

1. Richard Schlemmer. Handbook of Advertising Art Production, Prentice Hall, New York

Reference Books:

1. Paul martin lester. ‘visual communication. wadsworth, Australia.2000.
2. Frank Ramano et al. Encyclopedia of Graphic Communication. Prentice Hall. NY. 1998.

12VC210 INTRODUCTION TO MASS COMMUNICATION

Credits 4:0:0

Course Objective:

- To understand the types and models of communication
- To understand the process communication
- To understand the applications of communication in advertising
- To understand the functions of mass media
- To understand the relationship between culture and communication

Course Outcome:

- The students will understand the strategy for communicating in the corporate.

- They will learn the different facets of Media and the role of communication in them.

Unit I

INTRODUCTION COMMUNICATION: Introduction: Communication ,Definitions, Scope and purpose- Forms of Communication -Intra-personal Communication, Inter-personal Communication- Mass Communication- Organizational Communication - Verbal and Non Verbal Communication - Barriers of communication -Socio economic changes and the emerging trend in Communication.

Unit II

COMMUNICATION PROCESS: Introduction: Process of Communication - Source, message, channel, receiver , feedback- Noise, Types of noise-Encoding and Decoding Process - Formal and Informal channel- Models of Communication, Berlo, Lasswall, Shannon and weaver .

Unit III

THEORIES AND MODELS OF COMMUNICATION: Hypodermic Needle Theory, Two-step & Multi-step Theory, Commercial Theory, Play Theory Uses & Gratification Theory, Selective Exposure, Selective Perception & Selective Retention Theory, Individual Difference Theory, Meaning of theories based on scientific study &analysis; Four major theories of Press, according to Fred Siebert, Theodore Peterson & Wilbur Schramm Authoritarian Theory, Libertarian Theory, Social Responsibility Theory, Other Theories: Development Media & Democratic Participant Theory

Unit IV

MASS MEDIA: Introduction -Characteristics of mass media-Functions of mass media - Inform –Entertain, Educate, Persuade-Dysfunction of mass communication-Communication and public opinion.

Unit V

COMMUNICATION AND CULTURE: Introduction : Communication and culture -Global media – multi cultural content Mass media and developing countries -Cross cultural Communication, Problems and challenges- Policies and implications

Text Book :

1. Keval J. Kumar “Mass communication in India” Jeyco Publsisher 2007.

Reference Books :

1. Karl E. Rosengren “Communication an introduction” Sage Publbication 2006
2. Mc Quil “Mass communication theory” Sage Publicaiton 5th edition-2005

12VC211 CREATIVE SUITE – LAB - II

Credits 0:0:2

Course Objective:

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|------------------------|---------------|
| <i>School of Media</i> | Page No.28-12 |
|------------------------|---------------|

- To provide opportunities to the students to prepare certain exercises for possible demonstration of skills acquired by them to the specific level of acceptable performance.

Course Outcome :

- Hands-on experience in developing creative art by visualization.

-PHOTOSHOP

TYPES OF VISUALIZATION:

1. Visual of the product alone.
 2. Visual of the product in a setting where it is used.
 3. Visual in use.
 4. Visual of a benefit from using the product.
 5. Visual showing the loss or disadvantage resulting from not using the advertised product.
 6. Dramatization of the headline.
 7. Dramatization of the evidence.
 8. Dramatizing a detail (in the product)
 9. Comparison between two brands.
 10. Contrast between before and after using the product.
 11. Visuals using Trade Characters.
 12. Symbolism.
- Abstract illustration. (logo)
 Continuity strip
 Mood setting visual.
 Visual of the product in the package.
 Visual of the product ingredients or raw materials.
 Special effects.(freezing movements)
 Montage
 Visual with models.

TYPES OF LAYOUTS

- Big picture
- Big copy
- Omni bus
- Mortise
- Free form
- Scatter
- Continuity strip

12VC212 APPLIED ARTS LAB

Credits: 0:0:2

Course Objective:

- To learn the anatomy of the human parts through the drawing principles and perspective.

Course Outcome:

- Students will learn to use art work in drawing of human anatomy.

LIST OF EXPERIMENTS:

1. Anatomy Drawing
2. Proportion of the human body
The skeleton
3. The head and neck
4. The torso
5. The arm
6. The hand
The leg
7. The foot
8. The Ecorche and face
9. Study of expressions.
- 10. Clay modeling**
Terracotta
11. Modelling shapes
12. Modelling human forms.

12VC213 DIGITAL PHOTOGRAPHY

Credits: 4:0:0

Course Objective:

- To understand elements of Photography.
- To understand the Techniques Photo Composition
- To learn the Digital Photography
- To learn the Applications and Areas of Photography
- To understand Digital Studio and Commercial projects

Course Outcome:

- The students will know the techniques of using a digital still camera for photography.
- They will know the different skills sets for creating images on film.

Unit I

INTRODUCTION TO PHOTOGRAPHY

Define Photography. Brief History and Development of Photography. Camera –Types- Usage. Lens- Types- Usage. Lights-Types- Usage. Filters –Types- Usage. Film – Types. Film- Speed and Size. Tripod –Types- Usage. Light Meter- Usage. Flash- Types-Usage- Electronic Flash – Selection of Right Flash Mode. Other Useful Accessories.

Unit II

PHOTO COMPOSITION Basic Techniques for Better Image. Aperture-Usage. Shutter-Speed- Usage. Depth of Field. Focal Length. Basic Lighting- Key Light-Fill Light. Low Key and High Key Picture. Rule of Third. Angle of View. Picture Format.

Unit III

INTRODUCTION TO DIGITAL PHOTOGRAPHY Define -Digital- Digital Still Camera. Digital SLR Camera – Types. Working with Digital Camera – Major Components and Functions, Camera Operation, Mode, Advantages. Setup for Digital Imaging- Windows and Macintosh. Desktop Computer Components- Data Storage and Transfer Options. Software for Digital Processes(Digital Dark Room) -Image Editor- File Formats –Converters. Working with Scanner -Types - Scanning Techniques- Film Scanning. Photo Printers- How Printer works- Photo Quality. Printing Paper-Types

Unit IV

AREAS OF PHOTOGRAPHY Portrait-Architecture- Product- Fashion-Travel-Environmental –Action –Aerial-Macro-Panoramic- Sports-Indoor/Outdoor.

Unit V

DIGITAL STUDIO Photography Project, Assignments. Photo Power Point Presentation, Photo Documentary. Photo Essay. Small Budget Studio-Design, Equipments and Budget. Corporate Studio- Design, Equipments and Budget. Popular Photography Websites. Creating Photography Website. Connecting Images for Internet Use.

Text Book:

1. Mastering Digital Photography and Imaging (2001) – Peter K Burian – Publisher Sybex.USA.First edition.

Reference Books:

1. The Manual of Photography (2000) by Ralph E Jacobson/Geoffrey G Attridge/Sidney F Ray,Focal Press, Ninth Edition.
2. The Basic Book of Photography (Fourth Edition) by Tom Grimm and Michele Grimm
Mastering the Basics of Photography by Susan McCartney
3. The Photographer’s Handbook. 1999 by John H edgecoe. Alfred A.Knopf Publisher.,
Interior Shots .2002. by Roger Hicks and Frames Schultz, Rotovision, Switzerland.
4. Understanding Digital Photography by Joseph A . Iippolito, Thomson Delmar Learning, 2003.USA.
5. Digital Portrait Photography and Lighting: Take Memorable Shots Every Time 2005. by Catherine Jamieson/ Sean McCormick -Publisher: Wiley Jamieson and McCormick. London .
6. The Basic Book of Photography (Fourth Edition) by Tom Grimm and Michele Grimm
Mastering the Basics of Photography by Susan McCartney
7. The Photographer’s Handbook. 1999 by John H edgecoe. Alfred A.Knopf Publisher.,
Interior Shots .2002. by Roger Hicks and Frames Schultz, Rotovision, Switzerland.
8. Understanding Digital Photography by Joseph A . Iippolito, Thomson Delmar Learning, 2003.USA.

12VC214 MEDIA LAWS AND ETHICS

Credits: 4:0:0

Course Objective:

- To understand Overview of the Indian constitution.
- To understand the Media Laws In India
- To learn the Civil And Criminal Laws related to Media
- To understand the Broadcasting Code And Ethics
- To understand the cyber laws in India

Course Outcome:

- The learners will understand the limitations of media in public life.
- They will learn the legal points in media industry.

Unit I

INDIAN CONSTITUTION: Overview of the Indian constitution, Fundamental Rights, Duties of citizens ,Directive principles of state policy, Functions of Executive, Judiciary, Legislative, Powers and Privileges of Parliament, Provisions for declaring Emergency, Provision for amending the constitution, freedom of the press and restrictions these upon, Centre-state relations.

Unit II

MEDIA LAWS IN INDIA: PRB Act 1867, the press(objectionable matters)Act 1957, The News Paper (prices and Pages)Act 1956, Defence of India Act, Delivery of Books and News paper (public libraries)Act, Press Council Act, Cable TV Networks (regulations)Act, The Cinematographic Act 1952, Drugs and magic remedies Act.

Unit III

CIVIL AND CRIMINAL LAWS: Laws of Libel and defamation, Contempt of courts Act 1971 and contempt of Legislative, Copy right Act and IPR, Trade Mark Act and patents Act, Right to Information and Official Secrets Act, Autonomy and Prasar Bharati Act, Broadcasting Bill.

Unit IV

CODE AND ETHICS: Recommendations of press commission I and II, Mac Bridge report, Press council guide to Journalistic ethics, Self regulation and code of ethics, censorship and control of the press, press ownership and monopolies, Various committees of broadcasting, Broadcasting policies, Act regarding to working journalists.

Unit V:

CYBER LAWS IN INDIA: Nature and scope of cyber laws, The right to Publish and right to privacy, Digital signature , Piracy, Domain name registration issues, convergences bill, Media council and media ombudsman in the world. New IT Law IT 2000.

Text Book:

1. Basu, Introduction to Indian Constitution, Practice hall of india(2003)

Reference Books:

1. Basu, Law of the Press in India, Practice Hall of India(2003)
2. Radha Krishna Murthi , Indian Press Laws

3. R.K Ravindran, Press in the Indian Constitution, Indian Publishers, Distributors

12VC215 ELEMENTS OF VIDEO PRODUCTION

Credits: 4:0:0

Course Objective:

- To understand the aesthetics of video production
- To identify the elements of shot.
- To learn the camera options and production techniques.
- To understand the continuity of shots
- To learn the editing principles

Course Outcome:

- Students will come to know the use of video camera in producing a video.
- They will understand the different type of production techniques for creating a video movie.

Unit I

INTRODUCTION TO VIDEO EQUIPMENTS: Digital video camera – types of video cameras – format – major accessories – camera formats – camera operations and functions – aperture – shutter – white balance – focusing methods - focal length – depth of field – video signal – video format.

Unit II

THE SHOT: Elements of the shot: the shot – definition. **mise-en-scene:** aspects of mise-en-scene – lighting in a shot – setting aspect in a shot – character expression and movement – costume and makeup of the character - the realism of mise-en-scene – the power of mise-en-scene – time and space in mise-en-scene.

Unit III

THE PRODUCTION: Cinematography properties – basic types of shot - camera movement – camera framing – camera angle – duration of the shot – long take. lighting for a scene – colour temperature – dolly – trolley – grips and camera accessories – tripod – montage – lighting equipments.

Unit IV

TYPES OF PRODUCTION: Single camera production: the shot, scene, sequence, story board types of script, location scouting - the production phase. multi camera production – rehearsal – floor manager - the crew – director, cameraman, script writer, lighting director, art director, music director, gaffer, production assistant, etc.,- documentary production – short film production – electronic field production – talk shows- interviews.

Unit V

UNDERSTANDING THE POST PRODUCTION: Online production – offline production – the edl – dimensions of editing – spatial – rhythmic – graphic – temporal editing - continuity

editing. dimensions of film sound – voice over – dubbing – re-recording – titling – adding special effects.

Text Books:

1. Digital cinematography – paul wheeler, focal press – 2001
2. Film art – david boardwell – thirteenth edition

Reference Book

1. Video production techniques – zettl – 2002

12VC216 PRE PRODUCTION TECHNIQUES

Credits: 4:0:0

Course Objective:

- To learn pre production techniques in film production. To learn the art of script preparation.
- To create the concept for a production. Knowing the process of video production techniques and the various script formats.

Course Outcome:

- The students will learn the grammar of movie making from the scratch.
- Various elements in pre production techniques will be taught in this curriculum.

Unit I

BASIC - CONCEPT MAKING: Idea-seed of the programme-creative inspiration-visual thinking-discussion with team-format of the programme-types of formats like-news-documentaries-interview-TV programme - adscommercial- special programmes- daily soaps.

Unit II

BASIC ELEMENTS IN SCRIPT: Script-visual writing-budget-target audience-steps of developing concept- plot-story-character dialogue script formats –proposal-treatment-develop steps in script writing.

Unit- III

BASIC PRODUCTION TECHNIQUE: Basic shot ,angles& camera movements-introduction -lighting and colors-single camera –multicamera production-indoor studio-outdoor -properties.

Unit IV

STEPS IN PRE PRODUCTION: Shooting script-story board-scene-sequence break up-character –main character-relief character subsidiary character-character introduction important of dialogues-dialogue writing - dramatic points in the story-twist in plot.

Unit-V

VARIOUS SCRIPT FORMATS: Script writing- various formats –news-TV programme-ads-proms-commercial-special programme- daily soaps—documentaries-interview-film.

Text Books:

1. Antony Friedman” writing for visual media”-focal press
2. John Hart “the art of the story board”-focal press

Reference Books:

1. Dwight V Swain “film script writing”-focal press
2. Martha Mollison ” producing videos”-focal press

12VC217 ADVERTISING – I

Credits: 4:0:0

Course Objective:

- This curriculum offers an insight into the advertising industry and its components.

Course Outcome:

- The students will come to know the functioning of advertising agency and the different type of advertising being created to promote a product.
- Legal and ethical issues governing the advertising the industry will be learned.

Unit I

INTRODUCTION TO ADVERTISING: Advertising and its role in the market place, advertising industry in India – advertising as a process of communication - Social effects of advertising.

Unit II

TYPES OF ADVERTISING: Consumer, corporate, industrial, retail, cooperative and Public service advertising.- tone and content; reading the advertisement - review with current ad campaigns.

Unit III

ADVERTISING AGENCY: Structure and functions; Leading agencies in India-Diversification and competition – full service agencies – multinational clients – challenges and opportUnit Ies.

Unit IV

ADVERTISING CAMPAIGN: Objectives, creative strategy: message, appeals, target market, level of response, media planning, advertising budget, pre testing and post testing.

Unit V

ETHICAL ISSUES: Professional ethics in advertising- cases of ethical violations -Advertising Standards Council – Social and cultural issues – Global regulations and Future trend.

Text Books:

1. Kleppner, Otto; Fundamentals of Advertising; Prentice Hall; New Jersey. 1980.
2. Gupta, Sen; Brand Positioning; Tata McGraw Hill; New Delhi; 1990.
3. Hart, Norman; The practice of advertising; Heinemann Pub.; London. 1990.

Reference Books:

1. Mooij, Mariekae de; 'Advertising Worldwide (2nd edn.); Prentice Hall; UK.1994.
2. Mohan, M; "Advertising management concepts and cases"; Tata McGraw Hill; New Delhi. 1989.
3. Chunnawalla and K.C. Sethia ; "Foundations of Advertising: Theory and practice"

12VC218 VIDEO PRODUCTION LAB**Credits 0:0:2****Course Objective:**

- To introduce students to the profession of producing programme for TV.

Course Outcome:

- Making of this seven Television programs in Two or single camera set-up is real hand on experience for the student in the TV Program process.
- They learn all the technical's that is related to making of a program in production stage and post production stages.

List of Exercises

1. Thematic production (3mins)
2. Music video (1 min)
3. Educational video production (3mins)
4. Documentary (5mins)
5. Game shows (3mins)
6. News cast (2mins)
7. PSA (30 – 45 sec)
8. Indoor – Single Camera set-up Interview (5 mins)
9. Outdoor – Single Camera set-up Interview (5 mins)
10. Opinion survey (3 mins)
11. Producing video on organizational profile (3 mins)
12. Montage (2 mins)

12VC219 APPLIED PHOTOGRAPHY LAB**Credits 0:0:2****Course Objective:**

- To learn the types of photography. To learn the lighting techniques. To learn the techniques of photographing various subjects.

Course Outcome:

- The students will be taught the technique of taking different types of photographs in the lab and outdoor.

LIST OF LAB WORKS

1. Indoor photography
2. Outdoor photography
3. Portrait photography
4. Architecture photography
5. Product photography
6. Fashion photography
7. Travel photography
8. Environmental photography
9. Action photography
10. Aerial photography
11. Macro photography
12. Sports and Panoramic photography

12VC220 AUDIO ENGINEERING**Credits 4:0:0****Course Objective:**

- The students will be taught about Audio related Engineering fundamentals and the techniques involved in Audio production.

Course Outcome:

- The intricacies of recording and reproducing audio will be taught in the studio.
- The students will know the functioning of different equipments in recording industry.

Unit I

ANALOG AUDIO: Input Transducers - Microphones - Polar responses - Types of Microphones - Production of the different polar responses - Phantom power - Balanced wiring - Specific applications of microphones - Reference voltages in audio signals - Technical monitoring - Aural monitoring - Output Transducers - Loudspeaker - Professional and domestic standards - Methods of producing inter - channel differences -Stereo loudspeaker matching - Phase - Microphone techniques for stereo - Headphones for stereo monitoring.

Unit II

AUDIO ENGINEERING FUNDAMENTALS: Sound mixers - The basic channel - Important features of a mixer - Output stage - Inputs and connections - Filters - Equalizers - Shelving EQ - Semi parametric Eq - Parametric EQ-Graphic EQ - Paragrophic EQ – Talkback - Manual control of levels - Electronic level control – Signal processors - Dynamic processors - Compressor - Limiter - Expander - Gate – Multiband compressor - Sidechain - Effect processors - Reverb - Delay - Chorus - Phaser - Flanger – Audio lines and Patchbays.

Unit III

ANALOG RECORDING: Objectives and problems in recording - Analog Recording devices and systems - ATR – The fundamentals of magnetic recording - Tape standards - Cassette quality - Head and tape cleanliness - Noise reduction - Two track systems - Multi track systems - Tape speeds - Transport controls - TTL - Head alignment - General Maintenance - Routing - Recording - Punching - Auto punch - Editing - Basic Analog Mixing.

Unit IV

BASICS OF LIVE SOUND ENGINEERING: Need for Sound Reinforcement - Technology - Basic PA systems - Full Range sound Reinforcement systems - Choice of Equipment - Signal flow - FOH - MOH - Indoor systems - Outdoor Systems - Applications - Safety - Ear safety - Electrical safety - Mechanical safety – Fire safety.

Unit V

DIGITAL AUDIO: Basic Principles – Analog vs Digital – Analog to Digital Converter – Digital to Analog Converter – Application of Digital Audio – Digital audio hardware - formats - Storage medium – Digital mixers – Digital audio workstation –Editing – Mixing - Mastering – Audio Post production for Video.

Text Book:

1. Michael Talbot-Smith, “Sound Engineering Explained”, 2nd Edition, Focal Press, 2002.

Reference Books:

1. Ken Pohlmann, “Principles of Digital Audio”, 3rd edition, McGraw-Hill, 1995
2. David Simons, “Analog Recording”, 3rd Edition, Backbeat Books, 2006.
3. Paul White, “Basic Live Sound”, Sanctuary Publications, 2003.

12VC221 NON LINEAR EDITING

Credits 4:0:0

Course Objective:

- To know the different types of editing.
- To understand the terminologies and concepts of Avid video editing software.
- To acquire the editing and titling skills.
- To learn adding special effects and mixing audio with the visuals in Avid.

Course Outcome:

- The students will understand the techniques of editing video clips in the nonlinear editing systems using Avid software.

Unit I

INTRODUCTION TO VIDEO EDITING AND AVID: Editing: Definition, Principles, Stages – EDL – Role of Editor – Continuity & Dynamic Editing – Linear & Non-Linear Editing – Physical & Electronic Editing –Control Track & SMPTE Editing – A/B Roll Editing- Introduction to Avid Xpress DV – Hardware and Software Requirements

Unit II

TERMINOLOGIES AND RECORDING: Media files, Clips, Sub clips, Sequences, Bins, Projects – Timeline, Effect editor, Effect palette, Composer monitor, Source monitor – Tool palette – Bin Views –Importing, Copying, Moving and Deleting Clips in Bins IEEE 1394 – Selecting Deck/Tape, Target Drives, Audio and Video Channels –Controlling Decks

Unit III

EDITING AND TITLING: Customizing Monitor Displays – Playing Video in Client Monitor – Loading and Clearing Footage on Monitor – Controlling Playback – Marking and Sub-Cataloging Footage – Setting up a Sequence – Setting up Tracks – Undoing /Redoing Edits – Splice-in Edit & Overwrite Edit – Lifting, Extracting and Copying Segments – Slip Trim & Slide Trim – Finding Frames and Clips Titling: Editing, Removing, Replacing, Fading Titles, Replacing Fill Tracks.

Unit IV

SPECIAL EFFECTS: Types of Transition Effects – Single and Multiple Effects (Transition & Segment)– Rendering – Key frameable and Non-Key frameable Effects – Defining Motion Paths using Key frames – Layered Effects – Nested Effects – Key Effects (Chroma, Luma, Matte) Freeze Frame – Variable Speed – Strobe Motion – Reverse Motion

Unit V

WORKING WITH AUDIO AND EXPORTING: Soloing Audio Tracks – Audio Scrubbing – Audio Effect Tool – Audio Mix Tool –Automation Gain Tool – Adjusting Volume in Timeline – Audio EQ Tool – Audio Suite Plug-Ins Mixing Video Tracks – Recording to Tape – Exporting Formats (MPEG-1, MPEG- 2, QuickTime, DV Stream, OMF)

Text Books:

1. Video Field Production and Editing, Sixth Edition, Ronald J. Compessi, San Francisco State University
2. Avid Xpress DV User's Guide

Reference Book:

1. Avid Xpress DV Effects Guide

12VC222 2D GRAPHICS AND ANIMATION

Credits 4:0:0

Course Objective:

- To learn the animation techniques. To make the students understand about the 2D animation production.
- To learn the types of animation compositing techniques and post production in 2D Animation

Course Outcome:

- The students will understand different types of animation in 2D.
- They will learn preproduction techniques, software and compositing.

Unit I

TYPES OF ANIMATION: Types of animation: Traditional Animation – Cell Animation, Clay Animation , Stop motion Animation , Cutout Animation , Computer Generated Animation – 2D Animation Vs 3D Animation - Styles of animation – Principles of animation.

Unit II

DIFFERENT ANIMATION STYLES: Disney animation – Japanese animation – Russian animation – Comparative study of different animation styles – basic anatomy – proportions – staging – posing – timing – actions.

Unit III

PREPRODUCTION: Scripting – storyboard screen play – timing – duration – Character design – Turn around – colour schemes – attitudes – props. Tools for 2D animation : Colour keys – background – layout – source of light – styles – paper sources – paper quality.

Unit IV

SOFTWARE INTERFACE: Creating a document – creating accessible flash content - writing scripts – creating an application – working with layers – layout tools – drawing – creating symbols – adding animation and navigation – adding text – creating timeline action.

Unit V

COMPOSITING: Special Effects – Foley – sound design – software packages – US animation – Flash animation – animation pass -= compositing animation actions – compositing backgrounds – scanning images – compositing cels – compositing objects.

Text Book:

1. The Animator's Workbook: Step-By-Step Techniques of Drawn Animation [ILLUSTRATED] (Paperback) by Tony White
2. Timing for Animation (Paperback) by Harold Whitaker , John Halas
Cartoon Animation (The Collector's Series) (Paperback) by Preston Blair

Reference Book:

1. Character Animation: 2D Skills for Better 3D, Steve Roberts, Focal press, Second edition 2007.

12VC223 WEB DESIGNING**Credits 4:0:0****Course Objective:**

- To understand and use HTML tags for designing web pages.
- To learn Dreamweaver and its features to design web pages.
- To learn Javascript to develop dynamic pages.

Course Outcome:

- The students will be introduced HTML programming and designing a web page in Dreamweaver software.

Unit I

HTML: Anatomy of HTML file – Lists – Nested Lists – Font – Anchor – Image – Sound – Colors – Horizontal rules – Borders – Alignment – mail to – Preformatted text – Title, Base, HREF, Meta tags – Transition effects – Visual Filters

Unit II

PROGRAMMING PRINCIPLES: Table: Table Alignment – Cell Alignment – Colors – Adding Images Frame: Multiple frames – Inline frames Form: Label – Text – Text Areas – Password Input – Buttons (Button, submit, reset) – Checkbox – Radio Button – List Box – Hidden Input in Forms

Unit III

DESIGNING CORE PAGES IN DREAMWEAVER: HTML Editors – Features of Dreamweaver – Accessing the Code – Building Style Sheets – Working with Text – Inserting Images – Establishing Web Links

Unit IV

ADVANCED DESIGN FEATURES IN DREAMWEAVER: Working with Div and Layer – Using Behaviors – Setting Tables – Interactive Forms – Creating Lists – Using Frames and Framesets – Using Templates – Using Library Elements

Unit V

JAVASCRIPT: Introduction – keywords – Data types – Variables – Operators – Comments – Arrays – Expressions – Control Structures – Functions (calling a function, returning values, integrating function & HTML)

Text Books:

1. HTML 4.0 Sourcebook, Ian S. Graham, Wiley Publications, 1998 (Unit I, II)
2. Internet & World Wide Web – How to program, 3rd Ed., H.M. Deitel, P.J. Deitel, et al., Prentice Hall, 2003 (Unit I, II, V)

Reference Books:

1. Web Design with HTML/Flash/Javascript & Ecommerce BIBLE, David Crowder and Rhona Crowder, Wiley DreamTech India Pvt. Ltd (Unit I, II, V)
2. Dreamweaver 8 Bible, Joseph W. Lowrey, Wiley Publication, 2006.

12VC224 RADIO PROGRAMMING**Credits 3:0:0****Course Objective:**

- To provide an understanding of radio programming and radio programme formats and equip the students to apply these in regular programmes.

Course Outcome:

- The learners will be taught the growth of radio industry in India and abroad.
- They will understand the various activities of creating and broadcasting a radio programme.

Unit1:

HISTORY OF RADIO: All India radio – its growth & reach / Broadcast management – Public & Private Radio Stations / Laws & regulations / Community Radio / Audience research

Unit II:

RADIO PROGRAMMING SKILLS: Writing for Radio – News gathering and reporting skills / other genre of radio programmes

Unit III:

RADIO PRESENTATION SKILLS: Effective speaking skills – announcements – news reading / Interview skills / Voice culture

Unit IV:

RADIO PRODUCTION TECHNIQUES: Nature of sound / Sound recording techniques – indoor & outdoor / Post-production techniques – voice, music and special effect /

Unit V:

BROADCASTING TECHNIQUES: Equipments / Studio operations / OB operations Workshops on Voice Culture, Recording techniques etc and Radio - Station visits are part of the coursemodule. Evaluation will be based on theoretical knowledge as well as production of radio content.

Text Book:

1. H.R.Luthura, Indian Broadcasting Review, Ministry of I & B

Reference Books:

1. Srivatsava, Broadcasting, Vigyan Publication, New Delhi
2. Mencher. M., Basic NewsWriting, Sharma Books
3. Lesiler &Flat lay, Basic Business communication. Tata Mc Graw Hill.

12VC225 WEB DESIGNING LAB

Credits 0:0:2

Course Objective:

- To apply the skills in developing web pages using HTML tags. To know the basics of HTML and to create a web page with source codes without the help of the other automatic software's.

Course Outcome:

- It helps the learners to learn the basics of web designing which helps in the advance stages like VB, JAVA, etc.

List of Exercises

1. Develop a webpage using basic HTML tags
2. Create a web page with transition effects
3. Creating a webpage which contains a set of images (minimum 10) in same size inserted in table.
4. Develop a webpage using TABLE tag to display class timetable.
5. Develop and integrate at least 4 instructional web pages using FRAMES and suitable hyperlinks.
6. Construct a webpage using FORM tag to enter student bio-data.
7. Developing a webpage using basic hyperlinks
8. Creating web pages with visual effects.
9. Create a website for social awareness message
10. Create a website for banner ads. Ads should change for every 10 – 15 sec
11. Design an academic website
12. Design a website using HTML, CSS

12VC226 AUDIO PRODUCTION LAB**Credits 0:0:2****Course Objective:**

- The students will be practically taught to apply Audio production techniques involved in Radio Production, Music Production and Audio Post Production for Video using Digital Audio Workstations.

Course Outcome:

- It enables the students to be creatively and technically operational in the audio industry.

List of Exercises:

1. Record and edit a narration with appropriate BGM
2. Produce an interview Production (Indoor)
3. Interview Production (Outdoor)
4. Signature tune
5. Live multi-tracking of one instrument and vocals using Zoom H4
6. Overdubbing of one instrument in stereo with vocals

7. Recording SFX using Zoom H4
8. Ambient Sound Sampling using Zoom H4
9. Automated Dialogue Replacement
10. Music and Effects
11. Preparation of automated dialogue replacement
12. Preparation of effects track for video

12VC227 VIDEO POST PRODUCTION LAB (FCP)

Credits: 0:0:2

Course Objective:

- To introduce students to the profession of editing in NLE and give the professional exercise of basic editing.
- Here its hand on experience in EDIT Suit for the students to edit the visuals according to the category.

Course Outcome:

- Students will able to experience techniques of video editing using Avid software in the NLE Suite.

List of experiments:

1. Understanding tools
2. Introduce transition
3. Introduce video effects
4. Motion tracking
5. Masking
6. Basic Titling
7. Basic audio editing
8. Keying
9. Synchronization with audio effects
10. Film titling
11. Colour correction
12. Create one trailer

12VC228 FILM STUDIES

Credits 4:0:0

Course objective:

- To make the learners know about the different genes of films its types and the methods of digital production.

Course Outcome:

- To make the students understand the history of cinema and its growth.
- They will also get to know the elements and perspective of film industry.

Unit I

CINEMA – INTRODUCTION: Cinema as an institution. The origin of cinema. Film review. Appreciation. Criticism. Definitions. Qualities of film critic. Responsibilities of a film critic. Film and society. Film and politics. Shaping society. Film as an experience, Environment, Commodity and Communication Media.

Unit II

CINEMA – ELEMENTS: Approaches to studying film. Narrative and Non Narrative films. Structure of a narrative film. Cinematic codes. Mise-en-scene. Setting. Props. Costume. Performance and movement. Lighting. Camera and Camera movement. Editing. Sound. Narrative

Unit III

CINEMA – PERSPECTIVE: Genre, star and auteur. French new wave. Neo Realism. German Expressionism. Third world Cinema. Political Cinema. Representation of gender and sexuality. Soviet montage cinema.

Unit IV

CINEMA – AUDIENCE: Film audience. Audience positioning. Audience as the meaning makers. Hero worship. Fan clubs. Problematizing the film audience.

Unit V

WORLD CINEMA: Study of Great Indian and International filmmakers like Satyajit Ray, Adoor Gopalakrishnan, Akira Kurosawa, Ingmar Bergman and others.

Text Books:

1. Turner, Graeme. Film as social practice, Routledge, London, 1993
2. Monoco, James. How to read a film, Routledge, London, 2001

Reference Books :

1. Nelmes, Jill. An introduction to film studies, Routledge, London, 1996.
2. Vasudev, Aruna. The new Indian cinema, Macmillan, Delhi, 1986.
3. Oxford guide to world cinema, Oxford, London, 2000.

12VC229 PRODUCTION PLANNING AND MANAGEMENT**Credits 4:0:0****Course objective:**

- To familiarize the learners in managing the studio production and managing the equipments in meeting the schedules.

Course Outcome:

- The students will come understand the production of video film and the management of various factors involved.

Unit I

ELEMENTS OF PRODUCTION PLANNING: Need for production planning.. Pre production and Post production planning. Duties and responsibilities of producer/director. Production Package, Production Designers. Production office. Best laid plans.

Unit II

PLANNING OF STUDIO OPERATIONS: Set designing and make up – visualization and composition-aesthetics-directing the actors-directing the crew planning in career. Costing and budgeting of programme. Commissioned and sponsored programme.

Unit III

PRODUCTION MANAGEMENT: Planning in career. Planning and Production of indoor and outdoor shootings. Planning and management of live shows. Functions, roles, and skills of media managers in broadcast, cable and corporate facilities, with emphasis on financial management, personnel management, programming, physical systems, and regulations.

Unit IV

MANAGERIL SKILLS IN MEDIA INDUSTRY: An overview of management theory. Financing a production. Moving the budget down. Markets and marketing. Digital Asset Management. Rich Media. Streaming management. Re-purposing of assets. Storage management and archiving. Rights management. Contracts management. Anti-piracy measures.

Unit V

PROJECT PLANNING: Project Development Life cycle. Sample business plan for a fictional company.

Text Books:

1. Media Organisation and Production, Simon Cottle, Sage Publications, New Delhi, 2003
2. Filmmakers and Financing, Louise Levison, Focal Press, 2003.

Reference Books:

1. Raindance Producers Lab: Lo-to-No Budget filmmaking, Elliot Grove, Focal Press, 2004.
2. Digital Asset Management, David Austerberry, Focal Press, 2003.

12VC230 COMMERCIAL BROADCASTING**Credits 4:0:0****Course objective:**

- The course imparts the techniques and the application of the commercial production in preparing the script, to create a concept for the commercial production and knowing about the various scripting formats in producing an commercial.

Course Outcome:

- Students will be able to develop ideas for commercial broadcasting and also handle various stages involved in it including financial management.

Unit I

INTRODUCTION: Development of ideas- brief from client, agency interpretation, advertising strategy, creative work- idea/ concept development, popular TV ad formats, script/ story board, client approval, media approval- creative potential of TV.

Unit II

PREPRODUCTION : Pre production- film formats, film stocks, planning of special elements- choosing the production team, crew, cast- sources of casting, importance of casting director. Pre production meeting - the agenda.

Unit II

PRODUCTION: Production of the commercial- set shooting/ location shooting- recording the sound track and creating the special effects - Pre scoring and Post scoring.

Unit IV

POST PRODUCTION: Editing the commercial- traditional film editing/ non linear editing- finishing the audio elements- confirming the picture- special effects and animations.

Unit V

FINANCIAL MANAGEMENT: Economics of commercial production- Budgeting, factors affecting budgeting, problems with in-house production- finding production companies for bidding specialization of production companies, reviewing the production company cassettes future of TV commercial production.

Text Books :

1. Kelsey, Gerald. Writing for Television. Unistar, 2004.
2. Simon, Mark. Storyboards Motion in Action(2nd edn.). Oxford: Focal Press. 2000
3. Zettl, Herbert. Television Production Handbook(7th edn.). Belmont: Wadsworth Publishing, 2000.
4. Crittenden, Roger. Film and Video Editing (2nd edn.). London: Blue Print, 1995.

Reference Books :

1. Wright, Steve. Digital compositing for Film and Video. Oxford; Focal Press, 2005.
2. Hooper White. How to produce effective TV commercials (3rd edn.). NTC Business Books. Chicago.
3. The audio- visual handbook- a complete guide to the world of audio- visual techniques. Alan MCPHERSON & Howard Timms. Pelham books, London.
4. Mathur,C. Advertising Management; Text and Cases. New Age International: New Delhi-2005.

12VC231 TELEVISION PRODUCTION

Credits 4:0:0

Course Objective:

- The students will be taught to apply the production techniques involved in the television production.

Course Outcome:

- The course will enable the learners to produce their own television programme.
- This paper helps the students understand the process of television production.

Unit I

TV PRODUCTION: Genre of Studio based productions and target audience. TV production- Music shows, dance shows, reality shows, quiz, personality interview, Political discussion, current affairs, election campaign, Election Results & analysis, News Presentation, weather report.

Unit II

TV PROGRAMMING: Genre of Single camera Production- Documentary, Tele film, Experimental video, Outdoor, Soft stories, Teleserials, Crime subjects enacted.

Unit-III

TV BROADCAST DISTRIBUTION: Advantages and Disadvantages of various distribution systems- Terrestrial, cable with & without CAS (set top box), Direct to home, web streaming. IPTV

Unit IV

TV CHANNELS: Public service TV, Commercial TV, Religious TV, Sports TV, Discovery channel / NGC, Cartoon Net etc

Unit V

INFLUENCE OF TV PROGRAMME; How audience are influenced by TV Programmes and commercials- Children, Youth, women, Political leaders and senior citizen.

Text Books:

1. The Television Studies Book- David Lusted and Christine Geraghty
2. An Introduction to Television Studies - Jonathan Bignell -: Routledge 2007

Reference Books:

3. The Television Studies Reader-Edited by Robert C. Allen, Annette Hill
4. TELEVISIONS: An Introduction to Television Studies Glen Creeber British Film Institute, 2006.

12VC232 CORPORATE COMMUNICATION

Credits 4:0:0

Course Objectives

- To enable the students to learn the basic communication skills and the usage of communication technology in the modern workplace.

Course Outcomes

- It enhances the learners to maintain good work team communication.
- It also helps them to plan and execute the business documentation used in corporate culture.
- Students are able to understand the significance of planning and execution of media relations.

Unit I

INTRODUCTION TO COMMUNICATION: Communication basics – Business Communication – components – Types – formal communication network – Work team communication – variables – goal – conflict resolution – non – verbal communication – Cross cultural communication – Business meetings – Business Etiquette.

Unit II

INTRODUCTION TO CORPORATE COMMUNICATION: Understanding Corporate Communication – Employee Communication – Managing Government Relations – Writing for Media and Media Relations

Unit III

TYPES OF CORPORATE COMMUNICATION: Corporate Communication in Brand Promotion – Financial Communication – Crises Communication.

Unit IV

DOCUMENTATION: Report writing: Characterizing & business reports – Types and forms & reports – Project proposals – collection of data – table's constitution – charts – writing the report – documenting the sources – proof reading.

Unit V

BUSINESS PRESENTATION: Written and oral presentation – work – team presentation – Delivering the business presentation visual aids – slides – electronic presentation – hand-outs – delivering the presentation – career planning – preparing Resume – job applications – preparation for a job interview – employment interviews – follow-up.

Text Book:

1. Scot Ober, Contemporary business communication, fifth edition, biztantra.

12VC233 RADIO PRODUCTION LAB**Credits 0:0:2****Course Objective**

- To train the students in gaining knowledge on various formats of radio programme production.
- To impart technical knowledge in broadcasting various radio programmes.

Course Outcome

- Students will be able to produce radio programmes on their own.

List of Exercises

1. Produce radio programmes for News and Interviews
2. Script writing for radio programmes – Standard Script forms -Writing for Radio – Style grammar format writing tools, creative writing & editing.
3. Produce a radio ad for social awareness programme
4. Produce a radio programme using and highlighting the appropriate sound recording editing With Sound effects
5. Produce 60 sec radio announcements using the appropriate Compeering, Narration and Voice Modulation
6. Produce a radio interview with the location of music recording and remote broadcast.
7. Produce a news reading and presentation methods with proper pronunciation, vocal stressing, Inflection and quotation marks
8. Produce a 45 sec radio commercial on any product of your choice
9. Produce a radio documentary
10. Produce a programme on radio drama.
11. Produce a radio programme for a radio group discussion programme.
12. Produce a radio programme for a music talk.

12VC234 TELEVISION PRODUCTION LAB (Computer Graphics)**Credits: 0:0:2****Course Objective**

- To train the students in gaining knowledge on various formats of television production.
- To impart technical knowledge in broadcasting various television programmes.

Course Outcome

- Students will be able to produce various television programmes on their own according to the technical format.

List of Exercise

Topic/theme based programme will be based on producing

1. Produce a television Current affairs type programme
2. Produce a simple drama exercise for 5 min
3. Mime type programme
4. Interviewing personalities
5. Shoot a slice of life programme for 5 min
6. Produce a TV news cast
7. Shoot 10 min duration TV Documentary.
8. Shoot 5 min duration a Quiz programme.
9. Shoot and produce a 5 min TV environmental awareness programme
10. Shoot video on a testimonial television commercial
11. Produce and shoot a television talk show programme
12. Produce an instructional television programme

12VC235 COMMERCIAL PRODUCTION LAB

Credits 0:0:2

Course Objective:

- To make the learners train in various types of commercial production.
- To impart the students in making them know about the production techniques of both radio and television commercial.

Course Outcome:

- In enhances the students to produce various types of commercials on their own.

LIST OF EXPERIMENTS:

1. Produce a Radio commercial
2. Produce a radio jingle
3. Produce a signature tune for a radio programme
4. Record a celebrity endorsement commercial for a product
5. Produce a TV commercial
6. Produce a script and story board for a TV commercial
7. Produce a public service TV advertisement
8. Produce a live product demo for a commercial
9. Produce a TV commercial with animation effects
10. Produce a television new bulletin

11. Produce a commercial for an emotional appeal ad.
12. Produce a commercial for a rational appeal ad.

12VC236 MEDIA RESEARCH

Credits 4:0:0

Course Objective

- To understand research methods and statistical tools in media field.
- To understand the principles of evaluation, research and statistics and computer application.
- To prepare model research proposals for research studies and report writing.

Course Outcome

- After learning this paper the learners will be able to know the research methods and statistics applied in media industry.
- The students will also be able to initiate new media research proposals in their respective field.

Unit I

INTRODUCTION TO RESEARCH: Nature of scope and distinction between research in natural and social sciences – nature and scope of communication research – review of research related to effects research – limitations of effects research – basic parameters of media related studies.

Unit II

DESIGNING A RESEARCH STUDY: The problems and the method – preparing a research proposal – sources of research – primary and secondary etc.

Unit III

TYPES OF RESEARCH DESIGN: Exploratory studies – descriptive studies – diagnostic studies – experimental studies – their relevance and use in communication research.

Unit IV

METHODS OF DATA COLLECTION: Field studies – Holistic approach – observation – Interviews – Questionnaires – structured and unstructured schedules – sampling – content analysis – approach, method and use – techniques basic – data analysis techniques.

Unit V

Writing a research project – organization – chapterization – citation – footnotes

Text Books:

1. Research Methods in Mass Communication by Stempell and Westley Prentice Hall, 1981.
2. Communication Theories: Origins, Methods and Uses' by Severin and Tankard, Hastings House Publishers, 1979.
3. 'Mass Media Research – an introduction' by Roger Wimmer and Joseph Dominick, (III EDITION), Wadsworth Pub., 1991.

Reference Books:

1. 'Handbook of Radio and TV Broadcasting' Ed. By James Fletcher, Van Nostrand Reinhold Company, London, 1981.
2. 'Studies in Mass Communication and Technology' Ed. By Sari Thomaas, Ablex Publishing Company, 1984.

12VC237 ADVERTISING – II**Credits 4:0:0****Course Objective**

- To introduce the students to the advertising world and brief them on various stages involved in the process of producing & launching digital media advertisements.

Course Outcome

- This curriculum has been designed to teach the students why advertising is part of Marketing Management and how it helps the industry, consumers & the society to progress. Students will come to know the stages through which manufacturers have to travel for promoting their products by deploying various advertising techniques. Also, the off- shoot of advertising in to Public Relations has also been deliberated to give an insight to this area.

Unit I

Advertisers – Leading National and International Clients – Ad Spend – Advertising campaigns – other promotional campaigns – Advertising and PR Department of the clients– Role, responsibilities and functions of Advertising and PR managers – planning and execution – coordination with advertising and marketing agencies.

Unit II

ADVERTISING DEPARTMENTS IN MEDIA: Print and Electronic media – Advertising policy and regulations of newspapers, radio stations and TV channels – tariff – space and time allocation – schedule preparation - agency relations – client relations – coordination with other departments – advertising revenue generation – ad. executives/representatives.

Unit III

MEDIA FOR ADVERTISING: Newspapers and Magazines – Characteristics, reach and ad.exposure – Products and advertisers of Print media – Cost ; Radio advertising – jingles – spots – production cost – reach and effectiveness – radio audience – tariff; TV advertising: effectiveness – reach- products and advertisers on TV – channel competition – tariff – production cost – creativity; Outdoor media characteristics –cost- effectiveness in advertising.

Unit IV

RURAL ADVERTISING: Rural market characteristics – growth – penetration of brands – brand competition – media and rural market – nature of products and services for rural markets – media planning – use of outdoor media – successful rural advertising and marketing campaigns – Rural advertising agencies- economics of rural advertising.

Unit V

MULTINATIONAL ADVERTISING: Multinational Advertising Agencies – Indian Agencies with Foreign Agencies – Multinational campaign strategies and cost considerations – creativity and content in International advertisements – cultural differences and global advertising campaigns – implications – regulations .

Text Books:

1. 'Fundamentals of Advertising', Otto Kleppner, Prentice Hall, New Jersey, 1980.
2. 'The Practice of Advertising' 3rd Edn. Norman Hart, Heinemann Pub. London.1990.
3. 'Advertising world wide' (2nd Edn). Marieke de Mooij, Prentice Hall, UK. 1994.

Reference Books:

1. 'Brand positioning' . Sen Gupta, Tata Mc Graw Hill. New Delhi. 1990
2. 'Advertising Management concepts and cases' M. Mohan, Tata Mc Graw Hill, 1989.
3. 'Successful advertising research methods' Haskins & Kendrick, NTC Business

12VC238 PROFESSIONAL PHOTOGRAPHY

Credits 4:0:0

Course Objective:

- The syllabus is focused to orient the students on the professional photographic techniques and the professional equipments used in the media industry.

Course Outcome:

- The students will understand various stages in the growth of photographic technology from analogue to digital and how to use today's expertise for capturing images and manipulate them using editing software for different applications. The students will also appreciate the ways to use photography for gainful employment & as a rewarding hobby.

Unit I

PHOTOGRAPHIC GEAR: The equipments – cameras, lenses, light meters, filters, flashes and accessories, Understanding - exposure and lighting techniques – indoor and outdoor, Black & white and colour photography – films, chemicals, processing and printing.

Unit II

MACRO PHOTOGRAPHY: Still life, Close-up, macro and microphotography, Special effects Techniques and Manipulation of images, Photomicrography - study by magnification, close-up lenses and devices.

Unit III

PHOTO JOURNALISM: Photography as a mirror of reality and symbol - realism, surrealism and expressionism, Photo essay and documentary - expression of idea and emotion, Photo feature, editorial reportage, people and events, action and sports, Thematic presentation of nature, landscape, architecture, city life and people.

Unit IV

PHOTOGRAPHY IN ADVERTISING: Advertising - visualizing - copy and illustrations - use of drawing and photographs, Consumer and industrial products - sets props, casting, studio, indoors and outdoors locations, Fashion Photography - studio and location, editorial, advertising, beauty and portrait.

Unit V

PHOTOGRAPHY FOR VIDEO: Compact camcorder techniques, scoreboard, production for advertising - Digital Photography- Digital Camera functions and techniques, computer aided applications and creativity.

Text Books:

1. Michael Langford, Basic Photography, Focal Press, London, 1986.
2. Michael Langford, Advanced Photography, Focal Press, London, 1986
3. Mitchell Bearley, John Hedgeese's New Introductory Photography Course, Reed consumer Books Ltd, London, 1998

Reference Books:

1. Jonathan Hilton, Action Photography, Rotoision, Switzerland 1997
2. Dave Sounders, Professional Advertising Photography, Merchurst Press, London 1988
3. Roger Hicks, Practical Photography, Cassell, London 1996
4. Julian Calder and John Garrett, The 35 mm Photographer's Handbook, Pan Books, London 1999 Julie Adair King, Digital Photography

12VC239 STUDIO MANAGEMENT

Credits: 4:0:0

Course Objective:

- To brief learners on the concept of various broadcast & non-broadcast studios for Radio & Television.
- To describe the designing & construction of studios, infrastructure such as lighting, power & air-conditioning, requirement of Audio, Video, Graphic, Storage & Broadcast equipments.
- Manpower and budget to run the studio are also explained.

Course Outcome:

- Knowledge gained in this module will help the candidate to design, build & operate a broadcast or non-broadcast studio, taking care of intricate details.
- They will be able to manage the men, material & time efficiently to bring out a video programme and budget it economically.
- The learner will be able to choosing the right technical equipments for each department and maintain them for skilful functioning of the studio.

Unit I

ESSENTIALS OF A STUDIO: Perception of a studio – Audio, Video, Modelling studios – Broadcast & Non Broadcast studio – Designing & constructing a studio – Layout –

Infrastructural requirements of an ideal studio – Norms for planning Power, House Lighting, Air-conditioning & Data communication - Sound Proofing Techniques – Crafting a Shooting floor: Stage, Set, Blue/Green Screen, & Virtual studio – OB Van – Insight into Indian & International studios.

Unit II

BUDGETING & STAFFING: Scope for generating Income for a broadcast & non-broadcast studio – cost of operating & maintaining a studio – Budgeting for and marketing a TV program / Music Recording – Staff pattern & hierarchy in a mid & large size BS / NBS studio – Roles and responsibilities of creative & non creative staff : Administrative, Technical, Supervisory, Cast, Crew & Talents.

Unit III

TECHNICAL GEAR REQUIREMENT & USAGE: Equipment for Audio: Different types of microphones, stand, cable, connectors, monitors, mixers, compressors, expanders, amplifiers, liner & non liner recorders. Video equipments: Cameras, Lens, Filters, Camera mounts, Cables, Connectors, CCU, WFM, Vector scope, Vision Mixer, Router switch – Patch Bay Monitors - Recording Medium & Formats - Liner & Non Liner Recorders – CAR Room - Studio Lighting Equipments: Studio Lights, Grid, Mounts, Accessories, Lighting Controls.

Unit IV

RECORDING & POST PRODUCTION : Pre-shoots Technical Checks in Hot studio – Rehearsal & Blocking Technique – Set Etiquettes & Studio Procedure – Establishing Communication & Talkback system – Studio Calls - Shooting Floor & Control Room Dialogue – Non Verbal Cues during shoot - Audience Management – Stagecraft & Show Control - Graphic Station - AVG Chain from Studio to Storage - Tape & E-Library - Hardware & Software for Audio & Video NLE - Basic Transmission Equipments.

Unit V

FIRE, SAFETY, SECURITY & LEGAL ISSUES: Work Place Conditions - Fire Hazard & Risk Assessment – Prevention of Fire - Chemical Fire -Extinguishers & Fire Fighting Methods - Electrical Shock – Means to prevent electricity related accidents – Medical Emergency & First Aid – Screening Audience for Security – Preventing Theft & Pilferage – Insurance Cover for Men, Material, Building and Vehicles - Mandatory Government Licenses for filming & broadcasting – Intellectual Property Right – Film Trade Unions – Crew Protocol - Contracts, Bonds & Agreements of Cast & Talents.

Text Book:

1. Martha Mollison & Allen Unwin. Producing Videos - A Complete Guide by. Published by South Asian Edition 2007.

Reference Books:

1. Bastian Cleve. Film Production Management. Focal Press, Edition 2007.
2. Studio management – Manual, prepared by Tony M. Jawahar (E&MT-KU)

12VC301 BROADCAST JOURNALISM

Credits: 4:0:0

Course Objective:

- Two of the objective of radio & TV media points to instruction& information. This job lies on the shoulders of broadcast journalist.
- The curriculum deals with the responsibility of the electronic news journalist and the procedure of broadcasting in the media.

Course Outcome:

- Students will come to how the Radio & TV news goes on air from start to finish.
- They will understand the activities & protocol involved in the process.

Unit I

NEWS GATHERING: Introduction to Broadcast Journalism – Qualities of a Journalist – Freelancing & Training - What is news – Source of News – Getting the Story.

Unit II

BASIC RADIO JOURNALISM: Radio News Room Structure – News Writing – News Bulletin – News Presentation - Interviews – News desk & News room Management — Programme production – Specialized programmes.

Unit III

TV NEWS COVERAGE: Electronic News Gathering – Camera Shots – TV Script Writing – Compiling the Report- Editing the Image & Visuals used

Unit IV

DUTIES & RESPONSIBILITIES: Power, Freedom & responsibilities – Censorship in developing nations – Objectivity & Impartiality – Responsible reporting – Internal pressure on reporting – Journalist code of Professional Conduct - Legalities

Unit V

THE NEWS STUDIO: The News Studio Set & Control room – Video Journalism - Research – News online –3 Qualities of an online journalist - Teletext – Satellite Images for news - Computerized News room.

Text books:

1. Broadcast Journalism by Andrew Boyd. Vth Edition Focal Press 2007
2. Basic Radio Journalism by Paul Chantler & Peter Stewart. Focal Press 2007

Reference Book:

1. Aditya Sengupta: Electronic Journalism – Principles & Practices: Authors’ Press, New Delhi Ist PB Edition 2006.

12VC302 PRINCIPLES OF CINEMATOGRAPHY

Credit 4:0:0

Course Objective:

- The videography techniques are the copy of the practices followed in cinematography except for the medium used & the perception of lenses.
- One of those major factors for making a production interesting is the inspirational presentation style.
- Successful formula used in commercial cinematography to make the visuals pleasing & meaningful is discussed here to expose the students to various possibilities of applying similar creativity in video production.

Course Outcome:

- The students will learn the time tested concept of applying 5 Ps in their production that Hollywood follows in their film making techniques – Camera Angle, Continuity, Cutting (editing), Close-Ups & Composition.
- These techniques are adopted from the works of Shri. Joseph V Mascelli, an acclaimed cinematographer & the author of “The 5 Cs of Cinematography”.

Unit I

CAMERA ANGLE: Introduction - Scene, Shot & Sequence –Types of Camera Angles (Objective, Subjective & Point of View) – Subject size, Subject Angle & Camera Height – Scene requirements.

Unit II

CONTINUITY: Introduction – Cinematic Time & Space – Filming the Action (Controlled & Uncontrolled) – Filming Techniques (Master Scene, Triple-Take) - Directional Continuity, Scene Direction (Dynamic & Static), Different types of Action Axis, Transitional Devices (Sound & Picture)

Unit III

CUTTING (EDITING): Introduction – Types of Editing (Continuity & Compilation) - Cross Cutting & uses, Sound Editing Problems – Sound Flow – Editorial Requirement (Technical, Esthetical & Narrative).

Unit IV

CLOSE UPS: Introduction – Extreme, Over the Shoulder, Types of close ups (Cut in & Cut away) Close Up Choice – Close Up look, Close up camera angle & image size – player movements into & out of close up – Close up camera set up & background.

Unit V

COMPOSITION: Introduction – Still vs. Motion Picture Composition – Composition Rules – Composition Languages – Balance, Unity & Eye Scan – Framing – Image Size, Integrated composition, Camera Angle – Frame & Frame Requirements – Frame Focus & Movement – Compositional Variety.

Text Book:

1. The 5Cs of Cinematography (Motion Picture Filming Techniques) by Joseph V. Mascelli, Silman-James Press, California

Reference Books:

1. Ivan Cury: Directing & Producing for Television. Focal Press 2007
2. Mick Hurbis-Cherrier: Voice & Vision-A creative approach to narrative Flm & DV Production.

12VC303 ADVANCED MULTIMEDIA LAB

Credits 0:0:2

Course Objective:

- This exercise will introduce the advanced concepts of 2D animation, which will help students gain knowledge about cartoon animation.

Course Outcome:

- The students will gain hands on experience by undergoing different tools of 2D animation using Flash software.
- They will be able to create a 2D cartoon animation at the end of the experiments.

List of Experiments:

1. The Pre-production Phase
2. Character designing
3. Converting objects into symbols
4. Motion and Shape Tweening
5. Background Compositing for animation
6. Creating Camera movements
7. Masking & Motion guide
8. Creating movements (character) using bone tool
9. Creating Transition effects
10. Introduction to action scripting
11. Creating basic movements using Action Script
12. Keyboard and mouse interfacing using Action script

12VC304 NON LINEAR EDITING USING FCP

Credits: 4:0:0

Course Objective:

- To understand the grammar of video editing on a NLE system.
- To learn the procedures, techniques, and standard practices in motion picture editing.

Course Outcome:

- Students will acquire knowledge on various techniques involved in motion picture editing and post production work flow.
- They will familiarize with the tools available in Final Cut Pro NLE software for executing various commands in editing.

Unit I

INTRODUCTION TO EDITING: Aesthetics / Principles of editing - Linear & Nonlinear Editing -Spatial & Temporal possibilities - Manipulation of time, Rhythm & Pace - Dramatic Continuity - Analog & Digital Recording - Introduction to digital editing -Television Aspect ratio - Different television standardization - Editing Action Sequence - Cross Cutting - Parallel Cutting - Editing Advertising & Promotional video - Editing complex Dramatic Scene - Analysis of film sequences from editing point of view - Animation: Cell animation- Computer animation-Incorporating animation & live action.

Unit II

FINAL CUT PRO BASICS: Final cut pro post production work flow – Video formats – Audio formats - Timecode – Building blocks of project – Working with project – Connection between clips and media files – File naming considerations – Keyboard shortcuts - Buttons - Shortcut menus – Customizing interface – Doing, Undoing changes – Timecode for navigation – Browser basics – Customizing browser display – Viewer basics – Canvas basics – Timeline basics.

Unit III

WORKING WITH PROJECTS: Scratch disk – External video monitoring– AV settings – Device control presets – Sequence settings -Log and capture - Import, Using Deng media files into project – Organizing footage - Creating sub clips – Working with projects, clips & sequences – Adding clips to sequence – Using markers – Edit points – Working with tracks in timeline – Three point editing – Arranging clips.

Unit IV

ADVANCED EDITING: Linking and editing audio & video in sync – Slip, Slide, Roll & Ripple edits – Trimming clips - Transitions – Transition editor –Sequence to sequence editing – Matching frames – Video filters – Motion parameters - Clip speed –Freeze & still frames – Compositing & layering - Titles – Rendering & video processing – incorporating motion graphics – third party plugins.

Unit V

AUDIO & OUTPUTS: Audio editing basics – Evaluating levels with audio meters – Overview of audio mixer – Mixing audio in timeline - Audio filters – Exporting audio for other applications – Media management – Importing & Exporting EDLs – Output to tape – Print to video – Sequences for DVD.

Text Book :

1. Diana Weynand, “Apple Pro Training Series”

Credits 4:0:0

Course Objective:

- To understand the importance of professionally managing an event and handle the audience in the corporate & entertainment world.
- To learn the steps involved in planning, implementing & controlling major events in media industry.

Course Outcome:

- The learners will acquire knowledge on the requirement of managing a big event and the inherent grey areas associated.
- They will be able to foresee constraints and plan for contingency.

Unit I

INTRODUCTION TO ENTERTAINMENT AND SOCIETY : Entertainment Definition- Characteristics of Mass Mediated Entertainment - Narrative Theory - Dramatic Theory - Understanding Entertainment Audiences - Media Effects (Cultivation/ Culture Effects) - Business of Entertainment - Markets - Trends - Regulations - Interactive Media - Introduction: definition of event management - Event characteristics - size of events - Types of events - code of ethics for events - Qualities of event managers .

Unit II

DESIGNING AND PROJECT MANAGEMENT: Process: planning - Event team - putting together a team - budgeting the event - executing - evaluating - Managing the media: drafting the press release - press conference - media coverage - in-house publications - promotional materials - advertising campaign.

Unit III

EVENT MARKETING AND PROMOTION: Nature of event marketing - Process of event marketing - Marketing mix - Sponsorship - Image/ Branding - Advertising & publicity - Public Relations - Types of events: business events - corporate events - cause -related events - fund raising events - exhibitions - trade fairs.

Unit IV

EVENT PLANNING AND OPERATION: Develop mission / purpose statement - establish aim and objectives - Prepare event proposal - Planning tools - event protocol - Dress for formal occasion - speakers protocol - Religious and cultural protocol - Sports ceremonies - General events - Preparing dignitaries - Choosing event site - Developing the theme - Conducting rehearsals - Providing services - Organization accommodations - Managing the environment.

Unit V

EVENT BUDGET AND SAFETY MEASURES: Budget breakeven point - cash flow analysis - profit and loss statement - balance sheet - financial control system - security - occupational safety and health - incident reporting.

Text Books:

- 1 Successful event management - A Practical Handbook, Anton Shone, Bryn Parry, 2004
- 2 Media Management, B.K Chaturvedi, 2009

Reference Books:

1. Event Management for tourism, culture business and sporting events, Lynn Van Der Wagon Brender R. Carlos, 2008.
2. The Social Media Management Handbook, Dandunlop , 2010

12VC306 VIDEO POST-PRODUCTION LAB USING FCP**Credits: 0:0:2****Course Objective:**

- To teach advanced editing techniques used in film and broadcast industry using FCP.

Course outcome:

- Students will be able to edit a video using the tools available in FCP
- Will gain experience in post-producing a commercial video project independently.

LIST OF EXERCISES

1. Importing / capturing / ingesting footage from a tapeless source
2. Basic editing
3. Multi-clip editing
4. Titling
5. Advertisement / promo editing using video transitions & effects
6. Song editing using visual effects
7. Audio effects & Mixing
8. Exporting and Edit to tape
9. Skit editing
10. Multi-camera editing
11. Using compressor for converting files
12. LAB PROJECT – Student's own choice

12VC307 MULTI CAMERA PRODUCTION LAB**Credits 0:0:2****Course Objective:**

- To learn the techniques of using multi-camera in a production environment.
- To help the students know various multi camera shooting format used in the industry.

Course Outcome:

- The learners will be able to set up a studio for two & three camera shoot.
- They will be able to operate various equipments in the multi camera production.
- They will be professionally equipped to produce various programmes in the studio.

LIST OF EXPERIMENTS:

1. Two Camera Interview set-up inside studio
2. Two Camera Interview Production Pre planning
3. Two Camera Interview standalone video recording
4. Two Camera Interview Post Production – Video
5. Two Camera Interview Post Production – Audio
6. Familiarizing with Video Mixer, Vector scope & Waveform Monitor & its controls
7. Three Camera Tele play production pre planning
8. Routing cables for multi-camera setup production
9. Three Camera Tele play live mixing video recording
10. Three Camera Tele play post production – Adding inserts
11. Three Camera Tele play post production – Adding Graphics
12. Three Camera Post production – Audio sweetening

12VC309 DIRECTION & PRODUCTION**Credits 4:0:0****Course Objective:**

- This curriculum deals on the intricacies of the studio infrastructure & the function of key personnel involved in production.
- Subjects in running the show and the protocol of filming major programmes are also discussed.

Course Outcome:

- The students will understand how a studio is constructed to meet various production needs.
- They will learn the responsibilities of each staff working in the studio and the work flow of producing special programme & formats.

Unit I

INTRODUCTION & PRODUCTION FACILITIES: TV production Formats – Basic rules for all productions – Production Facilities – Studio & Shooting Floor, Control Room – Audio & Video gear, Support Area – Green room, Make Up & Dressing, Wardrobe, Office & Lobby – Media Stores, Audience, Screening Room

Unit II

WHO'S WHO IN PRODUCTION & PANEL PROGRESS: Executives, Producers, Directors, Production Manager, Scheduling, Accounting, Set & Art Director, Lighting Designer, Studio Manager, Engineering Crew, Talents – Graphics, Post Production Technicians – Panel Programme (Seating, Ground Plan, Camera placement, Programme routine, Script Format, Rehearsal procedure & Shoot.

Unit III

DEMONSTRATING FORMATS & SCRIPT FORMAT: Director in control – Guidelines for Creation – Coordinate pictures with ideas, Create routine, Display area, Demonstration & single camera Demonstration programme – Drama, Conventions, Ground Plan, Shooting Script, Marking Blocks & Camera, Shot Sheets – Studio walk through & run through – Daytime drama & sitcom rehearsal – Scored music & dance script.

Unit IV

MUSIC, COMMERCIAL, NEWS & DOCUMENTARY PRODUCTION: Music pre-production – Recording steps (audio, video, shot list), location shooting schedule, Stock shots – Music Production – TV studio & production rehearsal – Commercial pre-production & production - Cost Analysis – Special Talents – Production & Shot procedure – Keeping a Log – News Programme characteristics – Routines & rundowns – Presentation on air – Documentaries Ideas & format Production Plan – Log for montage.

Unit V

MULTIPLE CAMERA REMOTE: Basics of multi-camera gear – Jibs & cranes – Presentation Material – Stage, Light, Sound, Popular music – Sports Programme – Cross shooting, camera positioning – Hardware & Crew – Form sports & Game rules – Pre-production, Production & Post production protocol.

Text Books:

1. Directing & Producing for Television by Ivan Cury . Focal Press IIIrd edition -2007
2. Paul Wheeler: Digital Cinematography – Focal Press 2005

Reference Books:

1. The 5Cs of Cinematography (Motion Picture Filming Techniques) by Joseph V. Mascelli, Silman-James Press, California
2. Mick Hurbis-Cherrier: Voice & Vision-A creative approach to narrative Flm & DV Production.

12VC310 INTERACTIVE MULTIMEDIA TECHNOLOGIES

Credits 4:0:0

Course Objective:

- To know the basics of multimedia operation and tools used to develop them.
- To understand the project management and responsibilities of team members involved in interactive multimedia technologies.

Course Outcome:

- They will learn the phases of instructional designing and interactivity in designing.
- They will also learn the proper use of media technological environment & the process involved in delivering multimedia products.

Unit I

INTRODUCTION TO MULTIMEDIA: Benefits of Multimedia in Instruction - Media and Motivation - Surrounding Multimedia- Multimedia Hardware: Platforms - Peripherals - Creation Tools: Painting and Drawing Tools - Image Editing Tools - 3D Modeling and Animation Tools - Audio and Video Editing Tools Card and Page Based Tools - Icon Based Tools - Time Based Tools.

Unit II

PROJECT MANAGEMENT: Project Management Issues - Roles of Project Managers - Instructional Designers - Subject-Matter Experts - Content Writers - Programmers - Media - Producers Instructional Development Phases: Analysis & Planning - Design - Development - Implementation - Evaluation and Revision.

Unit III

MEDIA: Text: Guidelines for Creating Text - Spacing - Justification - Fonts - Variable - Spacing - Scrolling - Scrolling - Display Speed - Screen Focus Points - Hypertext and Hypermedia Images: Images and Learning - Displaying Images - Appearance - Costs - Digitization Animation: Animations and Learning Displaying Animations - Costs Audio: Audio and Learning - Scriptwriting Guidelines - Speech - Sounds - Music - Audio Quality - MIDI - Digitization -Video: Video and Learning - Strengths of Video Difficulties with Professional Quality Video.

Unit IV

DESIGNING INTERACTIVITY: Interactivity: Definition - Purpose - Process of Interactive Design Information Design: Product Definition - Audience and Environment - Development Choices - Organizing Information - Information Flowchart Interaction Design: Orientation - Navigation - Usability - Functionality - Storyboard Presentation Design: Tasks of Presentation Design - Color and Palettes - Interface Style - Layout - Interface Elements (Background, Panels, Buttons and Controls, Images, Text, Video, Sound, Animation).

Unit V

DELIVERY: Testing: Alpha Testing - Beta Testing Delivery: freezing the Product - Archiving - Project Debrief – Licensing - Copyright and Support Agreements - Copyright Issues - Legal and Ethical Issues - Packaging.

Text Books:

1. Multimedia: Making it Work, Seventh Edition, Tay Vaughan, McGraw Hill Osborne Media, 2006
2. Principles of Interactive Multimedia, Mark Elsom - Cook, McGraw-Hill, 2000.

12VC311 RESEARCH METHODOLOGY**Credits: 4:0:0****Course Objective:**

- To understand the research methods and statistical tools available in media field.
- Also to understand the principles of evaluation, research and statistics and computer application and to prepare a model proposals for research studies and report writing.

Course Outcome:

- After learning this paper the learners will be able to know the research methods and statistics applied in media industry.
- The students will also be able to initiate new media research proposals in their respective fields.

Unit I

RESEARCH METHODS: Introduction to research - nature of scope and distinction between research in natural and social sciences - nature and scope of communication research - limitations of effects research - basic parameters of media related studies - Qualitative Research Methods: Historical Research, Case Study, Participatory and Ethnography Research Methods - Quantitative Research Methods: Survey, Experimental, Action and Longitudinal Research Methods.

Unit II

TOOLS, VARIABLES AND SCALES OF MEASUREMENT: Tools for Data Collection: Observation - Interview - Schedule - Checklist - Questionnaire - Achievement test, Socio-metric, Attitude Scale and Content Analysis - Construction and Standardization of Tools. Variables: Discrete and Continuous Variables - Independent and Dependent Variables - Intervening and Manipulating Variables - Scales of Measurement: Nominal, Ordinal, Interval and Ratio Scales.

Unit III**SAMPLING TECHNIQUES AND HYPOTHESES:**

Meaning of Population and Samples - Sampling Method: Purposive Sampling, Simple Random Sampling, Multi Stage Sampling, Systematic Sampling, Stratified Random Sampling and Cluster Sampling, Levels of Confidence, Degrees of Freedom and Sampling Error - Hypotheses: Meaning, Scope and Types - Hypotheses Formulation and Testing.

Unit IV

ADVANCED STATISTICAL TECHNIQUES FOR RESEARCH : Introduction to Statistics: Meaning, Scope, Importance and Limitations of Statistics and Data - Descriptive and Inferential Statistics, Parametric and Non-Parametric Statistics - Univariate Analysis: Mean,

Median, Mode - Measures of Central Tendency and Standard Deviation - Bivariate Analysis: Correlation Methods, Chi - Square, T-test, and ANOVA.

Unit V

COMPUTER APPLICATION AND REPORT WRITING: Computer applications: Statistical Package for Social Sciences (SPSS), Microsoft word, Excel, etc - Writing Research Proposal and Research Report.

Text Books:

1. Research Methodology – Kothari, 2004
2. Foundations of Behavioral Research, Kerlinger, H. Fred, 2000

Reference Books:

1. Methods in Social Research, Goode & Hatt, 2000
2. Doing Media Research, An Introduction, Susanna Hornig Priest, 2009

12VC312 RESEARCH METHODOLOGY LAB

Credits 0:0:2

Course Objective:

- This exercise will introduce the concept of research methodology employed in media studies:

Course Outcome:

- The students will gain hands on experience by undergoing the steps in collecting, sorting, analyzing, interpreting the data.
- They will be able to produce a report for publishing a Research Document.

List of experiments:

1. Choosing of Topic & purpose of the survey
2. Assess Resources
3. Choosing the Method
4. Write the Questionnaire
5. Pilot Test
6. Prepare the Sample
7. Interviewers
8. Collect Data
9. Process Data
10. Analyze the Results - through SPSS

11. Interpret and Disseminate the Results

12. Result Publication

12VC313 DIGITAL MUSIC PRODUCTION

Credits: 4:0:0

Course objective:

- The students will appreciate the basics in the functioning of digital audio workstation.
- They will be exposed to the use MIDI and digital audio tools in music production.

Course outcome:

- This course will enable the students to be creatively aware of the skills in music production.
- They will be aware of the technologies and the digital tools used in music production.

Unit I

INTRODUCTION TO DAW: Introduction to DAW, Hardware and software, Mac & PC platform for DAW- Audio and MIDI Interfaces – Digital Audio Mixer – Audio Reference Monitors - Headphones - Cables, Connectors & Microphones .

Unit II

HARDWARE AND SOFTWARE SET UP FOR MUSIC PRODUCTION : PCI cards - USB – Fire Wire/ i link - PCMCIA Cards - Audio interface considerations - Audio interface features - MIDI interface types and features – Sound Card Driver installation basics - Patch bay & Routers- Unlisted MIDI devices - Surface controller setup - Template setup - Test run.

Unit III

MUSIC PRODUCTION – MIDI: What is MIDI - MIDI connections - MIDI channels - MIDI modes- Static bytes and Data bytes - MIDI implementation charts - Creating a new song file - Setting up song parameters - Laying down MIDI tracks - Step recording - Punch-in recording - Common MIDI Recording Problems and their Solutions - Quantization options - Basic MIDI editing.

Unit IV

MUSIC PRODUCTION - DIGITAL AUDIO: Recording fundamentals - Analog and Digital audio recording - Sample rates and resolutions - Recording studios - Basic track recording - dubbing - Wet vs Dry recording – Mix and individual track MIDI to digital audio conversion - Virtual MIDI instruments - Preparing tracks for audio editing - normalizing audio tracks - Trimming digital audio tracks - Creating comp takes.

Unit V

MIXING, MASTERING AND ARCHIVING: Mono, Stereo & Multi Track - A short mixing primer: Drums, bass guitars and vocals - Additional instruments - volume - monitoring the mix - frequency, volume and overtones - EQ types - Dynamic Processors - Effect Processors - The Final mix down - Mastering - Audio file preparation - side sequencing – Setting the index and gap - Archiving the project.

Text Books:

1. Zack Price, "Beginner's guide to computer based music production", Cherry lane music Company, 2004.
2. Martin Russ, "Sound Synthesis and Sampling", Third Edition, Focal Press, 2009

Reference Books:

1. Francis Rumsey, Tim McCormick, "Sound and Recording: An Introduction", Fifth edition, Focal Press, 2006
2. Andrea Pejrolo, "Creative sequencing techniques for Music Production", Focal Press, 2005.

12VC314 DIGITAL AUDIO PRODUCTION LAB**Credits 0:0:2****Course Objective:**

- The students can learn advanced knowledge in audio synchronization.
- They will be able to know the application of higher level production techniques used for digital audio projects.

Course Outcome:

- The students will get the experience in working on a DAW & recording techniques.
- They will acquire the expertise in handling high quality digital audio assignments.

LIST OF EXPERIMENTS

1. Introduction to different types of miking
2. Recording and Editing using DAW
3. Recording and Editing in MIDI
4. Sampling of SFX and Ambiance
5. Sampling of a Musical Instrument
6. Music for Video
7. Mixing of Audio Tracks
8. Mastering for a CD
9. Simultaneous Multi Track Recording
10. Live Sound Reinforcement
11. Introduction to Routing in a Studio
12. Introduction to Routing in a DAW

12VC315 AUTHORING AND VIRTUAL REALITY

Credits: 4:0:0

Course objective:

- Learn about the basics of Virtual Reality & VRML
- To understand various authoring tools and its components.

Course Outcome:

- The learners will be able to appreciate the use of authoring types and its software applications.
- They will learn the use of virtual reality markup language for various uses.

Unit I

INTRODUCTION OF AUTHORIZING : Introduction of Authoring - Different Authoring Styles - flow diagram, time line, old versus new styles, authoring language, Interactive presentations -Multimedia Development Tools - Presentation tools Slide Presentation Environments - Interactive Presentation Environments - Authoring Environments.

Unit II

AUTHORIZING SOFTWARE : Integrating Multimedia Elements - Script Language Programs - Icon-based Programs - DLLs for Extending Features - Supporting CD-ROM or Laser Disc Sources - Supporting Video for Windows -Hypertext - Cross-Platform Capability - Run-time Player for Distribution Authoring Tools - Author ware, Everest Authoring System - Icon Author - Image Q - Macromedia Director - QuickTime.

Unit III

AUTHORIZING TOOLS AND MULTIMEDIA PRODUCTION : Authoring tools - Popular Authoring tools - Multimedia authoring program categories - Key factors of selecting CD based or Web-based multimedia - various plug-ins for Web - HTML and Multimedia -Various Stages in designing & producing multimedia products for CD and Web: Planning, Content Analysis, Instructional Design, Preparation of Media Elements, Integration of Media Elements Authoring.

Unit IV

INTRODUCTION TO VIRTUAL REALITY : Definition and introduction – 3D animation and Augmented reality – Input devices – Output devices - Immersive and Non-immersive Virtual Reality - Advantages & Disadvantages - Glossary of VR terminology - Head Mounts Display (HMD), Boom, Cave, Input Devices and Sensual Technology - Characteristic of Immersive VR Shared Virtual Environments.

Unit V

VIRTUAL REALITY APPLICATIONS :Applications of Virtual Reality – Education & training – Entertainment – Medical applications - CFD (Computational fluid dynamics) –Games – Virtual sets Costing – Virtual Reality Markup Language – Computing architecture for VR - Past, present & future of VR .

Text Books:

1. Multimedia: Making it Work, Seventh Edition, Tay Vaughan, Tata Mc Graw Hills, 2008
2. Multimedia in Action, James E Shuman, Vikas Publishing House, 2001

Reference Books:

1. Principles of Multimedia, Ranjan Parekh, Tata McGraw Hill, 2006
2. Virtual storytelling, Olivier Balet, Gerard Subsol, Patrice Torguet, 2003

12VC316 INTRODUCTION TO 3D ANIMATION

Credits: 4:0:0

Course Objective:

- To present basic concepts and applications in 3 Dimensional computer animation.
- To focus on 3DSMAX & Maya software in animation.

Course Outcome:

- The students will be able to understand the use of 3DSMAX & Maya in animation.
- They will know modeling and rendering techniques useful for multimedia industry.

Unit I

INTRODUCTION TO 3D ANIMATION: Introduction to Animation – 3D animation & its concepts – Types of 3D animation – Skeleton & kinetic 3D animation – Texturing & lighting of 3D animation - 3D camera tacking – Applications of 3D animation.

Unit II

MODELING & ANIMATION USING 3Ds MAX: Introduction – Basic Interface - Object properties – Creating geometry - Edit mesh – Edit poly – Patch objects – NURBS modeling - Tools for low polygon modeling – Animation Concepts & methods - Animation controllers – Animation constraints - Wire parameters – Hierarchies and kinematics – Track view – Motion mixer – Saving & loading animation – Animation – Character animation - Rigging.

Unit III

MATERIALS & RENDERING IN 3Ds MAX: Materials introduction - Lights – Cameras – Designing materials – Material editor – Material / Map browser - Types of materials – Maps & shaders – Mapping – Rendering basics - Renderers – Types of rendering – Render preview – Video post.

Unit IV

MODELING & ANIMATION USING MAYA: Introduction - Interface – Creating, manipulating & viewing objects – Components & attributes – Polygonal modeling - NURBS modeling – Sub division surface – Character setup – Skeletons & Kinematics – Rigging - Hair – Fur – Cloth – Particles.

Unit V

MATERIALS & RENDERING IN MAYA: Painting – 2D painting – 3D painting – Polygon texturing - Lights - Shadows - Cameras – Editing – Caustics – Toon Shading – Lighting – Camera setup – Mental ray for MAYA rendering – Render nodes.

Text Book:

1. Kelly L.Murdock, “3DS MAX 2008 BIBLE”, FIRST EDITION REPRINT 2008

Reference books:

1. Kogent Learning Solutions INC, “3DS MAX 2009 IN SIMPLE STEPS”, 2009
2. Marcia Kuperberg, Martin W. Bowman, “Guide to Computer Animation”, Focal press, 2002.
3. John Edgar Park, “Understanding 3D animation using Maya”, Springer Science & Business Media Inc, 2005

12VC317 MEDIA TECHNOLOGY**Credits 4:0:0****Course Objective:**

- Deals with the fundamental technologies used in Radio & TV industries.
- Offers insight into analog & digital equipments used in broadcasting houses.

Course Outcome:

- The students will gain confidence in knowing the technology employed in broadcasting.
- They will be able to guide the staff in the job area on simple technical solutions.

Unit I

RADIO & AUDIO: Radio Broadcasting- FM and AM Broadcast - Frequency bands used in Radio communications - Audio equipments in Radio & TV broadcast, types and usage – Audio storage media, types and uses - audio delivery systems (PA) - Audio mixers - - ADCs and DACs -MP3, Surround Music Systems.

Unit II

DIGITAL IMAGING: Photographic equipments – CCD & CMOS - Digital images and their characteristics - Pixels and resolutions - Digital Cameras and their types - Image printing equipment - Storage and memory of digital images - Scanners and their applications - Digitizing tablets and Electronic boards.

Unit III

VIDEO FORMATS: Analog and Digital Video - Types of color video signals - Component Video - Composite video S-video - NTSC, PAL & SECAM TV Standard – HDTV & 3D TV – Various Video and audio compression methods, VTR, tape & tapeless video storage.

Unit IV

VIDEO TECHNOLOGIES : ENG Cam and Broadcast quality Video Camera - Features of Video cameras - Video capturing devices - Video tuning cards - Video editing systems and their components - Video mixers - storing and retrieving systems - Streaming of video over net - Block diagram of color TV receiver and description of each element – CCU, Vector scope, Waveform Monitor & - Special Effect Generators - Character Generators.

Unit V

DIGITAL TECHNOLOGIES: Computer components and other peripheral devices - CD ROMs DVD and Blue Rays and their characteristics - VCD players, DVD players - Compatibility and convertibility of various instruments and files – Video Monitor – CRT, Plasma, LCD, LED - IPAD & PDAs - Multimedia projectors - IMAX theater facilities - Computer networking and equipment - Types of cables and their uses.

Text Books:

1. Color TV- Principles and Practice, R.R. Gulati, New Age Int. (P) ltd., New Delhi, 2001
2. Handbook for Sound Engineers, Glen Ballou, Third edition, Focal Press, 2002.

Reference Books:

1. The Sound Studio, Alec Nisbett, Seventh Edition, Focal Press, 2003.
2. Practical Recording Techniques, Bruce Bartlett and Jenny Bartlett, Third Editions, Focal Press, 2001.
3. Digital Imaging for Photographers, Adrian Davies, Fourth Edition, Focal Press, 2001.

12VC318 STREAMING MEDIA

Credits 4:0:0

Course Objective:

- To give an insight on the possibilities of using internet for broadcasting.
- To expose the techniques of pod casting, blogging, web-casting, internet radio.
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Course Outcome:

- Students will learn to use the cyber media to broadcast live audio, video and other data types like Power Point Presentation, Animation or White-Board type application over the internet.
- The students will be know the process of audio & video content planning, production, encoding, authoring and delivering for corporate & entertainment industry.

Unit I

INTRODUCTION TO INTERNET: Understanding Internet Basics: How do people use the Internet – How was the internet impacted society- how did the internet grow into its current form-controlling the internet-how does the world wide web work-who controls internet- how do computers connect to the internet-types of internet connections- Understanding Internet Basics: understanding web browsing-HTML, website address

Unit II

BASICS OF HTML: HTML fundamentals, HTML elements, HTML attributes, headings, rules and comments, paragraphs, text formatting, styles, links, Images ,tables and color.

Unit III

INTERNET RADIO AND PODCASTING : What is radio on web, stream receivers, streaming radio output. An overview of podcasting, how podcasting works, The difference between radio and podcasting, creating a compelling podcast, components, strategies for planning each show, setting up your studio, recording your podcast, processing and posting your podcast, Distributing, Music and intellectual property, protecting your content

Unit IV

INTRODUCTION TO WEB CASTING AND BLOGGING: Basic web casting concepts, Digital audio video basics, web cast encoding. Planning for the blog, installing and setting up your first blog, building community, writing and creating conversation, building personal blog

Unit V

ADVANCED BLOGGING: Creating podcast blog, video blogging: recording video blog posts, exporting, compression and video formats, creating portfolio blog: what makes good content on a portfolio blog, picking right tool for the job, creating your online stream

Textbooks:

1. By Gary P. Schneider, Jessica Evans, Katherine T. Pinard The Internet: Illustrated,
2. Learn HTML and CSS with w3Schools by W3Schools,2010, ISBN-10: 0470611952
3. Chris Priestman, Web Radio: Radio Production for Internet Streaming, 2002, ISBN-10: 0240516354
4. George Colombo, Curtis Franklin , Absolute Beginner's Guide to Podcasting , 2005, ISBN-10: 0789734559

Reference Books:

1. Hands on Guide to Webcasting (Internet Event & AV Production) by Steve Mack & Dan Rayburn. Focal Press, 2007
2. Tris Hussey , Create Your Own Blog: 6 Easy Projects to Start Blogging Like a Pro , ISBN-10: 0672330652, 2010

12VC319 BLOGGING AND PODCASTING LAB

Credits 0:0:2

Course Objective:

- To introduce the students to the streaming media technology in audio & video
- To teach them techniques of creating content & broadcasting on the web.

Course outcome:

- The students will get hands on experiencing in creating & posting blogs.
- They will learn the techniques of broadcasting of audio & video on the internet.

List of Experiments:

1. Planning for blogging
2. Creating a conversation

3. Building community
4. Creating a personal blog
5. Creating a business blog
6. Video blogging
7. Portfolio blogging
8. Publishing for blogging
9. Pre production of audio for Podcasting
10. Production & Post production of audio for Podcasting
11. Video podcasting
12. Publishing for Podcasting

12VC320 INTRODUCTION TO VISUAL DESIGN AND CULTURE

Credits 4:0:0

Course Objective:

- The subject deals with the graphic design for visual applications in media.
- While touching area in fundamentals & principles in design, the syllabus encompasses the creative process and conceptualization of a sensory perception.

Course Outcome:

- The students will learn the role of design elements in creating an art form.
- They will understand various stages of visual designing and the lateral thinking process in the manifestation of creativity.

Unit I

FUNDAMENTALS OF DESIGN: Definition approaches to design - Centrality of design - Elements of design: Line, shape, direction, size, color, texture, form, value.

Unit II

PRINCIPLES OF DESIGN: Balance – Gradation – Rhythm – Contrast – Harmony – Emphasis - Unity.

Unit III

BASICS OF GRAPHIC DESIGN: Definition - Various stages of design process - problem identification - Search for solution - Refinement Analysis - Decision making and implementation - Design process - Research, a source of concept – Concept development.

Unit IV

CREATIVE PROCESS: Semiotics in design - Orientation, Preparation, Analysis, Idealization, Incubation, Synthesis, Evaluation – Creative inputs – Issues of plagiarism in creative productions - The process of developing ideas - verbal, visual _ Combination & thematic - Visual thinking - Associative techniques - Materials, tools - Design execution and presentation.

Unit V

INTRODUCTION TO COGNITIVE PSYCHOLOGY: Left brain Vs right brain - Thinking on the right brain – Creativity & conceptualization – Visual perception – Gestalt principles of design - Principles of Visual and other Sensory Perceptions - Color psychology and theory – Definition - Optical and Visual illusion.

Text Books:

- 1 Palmer, Frederic: Visual Elements of Art and Design, 1989, Long man.
- 2 Porter, Tom and Goodman, Sue: Manual of Graphic Technique For architects, Graphic designers, and artists, 1982, Astragal Books, London .

Reference Books:

- 1 Betty Edwards: The New Drawing on the Right Side of the Brain [Paperback]

12VC321 VIDEO SFX LAB USING AE & COMBUSTION

Credits 0:0:2

Course Objective:

- The make the students understand the use the application of After Effects & Combustion software in the media applications.
- To help the understand the various composition techniques & special effects offered by these software.

Course outcome:

- Students will get hands on experience in using After Effects & Combustion software.
- They will be able to use the tolls in the software to create Text animation, Particle composition, Tracking, Rotoscoping, Color correction etc

LIST OF EXERCISES

1. Creating Backgrounds for blue / green mattes using AE
2. Creating animated output elements for an advertisement using AE (Titles, wipes, template etc)
3. Keying using AE
4. Tracking using AE
5. Advertisement composition and final output rendering using AE
6. Understanding the interface & working with layers using Combustion
7. Creating special effects with operators using Combustion

8. Keying and Rotoscoping using Combustion
9. Color correction & Particle effects using Combustion
10. Creating a promo for an event using Combustion
11. LAB PROJECT (AE) – Implementing own concept
12. LAB PROJECT (Combustion)– Implementing own concept

12VC322 3D ANIMATION LAB

Credits 0:0:2

Course Objective:

- To offer the skills required to use computer application in media production.
- To get familiar with the use of most popular 3D animation software in Media Industry.

Course outcome:

- Students will gain hands on experience in the use of Maya & 3DSMAX for animation.
- They will learn 3D animation and advanced modeling and rendering techniques.

LIST OF EXERCISES

1. Understanding the basic interface, viewports and primitives of 3DS MAX
2. Basic modeling techniques using 3DS MAX
3. Texturing & Lighting using 3DS MAX
4. Animation using 3DS MAX
5. Character animation & Rendering using 3DS MAX
6. LAB PROJECT 1 – Implementing student 's own concept using 3DS MAX
7. Understanding the basic interface, viewports of MAYA
8. Creating primitive objects using MAYA
9. Spline & NURBS modeling using MAYA
10. Lights & Materials using MAYA
11. Animation & Rendering using MAYA
12. LAB PROJECT 2 – Implementing student's own concept using MAYA

ELECTRONICS & MEDIA TECHNOLOGY
LIST OF SUBJECTS

| Sub. Code | Name of the Subject | Credits |
|------------------|--|----------------|
| 12MT201 | Circuit Theory | 3:0:0 |
| 12MT202 | Electronic Devices | 4:0:0 |
| 12MT203 | Script Writing and Video Production | 4:0:0 |
| 12MT204 | C++ and Data Structures | 4:0:0 |
| 12MT205 | Audio Engineering and Production | 3:0:0 |
| 12MT206 | Electronics Devices and Circuits Lab | 0:0:2 |
| 12MT207 | C++ Programming Lab | 0:0:2 |
| 12MT208 | Photography Lab | 0:0:2 |
| 12MT209 | Java Programming and Applications | 3:0:0 |
| 12MT210 | Analog Electronics Circuits I | 4:0:0 |
| 12MT211 | Digital Electronics | 3:1:0 |
| 12MT212 | Studio Acoustics | 3:0:0 |
| 12MT213 | Digital Signal Processing & Media Applications | 3:1:0 |
| 12MT214 | Audio Engineering and Production Lab | 0:0:2 |
| 12MT215 | Digital Electronics Lab | 0:0:2 |
| 12MT216 | Analog Electronic Circuits II | 4:0:0 |
| 12MT217 | Microprocessor and Microcontrollers | 3:0:0 |
| 12MT218 | Digital Television & Digital Video Engineering | 4:0:0 |
| 12MT219 | Graphics and Animation | 4:0:0 |
| 12MT220 | Elements of Video Production | 3:0:0 |
| 12MT221 | Microprocessor and Microcontroller Lab | 0:0:2 |
| 12MT222 | Graphics and Animation Lab | 0:0:2 |
| 12MT223 | Video Production Lab | 0:0:2 |
| 12MT224 | Web Designing | 3:0:0 |
| 12MT225 | Electronic Communication Systems | 4:0:0 |
| 12MT226 | Computer Networks | 3:0:0 |
| 12MT227 | Advertising | 3:0:0 |
| 12MT228 | Digital Compositing | 3:0:0 |
| 12MT229 | IP TV | 3:0:0 |
| 12MT230 | Web Designing Lab | 0:0:2 |
| 12MT231 | Communication Circuits Lab | 0:0:2 |
| 12MT232 | Video Post Production Lab | 0:0:2 |
| 12MT233 | Digital Image Processing | 3:0:0 |
| 12MT234 | Computer Based Music Production | 4:0:0 |
| 12MT235 | Media Economics | 3:0:0 |
| 12MT236 | DSP Processors | 3:0:0 |
| 12MT237 | Audio Sampling and Synthesis | 3:0:0 |
| 12MT238 | Embedded Systems | 3:0:0 |
| 12MT239 | Principles of Digital Audio | 3:0:0 |
| 12MT240 | Digital Video Processing | 3:0:0 |
| 12MT241 | Equipment Maintenance & Servicing | 3:0:0 |
| 12MT242 | Satellite Communication | 3:0:0 |

| | | |
|---------|---|-------|
| 12MT243 | Game Programming with C++ | 3:1:0 |
| 12MT244 | Neural Networks | 3:0:0 |
| 12MT245 | 3D Animation | 3:0:0 |
| 12MT246 | Media Laws and Ethics | 3:0:0 |
| 12MT247 | ARM Cortex Architecture and Programming | 3:0:0 |
| 12MT248 | 3D Video and Graphics | 3:0:0 |
| 12MT249 | Digital Photography | 3:0:0 |
| 12MT250 | Electronic Media Management | 3:0:0 |
| 12MT251 | Audio Engineering and Production | 3:0:0 |

Karunya University

12MT201 CIRCUIT THEORY

Credits: 3:0:0

Course Objective:

- To develop the fundamental tools of linear circuit analysis.
- To learn the "alphabet" of circuits, including wires, resistors, capacitors, inductors, voltage and current sources, and operational amplifiers.
- To prepare students for more advanced courses in circuit analysis.

Course Outcome:

- Identify linear systems and represent those systems in schematic form
- Apply Kirchoff's current and voltage laws and Ohm's law to circuit problems
- Simplify circuits using series and parallel equivalents and using Thevenin and Norton equivalents
- Perform node and loop analyses and set these up in standard matrix format
- Identify and model first and second order electric systems involving capacitors and inductors
- Predict the transient behavior of first and second order circuits

Unit I

BASICS OF CIRCUIT ANALYSIS : Kirchoff's laws, DC and AC excitation, Series and parallel circuits, Sinusoidal steady state analysis, Mesh current and node voltage method of analysis, Matrix method of analysis.

Unit- II

NETWORK THEOREMS: Thevenin's and Norton's theorems, Super position theorem, Compensation theorem, Reciprocity theorem, Maximum power transfer theorem, Millman's theorem, Tellegen's theorem.

Unit III

RESONANCE AND COUPLED CIRCUITS: Series and parallel resonance, Quality factor and Bandwidth, Multi resonance circuits, Coupling co-efficient, Frequency response and bandwidth, Tuned circuit.

Unit IV

TRANSIENTS: Transient response of RL, RC and RLC circuits to DC excitation, Natural and forced oscillations.

Unit V

DUALITY AND TOPOLOGY: Concept of duality, Dual network, Graphs of a network, Trees, Chords and branches, Tieset and cutset of a graph, Application to network analysis.

Text Book

1. William H. Hayt and Jack E. Kemmerly, " Engineering Circuit Analysis ", McGraw Hill International Edition, 2006.

Reference Books

1. Paranjothi S.R., " Electric Circuit Analysis ", New Age International Ltd., New Delhi, 2008.
2. Chakrabati A., "Circuit Theory (Analysis and Synthesis) ", Dhanpath Rai & Sons, New Delhi, 2008.
3. Roland E. Thomas and Albert J. Rosa, "The Analysis and Design of Linear Circuits ", Prentice Hall International, 2nd Edition, 2008.

12MT202 ELECTRONIC DEVICES

Credits: 4:0:0

Course Objective:

- The aim of this course is to familiarize the student with the principle of operation, capabilities and limitation of various electron devices so that he will be able to use these devices effectively.

Course Outcomes

On completion of this course the student will understand the

- Basics of electron motion in electric field and magnetic field
- Mechanisms of current flow in semi-conductors
- Diode operation and switching characteristics
- Operation of BJT, FET, and MOSFET metal semiconductor rectifying and ohmic contacts and power control devices.

Unit I

ELECTRON BALLISTICS AND INTRINSIC SEMICONDUCTORS: Force on charge in electric field – Motion of Charge in uniform and time varying electric fields – Force on a moving charge in a magnetic field – calculation of cyclotron frequency – calculation of electrostatic and magnetic deflection sensitivity. Energy band structure of conductors, semiconductors and insulators – Density distribution of available energy states in semiconductors – Fermi-Dirac probability distribution function at different temperatures – Thermal generation of carriers – Calculation of electron and hole densities in intrinsic semiconductors – Intrinsic concentration – Mass Action Law.

Unit II

EXTRINSIC SEMICONDUCTOR AND PN JUNCTIONS: N and P type semiconductors and their energy band structures – Law of electrical neutrality – Calculation of location of Fermi level and free electron and hole densities in extrinsic semiconductors – Mobility, drift current and conductivity – Diffusion current – Continuity equation - Hall effect. Band structure of PN Junction – Current Component in a PN Junction – Derivation of diode equation – Temperature dependence of diode characteristics.

Unit III

SWITCHING CHARACTERISTICS OF PN JUNCTION AND SPECIAL DIODES:

Calculation of transition and diffusion capacitance – Varactor diode – charge control description of diode – switching characteristics of diode – Mechanism of avalanche and Zener breakdown – Temperature dependence of breakdown voltages – Backward diode – Tunneling effect in thin barriers Tunnel diode – Photo diode – Light emitting diodes.

Unit IV

BIPOLAR JUNCTION TRANSISTORS AND FIELD EFFECT TRANSISTORS:

Construction of PNP and NPN transistors – BJT current components – Emitter to collector and base to collector current gains – Base width modulation CB and CE characteristics – Breakdown characteristics – Ebers – Moll model – Transistor switching times. Construction and Characteristics of JFET – Relation between Pinch off Voltage and drain current – Derivation. MOSFETS – Enhancement and depletion types.

Unit V

METAL SEMICONDUCTOR CONTACTS AND POWER CONTROL DEVICES:

Metal Semiconductor Contacts -Energy band diagram of metal semiconductor junction Schottky diode and ohmic contacts. Power control devices: Characteristics and equivalent circuit of UJT - intrinsic standoff ratio. PNPN diode – Two transistor model, SCR, TRIAC, DIAC.

Text Books

1. Jacob. Millman, Christos C.Halkias, 'Electronic Devices and Circuits', Tata McGraw Hill Publishing Limited, New Delhi, 2003.
2. David A.Bell, 'Electronic Devices and Circuits', Prentice Hall of India Private Limited, New Delhi, 2003.

Reference Books

1. Donald A.Neaman," Semiconductor Physics and Devices" 3rd Ed., Tata McGraw-Hill, 2002.
2. S.Salivahanan, N.Sureshkumar and A.Vallavaraj, Electronic Devices and Circuits, TMH, 2008.
3. S.M.Sze, Semiconductor Devices – Physics and Technology, 2nd edn. John Wiley, 2002.
4. Ben G.Streetman and Sanjay Banerjee, Solid State Electronic Devices, Pearson Education, 2000.
5. Nandita Das Gupta and Amitava Das Gupta, Semiconductor Devices – Modelling and Technology, Prentice Hall of India, 2004.

12MT203 SCRIPT WRITING AND VIDEO PRODUCTION

Credits: 4:0:0

Course Objective:

- To do detailed study on script writing and video production.

Course Outcome:

- Students will gain comprehensive knowledge about video production and script writing.

Unit I

THE PROPOSAL OUTLINE: – questions to ask before writing the script – Visual treatment- subject factor – the film treatment – thinking through the treatment – the sequence outline – types of sequence – the shooting script- How shots are related – writing narration – the feature – preparing the presentation – the character – full length - the story treatment.

Unit II

THE ART OF CONFRONTATION: – confrontation dynamics – secondary function – the step outline – dialogue devices – the master scene script – format – adaptation and its problems – surviving story conferences- the story board – judging screen time – terminology used

Unit III

STORY OUTLINE: – proposal outline – script discussion – characterization – story treatment – master scene script – project presentation.

Unit IV:

BASIC SHOTS: angles & camera movements-introduction -lighting and colors-single camera – multi-camera production-indoor studio-outdoor -properties.

Unit V:

BUDGETING, Identifying sponsors, producer, insurance, safety measures, acquiring equipment, casting, hiring crew, sets, props, purchase of recording & storage material, location scouting, scheduling, transport, technical support, legal issues, permissions

Text Books

1. Dwight V Swain, “Film Scriptwriting”, Focal Press publishers, 1998.
2. Steve Katz, “Film Directing Shot”, Focal Press publishers, 1991.
3. Paul Wheeler , “Digital Cinematography”, Focal Press, 2001

References Books

1. Steven Katz “Film Directing: Cinematic Motion “ Focal Press publishers, 2004.
2. Antony Friedman “Writing for media” ,Focal press, 2006.

12MT204 C++ AND DATA STRUCTURES

Credits: 4:0:0

Course Objective:

- To learn the systematic way of solving problems
- To understand the different methods of organizing large amounts of data
- To learn to program in C++
- To efficiently implement the different data structures
- To efficiently implement solutions for specific problems

Course Outcome:

- Demonstrate strong problem solving skills in constructing C++ programs to address exercises inspired by real-world problems.
- Analyze the performance of algorithms and data structures.

Unit I

OBJECTS AND CLASSES: Objects – classes – inheritance – reusability – creating new data types – polymorphism and Overloading. Simple class, C++ objects as physical objects, C++ Objects and Data types, Object as function argument, constructors, as function argument, Overloaded Constructors, Copy Constructors, Static class data, const and classes, Arrays and Strings.

Unit II

OPERATOR OVERLOADING: Overloading Unary and Binary Operator, data conversion, and Pitfalls, Inheritance: derived class and base class, derived class constructors, Overloading member functions, class hierarchies, public and private inheritance, level of inheritance, multiple inheritance. Pointers: address and pointers, pointers and arrays, pointer and c-type strings, new and delete operator, pointers to pointer.

Unit III

VIRTUAL FUNCTIONS: Virtual functions, Friend functions, Static functions, this pointer. Streams and files: stream classes, stream errors, disk file I/O with streams, file pointers, error handling in file I/O. Templates and exception: function templates, class templates, exceptions.

Unit IV

INTRODUCTION TO DATA STRUCTURES: Linked list, Single linked list, Double linked list, Circular Linked list, Stack, Queue, Trees.

Unit V

SORTING AND SEARCHING TECHNIQUES: Sorting, Bubble sort, Insertion Sort, election Sort, Quick Sort, Heap Sort, Merge Sort. Searching, Binary Tree Search, Linear Search, Binary Search.

Text Books

1. Robert Lafore, Object Oriented Programming in C++, Fourth Edition, Galgotia Publishers, Pune 2002
2. Peter smith, Applied Data Structures with C++, Narosa Publishing House, 2004.

Reference Books

1. Herbert Schmidt, C++, The Complete Reference, McGraw-Hill Publishing Company Limited, New Delhi, 4th Edition 2000.
2. Sartaj Sahni, “Data Structures, Algorithms and Applications in C++”, McGraw-Hill Publishing Company Limited, New York, 2nd Edition 2005.

12MT205 AUDIO ENGINEERING AND PRODUCTION

Credits 3:0:0

Course Objectives:

- Understanding production workflow
- To acquire In-Depth knowledge on consoles and Digital audio workstations

Course Outcome:

- The student will be well versed in the technologies in Audio and Music production at the end of this subject.

Unit I

MICROPHONES AND AUDIO: Capturing Sound Electronically-Magnetic and Electronic Principles, Dynamic Transducers, Ribbon Transducers, Carbon Particle Transducers, Piezoelectric Transducers Reversed Transducers. Microphones-Technical Features, Pickup Patterns, Microphone Usage, Specialized Microphones, Microphone Placement, Miking techniques, Offaxis Coloration, Proximity Effect ,Acoustic Phase Relationships, Distant Miking.

Unit II

Mixers and Recorders: Pre-amplification, Peak Indicators, Faders and Potentiometers Level Indicators, Headroom, Signal Routing Signal Sends, Split and Inline Mixers, Control Room Monitoring, Mute and Solo, Pan Potentiometers, Channelized Mixers, Mixer Automation, Digital Consoles, Broadcast Consoles, Automatic Consoles, Digital Audio Workstations and Computers.

Unit III

POST PRODUCTION SYSTEMS: Audio post production equipments, Pre production for post production, Track planning and Post Production sequences, Transmission and reproduction of audio post production materials, Digital Audio Transfers, Synchronizing and controllers, sound effects, stereo, music, monitoring and the environment

Unit IV

EDITING AND PROCESSING: Purposes of Editing, Foundations of Editing: Adjusting Levels, Control Surfaces in Editing. Audio Processors and Processing-Amplification and Level Control, Dynamic Processors, Frequency Processors, Temporal Processing, Digital Signal Processing, Noise Reduction Processors, Forensic Sound, Monitors and Loudspeakers, Transporting Sounds

Unit V

Music Production: Genres in music, Music production workflow, MIDI, Sampling, Quantization, MIDI automation, Synchronization, MIDI clock, MIDI timecode.

Text Book:

1. David Miles Huber, Modern Recording Techniques, Sixth edition, Focal Press, 2005.
2. Zack Price, Computer based music production, Cherry lane music, 2005

Reference Books:

1. Michael Talbot Smith, Sound Engineering explained, Focal Press, 2001.
2. Bobby Owsinski, The mixing Engineers Handbook, 2nd edition, Thomas Course Technology, 2006.
3. Jay Rose, Audio Post Production for Digital Video, CMP books, 2002.

12MT206 ELECTRONICS DEVICES AND CIRCUITS LAB

Credits: 0:0:2

Course Objectives:

The main objective of this curriculum/course is to make the students well versed with basic electronic components and circuits. The students can

- Understand the nature and scope of modern electronics.
- Describe physical models of basic components.
- Design and construct simple electronic circuits to accomplish a specific function, e.g., designing amplifiers, ADC converters etc.
- Understand their capabilities and limitations and make decisions regarding their best utilization in a specific situation.

Course Outcome:

The combination of lecture and laboratory sessions provides learning opportunities that should enable the student to do the following upon completion of this course:

- Set up a bias point in a transistor.
- Verify the working of diodes, transistors and their applications.
- Build a common emitter/base/collector amplifier and measure its voltage gain.
- Understand the use of RPS and CRT.
- Explore the operation and advantages of operational amplifiers.
- Learn to design different types of filters and apply the same to oscillators and amplifiers.
- Exploring the circuitry which converts an analog signal to digital signal.

List of Experiments:

1. Characteristics of PN diode, Zener diode and Photo diode
2. Rectifiers (diode application)
3. NPN-PNP Transistors Biasing
4. Design of UJT/BJT amplifier
5. Characteristics of BJT in common emitter/base/collector configuration
6. Input and Output Characteristics of FET/JFET
7. Filters (R-C/ L-C / R-L-C)
8. Clippers and Clampers
9. RC coupled Amplifier
10. Op-Amp Inverter/Non Inverter
11. Op-Amp Differentiator and Integrator
12. Analog to Digital Conversion

12MT207 C++ PROGRAMMING LAB

Credits: 0:0:2

Course Objective:

- To understand the basic concepts of C++ programming

- To know about the object oriented programming concepts

Course Outcome:

- To identify and program concepts using C++.
- Create applications using object oriented programming principles

List of Experiments

1. Introduction to C++
2. Introduction to Classes and Objects.
3. Loops and control structures.
4. Function overloading in C++
5. Inheritance
6. Operator overloading in C++
7. Pointers.
8. Arrays using functions and strings.
9. Virtual functions
10. Friend functions
11. File handling.
12. Exception handling

12MT208 PHOTOGRAPHY LAB

Credits: 0:0:2

Course Objective:

- To train the students in the basics of framing artistically with photography and its software applications. To introduce the students the process of photography in studios.

Course Outcome:

- Students will be well equipped with all the basics of framing artistically with photography and its software applications practically which helps them in doing photography.

List of experiments:

Introduction: Basics of photography-The still camera-Accessories and equipments-Rules for composition-Lighting.

1. Framing and composition
2. Pictures under different light conditions
3. Black and White photography
4. Portrait photography
5. Texture/ Pattern photography
6. Travel/Architecture photography
7. Product photography
8. Fashion photography
9. Abstract photography
10. Sports/Action Photography

11. Nature/Wildlife photography
12. HDR photography

Reference Book

1. Dan Simson, Digital Photography Bible, Wiley, 2004.

12MT209 JAVA PROGRAMMING AND APPLICATIONS

Credits: 3:0:0

Course Outcome:

- To enable the students to design and develop enterprise strength distributed and multi-tier applications – Using Java Technology.

Course Objective:

- To learn advanced Java programming concepts like reflection, native code interface, threads, etc.
- To develop network and 2D animation programs in Java

Unit I

INTRODUCTION TO JAVA: Object oriented language – The JAVA environment – comparing JAVA C and C++–Keywords & operators – Identifiers – Literal – Expressions – Control flow – Arrays & Strings – Functions – Command line Arguments .Data members – methods – Overloading constructors – Class Assignment – This – Static members & methods - Inheritance – Abstract classes – exceptions .

Unit II

THE JAVA STANDARD LIBRARY: Overview– interfaces – packages – Exploring java.Lang–Simple type Wrappers. Input Output: Exploring java. io_Java I/O classes and Interfaces – The Character Stream – BufferedReader –BufferedWriter . Multithreaded Programming: Thread model –Creating a thread . Creating multiple thread– Thread Priority .

Unit III

THE APPLLET CLASS:HTML – Programming– applet initialization and termination – Applet skeleton – Simple Applet Display method – Passing parameters to applet .Events – Classes – Handling AWT Controls – Sources of events –Event Listener interfaces–Handling the events .AWT Classes –Windows fundamentals – Creating frame Window– Handing events in frame window - Working with graphics – Working with Color – Working with font –Layout Managers –MenuBar and menus –Dialog Boxes.

Unit IV

INTRODUCTION TO JAVA 2D AND APPLICATIONS: The rendering pipeline, Geometry: Drawing 2D Lines, Shapes and Curves , Painting with solid colors, gradients, and textures, Stroking paths, including dashed lines, Transformations: translation in java2D, rotation in java 2D, shearing, and scaling Alpha compositing, Clipping, Rasterizing and antialiasing. Image processing in java2D: image color models,image data processing, Image data storage.

Unit V

INTRODUCTION TO JAVA3D AND APPLICATION: The structure of a 3D Program, The Java3D Package, Canvas3D, Geometry: Drawing 3D Lines, Shapes and Curves, Java 3D Scene Graphs ,Shape3D and Transform3D, texturing in java3D, lighting in java3D- Ambient Light, Directional Light, Point Light, Spotlight, projections in java3D, Animations in Scene Graphs.

Text Books

1. Patric Naughton , Herbert Schildt, The Complete Reference “Java 2“, Third edition Tata Mc Graw Hills ,2001.
2. Java 2D Graphics by Jonathan B. Knudsen O'reilly Media (May 2005)

Reference Book

1. E. Balaguruswamy, Programming with Java , Second Edition, TMH, 2001

12MT210 ANALOG ELECTRONICS CIRCUITS I

Credits: 4:0:0

Course Objective:

- The aim of this course is to familiarize the student with the analysis and design of basic transistor amplifier circuits and power supplies.

Course Outcome:

On completion of this course the student will understand the

- Methods of biasing transistors & Design of simple amplifier circuits
- Mid – band analysis of amplifier circuits using small - signal equivalent circuits to determine gain , input impedance and output impedance
- Method of calculating cutoff frequencies and to determine bandwidth
- Design of power amplifiers and heat sinks
- Analysis and design of power supplies and power control using SCR.

Unit I

TRANSISTOR BIASING: BJT – Need for biasing - Fixed bias circuit, Load line and quiescent point. Variation of quiescent point due to h_{FE} variation within manufacturers tolerance. Stability factors. Different types of biasing circuits. Method of stabilizing the Q point to the extent possible. Advantage of Self bias (voltage divider bias) over other types of biasing. Use of Self bias circuit as a constant current circuit. Source self bias and voltage divider bias for FET. Use of JFET as a voltage variable resistor.

Unit II

MIDBAND ANALYSIS OF SMALL SIGNAL AMPLIFIERS: CE, CB and CC amplifiers. Method of drawing small-signal equivalent circuit. Midband analysis of various types of single stage amplifiers to obtain gain, input impedance and output impedance. Miller's theorem. Comparison of CB, CE and CC amplifiers and their uses. Darlington connection using similar and Complementary transistors. Methods of increasing input impedance using Darlington connection and bootstrapping. CS, CG and CD (FET) amplifiers. Multistage amplifiers. Basic

emitter coupled differential amplifier circuit. Bisection theorem. Differential gain. CMRR. Use of constant current circuit to improve CMRR. Derivation of transfer characteristic, Transconductance. Use as Linear amplifier, limiter, amplitude modulator.

Unit III

FREQUENCY RESPONSE OF AMPLIFIERS: General shape of frequency response of amplifiers. Definition of cut off frequencies and bandwidth. Low frequency analysis of amplifiers to obtain lower cut off frequency Hybrid – pi equivalent circuit of BJTs. High frequency analysis of BJT amplifiers to obtain upper cut off frequency. High frequency equivalent circuit of FETs. High frequency analysis of FET amplifiers. Gain-bandwidth product of FETs. General expression for frequency response of multistage amplifiers. Calculation of overall upper and lower cut off frequencies of multistage amplifiers. Amplifier rise time and sag and their relation to cut off frequencies.

Unit IV

LARGE SIGNAL AMPLIFIERS : Classification of amplifiers (Class A, B, AB, C&D), Efficiency of class A, RC coupled and transformer-coupled power amplifiers. Class B complementary symmetry, push-pull power amplifiers. Calculation of power output, efficiency and power dissipation. Crossover distortion and methods of eliminating it. Heat flow calculations using analogous circuit. Calculation of actual power handling capacity of transistors with and without heat sink. Heat sink design.

Unit V

RECTIFIERS AND POWER SUPPLIES: Half-wave, full-wave and bridge rectifiers with resistive load. Analysis for V_{dc} and ripple voltage with C, CL, L-C and C-L-C filters. Voltage multipliers Zener diode regulator. Electronically regulated d.c power supplies. Line regulation, output resistance and temperature coefficient. Switched mode power supplies. Power control using SCR.

Text Books

1. Millman J. and Halkias .C., " Integrated Electronics ", 2nd Edition, Tata McGraw-Hill, 2001.

Reference Books

1. Robert L. Boylestad and Louis Nashelsky, "Electronic Devices and Circuit Theory", 8th Edition., PHI, 2002.
2. S.Salivahanan, et.al, "Electronic Devices and Circuits", TMH, 2008.
3. Floyd, Electronic Devices, Sixth edition, Pearson Education, 2003.
4. I.J. Nagrah, Electronics – Analog and Digital, PHI, 2009.

12MT211 DIGITAL ELECTRONICS

Credits: 3:1:0

Course Objectives:

- To introduce number systems and codes
- To introduce basic postulates of Boolean algebra and shows the correlation between Boolean expressions
- To introduce the methods for simplifying Boolean expressions

- To outline the formal procedures for the analysis and design of combinational circuits and sequential circuits
- To introduce the concept of memories, programmable logic devices and digital ICs.

Course Outcome:

- On completion of this course, the students can design combinational and sequential digital logic circuits. Also they will have knowledge on Programmable Logic devices and its usage.

Unit I

NUMBER SYSTEMS AND BOOLEAN ALGEBRA: Binary, octal, hexadecimal number systems, Complements, representation of signed numbers, floating point numbers -BCD-ASCII-EBCDIC Excess 3 code-gray code-error detecting and correcting codes. Boolean Algebra: Postulates and theorems of Boolean Algebra –canonical forms – simplification of logic functions using Karnaugh map.

Unit II

COMBINATIONAL LOGIC DESIGN: Logic gates –implementation of combinational logic functions –encoders & decoders – multiplexers & demultiplexers –code converters – comparator – half adder, full adder – parallel adder – binary adder – parity generator/checker – implementation of logical functions using multiplexers.

Unit III

COUNTERS AND REGISTERS: RS, JK, Master–slave, D&T flip flops – level triggering and edge triggering – characteristic tables, characteristic equations, excitation tables –asynchronous & synchronous counters – modulus counters–shift register –Johnson counter- ring counter – timing waveforms.

Unit IV

SEQUENTIAL LOGIC DESIGN: Basic models of sequential machines – concept of state table – state diagram – state reduction implementation of synchronous sequential circuits – asynchronous sequential logic – Fundamental mode operation – Transition Table, Flow Table, Race, Primitive Flow Table, Reduction of primitive flow table, Reduction of state and flow tables, Race free assignment.

Unit V

PROGRAMMABLE LOGIC AND DIGITAL INTEGRATED CIRCUITS: Semicustom design – Introduction to PLD's – ROM – PAL – PLA – FPGA. Digital IC – Characteristics - Logic Families: RTL, TTL, ECL, CMOS, Comparison of performance of various logic families.

Text Book:

1. Morris Mano, Digital Design, Prentice Hall of India, 2002.

Reference Books:

1. John M.Yarbrough, 'Digital Logic, Application & Design', Thomson, 2002.
2. Thomas L.Floyd, "Digital Fundamentals", PHI, 2003.

Credits 3:0:0

Course Objective:

- To Understand Sound and it's properties
- To gain knowledge about acoustics
- Enlightening on the various technicalities involved in acoustic design of studios

Course Outcome:

- The students will have thorough understanding about acoustics and sound-proofing, which will enable them in acoustic design of studios.

Unit I

SOUND: Sound source-Propagation of sound-Sound waves-Sound in free space-Sound and obstacles-Wavelength-frequency-Complex--waves-Pitch-Timbre-harmonics-phase-partialsoctaves-Linear and Logarithmic measures-Understanding Decibel -Units of sound- Sound Pressure level-Sound Intensity level –Acoustics-Reverberation-Sound transmission class-Echo-Effect of boundaries-Absorbers-Diffusers-Adjustable acoustics-Reverb Time and it's techniques-Acoustic properties of materials-The human ear

Unit II

ACOUSTICS OF A SMALL RECORDING STUDIO: Acoustical characteristics of a studio-reverb-studiodesign-studio volume-room proportions-reverberation time-diffusion-noise-studio design procedure-studio features-elements common to all studios-Air handlers-Sound isolation-Minimising structure-borne sound

Unit III

ACOUSTICS FOR CONTROL ROOM: Initial time delay gap-live end-specular reflections vs diffusion low frequency resonances-managing reflections-control room frequency range-outer shell of the control room-inner shell of the control room-representative control rooms-study of designs consultants

Unit IV

ACOUSTICS FOR LISTENING ROOM: Acoustical link-peculiarities of small room acoustics-room size room proportions-reverb time-low frequencies-control of modal resonances-bass traps-modal colorations-mid-high frequencies-identification and treatment of reflecting points-lateral reflections-control of spaciousness.

Unit V

ACOUSTICS FOR MULTITRACKING: Flexibility-Advantages and disadvantages of multitracking-Achieving track separation-studio acoustics-distance between artists-microphone management barriers for separation-electronic separation- electronic instruments and separation

Text Book:

1. F. Alton Everest, Master Handbook for Acoustics- V Edition, MCGraw-Hill, 2010.

Reference Book:

1. Michael Talbot Smith, 'Sound Engineering explained', Focal Press, 2001

12MT213 DIGITAL SIGNAL PROCESSING & MEDIA APPLICATIONS

Credits: 3:1:0

Course Objective:

- This course will introduce the basic concepts and techniques for processing signals on a computer.
- By the end of the course, you be familiar with the most important methods in DSP, including digital filter design, transform-domain processing and importance of Signal Processors.
- The course emphasizes intuitive understanding and practical implementations of the theoretical concepts.

Course Outcome:

- Represent discrete-time signals analytically and visualize them in the time domain.
- Understand the meaning and implications of the properties of systems and signals.
- Understand the Transform domain and its significance and problems related to computational complexity.

Unit I

INTRODUCTION TO DSP AND FOURIER TRANSFORM: Signals, Systems and Signal Processing: Basic Elements of a Digital Signal Processing System-Advantages of Digital over Analog Signal Processing, Discrete-Time Signals and Systems:-Discrete-Time Signals-Discrete-Time Systems-Analysis of DTLTI Systems-DT Systems described by Difference Equations-Correlation of DT signals, Linear, circular convolution Sectioned convolution , DTFT – DFT-FFT Computations using DIT algorithms FFT Computations using DIF algorithms

Unit II

FINITE IMPULSE RESPONSE DIGITAL FILTERS : Review of classical analog filters: Butterworth and Chebyshev filters, Elliptic filters, Linkwitz Riley filters - Transformation of Butterworth and Chebyshev filters into equivalent digital filters using Bilinear transform method and Impulse invariant method -Realization structures of IIR filters: Direct form I and II, cascade forms and Parallel forms

Unit III

FINITE IMPULSE RESPONSE DIGITAL FILTERS: Symmetric FIR filters-Linear phase response and its Implication - FIR filter design using window method, Frequency sampling method- Realization structures of FIR filters: Direct form-Cascade-Linear Phase Realizations.

Unit IV

FINITE WORD LENGTH EFFECTS: Representation of numbers in registers ADC quantization noise Coefficient quantization error Product quantization error Limit cycles due to

product round-off Round-off Noise reduction scheme Addition overflow errors, Principle of scaling

Unit V

SPECIAL TOPICS IN DSP AND DSP PROCESSORS: Introduction to general and special purpose hardware for Digital Signal Processors- Harvard architecture, Pipelining, MAC, Special instructions, Replication, On-chip memory/cache-Extended parallelism Applications of Digital Signal Processing: Dual-Tone multifrequency Signal Detection-Spectral Analysis of Sinusoidal Signals-Spectral Analysis of Nonsatourary Signals-Spectral Analysis of Random Signals-Musical Sound Processing-Digital Music Synthesis.

Text Books

1. John G.Proakis and Dimitris G.Manolakis, 'Digital Signal Processing Algorithms and Applications', PHI of India Ltd., New Delhi, 4th Edition, 2008
2. Oppenheim and Schafer, 'Digital Signal Processing', Prentice Hall of India, Reprint 2002

Reference Books

1. Johnny R.Johnson, "Introduction to Digital Signal Processing", PHI of India Ltd., New Delhi, Reprint, 2011
2. Emmanuel C.Ifearcher and Barrie W.Jervis, 'Digital Signal Processing – a Practical approach', Addison-Wesley Longman Ltd, 2nd 2004 Low Price Edition
3. Sanjit K.Mitra, 'Digital signal Processing – A Computer Based Approach', Tata McGraw – Hill, New Delhi, 3rd Edition, 2008
4. Lonnie C Ludeman, Fundamentals of Digital Signal Processing, John Wiley and Sons ,

12MT214 AUDIO ENGINEERING AND PRODUCTION LAB

Credits: 0:0:2

Course Objective:

- To learn the various trends and technologies in Audio engineering and production

Course Outcome:

- The students will be well trained in handling various audio software.
- They will also learn the nuances in handling equipment, setting up for a recording and troubleshooting.
- The students will gain in-depth knowledge in the terms and techniques in audio production.
- They would have learnt the working signal flow of a basic studio set up.

List of Experiments

1. Recording voice
2. Recording dialogue
3. Basic edits

4. Radio Edit
5. On-location sound
6. Special effects
7. Foley
8. ADR
9. Music and Effects
10. MIDI
11. Multi-track recording
12. Mixing

12MT215 DIGITAL ELECTRONICS LAB

Credits: 0:0:2

Course Objective:

- To impart the concepts of digital electronics practically and train students with all the equipments which will help in improving the basic knowledge.

Course Outcome:

- The students will have good knowledge about the concepts of digital electronics and they will be able to apply all these concepts practically.

List of Experiments:

1. Logic gates
2. Half adder and Full adder
3. Multiplexer and De-multiplexer
4. Code converter
5. Encoder and Decoder
6. Flip-flops
7. Counters
8. Shift registers
9. IC timer
10. Parity generation and checking
11. Analog to digital converter
12. Digital to analog converter

12MT216 ANALOG ELECTRONIC CIRCUITS II

Credits: 4:0:0

Course Objective:

- The aim of this course is to familiarize the student with the analysis and design of feedback amplifiers, oscillators, tuned amplifiers, wave shaping circuits, multivibrators and blocking oscillators.

Course Outcome:

On completion of this course the student will understand the

- Advantages and method of analysis of feedback amplifiers
- Analysis and design of RC and LC oscillators, tuned amplifiers, wave shaping circuits, multivibrators, blocking oscillators and time based generators.

Unit 1

FEEDBACK AMPLIFIERS: Block diagram. Loop gain. Gain with feedback. Desensitivity of gain. Distortion and cut off frequencies with feedback. The four basic feedback topologies and the type of gain stabilized by each type of feedback. Input and Output resistances with feedback. Method of identifying feedback topology, feedback factor and basic amplifier configuration with loading effect of feedback network taken into account. Analysis of feedback amplifiers. Nyquist criterion for stability of feedback amplifiers.

Unit II

OSCILLATORS: Barkhausen Criterion. Mechanism for start of oscillation and stabilization of amplitude. Analysis of Oscillator using Cascade connection of one RC and one CR filters. RC phase shift Oscillator. Wienbridge Oscillator and twin-T Oscillators. Analysis of LC Oscillators, Colpitts, Hartley, Clapp, Miller and Pierce oscillators. Frequency range of RC and LC Oscillators. Quartz Crystal Construction. Electrical equivalent circuit of Crystal. Crystal Oscillator circuits.

Unit III

TUNED AMPLIFIERS: Coil losses, unloaded and loaded Q of tank circuits. Analysis of single tuned and synchronously tuned amplifiers. Instability of tuned amplifiers. Stabilization techniques. Narrow band neutralization using coil. Broad banding using Hazeltine neutralization. Class C tuned amplifiers and their applications. Efficiency of Class C tuned Amplifier.

Unit IV

WAVE SHAPING AND MULTIVIBRATOR CIRCUITS: RL & RC Integrator and Differentiator circuits. Diode clippers, clampers and slicers. Collector coupled and Emitter coupled Astable multivibrator. Monostable multivibrator. Bistable multivibrators. Triggering methods. Storage delay and calculation of switching times. Speed up capacitors. Schmitt trigger circuit.

Unit V

BLOCKING OSCILLATORS AND TIMEBASE GENERATORS: Monostable and Astable Blocking Oscillators using Emitter and base timing. Frequency control using core saturation. Pushpull operation of Astable blocking oscillator i.e., inverters. Pulse transformers. UJT sawtooth generators. Linearization using constant current circuit. Bootstrap and Miller saw-tooth generators.

Text Books:

1. Millman and Halkias. C., "Integrated Electronics", Tata McGraw-Hill 2001
2. Schilling and Belove, "Electronic Circuits", TMH, Third Edition, 2002
3. Millman J. and Taub H., "Pulse Digital and Switching waveform", McGraw-Hill, 2000

Reference Books

1. Sedra Smith, "Micro Electronic Circuits" Oxford university Press, 2004.
2. David A. Bell, " Solid State Pulse Circuits ", Prentice Hall of India, 1992.
3. Robert L. Boylestead and Louis Nasheresky, 8th edn., PHI, 2002.

12MT217 MICROPROCESSOR AND MICROCONTROLLERS

Credits: 3:0:0

Course Objective:

- To introduce and learn the architecture, programming and interfacing of microprocessors and Microcontrollers.

Course Outcome:

- The students will gain adept knowledge in Microprocessor and Microcontroller terminologies.

Unit I

8085 CPU: 8085 Architecture – Instruction set – Addressing modes – Timing diagrams – Assembly language programming – Counters – Time Delays – Interrupts – Memory interfacing – Interfacing I/O devices.

Unit II

PERIPHERALS INTERFACING: Interfacing Serial I/O (8251)- parallel I/O (8255) – Keyboard and Display controller (8279) -ADC/DAC interfacing – Inter Integrated Circuits interfacing (I2C Standard)- Bus: RS232CRS485- GPIB

Unit III

THE 8051 ARCHITECTURE: Introduction - 8051 Micro controller Hardware - Input/Output Ports and Circuits - External Memory - Counter and Timers - Serial data Input/Output - Interrupts.

Unit IV

8051 BASIC ASSEMBLY LANGUAGE PROGRAMMING CONCEPTS: The Assembly Language Programming Process - Programming Tools and Techniques - Programming the 8051 - Data Transfer and Logical Instructions - Arithmetic Operations - Decimal Arithmetic - Jump and Call Instructions - Further Details on Interrupts.

Unit V

ARM PROCESSOR AND ARCHITECTURE: The ARM processors - ARM registers - ARM instructions - The ARM built - in shift mechanism - ARM branch instructions - sequence control - Data movement and memory reference instructions.

Text Books

1. Ramesh S Gaonkar, Microprocessor Architecture, Programming and application with 8085, 4th Edition, Penram International Publishing, New Delhi, 2000.
2. John Uffenbeck, the 80x86 Family, Design, Programming and Interfacing, Third Edition. Pearson Education, 2002.
3. Kenneth J Ayala, the 8051 Microcontroller Architecture Programming and Application, 3rd Edition, Penram International Publishers (India), New Delhi, 2004.
4. Alan Clements, "The principles of computer Hardware", Oxford University Press, 3rd Edition, 2003.

Reference Books

1. A.K. Ray and K.M.Burchandi, Intel Microprocessors Architecture Programming and Interfacing, McGraw Hill International Edition, 2000
2. Mohammed Ali Mazidi and Janice Gillispie Mazidi, the 8051 Microcontroller and Embedded Systems, Pearson Education Asia, New Delhi, 2003.
3. M. Rafi Quazzaman, Microprocessors Theory and Applications: Intel and Motorola prentice Hall of India, Pvt. Ltd., New Delhi, 2003
4. Joseph Yiu, "The Definitive Guide to the ARM Cortex-M3", Newnes Edition, 2007.

12MT218 DIGITAL TELEVISION & DIGITAL VIDEO ENGINEERING

Credits: 4:0:0

Course objectives:

- To Overview of current and emerging trends in digital television.
- Comparing the different standards of digital television standards.

Course Outcome:

- To identify the techniques involved in digital television broadcasting and transmission.
- To know and monitor basics and principles of digital television systems.

Unit 1

BASICS OF TELEVISION: eye brain mechanism, scanning standards, resolution concept, composite video signal, Digital video fundamentals: spectrum of video signals, black box, composite digital standards.

Unit II

DIGITAL TELEVISION TRANSMISSION: Transmission lines for digital television: fundamental parameters, efficiency, VSWR, AERP, waveguide attenuation. Transmitting antennas for digital television: patterns, types of digital television antennas.

Unit III

DTV NETWORKING AND TRANSPORT TECHNOLOGIES: networking and transmission protocols: reference architecture and components, transmission protocols, Transport technologies, IEEE1394, data streaming, DTV standard converters.

Unit IV

CHANNEL CODING AND MODULATION FOR DTV: data synchronization, randomization, scrambling, forward error correction, interleaving, 8 VSB, COFDM. Digital television transmission standards, DVB coding and modulation. Picture quality analysis.

Unit V

INTERNATIONAL SYSTEM FOR DIGITAL TELEVISION: Introduction, reference model for DTV system, source coding, transport layer, MPEG-2 systems layer, BST-OMFD, middleware, ginga middleware, interactivity channel, WiMAX.

Text Books

1. Michael Robin, Michael Poulin “Digital Television Fundamentals”, McGraw Hill 2nd Edition 2000.
2. Gerald W.Collins, “Digital Television Transmission”, John Wiley & Sons 2001

Reference Books

1. Marcelo S. Alencar, “Digital television Systems”, Cambridge University Press 2009.
2. Walter Fisher. “ Digital Video And Audio Broadcasting Technology”, Springer 2nd Edition 2008.

12MT219 GRAPHICS AND ANIMATION

Credit: 4:0:0

Course Objective:

- To learn the animation techniques. To make the students understand about the 2D animation production..

Course Outcome:

- To do the types of animation compositing techniques and post production in 2D animation

Unit I

PRINCIPLES OF 2D GRAPHICS: Basic geometric objects, Geometric transformations, Applications of transformations, Animation and movements based on transformations, Interpolators for continuous changes, implementations in Java 2D.Lines and pixel graphics, Structural algorithms, Drawing arbitrary curve, Antialiasing with Java 2D,Areas, texts and colours

Unit II

PRINCIPLES OF 3D GRAPHICS: Geometric transformations, Animational moving objects, Projections in Java 3D, modeling 3D objects, Surface modeling, Normal vectors for Java 3D

Unit III

VISIBLE SURFACE DETERMINATION: Clipping volumes, Algorithms for visible surface determination, Image precision techniques, Priority algorithms, Illumination and shading: Light sources, Reflections, shadings, textures, textures in Java 3D

Unit IV

SPECIAL EFFECTS AND VIRTUAL REALITY: Fog and particle systems, Fog in Java 3D, Dynamic surfaces Interaction, Interaction in Java 3D, Collision detection, Collision detection in Java 3D, Sound effects, Sound effects in Java 3D, stereoscopic viewing.

Unit V

INTRODUCTION TO ANIMATION: Homogeneous coordinates and transformation, Description of transformation in the display pipeline, Interpolation-Controlling the motion along a curve, Interpolation of rotations.

Text Book:

- Frank Klawonn, Introduction to Computer Graphics Using Java 2D and 3D, Springer, 2008

Reference Books:

- Aaron E. Walsh ,Doug Gehringer , Java 3D API Jump-Start, Prentice Hall, 2001
- Leen Ammeraal ,Kang Zhang, Computer Graphics for Java Programmers, ISBN-13: 978-0470031605, 2007

12MT220 ELEMENTS OF VIDEO PRODUCTION

Credit 3:0:0

Course Objective:

- To understand the aesthetics of video production
- To identify the elements of shot.
- To learn the camera options and production techniques.
- To understand the continuity of shots
- To learn the editing principles

Course Outcome:

- Students should be equipped with the video production skills so that they may be able to direct the production.
- The important component of this programme is to impart the aesthetics of film direction so that the student become capable of producing a show effectively.

Unit I

INTRODUCTION TO VIDEO EQUIPMENTS: Digital Video Camera – Types Of Video Cameras – Format – Major Accessories – Camera Formats – Camera Operations And Functions

– Aperture – Shutter – White Balance – Focusing Methods - Focal Length – Depth Of Field – Video Signal – Video Format.

Unit II

THE SHOT: Elements of the shot: the shot – definition. **mise-en-scene:** aspects of mise-en-scene – lighting in a shot – setting aspect in a shot – character expression and movement – costume and makeup of the character - the realism of mise-en-scene – the power of mise-en-scene – time and space in mise-en-scene

Unit III

THE PRODUCTION: cinematography properties – basic types of shot - camera movement – camera framing – camera angle – duration of the shot – long take. lighting for a scene – colour temperature – dolly – trolley – grips and camera accessories – tripod – montage – lighting equipments.

UNIT IV

TYPES OF PRODUCTION: single camera production: the shot, scene, sequence, story board types of script, location scouting - the production phase. Multi camera production – rehearsal – Floor manager - the crew – director, cameraman, script writer, lighting director, art director, music director, gaffer, production assistant, etc.,- documentary production – short film production – electronic field production – talk shows interviews.

Unit IV

UNDERSTANDING THE POST PRODUCTION: online production – offline production – the edl – dimensions of editing – spatial – rhythmic – graphic – temporal editing - continuity editing. Dimensions of film sound – voice over – dubbing – re-recording – titling – adding special effects.

Text Books:

1. Digital Cinematography – Paul Wheeler, Focal Press – 2001
2. Film Art – David Boardwell – Thirteenth Edition 2001

Reference Book

1. Video Production techniques – zettl - 2002

12MT221 MICROPROCESSOR AND MICROCONTROLLER LAB

Credits: 0:0:2

Course Objective:

- To introduce to students the basics of microprocessor and microcontroller Programming and their applications.

Course Outcome:

- The students will be equipped with the basic knowledge of microprocessor and microcontroller interfacing and their applications.

List of Experiments:

1. Arithmetic and Logical operations using 8085
2. Data Transfer operation using 8085
3. Code conversions using 8085
4. Programs on finding largest/smallest number using 8085
5. Parallel port Interfacing using 8255
6. ADC Interfacing using 8085
7. DAC Interfacing using 8085
8. Arithmetic and Logical operations using 8051
9. Programs on finding largest/smallest number using 8051
10. Programs on ascending/descending order using 8051
11. Stepper motor interfacing using 8051
12. RS232 Interfacing using 8051

12MT222 GRAPHICS AND ANIMATION LAB

Credits: 0:0:2

Course Objective:

- To train the students in the area of 2D Animation and its software applications. To make the students understand the process of 2d animation production in studios. The students will be trained in the area of basic character designing and concept designing in 2D animation.

Course Outcome:

- Students will gain the knowledge in computer graphics and animation.

List of Experiments

1. Software interface
 - a. Screen layout
 - b. Basic drawing tools
 - c. Animating rough blue and planning red
 - d. Setup and Marking menus
 - e. Working with Layers
2. Frame by frame animation
3. Key frame, Inbetweens & Secondary actions
4. Tweening
5. Compositing and camera movements for animation
6. Motion guide
7. Converting to symbols
8. Creating effects using filters
9. Embedding video
10. Introduction to Action Script
11. Creating basic movements using Action Script

12. Keyboard and mouse interfacing using Action script

12MT223 VIDEO PRODUCTION LAB

Credits : 0:0:2

Course Objective:

- To learn practically pre production techniques in film production. To learn the art of script preparation..

Course Outcome:

- To create the concept for a video production. Knowing the process of video production techniques and the various script formats

List of Experiments:

1. The Camera interface
2. Basic shots and angles
3. Different lighting techniques for indoor production
4. Different lighting techniques for Outdoor production
5. Using the Dolly, trolley and tracking
6. Single camera production
7. On-location sound
8. The vision mixer
9. Patching the studio for multi-camera setup
10. Interview with a two- camera setup
11. Talk show with multi-camera setup
12. Dance show/cultural event with multi-camera setup

12MT224 WEB DESIGNING

Credits: 3:0:0

Course Objective:

- Enabling the student to build and manage web applications and have working knowledge in HTML , DHTML & XML

Course Outcome:

- The students would learn to design, develop and manage web applications in media.

Unit 1

HTML: Introduction to internet and world wide web –Basic html document body -working with text-Hyperlinks-formatting – list - tables – using color and images - working with images – multimedia objects – working with frames – forms - XHTML.

Unit II

DHTML: Cascading style sheet – using styles – properties and values in styles – style sheets - Data Binding – Simple Data Binding – Moving with a record set – Sorting table data – Binding of an Image and table.

Unit III

XML: Basic Xml – Defining data for web applications – Document type definition – Xml schema – Document object model - Presenting xml - XSL – xml applications – Xml with perl.

Unit IV

WEB TECHNOLOGY: Internet protocols – Internet Applications and application protocols – web browsers – web servers – web server scripting.

UNIT V

CGI: Introduction – Building web application with perl - perl and CGI – CGI scripting – using RDBMS – creating and manipulating images – CGI environment variables – CGI.pm module – Debugging CGI applications and programs.

Text Books

1. Chris Bates , “Web Programming” , second edition reprint 2003, year of publications 2003.
2. Gopalan N.P , “Web Technology” , First edition , year of publications 2007.

Reference Books

1. Deitel & Deitel, Goldberg, “Internet and world wide web – How to Program”, Pearson Education Asia, 2001.
2. Simon Cozens and Peter Wainwright, Beginning Perl, Shroff publishers, Apress reprint 2005
3. Steven Holzner , HTML , Dreamtech press , Reprint Edition 2008
4. Elliotte Rusty Harold, “XML Bible”, IDG Books India (P) Ltd, Second Edition ,2003,

12MT225 ELECTRONIC COMMUNICATION SYSTEMS

Credits: 4:0:0

Course Objectives:

- To understand basic signals, analog modulation, demodulation and radio receivers.
- To understand source digitization, digital multiplexing and modulation.
- To understand the various noises in communication systems.

Course Outcome:

- This course will provide a clear understanding of various communication system Techniques, their operation and performance evaluation.

Unit I

WAVEFORM SPECTRA AND NOISE: Waveforms, spectrum, Energy signals, Power signals, Noise, Sources of noise, Thermal noise, shot noise, partition noise, low frequency noise, Signal to noise ratio, Noise factor, Noise temperature.

Unit II

AMPLITUDE MODULATION: Amplitude modulation – Modulation Index, Frequency spectrum, Power, DSBSC, Modulator demodulator circuits, AM transmitters, Super heterodyne receiver, tuning range, Image rejection, Adjacent channel selectivity, AGC, double –conversion receivers, Single-sideband principles, balanced modulator, SSB generation, SSB reception.

Unit III

FREQUENCY AND PHASE MODULATION: Frequency modulation – Frequency spectrum, power, Deviation ratio, Phase modulation, Equivalence between FM and PM, Angle modulator, FM transmitter, Angle modulation Detectors , AFC, Amplitude limiters, Noise in FM, Pre-emphasis and De-emphasis, FM broadcast and stereo receivers.

Unit IV

PULSE MODULATION: Pulse amplitude modulation, Sampling, Time division multiplexing, Pulse code modulation – Compression, Differential PCM, Delta modulation, Pulse Position Modulation, Pulse Width Modulation.

Unit-V

DIGITAL COMMUNICATION: Symbol. Bit, Baud, Line codes and waveforms, Basic digital communication systems, probability of error, digital carrier systems, ASK, FSK, PSK, QPSK.

Text Book:

1. Dennis John Roddy and Coolen, Electronic Communications, PHI, 2000.

Reference Books

1. Taub and Schilling, Principles of Communication Systems, McGraw Hill, 2003.
2. G.Kennedy, “Electronic Communication Systems”, McGraw Hill, 2003.

12MT226 COMPUTER NETWORKS

Credits: 3:0:0

Course Objective:

- To introduce key trends on network principles and practices.
- To provide a top down approach which focus on the internet and its accessible styles.

Course Outcome:

- Students will be able to manage networks and the applications behind it.

Unit I

INTRODUCTION TO NETWORKS: Introduction To Networks – Network Architecture – Network Performance – Direct Link Networks – Encoding – Framing – Error Detection – Transmission – Ethernet –Rings – FDDI – Wireless Networks – Switched Networks – Bridges

Unit II

INTER-NETWORKING: Internetworking – IP - ARP – Reverse Address Resolution Protocol – Dynamic Host Configuration Protocol – Internet Control Message Protocol – Routing – Routing Algorithms – Addressing – Subnetting – CIDR – Inter Domain Routing – IPv6

Unit III

TRANSPORT LAYER: Transport Layer – User Datagram Protocol (UDP) – Transmission Control Protocol – Congestion Control – Flow Control – Queuing Disciplines – Congestion Avoidance Mechanisms.

Unit IV

DATA COMPRESSION: Data Compression – Introduction To JPEG, MPEG, MP3 – Cryptography – Symmetric-Key – Public-Key – Authentication – Key Distribution – Key Agreement PGP – SSH – Transport Layer Security – IP Security – Wireless Security – Firewalls

Unit V

NETWORK APPLICATIONS: Domain Name System (DNS) – E-Mail – World Wide Web (HTTP) – Simple Network Management Protocol – File Transfer Protocol (FTP)– Web Services - Multimedia Applications – Overlay Networks

Text Book

1. Larry L. Peterson and Bruce s. davie, “computer networks: a systems approach”, fourth edition, elsevier publishers inc., 2007.

Reference Books

1. James f. Kuross and Keith w. Ross, “computer networking: a top-down approach featuring the internet”, third edition, Addison Wesley, 2004.
2. Andrew s. Tanenbaum, “computer networks”, fourth edition, PHI, 2003.
3. William Stallings, “Data and Computer Communication”, sixth edition, Pearson Education, 2000.
4. Nader f. Mir, “computer and communication networks”, Pearson Education, 2007.

12MT227 ADVERTISING

Credits: 3:0:0

Course Objective:

- To introduce the students to the advertising world and brief them on various stages involved in the process of producing & launching digital media advertisements.

Course Outcome:

- To teach the students why advertising is part of Marketing Management and how it helps the industry, consumers & the society to progress.
- Students will come to know the stages through which manufacturers have to travel for promoting their products by deploying various advertising techniques. Also, the offshoot of advertising in to Public Relations has also been deliberated to give an insight to this area.

Unit I

OVER VIEW OF ADVERTISING – Advertising in Marketing – Marketing & Promotion Mix – Importance of advertising to the Manufacturing Industry, Consumer & to the Society - Advertising Communication - Types & Functions of Advertising – Merits & Demerits of Advertising - Advertisement vs. Publicity vs. Propaganda.

Unit II

ROLE OF ADVERTISING AGENCY – Structure & Types of Agencies – National & International Agencies - Responsibility of the Advertising Manager – Client Servicing – Advertisement Campaign & Sales Promotion – Advertising Audiences - Audience and Buyer Behaviour analysis.

Unit III

SEGMENTATION OF THE MARKET, Targeting Audience and Positioning the Product - Advertising Research – Conducting & Using Research – Developing Objectives, Strategy & Plans for launching Advertisement Campaigns - Evaluation of Advertisement effectiveness.

Unit IV

CHANNELS OF MASS MEDIA – Merits & demerits of each Media - Media Planning – Creative thinking & Strategy – Producing Electronic Media Advertisings - Role of Out Door Media & New Media in Advertising - Rural Advertising in India.

Unit V

WHAT & WHY OF PUBLIC RELATIONS - Role of Advertising in Public Relations – Public Relations in Government, Public and Private Sectors; Public Relation and Corporate Communications - Ethics and Regulations for Advertising & Public Relations.

Text Book

1. Courtland L. Bovee , Advertising Excellence : McGraw –Hill Inc. Publications, 2001

Reference Books

1. Advertising & Media Management by Meena Devi. Alpha Publications, New Delhi 2009
2. The Challenges of Public Relations by C.K. Sardana. Har Anand Publications, New Delhi 2004

12MT228 DIGITAL COMPOSITING

Credits: 3:0:0

Course Objective:

- To teach students about different concepts involved in digital compositing which will help them to apply these entire concepts practically.

Course Outcome:

- The students will have good knowledge about the latest trends and technologies involved in digital compositing and they will be able to apply all these concepts practically.

Unit I

DIGITAL REPRESENTATION OF VISUAL INFORMATION: Image Generation, Pixels, Components, Channels, Spatial Resolution, Bit Depth, Normalized Values, Additional Channels, HSV and YUV Color Representation, Image Input Devices, Digital Image File Formats, File Format Features, Vendor –specific File Format Implementations, Compression, Choosing a File Format, Nonlinear Color encoding.

Unit II

BASIC IMAGE MANIPULATION AND COMPOSITING: Terminology, Color Manipulations, Spatial filters, geometric transformations, Expression Language, Filtering Algorithms, motion blur, Multi source Operators, Matte Image, The Integrated Matte Channel, Masks, Compositing With Pre multiplied Images, Morphing, Matte creation and manipulation: Rotoscoping, Procedural matte extraction, matte manipulations, Time and Temporal Manipulations: Apparent Motion, Temporal Resolution, Temporal Artifacts, Changing the Length or Timing of a Sequence, Key Framing.

Unit III

IMAGE TRACKING AND STABILIZATION: Tracking an Element into a Plate, Choosing the Feature to Track, Limiting the Search Area, Human Intervention, Using Tracking Curves Manually, Tracking Multiple Points, Stabilizing a Plate, Camera tracking, Interface Interactions: Workflow, the evolution of Interactivity, Methods of representing the compositing process, Timelines, Curve Editors, Working With Proxy Images, Image Viewing and Analysis Tools.

Unit IV

FILM FORMATS: Aspect Ratio: Non square Pixels, Deciding on a Resolution for an Aspect Ratio, Format Conversion Pipeline, Format Conversion Example, Film Formats: 35mm Formats, 16mm Formats, Specialized Film Formats, Video Formats: Fields, Color Resolution, Gamma, Common video formats, Other Formats, Working with non square pixels, converting and combining formats

Unit V

CREATING ELEMENTS AND INTEGRATION TECHNIQUES: Lighting, Interactive Lighting, Matched Cameras, Reference Stand-in, Clean Plates, Film Stock, Filters, Choosing a Format, Lighting and Shooting with Blue screens, Blue screen versus Green screen, Shooting Order, Integration Techniques: Scene Continuity, Color and lighting, Lighting, light wrapping, Shadows, digital color matching, spill suppression, Atmosphere, camera characteristics: Camera Mismatches, Camera Movements, scale and perspective, Focus, Motion Blur, lens flares, Film Grain and sensor noise.

Text Book

1. Ron Brinkmann, The Art and Science of Digital Compositing, second edition, Morgan Kaufmann, 2008.

Reference Books

1. Steve Wright, Digital Compositing for Film and Video, Focal Press, 2006
2. Dough Kelly, Digital Compositing in-Depth, Coriolis, 2000.

Credits: 3:0:0

Course Objective:

- To provide an overview of hardware, software, and Internet technologies.
- To introduce key trends and drivers transforming the world of broadcast television and the Web.

Course Outcome:

- Students will know the working of internet protocol and other characteristics like video compression, their bandwidths etc

Unit I

INTRODUCTION: Introduction: Internet Protocol-Market for IP Video-Characteristics of IPTV-Internet video-IPTV versus internet video-constructing an IPTV network-constructing an internet video System

Unit II

INTERNET PROTOCOL: Internet Protocol & video compression: Packet – types of IP Networks-IP Addresses-key parts of an IP network-Transport protocols-Multicasting-video compression-groups of pictures-MPEGMicrosoft Windows Media and VC-1-Other compression techniques

Unit III

VIDEO QUALITY & SERVERS: Video Quality& servers: Maintaining video quality and security-video servers-video on demand servers-advertising servers-live streaming servers-encryption and right management.

Unit IV

DSL TECHNOLOGIES: Bandwidth: DSL technologies-DSLAM-Home gateway-multiple televisions-Calculate Bandwidth.

Unit V

SET TOP BOX: Set top boxes & Internet video technologies: Basic functions-middleware-STB selection issues internet video technologies-types of internet streaming-commercial players-content creation workflows.

Text Books

1. Wes &Howard Greenfield, IPTV and Internet Video, Second Edition: Expanding the Reach of Television Broadcasting, Focal press, ISBN: 978-0240812458
2. Lawrence Harte,IPTV Basics, Technology, Operation and Services , 2007, ISBN-193281356X

Reference Books

1. Howard J. Gunn, The Basics of IPTV, Intl. Engineering Consortium, 2007, ISBN 9781931695589
2. Gerard O'Driscoll, Next Generation IPTV Services and Technologies, Wiley-

Interscience, 2007. ISBN :0470163720

3. Gilbert Held, Understanding IPTV, CRC Press, 2006. ISBN: 0849374154

12MT230 WEB DESIGNING LAB

Credit: 0:0:2

Course Objective:

- To learn creation of web pages, scripting objects, application and special objects. To understand the usage of data bases. The students will be trained to programme ASP and XML.

Course Outcome:

- To develop a webpage for commercials requirements.

List of Experiments:

ASP

1. Creation of Simple Web pages.
2. Usage of scripting objects
3. Usage of Application and session objects
4. Adding data entry features
5. Usage of databases in ASP
6. Usage of components in ASP
7. Usage of Cookies in ASP.

XML

8. Creating simple web pages using XML
9. Applying animations and multimedia effects through XML
10. Usage of databases in XML
11. Simple web page using XML
12. Web pages using XSL.

References

1. Richard Anderson, Dan Denault, Brian Francis, ASP 3.0 Programmer's Reference, IDG books India (P) Ltd., 2000.
2. Elliot Rusty Harold, XML Bible", IDG Books India (P) Ltd, 2000.
3. Vivek Sharma, Rajiv Sharma, Developing E-Commerce Sites – An Integrated Approach, Addison Wesley, First Edition, 2000.

12MT231 COMMUNICATION CIRCUITS LAB

Credits 0:0:2

Course Objective

- To learn circuit design and understand the theoretical concepts by hands on with circuit connections in breadboard for communication and Audio application.

Course Outcome:

On Completion of this lab the Student will be able to:

- Implement properly any constructed circuits.
- Correctly operate standard electronics test equipment such as CRO, DSO, Signal analyzers and Function Generators to test electronics Circuits
- Correctly analyze a circuit and compare its theoretical performance to actual performance.

List of Experiments:

1. Equalizer
2. Active Filters Design
3. Amplitude Modulation & Diode Detector
4. Frequency Modulation & Demodulator
5. Classes of Amplifiers Design
6. Pre-emphasis and De-emphasis Circuits Design
7. IF amplifier, Mixer
8. Multivibrator Circuits Design
9. Study of Sampling Theorem
10. Time Division Multiplexing
11. PLL applications
12. Radiation Pattern of Antennas

12MT232 VIDEO POST PRODUCTION LAB

Credits: 0:0:2

Course Objective:

- The students will be practically taught to apply post production techniques.

Course Outcome:

- Students will be creatively and technically work in TV and Film Industry.

List of Experiments:

1. Software interface
2. Basic edit-Importing files and arranging of shots, cut, trim
3. Adding transitions
4. Adding Effects
5. Color correction
6. Time warp
7. Chroma keying
8. Titling
9. Editing for an Interview
10. Editing for a talk-show
11. Editing for a Music Video
12. Editing for a Cultural/Dance show

12MT233 DIGITAL IMAGE PROCESSING

Credits: 3:0:0

Course Objective:

- To learn the fundamental concepts of Image processing techniques.

Course Outcome:

- Can develop simple algorithms for image processing.

Unit I

DIGITAL IMAGE FUNDAMENTALS AND TRANSFORMS : Elements of visual perception – Image sampling and quantization Basic relationship between pixels – Basic geometric transformations-Introduction to Fourier Transform and DFT – Properties of 2D Fourier Transform – FFT – Separable Image Transforms -Walsh – Hadamard – Discrete Cosine Transform-Haar-Slant–Karhunen–Loeve-transforms.

Unit II

IMAGE ENHANCEMENT TECHNIQUES: Spatial Domain methods: Basic grey level transformation – Histogram equalization – Image subtraction – Image averaging –Spatial filtering: Smoothing, sharpening filters – Laplacian filters – Frequency domain filters ,smoothing –Sharpening-filters-Homomorphic-filtering.

Unit III

IMAGE RESTORATION: Model of Image Degradation/restoration process – Noise models – Inverse filtering -Least mean square filtering – Constrained least mean square filtering – Blind image restoration – Pseudo inverse – Singular value decomposition.

Unit IV

IMAGE COMPRESSION: Lossless compression: Variable length coding – LZW coding – Bit plane coding- predictive coding-DPCM. Lossy Compression: Transform coding – Wavelet coding – Basics of Image compression standards: JPEG, MPEG,Basics of Vector quantization.

Unit V

IMAGE SEGMENTATION AND REPRESENTATION: Edge detection – Thresholding - Region Based segmentation – Boundary representation: chain codes- Polygonal approximation – Boundary segments – boundary descriptors: Simple descriptors-Fourier descriptors - Regional descriptors –Simple descriptors- Texture

Text Book

1. Rafael C.Gonzalez and Richard E. Woods, “Digital Image Processing”, PHI 2nd edition, 2002

Reference Books

1. Anil K.Jain, “Fundamentals of Digital Image Processing”, Prentice Hall of India, 9th edition, Indian Reprint, 2002

2. William, K.Pratt, “Digital Image Processing”, John Wiley and Sons, 3rd edition,2002

12MT234 COMPUTER BASED MUSIC PRODUCTION

Credits: 4:0:0

Course Objective:

- The students who are musically inclined will be taught the fundamentals involved in choosing the right components to make a digital audio workstation and to use MIDI and digital audio tools in music production.

Course Outcome:

- This course will enable the students to be creatively and technically aware of the technologies and production tools in the music production industry.

Unit I

THE DAW AND IT'S PERIPHERALS: The Computer - Software - Audio and MIDI Interfaces - Mixer - Headphones and Monitors – Surface controller - Cables - Microphones - Miscellaneous equipment - Mac Vs PC debate - Desktop, Laptop and Tabletop computers and specific users - The need for speed - Computer options.

Unit II

AUDIO/MIDI HARDWARE AND SOFTWARE SETUP: PCI cards - USB - FireWire/ iLink - PCMCIA Cards - Audio interface considerations - Audio interface features - MIDI interface types and features - Driver installation basics - MAC and PC driver/software setup - Patch setup - Unlisted MIDI devices - Surface controller setup - Template setup - Test run.

Unit III

MUSIC PRODUCTION – MIDI: What is MIDI - MIDI connections - MIDI channels - MIDI modes - Status bytes and Data bytes – MIDI implementation charts - Creating a new song file - Setting up song parameters - Laying down MIDI tracks - Step recording - Punch-in recording - Common MIDI Recording Problems and their Solutions - Quantization options - Basic MIDI editing.

Unit IV

MUSIC PRODUCTION - DIGITAL AUDIO: Recording fundamentals - Analog and Digital audio recording - Sample rates and resolutions -Recording in the computer room - Basic track recording - Overdubbing - Wet Vs Dry recording – Mix and individual track MIDI to digital audio conversion - Virtual MIDI instruments - Preparing tracks for audio editing - normalizing audio tracks - Trimming digital audio tracks - Creating comp takes.

Unit V

MIXING, MASTERING AND ARCHIVING: The Stereo field - A short mixing primer: Drums, bass, guitars and vocals - Additional instruments - volume - monitoring the mix - frequency, volume and overtones - EQ types - Dynamic Processors - Effect Processors - The Final mixdown - Mastering - Audio file preparation - side sequencing – Setting the index and gap - Burning and packaging the audio CD - Archiving the project.

Text Book:

1. Zack Price, "Beginner's guide to computer based music production", Cherry lane music company, 2004.

Reference Books:

1. Francis Rumsey, Tim McCormick, "Sound and Recording: An Introduction", 5rd edition, Focal Press, 2006
2. Andrea Pejrolo, "Creative sequencing techniques for Music Production", Focal Press, 2005.
3. Martin Russ, "Sound Synthesis and Sampling", Third Edition, Focal Press, 2009.

12MT235 MEDIA ECONOMICS**Credits: 3:0:0****Course Objective:**

- To learn the economic policies and practices of media companies and disciplines including journalism and the news industry, film production, entertainment programs, print, etc

Course Outcome:

- The students will be well versed with all the economic policies and practices of media companies.

Unit I

INTRODUCTION TO MEDIA ECONOMICS: Macroeconomics and microeconomics, economics of scale, economics of scope, Market structure, Key economics characteristics of the media, Economics of Advertising, Media Economics and Public Policy, economic methodologies, Decision making, demand and supply.

Unit II

MEDIA AND PR: Introduction to media: Overview of media/ the media industry in India/ Types of Media/ role of each medium/ advantages and disadvantages of each medium. Role of PR in the success of a product /service. The relationship between marketing and Advertising and PR/ The relationship between sales and PR/ how sales benefits from PR.

Unit III

PRINT AND TELEVISION MEDIA: Economic characters of news paper and broadcasting, Ownership Structure, Publicly funded broadcasting, vertical supply chain for television, Impact of new distribution technologies. Television programme production-Economics of programme supply, International trade in audio visual contents.

Unit IV

NEW MEDIA: Internet and E-commerce, Digitalized media contents, increasing economics of scale and scope interactivity, internet and mobile communication and possibilities; leveraging new media; understanding value added services; understanding streaming video net and mobile; using SMS.

Unit V

MEDIA ECONOMICS AND PUBLIC POLICY: Free market Vs interventions, support measures for media contents, concentrated media ownerships, Monopolies and technological change: Events and sponsorships; overview of how events are marketed; certain sponsorship proposals; structuring sponsorship deals, Understanding of common terminology and jargon in media.

Text Books

1. Gillian Doyle, Understanding Media Economics, Sage Publications, 2007.

Reference Books:

1. C.R. Colin Hoskins, Media Economics-Appling Economics New and Traditional Media, Sage, 2003.
2. Philip Kotler, Marketing Management, Prentice Hall, 2003.

12MT236 DSP PROCESSORS

Credits: 3:0:0

Course Objective:

- Program a DSP chip to filter signals using either assembly language or a C compiler for the chip.
- Understand how digital to analog (D/A) and analog to digital (A/D) converters operate on a signal and be able to model these operations mathematically.
- Use Z transforms and discrete time Fourier transforms to analyze a digital Signals

Course Outcome:

- Describe the architecture and basic operation of fixed-point and floating-point DSPs.
- Perform worst-case timing analysis on real-time DSP systems.
- Develop and realize computationally efficient algorithms on the DSP platform
- Optimize DSP code (e.g. software pipelining).

Unit I

INTRODUCTION TO DIGITAL SIGNAL PROCESING : Introduction, A Digital signal-processing system, The sampling process, Discrete time sequences. Discrete Fourier Transform (DFT) and Fast Fourier Transform (FFT), Linear time-invariant systems, Digital filters, Decimation and interpolation, Analysis and Design tool for DSP Systems MATLAB, DSP using MATLAB.

Unit II

COMPUTATIONAL ACCURACY IN DSP IMPLEMENTATIONS : Number formats for signals and coefficients in DSP systems, Dynamic Range and Precision, Sources of error in DSP implementations, A/D Conversion errors, DSP Computational errors, D/A Conversion Errors, Compensating filter.

Unit III

ARCHITECTURES FOR PROGRAMMABLE DSP DEVICES : Basic Architectural features, DSP Computational Building Blocks, Bus Architecture and Memory, Data Addressing Capabilities, Address Generation Unit, Programmability and Program Execution, Speed Issues, Features for External interfacing.

Unit IV

EXECUTION CONTROL AND PIPELINING : Hardware looping, Interrupts, Stacks, Relative Branch support, Pipelining and Performance, Pipeline Depth, Interlocking, Branching effects, Interrupt effects, Pipeline Programming models.

Unit V

PROGRAMMABLE DIGITAL SIGNAL PROCESSORS : Commercial Digital signal-processing Devices, Data Addressing modes of TMS320C54XX DSPs, Data Addressing modes of TMS320C54XX Processors, Memory space of TMS320C54XX Processors, Program Control, TMS320C54XX instructions and Programming, On-Chip Peripherals, Interrupts of TMS320C54XX processors, Pipeline Operation of TMS320C54XX Processors.

Text Books

1. Digital Signal Processing – Avtar Singh and S. Srinivasan, Thomson Publications, 2004.
2. DSP Processor Fundamentals, Architectures & Features – Lapsley et al. S. Chand & Co, 2000.

Reference Books

1. Digital Signal Processors, Architecture, Programming and Applications – B. Venkata Ramani and M. Bhaskar, TMH, 2004.
2. Digital Signal Processing – Jonatham Stein, John Wiley, 2005.

12MT237 AUDIO SAMPLING AND SYNTHESIS

Credits: 3:0:0

Course Objective:

- To impart basic knowledge of sound sampling and synthesis techniques with applications.

Course Outcome:

- Develop understanding on sound synthesis techniques

Unit I

SOUND SYNTHESIS: Digital signal and sampling, Synthesis, telecom research, tape techniques, Experimental versus Popular music, electro acoustic music, synthesis classics, fundamental principles of electronics and acoustics, MIDI.

Unit II

ANALOG SYNTHESIS TECHNIQUES: Analog sampling, Analogue synthesis- analog and digital, additive synthesis, subtractive synthesis, other methods of analog synthesis, Toplogy, Early versus modern implementations, Example instruments.

Unit III

DIGITAL SYNTHESIS TECHNIQUES: Digital signals, FM, granular synthesis, waveshaping, modelling, FOF and other techniques, Analysis-Synthesis, Hybrid synthesis- wave table, DCO, sample and synthesis, Example instruments- digital techniques, hybrid techniques.

Unit IV

SYNTHESIS APPLICATIONS: Using synthesis- arranging, stacking, layering, hocketing, multi-timbrality, ployphony, GM, on-board effects, editing. Controllers- controller and expander, MIDI control, keyboard controls, foot controls, ribbon controls, guitar controls.

Unit V

PERFOMANCE AND ANALYSIS: Synthesis live, role of electronics, drum machines, sequences, workstations, accompaniment, groove boxes, studios on computers. Analysis- future of synthesis, closing the circles, control, commercial imperatives.

Text Book

1. Martin Russ-Sound synthesis and sampling-Focal Press, 3rd edition, 2009

Reference Book

1. Sam McGuire, Roy Pritts, Audio Sampling - A Practical Guide, Focal Press, Ist Edition, 2008

12MT238 EMBEDDED SYSTEMS

Credits: 3:0:0

Course Objective:

- To introduce and learn the concepts of embedded computing with microcontroller and Real time Operating Systems.

Course Outcome:

- The students will gain adept knowledge in embedded system technologies.

Unit I

EMBEDDED COMPUTING: Embedded Computing: Introduction, Complex Systems and Microprocessor, The Embedded System Design Process, Formalisms for System Design, Design Examples.

Unit II

MICROCONTROLLER APPLICATIONS: Microcontroller 8051 Applications: Interfacing with Keyboards, Displays, D/A and A/D Conversions, Multiple Interrupts, Serial Data Communication.

Unit III

REAL TIME OPERATING SYSTEMS: Introduction to Real – Time Operating Systems: Tasks and Task States, Tasks and Data, Semaphores, and Shared Data; Message Queues, Mailboxes and Pipes, Timer Functions, Events, Memory Management, Interrupt Routines in an RTOS-Environment.

Unit IV

DESIGN USING RTOS: Basic Design Using a Real - Time Operating System : Principles, Semaphores and Queues, Hard Real-Time Scheduling Considerations, Saving Memory and Power, An example RTOS like uC OS (Open Source); Embedded Software Development Tools: Host and Target machines, Linker/Locators for Embedded Software, Getting Embedded Software into the Target System; Debugging Techniques: Testing on Host Machine, Using Laboratory Tools,

Unit V

RISC: The RISC revolution - Characteristics of RISC Architecture - The Berkeley RISC – Register Windows - Windows and parameter passing - Window overflow - RISC architecture and pipelining - Pipeline bubbles - Accessing external memory in RISC systems - Reducing the branch penalties-branch prediction

Text Books

1. Computers as Components-principles of Embedded computer system design, Wayne Wolf, Elsevier.
2. Kenneth J Ayala, The 8051 Microcontroller Architecture Programming and Application, 3rd Edition, Penram International Publishers (India), New Delhi, 2004.
3. David E. Simon, “An Embedded Software Primer”, Addison Wesley, New Delhi, 2005
4. Alan Clements, “The principles of computer Hardware”, Oxford University Press, 3rd Edition, 2003.

Reference Books

1. Raj Kamal, “Embedded Systems” McGraw Hill, 2nd Edition, 2008.
2. Frank Vahid, Tony Givargis, “Embedded Systems Design”, Wiley India, 2006
3. Rajkamal, The concepts and feature of micro controllers 68HC11, 8051 and 8096; S Chand Publishers, New Delhi.

12MT239 PRINCIPLES OF DIGITAL AUDIO

Credits: 3:0:0

Course Objective:

- To introduce and learn the concepts of digital audio production, perceptual coding and PC audio buses.

Course Outcome:

- Students can work in applied audio technology.

Unit I

SOUND AND NUMBERS: Fundamentals of Digital Audio-Sampling Theorem-Aliasing-Quantization-Dither-Digital Audio Recording-Pulse Code Modulation-Dither Generator-Input Low Pass Filter-Sample and Hold Circuit; Analog-to-Digital Converter-Successive Approximation-Oversampling A/D Converter, Record Processing-Channel Codes.

Unit II

DIGITAL AUDIO REPRODUCTION: Reproduction Processing-DAC Converter-Output Sample and Hold Circuit-Output Low pass filter-Impulse Response-Digital Filter; Alternate Coding Methods- μ -Law and A-Law Companding-DPCM-Adaptive Delta modulation-Companded Predictive Delta Modulation-ADPCM-Timebase Correction-Error Correction

Unit III

MAGNETIC TAPE STORAGE: Recording Bandwidth-Digital Magnetic Tape-Inter Symbol Interference Longitudinal Magnetic Recording-vertical magnetic Recording-Stationary Head Tape Recorders-Rotary Head Tape recorders; Digital Audio Tape(DAT)-Cassette-Modes-hardware Design-Track Format-Eight to ten Modulation-DAT Error Correction-Prerecorded DAT-Professional DAT-Optical Disc Storage-Compact Disc.

Unit IV

PERCEPTUAL CODING: Psychoacoustics-Physiology of Human Ear-Data Reduction Coding-MPEG1 Audio Standard-MPEG2 Audio Standard-AC-3(Dolby Digital) Coder-DVD-Physical Specifications-UDF-DVD Audio-Video-Meridian Lossless packing-The Mini Disc-Interconnection.

Unit V

PC AUDIO-PC Buses and Interfaces-Sound Cards-Digital Audio Extraction-PC Audio Software Applications; Internet Audio-Computer Networks and File Transfer-MP3-SDMI-Streaming audio-MPEG4-Satellite Operation-Digital Audio Radio-Inband Digital Radio-Direct satellite Radio

Text Book

1. Ken Pohlmann, Principles of Digital Audio, Mc Graw Hill, Fourth Edition, 2000.

Reference Books

1. Peter Kirn, Real World Digital Audio, Peachpitt Press, Ist Edition, 2006
2. John Watkinson, Introduction to Digital Audio, Focal Press, Second Edition , 2002

12MT240 DIGITAL VIDEO PROCESSING

Credits: 3:0:0

Course Objective:

- This course covers algorithmic aspects of digital video processing and important industrial applications such as video communication, human-computer interaction, video surveillance, biometrics and biomedical engineering..

Course Outcome:

- Students will understand the acquisition and format of digital video signals.
- Students will have some knowledge about mathematical modeling of video.
- Students will grasp the most important classes of motion estimation techniques including optical flow estimation, block matching algorithm and Bayesian estimation.
- Students will gain a comprehensive understanding of various video processing tasks including Denoising, restoration, super-resolution, Deinterlacing and post-processing.

Unit I

VIDEO FORMATION, PERCEPTION AND REPRESENTATION: Video Capture and Display- Principles of Color Video-Video Cameras.-Video Display-Composite versus Component Models-Gamma Correction, Analog Video Raster-Progressive Vs Interlaced scans-Characterization of Video Raster-Spatial and Temporal resolution, Signal Bandwidth-Multiplexing of Luminance, Chrominance-and Audio, Digital Video-Notation-ITU-R.BT.601 Digital Video Forma

Unit II

FOURIER ANALYSIS AND HUMAN VISUAL SYSTEM RESPONSE: Multidimensional Continuous-Space Signals and Systems, Multidimensional discrete-Space Signals and Systems, Frequency Domain Characterization of Video Signals-Spatial and Temporal Frequencies-Temporal Frequencies Caused by Linear Motion, Frequency Response of the Human Visual System-Temporal Frequency Response and Flicker Perception-Spatial Frequency Response-Spatiotemporal Frequency Response-Smooth Pursuit Eye Movement.

Unit III

VIDEO SAMPLING: Basics of the Lattice Theory, Sampling of Video Signals Over Lattices, Filtering Operations in Cameras and Display Devices, Video Sampling Rate Conversion-Conversion of Signals Sampled on Different Lattices-Sampling Rate Conversion of Video Signals.

Unit IV

VIDEO MODELING AND 2D - MOTION ESTIMATION: Camera Model, Object Model, Scene Model, Two-Dimensional Motion Models, Two-Dimensional Motion Estimation-Optical Flow-General Methodologies-Pixel-Based Motion Estimation-Block-Matching Algorithm-Multiresolution Motion Estimation-Application of Motion Estimation in Video Coding.

Unit V

WAVEFORM BASED CODING AND VIDEO COMPRESSION STANDARDS: Waveform-Based Video Coding-Block-Based Transform Coding-Predictive Coding-Video Coding Using Temporal Prediction and Transform Coding, Video Compression Standards-Video Telephony with H.261 and H.263-H.261 Overview-H.263 Highlights-Comparison.Digital TV with MPEG-2-Systems-Audio-Video-Profiles, Coding of Audiovisual Objects with PMEG-4

Text Book

1. Multimedia Communication Technology, J.R.Ohm, Springer Publication. 2004

Reference Books

1. David R Bull et al Video Coding for Mobile Communications, , Academic Press, 2002
2. Handbook on Image and Video Processing, A.I.Bovik, Academic Press, 2005
3. Tekalp Digital Video, Prentice Hall, 2004

12MT241 EQUIPMENT MAINTENANCE & SERVICING

Credits: 3:0:0

Course Objective:

- To provide a thorough understanding of the working of studio equipments.
- To introduce various techniques in maintaining and repairing of audio-visual equipments.

Course Outcome:

- After the course the students will be able to have an in-depth knowledge in maintaining Equipments in the studio.
- Basic repair and services of equipments will be learned.

Unit I

EXPLANATIONS AND CALCULATIONS: Electricity - Basic Electronics- DC Voltage, Current, and Resistance Basic Electronics: AC Voltage, Current, and Reactance- Basic Formulas for Calculations-Decibels- Advanced Formulas for Calculations- Wire Sizes and Maximum Current for Each Wire- Technical Power and Current Requirements-

Unit II

SIGNALS AND EQUIPMENT: Balanced and Unbalanced Signals- Metering-VU, RMS, PPM and Correlation-RF Transmissions – AM and FM- Compressors and Limiters- Multitrack Recorders- Speakers and Microphones- Wireless – Microphones

Unit III

AUDIO LINES: Cables and Connectors-Equipment and Rack Grounding- Patch Bay Wiring- Cable Routing- Tools-Test Equipment- A 48-Volt Phantom Power Supply Project

Unit IV

MAINTENANCE: Cleaning Chemicals and Applications- Fixed Head Tape Recorders -- Analog- Analog Tape Recorder Calibration- Rotary Head Tape Recorders -- Digital- Amplifier Cleaning- Computer and Processor, Cleaning- Mixing Console, Pot and Fader Cleaning-Lighting Equipment Cleaning

Unit V

SERVICE AND REPAIRS: Speaker Damage and Repairs- Amplifier Diagnostics- Soldering, Cable Repair, and RF Interference Cures- Processors and Outboard Gear Service-

Text Book

1. Tom McCartney. "Recording Studio Technology, Maintenance, and Repairs". McGraw-Hill/TAB Electronics – 2004.

Reference Books

1. Trevor Linsley. "Electronic Servicing and Repairs". Newnes – Second Edition 2000
2. John Markus. "Television and Radio Repairing". Mc Graw Hill –2002.

12MT242 SATELLITE COMMUNICATION

Credits: 3:0:0

Course Objective:

- To understand satellite systems in relation to other terrestrial systems.
- To know satellite orbits and launching.
- To study earth segment and space segment components, study of satellite access by various users and DTH and compression standards.

Course Outcome:

- To enable the student to become familiar with satellites and satellite services.

Unit 1

ORBITAL PARAMETERS: Orbital parameters, Orbital perturbations, Geo stationary orbits, Low, Earth and Medium orbits. Frequency Selection, Frequency co-ordination and regulatory services, Sun transit outages, Limits of visibility, Attitude and orientation control, Spin stabilization techniques, Gimbal platform

Unit II

LINK CALCULATIONS: Space craft configuration, Payload and supporting subsystems, Satellite uplink -down link power budget, C/No, G/T, Noise temperature, System noise, Propagation factors, Rain and ice effects, Polarization Calculations

Unit III

ACCESS TECHNIQUES: Modulation and Multiplexing: Voice, Data, Video, Analog and Digital transmission systems, multiple access techniques:FDMA,TDMA,T1-T2 carrier systems, SPADE,SS-TDMA,CDMA, Assignment Methods, Spread spectrum communication, Compression-Encryption and Decryption techniques

Unit IV

EARTH STATION PARAMETERS: Earth station location, propagation effects of ground, High power transmitters-Klystron Crossed field devices, Cassegrain feeds, Measurements on G/T and Eb/No

Unit V

SATELLITE APPLICATIONS: INTELSAT Series, INSAT, VSAT, Remote sensing, Mobile satellite service: GSM. GPS, INMARSAT, Satellite Navigation System, Direct to Home service(DTH), Special services, E-mail, Video conferencing and Internet Connectivity

Text Book

1. Dennis Roddy, Satellite Communications, McGraw-Hill Publication Third edition 2001

Reference Books

1. Bruce R. Elbert, "The Satellite Communication Applications Hand Book, Artech House Boston, 1997
2. Wilbur L. Pritchard, Hendri G. Snyderhood, Robert A. Nelson, "Satellite Communication Systems Engineering", II Edition, Prentice Hall, New Jersey. 1993
3. Dennis Roddy, "Satellite Communication", Regents/Prentice Hall, Eaglewood Cliff, New Jersey, 1983
4. Tri T. Ha, "Digital satellite communication", 2nd Edition, McGraw Hill, New York. 1990
5. K. Feher, Digital communication satellite / Earth Station Engineering, Prentice Hall Inc, New Jersey, 1983

12MT243 GAME PROGRAMMING WITH C++

Credits: 3:1:0

Course Objective:

- To learn 2D and 3D game programming using C++ programming language in detail. Drawing, painting, development of surfaces, sound, images, making scenes are all learnt.

Course Outcome:

- At the end of this course students will be able to develop their own games using C++ programming language.

Unit I

GAME PROGRAMMING & 2D GAMES AND CLANLIB GAME DEVELOPMENT: Software Abstraction, Graphics Sound and Music, More Middleware, ClanLib, Downloading ClanLib Building ClanLib, First ClanLib Application, Games and the Message Loop, Graphics Rendering

Unit II

CLANLIB: Core Classes & ClanLib-Scene Management, 2D Games and Images, Surfaces, Drawing Surfaces, Transformation, XML, Resources, Sprites, Input, Scenes, Scenes and Design, Scene Implementation, Layers, Painting a Layer, Overview -Using Scene Manager

Unit III

3D GAMES: OGRE 3D, Downloading OGRE 3D, Installing OGRE 3D, Compiling the OGRE 3D Samples, Running the OGRE 3D Samples, Creating an OGRE Application Using a Wizard, Creating an OGRE Application Manually, OGRE Log, OGRE, Documentation.

Unit IV

EXPLORING OGRE 3D: 3D Scenes, Creating 3D Scenes, Scene Node Properties and Methods, Lights, Cameras, Materials and Scripts, Billboards, Particle Systems Frame Listeners.

Unit V

OTHER GAMING LIBRARIES: Install and Sound, Sound and Music, FMOD, BASS, NSIS Windows Installer, Scripting, Open-Source Software, Open Media Formats

Text Book

1. Alan Thorn, Introduction to Game Programming with C++, Wordware Publishing Inc, 2007.

Reference Books

1. Noel Llopis, C++ for Game Programmers, Charles River Media, 2003.
2. David Conger and Ron Little, Creating Games In C++, First Impression, 2006.

12MT244 NEURAL NETWORKS

Credits 3:0:0

Course Objective:

- This course introduces the basics of Neural Networks and essentials of Artificial Neural Networks with Single Layer and Multilayer Feed Forward Networks. Also deals with Associate Memories and introduces Fuzzy sets and Fuzzy Logic system components. The Neural Network to Systems Engineering is also presented.

Course Outcome:

- Students will be able to develop artificial intelligence systems.

Unit I

INTRODUCTION TO NEURAL NETWORKS: Introduction, Humans and Computers, Organization of the Brain, Biological Neuron, Biological and Artificial Neuron Models, Characteristics of ANN, McCulloch-Pitts Model, Historical Developments, Potential Applications-of-ANN.

Unit II

ESSENTIALS OF ARTIFICIAL NEURAL NETWORKS: Artificial Neuron Model, Operations of Artificial Neuron, Types of Neuron Activation Function, ANN Architectures, Classification Taxonomy of ANN – Connectivity, Learning Strategy (Supervised, Unsupervised, Reinforcement), Learning Rules.

Unit III

SINGLE LAYER FEED FORWARD NEURAL NETWORKS: Introduction, Perceptron Models: Discrete, Continuous and Multi-Category, Training Algorithms: Discrete and Continuous Perceptron Networks, Limitations of the Perceptron Model.

Unit IV

MULTILAYER FEED FORWARD NEURAL NETWORKS: Credit Assignment Problem, Generalized Delta Rule, Derivation of Backpropagation (BP) Training, Summary of Backpropagation Algorithm, Kolmogorov Theorem, Learning Difficulties and Improvements.

Unit V

ASSOCIATIVE MEMORIES: Paradigms of Associative Memory, Pattern Mathematics, Hebbian Learning, General Concepts of Associative Memory, Bidirectional Associative Memory (BAM) Architecture, BAM Training Algorithms: Storage and Recall Algorithm, BAM Energy Function. Architecture of Hopfield Network: Discrete and Continuous versions, Storage and Recall Algorithm, Stability Analysis.

Text Book

1. S. Rajasekharan and G. A. Vijayalakshmi pai, “Neural Networks, Fuzzy logic, Genetic algorithms: synthesis and applications”, PHI Publication, 2004.

Reference Books

1. Simon Haykin, “Neural Networks- A comprehensive foundation”, Pearson Education, 2001.
2. S.N.Sivanandam, S.Sumathi,S. N. Deepa “Introduction to Neural Networks using MATLAB 6.0”, TMH, 2006.
3. James A Freeman and Davis Skapura, Neural Networks Pearson Education, 2002.
4. Timothy J. Ross, “ Fuzzy Logic With Engineering Applications”, McGraw-Hill Inc. 1997

12MT245 3D ANIMATION

Credits: 3:0:0

Course Objective:

- To present concepts required to understand the steps and procedures that lead to the completion of a fully rendered 3 Dimensional computer animation.

Course Outcome:

- In order to assess the student’s progress towards achieving the learning outcomes, a number of assignments may be assigned periodically. The students will be able to do basic 3D animation and gain basic knowledge about advanced modeling and rendering techniques.

Unit I

PREPRODUCTION: Introduction – Storyboarding – character and model design - sound design –technical tests –Production scheduling.

Unit II

MODELING BASICS: Introduction –polygonal modeling –splines and patches –coordinate systems –viewing windows – Geometric primitives –transformations –common modeling techniques –hierarchies –booleans and trims.

Unit III

RENDERING BASICS: The camera –Lights –Surface characteristics –shading algorithms – rendering algorithms –background images –Surface texture mapping –solid texture mapping – final rendering.

Unit IV

ANIMATION BASICS: Introduction –Key framing –interpolations –parameter curve editing – dope sheet editing –forward kinematics –inverse kinematics –motion plans –shape deformations –camera animation –animating lights and surface properties –pose based animation.

Unit V

RE -TOUCHING AND POSTPRODUCTION TECHNIQUES: Virtual sculpting –hair and fur –texturing polygons –more rendering algorithms –cloth dynamics – facial animation-compositing –Editing.

Text Books

1. Michael O'Rourke, "Principles of Three – Dimensional Computer animation", 3rd edition, W.W. Norton & company, 2003.
2. John Vince, "Essential Computer Animation", Springer UK , FirstEdition 2000.

Reference Books

1. John Edgar Park, "Understanding 3D animation using Maya", Springer Science & business Media. Inc, 2005.
2. Marcia Kuperberg, Martin W. Bowman, "Guide To Computer Animation", Focal press , 2002.

12MT246 MEDIA LAWS AND ETHICS

Credits: 3:0:0

Course Objective:

- This will give an overall idea about the Indian constitution .The media laws and ethics followed in newspapers, journals, Broadcasts are highlighted.

Course Outcome:

- Students when studies the laws and ethics to be followed in media they will start applying it in their media works and this will make them a successful media professionals in the society.

Unit I

OVERVIEW OF INDIAN CONSTITUTION: Overview of the Indian Constitution, Fundamental rights, Duties of citizens, Directive principles of state policy, Functions of Executive, Judiciary, Legislative, Powers and Privileges of parliament, Provisions for declaring Emergency, Provision for amending the Constitution, Freedom of the Press and restrictions these upon, Centre-State relations

Unit II

MEDIA LAWS IN INDIA: PRB Act 1867, The Press (Objectionable matters) Act 1957, The News paper (Prices and Pages) Act 1956, Defense of India Act, Delivery of Books and News paper (Public Libraries) Act, Press Council Act, Cable TV Networks (Regulations) Act, TRAI, BRAI.Cinematographic Act 1952, Drugs and magic remedies Act.

Unit III

CIVIL AND CRIMINAL LAWS: Laws of Libel and defamation, Contempt of courts Act 1971 and contempt of Legislative, Copy right Act and IPR, Trade Mark Act and patents Act, Right to information and Official Secrets Act, Right o information Act, Autonomy and Prasar Bharati Act, Broadcasting Bill. Cyber Laws, Digital signature, piracy, Domain name registration issues

Unit IV

CODE AND ETHICS: Recommendations of Press Commission I and II, Mac Bridge Report, Press council guide to Journalistic ethics, Self regulation and code of ethics, censorship and control of the press, press ownership and monopolies, various committees of broadcasting, Broadcasting policies, Act regarding to working journalists.

Unit V

JOURNALISTIC ETHICS: Gathering the news, Libel, Invasion of privacy, Defamation, Use of the word *alleged* Apparent authority, Technology, Telephone recordings, Juveniles as News Sources, Subpoenas and Shield Laws, Access Laws, Definition of Ethics, Effects of Competition Situational Ethics , Case Studies in Ethical Dilemmas

Text Books

1. Basu, Law of the Press in India, Practice Hall of India, 2003.
2. Radha Krishna Murthi, Indian Press Laws, Indian Publishers, Distributors, 2001.
3. Philip Patterson, Lee Wilking, Media Ethics, Issues Capes, McGraw Hill, 2004.
4. Clifford G.Christians, Media Ethics, Cases and Moral Reasoning, Pearson, 2006.

Reference Books

1. Leslie, Mass Communication Ethics, Thomson Learning, 2004.
2. Basu, Introduction to Indian constitution, Practice Hall of India, 2003.

12MT247 ARM CORTEX ARCHITECTURE AND PROGRAMMING

Credits: 3:0:0

Course Objective:

- To give very good understanding of the 32 bit embedded processor and their requirements.
- To give students understanding of application development using 32 bit microprocessor.

Course Outcome:

- Students will be able to blends the best features from the 32-bit ARM architecture with the highly successful Thumb-2 instruction set design whilst adding several new capabilities.

Unit I:

WHAT IS THE ARM CORTEX-M3 Processor, Background of ARM and ARM Architecture, Instruction Set Development, The Thumb-2 Instruction Set Architecture (ISA), Cortex-M3 Processor Applications Fundamentals, Registers, Operation Modes , The Built-In Nested Vectored Interrupt Controller, The Memory Map, The Bus Interface, The Instruction Set Interrupts and Exceptions Debugging Support, Characteristics Summary, Registers, Special Registers, Operation Mode, Exceptions and Interrupts, Vector Tables , Stack Memory Operations, Reset Sequence.

Unit II:

ASSEMBLY: Basics, Instruction List, Instruction Descriptions, Several Useful Instructions in the Cortex-M3, Memory System Features Overview, Memory Maps, Memory Access Attributes, Default Memory Access Permissions, Bit-Band Operations, Unaligned Transfers, Exclusive

Accesses, Endian Mode, The Pipeline, A Detailed Block Diagram, Bus Interfaces on the Cortex-M3, Other Interfaces on the Cortex-M3, The External Private Peripheral Bus, Typical Connections, Reset Signals

Unit III:

EXCEPTION TYPES, Definitions of Priority, Vector Tables, Interrupt Inputs and Pending Behavior, Fault Exceptions, SVC and PendSV, NVIC Overview , The Basic Interrupt Configuration, Interrupt Enable and Clear Enable, Interrupt Pending and Clear Pending, Example Procedures of Setting Up an Interrupt, Software Interrupts , The SYSTICK Timer, Interrupt/Exception Sequences, Exception Exits, Nested Interrupts, Tail-Chaining Interrupts, Late Arrivals, More on the Exception Return Value, Interrupt Latency, Faults Related to Interrupts, Stacking, Unstacking, Vector Fetches, Invalid Returns

Unit IV:

CORTEX-M3 PROGRAMMING OVERVIEW: The Interface Between Assembly and C , A Typical Development Flow , The First Step , Producing Outputs, Using Data Memory, Using Exclusive Access for Semaphores, Using Bit Band for Semaphores, Working with Bit Field Extract and Table Branch, Using Interrupts, Exception/Interrupt Handlers, Software Interrupts, Example with Exception Handlers, Using SVC, SVC Example: Use for Output Functions , Using SVC with C, Running a System with Two Separate Stacks , Double-Word Stack Alignment, Nonbase Thread Enable, Performance Considerations, Lockup Situations

Unit V:

THE MEMORY PROTECTION UNIT OVERVIEW:MPU Registers, Setting Up the MPU, Typical Setup, The SYSTICK Timer Power Management, Multiprocessor Communication, Self-Reset Control, Debugging Features Overview, CoreSight Overview, Debug Modes, Debugging Events, Breakpoint in the Cortex-M3, Accessing Register Content in Debug , Other Core Debugging Features, Debugging Components introduction, Trace Components: Data Watchpoint and Trace, Trace Components: Instrumentation Trace Macrocell, Trace Components: Embedded Trace Macrocell, Trace Components: Trace Port Interface Unit, The Flash Patch and Breakpoint Unit, The AHB Access Port, ROM Table

Text Book

1. Joseph Yiu, "The Definitive Guide to the ARM Cortex-M3", Newnes Edition, 2007.

Reference Books

1. Alan Clements, "The principles of computer Hardware", Oxford University Press, 3rd Edition, 2003.
2. Andrew N. Sloss, Dominic Symes, Chris Wright, "ARM system developer's guide: designing and optimizing system software ", Elsevier, 3rd Edition, 2004.

12MT248 3D VIDEO & GRAPHICS

Credits: 3:0:0

Course Objective:

- To learn the concepts of 3D Video development and streaming applications.

Course Outcome:

- To develop a 3D Video streaming applications.

Unit-I

FUNDAMENTALS OF VISUAL SCIENCE: Stereo vision concepts-stereoscopy, binocular depth perception convergence, cyclopean image, accommodation, Parallax Concepts- parallax, parallax barrier and lenticular lenses, polarization, chromostereopsis, 3D imaging, occlusion and scene reconstruction, Theory of stereo reproduction, analytics.

Unit-2

APPLICATION OF VISUAL SCIENCE FUNDAMENTALS TO 3DTV: Common video treatment approaches, projections methods for presenting stereopairs, polarization, synchronization and colorimetrics, Autostereoscopic viewing- lenticular lenses, parallax barriers, other longer term systems-multi viewing 3D systems, Integral imaging/ holoscopic imaging, holographic approaches, volumetric displays/ hybrid hollgraphic, Viewer physiological issues with 3D content

Unit III

BASIC 3DTV APPROACHES FOR CONTENT CAPTURE AND MASTERING: General capture, mastering and distribution process, 3D capture, mastering and distribution process, content acquisition, 3D mastering- spatial compression, temporal multiplexing, 2D in conjunction with Metadata (2D+M), color encoding, Network Transport approaches, MPEG standardization effects

Unit- 4

TECHNOLOGIES FOR IN-HOME DISPLAY OF CONTENT: Connecting the In-Home source to the display, 3DTV display Technology- commercial displays based on projection, commercial displays based on LCD and PDP technologies, LCD 3DTV polarized display, other display technologies

Unit-5

3DTV ADVOCACY: 3DC, 3D media cluster, 3DTV, challenges and players in the 3TV Universe- 3D content creation, 3D video coding, transmission, virtual view generation and 3D display, mobile 3DTV, Real3D, HELIUM3D, Multiuser 3D Television Display, 3D4YOU, Audio Visual content search and retrieval in a Distributed P2P repository

Text Book:

1. 3D Television (3DTV) Technology, Systems, and Deployment: Rolling Out the Infrastructure for Next-Generation Entertainment by Daniel Minoli, 2010, ISBN-978-1439840665.

Reference Book:

1. 3DTV Content Capture, Encoding and Transmission: Building the Transport Infrastructure for Commercial Services by Daniel Minoli, 2010, ISBN: 0470649739

Credits: 3:0:0

Course Objective:

- The syllabus is focussed to orient the students on the basic photographic techniques and the professional equipments used in the media industry.

Course Outcome:

- The students will understand various stages in the growth of photographic technology from analogue to digital and how to use today's expertise for capturing images and manipulate them using editing software for different applications. The students will also appreciate the ways to use photography for gainful employment & as a rewarding hobby.

Unit I

INTRODUCTION TO PHOTOGRAPHY: History and Development of Photography – Different types of Digital Cameras and their application - Types of Lenses & Usage - Types of artificial Lights used in photography - Optical & gelatine Filters & the Usage – Different photographic Films used – Other accessories in photography.

Unit II

PHOTO COMPOSITION : Grammar of shooting a Good Picture - Exposure Triangle - Aperture, Shutter & film Speed (ISO), Depth of Field - Focal Length of different lenses - Angle of View - Indoor & outdoor Lighting Techniques - White Balance - Framing & Composition - Rule of Third.

Unit III

INTRODUCTION TO DIGITAL PHOTOGRAPHY : Constructing of DSLR camera - Digital Image Sensing CCD & CMOS – Controls on the camera & on the lens - Working with Digital Camera – Picture Resolution - Digital Storage Medium - Setup for Digital Imaging Editing for Windows and Macintosh platform - Software used for processes of images and their merit - File Formats – Converters.

Unit IV

AREAS OF PHOTOGRAPHY : Portrait – Architecture – Product - Fashion – Travel - Social function – Environmental – Action – Aerial – Under water – Macro – Panoramic – Sports - Wild Life - Indoor/Outdoor.

Unit V

PHOTOGRAPHY PROJECTS : Press Assignments - Photo Documentary - Photo Essay – Building small & Corporate Studios - Design, Equipments and Budget - Popular Photography Websites - Creating Photography Website - Connecting Images to website – Photo Scanners - Scanning Techniques - Photo Printers - How Printer works - Photo Quality Printing Paper & Types.

Text Book

1. Peter K Burian, Mastering Digital Photography and Imaging — Publisher Sybex.USA. First edition, 2001

Reference Books

1. Ralph E Jacob, Geo G Attridge, Sidney F Ray, The Manual of Photography (2000) by Focal Press, Ninth Edition.
2. Tom Grimm and Michele Grimm, The Basic Book of Photography, Fourth Edition
3. John H Edgecoe, Alfred A, The Photographer's Handbook. 1999 by. Knopf Publisher.
4. Joseph A Ippolito , Understanding Digital Photo, Thomson Delmar Learning 2003.USA.

12MT250 ELECTRONIC MEDIA MANAGEMENT

Credits 3:0:0

Course Objective:

- The course imparts knowledge on the structure of electronic media industry, its regulation, economics & business, its impact on the audience, and the forces shaping the communications revolution in media.

Course Outcome:

- The students will be able to understand the multidisciplinary field of electronic media management and how media planning helps in efficient buying and selling air time. Students will learn to apply the Audience Research findings to analyse the media and recommend strategic use of resources for effective product & brand promotion.

Unit I

ELECTRONIC MEDIA: Structure, function and economic of electronic media - Major Indian Media Houses – Major heads of income and expenditure in media - Advertising in Media Industry

Unit II

TV & RADIO PROGRAMME MANAGEMENT: TV & Radio Programme management: Planning, scheduling, production and broadcasting - Costing and budgeting of programme - Commissioned and sponsored programmes.

Unit III

MEDIA MARKETING: Media marketing - Market & Audience Survey: media, product and audience profile –TRP/TAM - Agencies of rating, process and method of rating – Marketing a sponsored programme.

UNIT IV

RADIO & TV HOUSES: Structure of radio and television houses - Recruitment and contractual engagement of H.R.- Service conditions and General administration - Channel management: training and deployment of personnel.

UNIT V

CABLE INDUSTRY: Cable Industry: Evolution, growth and regulations - Process of distribution of signals - Pay channels vs. free to air channels – Technology in use: Terrestrial, Satellite, DTH & IPTV, Mobile casting & Webcasting, FM & AM Radio, Net & satellite radio.

Text Books

1. Promotion & Marketing for Broadcasting Cable of the web by Eastman, Susantylen
2. Consumer Behavior by Leon G. Schiffman and Leslie Lazar Kanuk, Prentice Hall India

Reference Books

1. Essentials of Management by Harold Koonz and Heinz Weihrich, Mac Graw Hills, 2001

12MT251 AUDIO ENGINEERING AND PRODUCTION

Credits: 3:0:0

Course Objective:

- The students will be taught about Sound and Audio Engineering fundamentals and the techniques involved in Audio production.

Course Outcome: -

- This course will enable the students to be creatively and technically aware of the Technologies and Production systems in the Audio Industry.

Unit I

SOUND THEORY: Sound waves-Frequency - Wavelength - Amplitude - The velocity of sound waves - Sound waves and obstacles - Diffraction -Units used in sound - Decibels - Inverse Square Law - Effect of Boundaries – The response of the ear - Loudness - Fletcher and Munson Curves - Musical pitch - Timbre - The brain's perception of sound - Frequency ranges in music - Basic Acoustics - Reflection - Absorption – Refraction - Diffraction - Acoustic materials - STC - RT-60 - TL - CD.

Unit II

ANALOG AUDIO: Input Transducers - Microphones - Polar responses -Types of Microphones - Production of the different polar responses - Sensitivities of microphones - Phantom power - Balanced wiring - Specific applications of microphones - Reference voltages in audio signals-Metering - Technical monitoring - Aural monitoring - Output Transducers-Loudspeaker - Loudspeaker resonators - Loudspeaker cables - Professional and domestic standards - Stereo - Methods of producing inter - channel differences - Stereo listening-Stereo loudspeaker matching - Phase - Microphone techniques for stereo - Headphones for stereo monitoring.

Unit III

AUDIO ENGINEERING FUNDAMENTALS: Sound mixers - The basic channel - Important features of a mixer - Output stage - Inputs and connections- Filters - Equalizers - Talkback-Manual control of levels - Electronic level control - Signal processors - Dynamic processors - Effect processors - Audio lines and Patch bays - Analog Recording devices and systems - ATR - The fundamentals of magnetic recording - Tape standards - Cassette quality - Head and tape cleanliness - Noise reduction - Multi track systems - Tape speeds - Transport controls – Head alignment - Routing - Recording - Punching - Auto punch - Editing - Basic Analog Mixing.

Unit IV

DIGITAL AUDIO: Basic Principles – Analog vs Digital – Analog to Digital Converter – Digital to Analog Converter – Application of Digital Audio – Digital audio hardware - formats - Storage medium – Digital mixers – Digital audio workstation –Editing – Mixing - Mastering – Audio Post production for Video.

Unit V

BASICS OF LIVE SOUND ENGINEERING: Need for Sound Reinforcement - Technology - Basic PA systems - Full Range sound Reinforcement systems - Choice of Equipment - Signal flow - FOH - MOH -

Indoor systems - Outdoor Systems -Applications - Safety - Ear safety - Electrical safety - Mechanical safety - Fire safety.

Text Book

1. Michael Talbot-Smith, "Sound Engineering Explained", 2nd Edition, Focal Press, 2002.

Reference Books

1. Ken Pohlmann, "Principles of Digital Audio", 3rd edition, McGraw-Hill, 1995
2. David Simons, "Analog Recording", 3rd Edition, Backbeat Books, 2006.
3. Paul White, "Basic Live Sound", Sanctuary Publications, 2003.
4. F.Alton Everest, "Master Handbook of Acoustics", 4th Edition, McGraw Hill Publishing,2001
5. Frederick N Martin, John Greer N Clark, "Introduction to Audiology", 9th Edition, Pai and Sons, 2003

LIST OF SUBJECTS

| Sub. Code | Name of the Subject | Credits |
|-----------|-------------------------------------|---------|
| 13VC201 | Communication Media | 4:0:0 |
| 13VC202 | Multimedia Applications | 4:0:0 |
| 13VC203 | Audiography | 4:0:0 |
| 13VC204 | Film Art | 4:0:0 |
| 13VC205 | Radio Programme Production | 4:0:0 |
| 13VC206 | Typography Lab | 0:0:2 |
| 13VC207 | Light and Colours | 4:0:0 |
| 13VC208 | Television Programme Production Lab | 0:0:2 |
| 13VC209 | Entertainment Marketing | 4:0:0 |
| 13VC210 | Marketing Management | 4:0:0 |
| 13VC211 | Web Journalism | 4:0:0 |
| 13VC212 | Media Culture and Communication | 4:0:0 |
| 13VC213 | Media Management | 4:0:0 |
| 13VC214 | Ethnography | 4:0:0 |
| 13VC301 | Documentary Production | 4:0:0 |
| 13VC302 | E – Content Writing | 4:0:0 |
| 13VC303 | Development Communication | 4:0:0 |
| 13VC304 | Web Production and Publishing | 4:0:0 |
| 13VC305 | Film Appreciation | 4:0:0 |
| 13VC306 | Lighting Techniques | 4:0:0 |
| 13VC307 | Audio Presentation | 4:0:0 |
| 13VC308 | Media Economics | 4:0:0 |
| 13VC309 | Audio Recording Studio Designing | 4:0:0 |

13VC201 COMMUNICATION MEDIA

Credits: 4:0:0

Objective

- The student will understand the role and impact of different types of communication related to media.

Outcome

- The course helps the students to examine and realize the influence of media on social and cultural fabric of the society.

Unit- I

PRINT MEDIA

History of print media - Print medium: Newspapers and Magazines - types of newspapers and magazines: general and specialized - structure and functioning of newspapers and magazines technological developments - Hierarchy of newspaper and magazine industry - competition, content and style newspapers and magazines - An overview.

Unit II

RADIO

Nature and characteristics of radio - Radio as a medium of mass communication - Types of ownership: Private and Public- Organizational structure and functioning - Time and deadline factor - Radio jockeying - Talk shows - Interviews - FM broadcasting and the audiences: Programming Content variety and style.

Unit III

TELEVISION

Nature and characteristics of television medium - ownership, organizational structure of Doordarshan - Audio and visual elements - Video jockeying - Programming pattern, content and style - foreign and regional Satellite and cable TV - Prasar Bharati- Audience participation.

Unit IV

FILM

Motion pictures - historical background - structure and organization of motion picture industry in India - new developments in film production - status, problems and prospects of film industry with special reference to regional cinema - documentary films future of film as a medium of entertainment - film audiences - critical review of noted regional/national films.

Unit V

NEW MEDIA

New Media: Information age, knowledge society and global media and audiences - Web writing -New media technologies: digital revolution, internet, satellite TV and DTH, media convergence, ICT uses in Public and private sector - information super high way - issues and future challenges.

Text Books

1. White Ted, Broadcast news writing, reporting and producing, fourth edition, Oxford, Focal Press, 2006.
2. Mass Communication in India, Keval J Kumar, 2010

Reference Books

1. Mencher Melvin, News reporting and writing, New York, Mc Graw Hill Publications, 2003.
2. Dynamics of Mass Communication: Media in Digital age, Joseph R. Dominick, Tata Mc Graw Hill Publications, 2010.

13VC202 MULTIMEDIA APPLICATIONS

Credits: 4:0:0

Objective

- The subject aims in making to understand the students the basic and application level of multimedia pertaining to media industry.

Outcome

- The students will be able to design their own multimedia project and portfolio related to the media industrial needs.

Unit I

INTRODUCTION TO MULTIMEDIA

Evolution of Multimedia - Structure and components of Multimedia - multimedia platforms - Applications of Multimedia in Education, Communication, Medical, Business, Entertainment - Video Conferencing, Web Streaming, Video Streaming, Internet Telephony - Virtual Reality - Artificial intelligence.

Unit II

IMAGES

Images - Bitmap - Vector graphics-Image file formats - Animation - Power of motion - Principles of animation - Cell and computer animation - 2D and 3D animation - Morphing - Kinematics - tweening - Motion capture - character animation - modeling - special effects - compositing.

Unit III

VIDEO

Video basics - Working with video - Video Formats - Video hardware - encoding - decoding - video editing - non-linear editing - Audio basics - working with audio - audio formats - audio hardware & software.

Unit IV

TOOLS IN MULTIMEDIA

Software tools - Text editing and word processing tools - Painting and Drawing tools-3D modeling and Animation tools - Image editing tools - Sound editing tools - Animation, video and digital Movie tools.

Unit V

PROJECT DESIGNING

Project analysis - planning - prototyping - product development - Testing - alpha and Beta test - Implementation - Evaluation - Maintenance - roles of project team members - working with clients.

Text Books

1. Multimedia Technology and Applications, David Hillman, 2010
2. Multimedia Magic, S. Gokul, 2002

Reference Books

1. The Ultimate Multimedia Handbook, Tata Mc Graw Hill
2. Multimedia Production, Planning and Delivery by John Villamil - Casanova and Louis Molina, Feb 18, 1997)

13VC203 AUDIOGRAPHY

Credits: 4:0:0

Objective

- The students will be taught about audio related fundamentals and the techniques involved in audio production.

Outcome

- The intricacies of recording and reproducing audio will be taught in the studio.
- The students will know the functioning of different equipments in recording industry.

Unit I

ACOUSTICS AND AESTHETICS OF SOUND

Human hearing - Perception of sound - hearing sensitivity- frequency of range - sound wave length - measuring sound - reverberation time - Sabine formula.

Unit II

EQUIPMENT DEVICES

Microphone - types - direction, pickup pattern, noise, choosing the right mic, technique- sound reproduction devices - Input devices - various sound file extension, Sound production devices - Compression ratios - Positioning of microphones - Speech - Musical instruments - Mixing console - Accessories and connectors - cables.

Unit III

DIGITAL AUDIO WORKSTATIONS

Digital recording software - Editing techniques - Networking of studio - Streaming basics of broadcasting - Special effects - equalizers - digital recording software - location recording - Basic setup of recording system - analog digital cables, connectors - Analogue to digital conversion - pitch - dynamic range - harmonics - equalization -

Unit IV

EDITING

Editing techniques - audio sweetening - chorusing - noise reduction - The mastering process - Computers in music technology - Foley and sound effect creation - Standard rules -1/3 rule - care and handling.

Unit V

PRODUCTION

Audio dubbing for video production - Synchronization time - code - storage, output devices - file transfer protocols - archival - Digital audio broadcast.

Text Books

1. Audio Post – production in Video and Film. Oxford: Focal Press. 2001
2. Paul White, “Basic Live Sound”, Sanctuary Publications, 2003.

Reference Books

1. Alec Nibet, The Use of Microphones. Oxford: Focal Press, 2004
2. Michael Talbot – Smith. Broadcast Sound Technology, Oxford: Focal Press.

13VC204 FILM ART

Credits: 4:0:0

Objective

- To make the learners know about the different genres of films its types and the methods of digital production.

Outcome

- To make the students understand the history of cinema and its growth. They will also get to know the elements and perspective of film industry.

Unit I

FILM FORM

Film History – Film forms - Early Cinema (1893-1903) - Development of Classical Hollywood cinema (1903-1927) - German expressionism (1919-1924) - French Impressionism and Surrealism (1917-1930) - Soviet Montage (1924-1930) - The Classical Hollywood Cinema after the coming of sound - Italian neo-realism (1942-1951) - The French New wave (1959-1964) - Japanese cinema – Third world cinema - Contemporary trends.

Unit II

PRODUCTION

Pre Production planning – Concept - Plot- Story development - Scripting - Screen play writing, Budgeting, Casting, Locations - Financing. Production-Shooting, Direction & Cinematography -Post production - Editing, Sound recording - Dubbing, Special effects, Graphics & Final mixing - Distribution & Exhibition.

Unit III

ELEMENTS OF FILM

Mise-en-scene - Realism, the power of mise-en-scene, aspects of mise-en-scene - space and time, narrative functions of mise-en-scene - Cinematographer properties-the photographic image, framing, duration of the image, montage and long take - Editing- dimensions of film editing, continuity editing, alternative to continuity editing - Sound - the powers of sound, fundamentals of film sound - dimensions of film sound - functions of film sound.

Unit IV

GENRES AND FILM APPRECIATION

The concept of form in films - principles of film - narrative form - non-narrative form - dividing a film into parts and Genres (language, style, grammar, syntax) – Film appreciation – Film criticism – Film review techniques – Deconstruction of film – Content analysis.

Unit V

FILM STYLES

Style as a formal system - narrative unity – ambiguity - A non - classical approach to narrative films - space and time – disunity – form - style and ideology - Popular, Parallel and documentary films.

Text Books

1. Turner, Graeme. Film as social practice, Routledge, London, 1993
2. Monoco, James. How to read a film, Routledge, London, 2001

Reference Books

1. Asish Rajadhyasha, Paul Wileman, Encyclopedia of Indian cinema, Ashish, 2005
2. Film Directing Fundamentals, Oxford Focal press, 2001.

13VC205 RADIO PROGRAMME PRODUCTION

Credits 4:0:0

Objective

- To provide an understanding of radio programming and programme formats.
- To equip the students in knowing about the functioning of a community radio and to impart the programming skills in news gathering and reporting for various radio programmes.

Outcome

- After learning this paper the students can plan and execute a radio programme. They will also be technically aware of the production tools in radio production industry.

Unit I

RADIO - BASICS

Introduction to Radio as a Mass Medium - Production elements of Radio programmes: Aural Sense Appeal, narration, dialogue, sound effect, Rapid Getaway, music, silence etc. Future of Radio: FM, Online Radio, Visual radio, Satellite radio, Community Radio: Concept & Importance.

Unit II

RADIO FORMATS & STYLES

Radio Programming Skills: Writing for Radio - News gathering and reporting skills - , Compilation of News: Pool copy, News Bulletins - Commercial radio production - Public affairs. Program styles – comedy, music, drama, talk shows, debate and discussion, interview, Sports, events and others - Interactive broadcasting - Educational broadcasting.

Unit III

RADIO PRESENTATION AND ANCHORING

Radio Presentation Skills: Effective speaking skills - announcements - News reading - Interview skills - Voice culture - Voice over techniques.

Unit IV

ADVANCED RADIO PRODUCTION

Radio Production Techniques: Nature of sound - Sound recording techniques - Indoor and Outdoor - Post-production techniques - voice, music and special effect - Computer in automation Multichannel - Computer generated effects.

Unit V

BROADCAST EVALUATION TECHNIQUES

Broadcasting Techniques: Equipments - Studio operations - OB operations - Recording techniques, Radio station visits - production of radio content - Programme content evaluation- Technical evaluation - Thematic evaluation - Radio marketing strategies.

Text Books

1. Mencher. M., Basic News Writing, Sharma Books, 2008
2. Programme Making for radio, Jim Beaman, 2006

Reference Books

1. Radio Production, Robert McLeish, 2005
2. Lesiler & Flat lay, Basic Business communication. Tata Mc Graw Hill, 2004

13VC206 TYPOGRAPHY LAB

Credits: 0:0:2

Objective

- The students will understand the elements of typography and its importance in designing.

Outcome

- This course helps the students t learn how to harness typography as a visual voice

The faculty conducting the Laboratory will prepare a list of experiments [10/5 for 2/1 credit] and get the approval of HoD and notify it at the beginning of each semester.

Karunya University

13VC207 LIGHT AND COLOURS

Credits: 4:0:0

Objective

- To provide an overview experience of light and colour theories, its usage, the role of colour and light in producing visual effects and for other media application purposes.

Outcome

- The students will also apply their knowledge in the professional area of creative use of light and colour in media applications.
- It also gives the learners the theory and practice in the preparation of color images for reproduction and the use of appropriate quality control devices and standards.

Unit I

COLOUR IN CONTEXT

Experience of colour in media - Colour awareness - Transparent colours - Water colours - Waterproof ink - Opaque colors - Poster colour - Pastels wax crayons - Transparent papers - Cellophane Colour culture and creativity - colour psychology - colour theory - Trichromatic theory - Optical illusions - Dimensions of colour - colour and illumination - colour systems - color wheels - color harmonies - psychological colour systems.

Unit II

MAKING COLOUR AND VISUAL EFFECTS

Making colour - Art in media - colour photography - colour reproduction - colour forecasting - colour indoors - paints and lighting - flooring and textile – accessories and appliances - Visual effects – Meaning of light and colour - Function of Eye - Physical properties - Hue: Value - Chroma - tint - shade and tone - gray scale - chromatic value scale - colour value scale.

Unit III

COLOR IN MEDIA

Color in photography - Recording light - creative use of colors - color management in digital photography - Color in moving image - Color in feature films - color in animation - Color composition - Basics of composition - composing with color - Color in publications - cover stories - books - color at point of sale - packaging details - Color in branding and advertising - color on web.

Unit IV

CAPTURING COLOR

Colour experience in: Primary (Pigment and light theory), Secondary, Tertiary, Quaternary, Achromatic, Monochromatic, Polychromatic, High, Average, and lower, High average and low contrast - Experience in colour harmonies: Complementary split - Double split complementary- Analogous - Warm and cool - Naturalization of colour.

Unit V

IMAGE MANIPULATION

Basics of tonal adjustment - global color corrections - selective color corrections - file formats and compressions - color effects - digital painting - Optical illusion - Advancing and receding colours - Simultaneous and successive contract - Visual mixing - Experience in rendering methods - Wash - broken - Impasto - Super imposition.

Text Books

1. The complete guide to color, Tom Fraser Adam Banks, 2004, The Illex Press Ltd.
2. Color management and color science: Introduction, Norman Koren, 2004.
3. Kelly Dempski & Emmanuel Viale, Advanced lighting and materials with shaders, Worldwide Publishing, 2005.

Reference Books

1. Color Management , Bruce Fraser, Chris Murphy and Fred Bunting, 2003
2. Understanding colour Management, Abhay Sharma, 2004.
3. Ralph Donald, Riley Maynard and Thomas span, Fundamentals of Television Production, Pearson, 2008.

13VC208 TELEVISION PROGRAMME PRODUCTION LAB

Credits : 0:0:2

Objective

- To train the students in gaining knowledge on various formats of television production.
- To impart technical knowledge in broadcasting various TV Programme

Outcome

- Students will be able to produce various TV programmes on their own.

The faculty conducting the Laboratory will prepare a list of experiments [10/5 for 2/1 credit] and get the approval of HoD and notify it at the beginning of each semester.

Karunya University

13VC209 ENTERTAINMENT MARKETING

Credits: 4:0:0

Objective

- To give an overview of entertainment marketing scenario prevailing in the media industry.
- To show how advertising can be put to best use for promoting Entertainment Industry.

Outcome

- Students will understand the opportunities available in various Entertainment Industries for marketing them effectively to the right target audience.
- Students will come to know the methodology of handling the promotional communication needs of Entertainment industry to market them profitably.

Unit I

INTRODUCTION TO ENTERTAINMENT MARKETING MANAGEMENT

Principles of Marketing - Characteristics of Entertainment Marketing - How it is organized – Entertainment Vs Product Vs Service Marketing - GAPS Model of Service Quality – Elements of Entertainment Service marketing - Convergence Marketing Strategies – Changing Landscape of Audience – Cultural Dimensions & Global Paradigms - Madison & Vine approach to Entertainment Marketing.

Unit II

ENTERTAINMENT INDUSTRY

Entertainment Industry Environment - TV, Radio, Film, Music, Advertisement, New Media, Print Media, Traditional Folk Art & Out-Door Media Industries –TV Cable Network Industry – Entertainment Venues – Venue Marketer - Entertainment Venue Economics.

Unit III

AUDIENCE, SEGMENTATION & RESEARCH IN ENTERTAINMENT

Who is audience? – What motivates the audience? – Audience attitude - Audience Research – Fan Subculture – Segmenting entertainment audience – Criteria - Traditional segmentation - Global Lifestyle segments - Generic segmentation – Approach to entertainment focused research.

Unit IV

MIXING, BRANDING & COMMUNICATING

4 Ps of Entertainment Marketing Mix – Brand Positioning & Equity – Communication the marketing Objective & Message Development – Communication Strategies & Tactics – Brand Positioning – Event Marketing – Integrated Marketing Communications Campaign.

Unit V

MARKETING OF ENTERTAINMENT EVENTS

Theatre & Stage Performance – Destination & Tourist Service – Attractions & Themed Spaces – Mediated Entertainment – Stars & Celebrities.

Text Books

1. Entertainment Marketing & Communication, Shay Sayre, Pearson Education 2008
2. Entertainment Marketing Revolution: Prentice Hall, Al Lieberman, 2002

Reference Books

1. Marketing Management, Philip Kotler, Pearson Education India
2. Social Media Marketing, An hour a day, Second edition, Dave Evans, 2011.

13VC210 MARKETING MANAGEMENT

Credits: 4:0:0

Objective

- To understand the overall marketing strategies employed in media industry.

Outcome

- The students will be able to understand the intricacies of media marketing.

Unit I

INTRODUCTION TO MARKETING

Definition of Marketing and marketing management- (needs, wants, demand, exchange, transactions, markets, buying, selling, and marketing, transporting, storage, financing, risk taking, standardization, grading) – marketing environment – marketing mix – understanding the consumer markets, business markets.

Unit II

MARKET SEGMENTATION

Marketing segmentation – Targeting – Positioning - Promotion – a view of the communication process – setting the communication Objective – steps in developing effective communication – setting the total promotion budget – setting the promotion mix.

Unit III

PRODUCT

Product – what is a product – New product development – product mix strategy – product life cycle strategy – product levels, product lines, Branding, packaging, labeling.

Unit IV

PRICING

Pricing – factors to consider for pricing – internal and external, including pricing Objective – methods of pricing – adopting the price.

Unit V

MARKETING BEHAVIOUR

Marketing channels – the nature of marketing channels – their functions and types – channel design management – channel behaviour – organization and conflict.

Text Books

1. Marketing Management, Philip Kotler, Pearson Education India, 2009
2. Marketing Management - Text and cases, Excel Books India, 2004

References:

1. Philip Kotler and Gary Armstrong, Principles of Marketing, Pearson Education, 2008
2. Varshney P. L. and Gupta S. L., Marketing management – An Indian Perspective, 2004.

13VC211 WEB JOURNALISM

Credits: 4:0:0

Objective

- To develop students as responsible web journalist and also to impart knowledge of new media journalism.

Outcome

- The students will have skills of writing for web portal and for web reporting.

Unit I

INTRODUCTION TO INTERNET

Internet : meaning and history - Functioning of internet - Uses of internet in communication - Fundamentals of internet: - WWW, IP, web page, web site, search engine, browser, domain name - Concept of cyber space.

Unit II

INTERNET, COMMUNICATION AND JOURNALISM

Introduction to Internet - Internet as a medium of journalism - Challenges and limitations of internet - Development of internet language - Mass communication after internet - Issues of new media - Internet regulations - Internet ethical rules and regulations.

Unit III

WEB TECHNOLOGY

Making of a web page: HTML, FTP, etc. - Role of web master, application programmer and network engineer - Web team members: Visualizer, graphics designer, project manager, web site manager, animator, audio-video expert.

Unit IV

FUNCTIONING OF A PORTAL OFFICE

Content team member - Structure of a web news room - Content collection and selection - Web writing and copy editing - Web updating and web reporting.

Unit V

WEB INDUSTRY

Introduction to major news portals - Economics of a news portal - Web advertising - Cyber crimes and cyber laws – Media laws and ethics governing cyber crimes - Assignment on preparing a chart of the structure of a portal office - Plan a small web news portal project.

Text Books

1. Online Journalism: Principles and practices of news for the web, James C. Focust, 2004
2. The Digital Journalists Handbook , Mark S. Luckie, 2012

References

1. Web Journalism: Practice and Promise of a New Medium, 2007
2. Excellence in Online Journalism, David A. Craig, 2011

13VC212 MEDIA CULTURE AND COMMUNICATION

Credit: 4:0:0

Objective

- The student will understand the role and impact of different media and culture on society.

Outcome

- The students will be aware of social implications, media exposure, and its use in globalization among media audiences.

Unit I

MEDIA STUDIES

An introduction to the media, media industries and audiences - Media is a cultural force and changing paradigm. Basic concepts: Language of persuasion - Media messages - constructing media - Dynamics of modern communication - the shaping and impact of new communication technologies - Theoretical approaches, theories of the media, theories of society, messages and meanings.

Unit II

MEDIA AND GLOBALIZATION

Large corporations and control of the communications industries - Negotiation of control in media organization and occupation - Cultural dependency and mass media - The economies of media industry, the global gaps, social class, technology gaps, structure and agency, communication and connectivity - Dynamics of global culture, and migration, cultural melding and mediation, globalization, Diasporas, circular migration - Hegemony - the role of media and popular culture, global capitalist hegemony and Communist hegemony.

Unit III

MEDIA AND SOCIETY

Language and social construction of reality, mediation and representation - texts, meanings and audiences. Rules in society, rules and culture, the special authority of electronic media public images and private practices, media and rules.

Unit IV

MEDIA AND CULTURE

Defining Ideology and culture, emotions and culture, language and culture, race and culture, social class and culture, habits and popular culture, popular reception - popular emotions, emotional branding - mediated feelings, story, genre, discourse, culture uses of material world. Media and cultural imperialism - defining dominant ideology, hegemony.

Unit V

MEDIA AND AUDIENCES

Media and audience direct effects, limited effects, uses and gratification, the mass audience, the mass society, rethinking the mass audience, the audience and the technological change, segmentation, polarization, TV as dominant culture.

Text Books

1. Mohammad Ali, International Communication & Globalization, Sage Publications, London, 1997.
2. Dennis McQuail, Mass Communication Theories, Sage Publications, 2000.

References

1. Straubhar, Larose, Media Now, Thomson Wordsworth, 2004
2. Vincent Mosco, the Political Economy of Communication (Media, Culture and Society Series), Thomson Series, 2004

13VC213 MEDIA MANAGEMENT

Credits: 4:0:0

Objective

- To familiarize the learners in managing and understanding the structure of media industry and management.

Outcome

- The students will come to understand the current scenario of how the media organization works, the job opportunities and its nature.

Unit I

TYPES OF MEDIA FIRMS

Types of media organization – Design: conceptual issues – Media as business and social institution – Media entrepreneurship – Government and private Ltd – India's major media houses and their holdings.

Unit II

ORGANIZATIONAL HIERARCHY AND BUSINESS MODEL

Behaviour in media organization – Structure of different media organizations – AIR/ DD – Private organizations – Roles of different persons.

Unit III

BUSINESS MODEL

Business models – Revenue generation – Advertisements – Cost factors – Revenue models – Market factors – TRP – Process and method of rating – Selling of a programme – Space and time – Media audience – Program strategies – Legal arrangements.

Unit IV

MEDIA MANAGEMENT

Project management in media production – Project cycle (PC) – Management themes in production process – Project planning – Production strategies – PPC in practice initiation – Risk and impact assessment – Pre production – Production team – Project specification – Project work plan – Source of funds – Budgeting – Production process.

Unit V

CASE STUDY – ORGANIZATIONAL BEHAVIOUR

Case study of advertising firm – Case study of news channel – Case study of commercial TV channel – Case study of sports channel.

Text Books

1. Media organization and Production – Simon Cottle, Sage publications, 2003
2. Handbook of Media Management and Economics, Alan B. Albarran , Sylvia M. Chan Olmsted, 2006

Reference Books

1. Media Management in the Age of Giants , Dennis F. Herrick , 2003
2. Organizational Behaviour, Stephen P. Robbins, 2009

13VC214 ETHNOGRAPHY

Credits: 4:0:0

Objective

- The paper helps in understanding the concepts of cognitive psychology and ethnography.

Outcome

- The learners will be able to identify the elements of ethnographical approaches in designing and learning the intricacies of designing psychology.
- The students will be able to learn the cognitive potentials in designing and transforming in ethnographical contexts.

Unit I

APPROACHES TO COGNITIVE PSYCHOLOGY

Introduction – Experimental cognitive psychology – Cognitive Neuro psychology – Cognitive Neuro science – Major perceptual process – Visual systems – Perceptual organizations – Colour perception – Movement perception – Space and depth perception.

Unit II

OBJECT RECOGNITION

Pattern recognition – Visual agnosia – Face recognition – Perceptual development – Focussed auditory – Attention Focussed – Visual attention – Divided attention – Automatic processing – Short term memory – Long term memory – Reasoning – problem solving and decision making.

Unit III

VISUAL IN ETHNOGRAPHY

Introduction to Ethnography – Approach to theory – Visual method – Visual images in social science – Methodologies and developments in visual anthropology – Transformative potentials of visuals – Reflexivity and subjectivity – Gender identities – Technologies and images.

Unit IV

FILM AS ETHNOGRAPHY

Introduction to Ethnography – Complexities of science – Aesthetics – Anthropological knowledge – Ethnographic film spectators – Visual Imperialism – Myths – Opportunism – Cultural facts and documentation.

Unit V

ETHNOGRAPHY DESIGN

Problems, Cases and samples – Field relations – Oral accounts and the role of interviewing – Documents and other artifacts – Real and virtual – Recording and organizing data – Process of analysis – Writing ethnography ethics.

Text Books

1. Ethnographic principles and practices , Martyn Hammersley, Paul Atkinson, Taylor and Francis, 2007
2. Ethnography – A way of seeing, Harry F. Wolcott – Altamira press

Reference Book

1. Doing Visual Ethnography , Sarah Pink, Sage publications, 2007.

13VC301 DOCUMENTARY PRODUCTION

Credits: 4:0:0

Objective

- It familiarizes the students with concepts and practices of developing a documentary, its types and styles of production.

Outcome

- The learners will be able to analyze and produce documentaries of various styles and formats.

Unit I

INTRODUCTION

The definition of documentary- The difference between Fact film and Fiction film –Brief study of different types of factual films - Educational films - Instructional films - Travel films - Publicity films. The director's role - defining artistic identity - Developing story ideas- Proposing and pitching a short documentary.

Unit II

DOCUMENTARIES AND FILM LANGUAGE

Traditions in documentary films: Naturalist – Realism - Detailed study of Louisiana Story, Berlin “The Symphony of a city” - Kino-eye - Theory - Night Mail - Song of Ceylon - Principle of documentary films - The documentary idea today - The different style of documentary film making - Journalist approach Documentary language - Elements of grammar (Screen language, screen grammar, motivation, denotation and connotation: Shots in juxtaposition, duration, rhythm and concentration).

Unit III

DOCUMENTARY AESTHETICS

Point of view and story tellers - dramatic development - time and story structure - dramatic curve - form - control and style - Reenactment - reconstruction and docudrama - The proposal outline - Fact film treatment - The information line - Interesting line - The presentation line - The sequence outline - Shooting script - Writing narration for non- fiction script.

Unit IV

PRODUCTION PROCESS

Pre Production - The working hypothesis - Research overview - The outline - documentary proposal - developing the crew - crew and responsibilities - director - director of photography - camera operator - sound recordist - Post production - Editing - from start to viewing the first assembly: Editing - process of refinement - Editing: From fine cut to sound mix.

Unit V

TYPES OF DOCUMENTARIES

Documentary films - Non narrative documentaries and narrative documentaries - Characteristics of documentary films - Mediated reality - real people - artifacts and information language Narrative documentary films - Fight club - soviet classic Battleship Potemkin - Development of documentaries in India - The Government approach to sponsorship - The Film Division of India - The independent documentary filmmaker - Television documentary films and educational films - U.G.C's TV programmes.

Text Books

1. Direct the documentary – Michael Rabiger, Focal press, 2009
2. Introduction to Documentary production, Searle Koch berg, 2002

Reference Books

1. Film – An Introduction , Second edition, William H. Phillips, 2002
2. Directing the Documentary, Michael Rabiger, 2009
3. Writing, directing, and producing documentary films and videos, Alan Rosenthal, 2007

13VC302 E-CONTENT WRITING

Credits 4:0:0

Objective

- To familiarize the basics of writing.
- To learn the skills required for a multimedia/web writer.

Outcome

- They will know about the styles of writing for different types of documents.
- They will also understand the architecture of multimedia/web.

Unit I

INTRODUCTION TO WRITING

Introduction to writing styles – Skills – Writing – Basics of Content Writing –Traditional Content Vs E-Content – Language Use in E-Learning – Advantages and Limitations – Coherence – Cohesion – Accuracy – Brevity – Clarity –Content Writing: Roles of Content Writer, Subject Matter Experts, And Instructional Designer.

Unit II

INTERACTIVE WRITING SKILLS

Concept of Interactive Multimedia – Interactive Writer – Interactivity and Control – Thinking Interactively – Interactive Devices -Information and Interactive Architecture – Narrative Design - Content Expertise and Strategy – Writing for Search Engines - Technical Skills: Flowcharting – Other Organizational Tools.

Unit III

STYLES AND FORMATS

Types of styles – Formats – Techniques of identifying audience –Types of audience – User Prism –Script and Proposal Formatting: Outlines – Proposals – Storyboards – Scripts – Final Documents.

Unit IV

APPLICATIONS OF E – CONTENT WRITING

Architecture: Linear – Linear with Section Branching – Hierarchical Branching – Parallel/Multiple Path Architecture – Dynamically Generated Websites – Active and Passive Information Delivery - Writing Non-Narrative, Linear Narrative, Interactive Narrative – Interactive Narration: Character and Role of the Player – Structure and Navigation – Exposition.

Unit V

PROJECT DESIGNING

Writing a corporate website - Writing a museum kiosk - Writing interactive lessons - Writing learning content for a simulation - Writing classic lessons to a computer game.

Text Books

1. Writing for the Media, Sunny Thomas, Vision Books Pvt. Ltd.2000
2. Writing for Multimedia & the Web: A Practical Guide to Content Development for Interactive Media, Timothy Garrand, Elsevier Inc, 2006.

References

1. Developing Online Content: The Principles of Writing and Editing for the Web, Irene Hammerich, Claire Harrison, John Wiley & Sons Inc, 2002.
2. Effective Writing for E-Learning Environments (Cases on Information Technology), Katy Campbell, Information Science Publishing, 2004

13VC303 DEVELOPMENT COMMUNICATION

Credits: 4:0:0

Objective

- To understand the nature and potential of communication for holistic social development.

Outcome

- To know about the role of development of communication in social transformation.

Unit I

NATURE OF DEVELOPMENT COMMUNICATION

The nature of Development - Defining development as a Goal, as a Process - Key concepts: Self-reliance, Dependence, Cultural Identity, Decentralization, Participation, Modernization, Industrialization - First-Second-Third-Fourth Worlds, Basic Needs etc - Complexities of development efforts - Alternate paths to development - Development and Colonialism - Development and Tradition bound Society.

Unit II

ROLES OF DEVELOPMENT COMMUNICATION

The Concept of Development Communication: Definitions, Roles and Philosophy of Development Communication - Differences from General Communication, Goals - Differences between Communication and Development Communication - Models of Daniel Lerner, Everett Rogers and Wilbur Schramm.

Unit III

TRADITIONAL COMMUNICATION STRATEGY

Communication for social change - Using Folk Forms for Social Change - Taking Theatre into the Streets - Empowerment through Silver Screen; Role of a communicator in the process of social change - Folk forms and alternative silver screen' for social change.

Unit IV

SOCIAL MARKETING

Social Advertising - Historical perspective - Taxonomy of advertising - Social advertising - the Concept - why of social advertising, taxonomy of social ads. Social advertising in India - areas Covered - agencies involved, the DAVP and other media units, organized sector and voluntary Organizations - International agencies.

Unit V

APPLICATIONS IN DEVELOPMENT COMMUNICATION

Campaign Strategies - the why and how of a campaign, audience analysis, fixing target audience - Focusing message - determining media choice - execution of a campaign by the students.

Text Books

1. Melkote. Srinivas .R, Steves H. Lessley, Communication for the development in the third world, Theory and Practice for Empowerment, Sage publications, 2001.
2. Voice to the people, Communication for Social change, 1990.

References

1. Melkote, Srinivas R., Steeves, H.Leslie - Communication for Development in the Third World- Theory and Practice for Empowerment,'(2nd Edition), Sage Publications, New Delhi 2001.
2. Chauhan, Meenakshi R., 'Advertising - The Social Ad Challenge', Anmol Publications Pvt Ltd., New Delhi 1995.

13VC304 WEB PRODUCTION AND PUBLISHING

Credits: 4:0:0

Objective

- To enable students to get a hands-on experience of web world and web designing.

Outcome

- The students will be able to know the techniques to be applied in web publishing as well as the laws governing the web.

Unit I

INTRODUCTION

An introduction to the world of online journalism - pitfalls and possibilities - What is "Online Journalism?" - How is it different from traditional media, such as print, broadcast and magazine? - Writing styles for online readers - Introduction to Story components.

Unit II

USES OF WEB

Services of internet: e-mail, chatting, newsgroups, Chat rooms, bulletin board services and forums- how to use them to gather information - Discussion of Netiquette; users' expectations of privacy; journalists' behavior within these public and semi-public spaces - Using the Web sites of nonprofit organizations and government agencies as information sources: What to look for: Data, authorities, history, background, linked sources.

Unit III

WORKING ON WEB

Blogging as journalism - Reporting Online: Interviewing - Researching & Interviewing - Finding experts through the Web: How to approach them to get good results - Techniques of web media-editing, layout and use of pictures in web - Web publishing tools.

Unit IV

APPLICATIONS

Scrolling vs. clicking: How we read on the screen - Chunking the story: Writing links; writing Web headings - showing vs. telling - Nonlinear Writing, Multi-Linear Storytelling - Linking in Nonlinear Story Presentation.

Unit V

CYBER LAWS AND ETHICS

Double-checking sources – accuracy, and credibility of online news sources – maintaining balance – media laws pertinent to online journalism – ethical issues and editorial dilemma in online environment.

Text Books

1. Foust, James C. Online Journalism- Principles and Practices of News for the Web.
2. Quinn Stephen- Knowledge management in the digital Newsroom

Reference

1. Goldstein, Norm- The Associated Press Guide to Internet Research and Reporting.
Gunter, Barrie- News and the Net.

13VC 305 FILM APPRECIATION

Credit 4:0:0

Objective

- To know about the different genres of films, its styles and their method of production.
- To know about the various film styles, its narration and different case studies of film reviews.

Outcome

- The learner will be aware of internationally renowned film contributions to the industry.

Unit I

INTRODUCTION TO FILM APPRECIATION

Definition and need for film Appreciation - How to read and understand cinema- Inductive approach and Deductive approach – Social, Political, Economical, Cultural, Technical and Aesthetic aspects of Cinema - A comparative study of Cinema and other aesthetic expressions - The types of films to be appreciated - subject content, structural characteristics -- Factors to be appraised while appreciating films - The narrative and stylistic elements.

Unit II

UNDERSTANDING THE FILM STRUCTURE

Appreciation of Neo-realistic films with a detailed analysis of Vittorio-Desica's Bicycle Thieves (1948). The structure of the film - the social criticism - Camera work - Editing style use of non-actors.

Unit III

GENRES AND ITS TECHNIQUES

Appreciation of thrillers with special reference to Alfred Hitchcock's films: Psycho (1960) - its structure - Dramatic development - Psychological thrills - Camera work – Lighting - Editing style - use of sound effects - North by North west (1959) - its structure - Camera work -editing style with emphasis on chase sequences - use of sound effects and music.

Unit IV

FILM ANALYSIS

Analysis of Orson Wells' film "Citizen Kane" – Its structure camera work - The use of long takes and deep focus technique - editing style - use of actors - Art Direction-Appreciation of Epic films of David Lean with special reference to the Bridge on the River Kwai (1959) scripting - study of the characters - The prison commander and the British Colonel – The camera work - Editing style and the creative use of sound – Doctor Zhivago (1966) structure-Visual appeal and Artiste performance.

Unit V

FILM STUDIES

Appreciation of Kriztof Kieslowski films with special reference to the Colour Trilogy - "Blue", "White", "Red" - The dramatic structure - Study of the style - Fragmented narrative - Mobility of camera. Appreciation of Yasujiro Ozu's films with special reference to Tokyo Story (1953) - Study of the style and craft - "Shomingeki" tradition - Depiction of domestic culture - Use of low angles and long takes.

Text Books

1. How to read a film, James Monaco, 2009, Oxford University.
2. Film as Art, Deluxe edition, 2006 , Ernest Lindgren

Reference Books

1. Cinema as Graphic Art, Studio Publication, Vladimir Wilsen
2. Art of the Film , Stephenson and Debrix, 1985.

13VC306 LIGHTING TECHNIQUES

Credits: 4:0:0

Objective

- Lighting Techniques covers the full ambit of technology & artistic values to illuminate a scene for photography, video or a stage event.

Outcome

- Students will learn the value and characteristics of lighting for Video & Still shooting & for stage performance.
- The student can choose to be creative in such situations by manipulating the light and using different lighting equipments that will help to produce innovative programmes.

Unit I

LIGHTING TECHNIQUES

Lighting Variables: Measuring Light, Intensity Controlling Light Intensity, Light Character Color Temperature, Basic Lighting Triangle: 3-point Lighting, Ratios in the Lighting Triangle, 2-Point Lighting, Other Lighting Objective

Unit II

LIGHTING INSTRUMENTS AND ACCESSORIES

Spotlights, Accessories for Spot Lights, Fill Lights Spots, Reflectors and PAR Banks as Fills, Fill Light Accessories, Mounts and Connectors for Lighting Equipment, Light Control Consoles, Safety and Efficiency, Artistic or Mood Lighting

Unit III

MATERIALS AND REFLECTIONS

Rendering equation, Irradiations and luminance, Lamberts Law, Bidirectional reflectance distributions and functions, Diffuse materials, Specular materials, Diffuse reflection models, Specular and metallic reflections models.

Unit IV

LIGHTING IMPLEMENTATION

Basic lighting math's, Per-vertex warn Lights, per pixel warn lights, Basic set up and diffuse materials, Specular materials, Introduction to spherical harmonic lighting.

Unit V

RAY TRACING TECHNIQUES

Ray tracing algorithm, backward ray tracing, extending ray tracing algorithm, Real time ray tracing, Materials-Plastic, wood, Metals

Text Book

1. Kelly Dempski and Emmanuel Viale, Advanced Lighting and Materials with Shaders, Worldware Publishing, 2005.

Reference Book

1. Ralph Donald, Riley Maynard and Thomas Spann, Fundamentals of Television Production, Pearson, 2008

13VC307 AUDIO PRESENTATION

Credits: 4:0:0

Objective

- This subject offers a wide variety of presentation styles, skills & techniques that are required for presentation on any electronic media.

Outcome

- Students will learn the importance of voice presentation on various audio media and the techniques that need to be adopted to different situations.
- If the student wants to be a radio or Video Jockey in a professional studio or wants to employ anyone with presentation skills for his/her studio, the topic under discussion will prove to be of immense help.

Unit I

CHARACTERISTICS OF THE MEDIUM

Transient nature of radio AM & FM, Radio signs and codes, Types of Audio – Video Programmes - Characteristics of Drama, Music, Talk, Interview, Group Discussion, Documentary, Microphones: Characteristics and types, Directional Features.

Unit II

PRESENTATION TECHNIQUES

Who are you talking to? - Pace problems, making sense of intonation, Script problem, Breath Support and resonance, Are you sitting comfortably, Learning to love microphone, getting your breath, being conversational, Language and Performance

Unit III

SOUND AND PICTURE

Sound Aesthetics, Sound design, elements of sound structure, Sound production, studio and live mixing speech, music, live shows, interviews; sound editing, scripting sound, dubbing, creative usage of special effects and its functions, functions off sound in relation to picture, strategies In designing sound

Unit IV

TYPES OF PRESENTATION

News and current affairs, sport, Life style and features, Music, Children's programme, Business programme, Travel news Qualities of presenters: Performance, presence, Getting through the audience, Code of on-air talents, comparer, moderator, commentator, sign languages, Good Vocabulary, Need for complete neutrality, Moderating talk shows and discussions, voice over and narrations, training in pronunciation of names, on-air check list.

Unit V

ON-AIR PERFORMANCE

Speed, Breathing, projection techniques, Corpsing, relaxation, using prompter, Voice, SFX, Echo, chorus, backgrounds. Presenting programme items: Travel news, weather, telling the time, station identity, Ad breaks. Phone in's, Choosing the topics, setting up the topics, screening the callers, scheduling the callers, recording the callers.

Text Books

1. Jenni Mills, The broadcast voice, Focal Press, 2001.
2. Trewin Janet, Presenting on TV and radio an insider's guide, Elsevier, 2003.

Reference Books

1. William Moylam , The Art of Recoding, Focal Press, 2003.
2. Carl Hausmann Philip Benoit, Announcing, Broadcasting, Communicating Today, Thomson Publications, 2004.
3. Andrew Boyd, Broadcast Journalism Techniques of Radio and Television News, Elsevier, 2001.
4. Stewart Peter, Essential Radio Skills, How to Present and Produce a Radio Show, A&C Black Publications, 2006

13VC308 MEDIA ECONOMICS

Credits: 4:0:0

Objective

- The course will offer a concise view of the Media Industries operating in the present Indian economic scenario.

Outcome

- Students will come to know the functioning of Electronic, Print & New Media serving the nation and the economics of operation.
- This will help them to choose an industry in the event of their planning to become a Media entrepreneur.

Unit I

INTRODUCTION TO MEDIA ECONOMICS

Macroeconomics and microeconomics, economics of scale, economics of scope, Market structure, Key economics characteristics of the media, Economics of Advertising, Media Economics and Public Policy, economic methodologies, Decision making, demand and supply.

Unit II

MEDIA AND PR

Introduction to media: Overview of media/ the media industry in India/ Types of Media/ role of each medium/ advantages and disadvantages of each medium. Role of PR in the success of a product or service. The relationship between marketing, Advertising and PR - The relationship between sales and PR/ how sales benefits from PR.

Unit III

PRINT AND TELEVISION MEDIA

Economic characters of news paper and broadcasting, Ownership Structure, Publicly funded broadcasting, vertical supply chain for television, Impact of new distribution technologies. Television programme production-Economics of programme supply, International trade in audio visual contents.

Unit IV

NEW MEDIA

Internet and E-commerce, Digitalized media contents, increasing economics of scale and scope interactivity, internet and mobile communication and possibilities; leveraging new media; Understanding value added services; understanding streaming video net and mobile; using Short Message Service

Unit V

MEDIA ECONOMICS AND PUBLIC POLICY

Free market Vs interventions, support measures for media contents, concentrated media ownerships, Monopolies and technological change: Events and sponsorships; overview of how events are marketed; certain sponsorship proposals; structuring sponsorship deals, Understanding of common terminology and jargon in media.

Text Book

1. Gillian Doyle, Understanding Media Economics, Sage Publications, 2007.

Reference Books

1. Gillean Doyle, Understanding Media Economics, Sage Publication, 2004.
2. C.R.ColinHoskins, Media Economics-Applying Economics New and traditional Media, Sage, 2003.
3. Newman, Bruce I, The Mass Marketing of Politics, Sage Publication, 1999 Philip Kotler, Marketing Management, Prentice Hall, 2003.

13VC309 AUDIO RECORDING STUDIO DESIGNING

Credits 4:0:0

Objective

- To understand the behavior of sound in enclosed space.
- To know various technicalities involved in acoustic design of studios.

Outcome

- Students will learn acoustic of sound with reference to a recording studio.
- Students will be able to apply the principles of acoustics & psychoacoustics while designing a studio.

Unit I

SOUND ISOLATION & ROOM ACOUSTICS

The human ear - Sound in free space - Propagation of sound - Sound and obstacles – Acoustics – Reverberation - Sound transmission class - Noise - Sound isolation - Minimizing structure borne sound.

Unit II

ACOUSTICS OF RECORDING STUDIO

Acoustical characteristics of a studio - studio design procedure - studio features - elements common to all studios – reverb - reverberation time – diffusion – Echo - Effect of boundaries - Absorbers – Diffusers - Acoustic properties of materials

Unit III

ACOUSTICS FOR CONTROL ROOM

Initial time delay gap - Low frequency resonances - Managing reflections - control room frequency range - outer shell of the control room - inner shell of the control room - representative control rooms.

Unit IV

ACOUSTICS FOR LISTENING ROOM

Peculiarities of small room acoustics - room size - room proportions - control of modal resonances - bass traps -modal colorations – behavior of mid-high frequencies - identification and treatment of reflecting points.

Unit V

STUDIO MONITORING SYSTEMS AND SURROUND SOUND

Ventilation and Air conditioning, Power cabling, Earthing, Cables and connectors, Cross over networks, loud speaker driver units, Psychoacoustics of surround sound, Surround loud speakers.

Text Books

1. Philip Newell, Recording Studio Design, Focal Press, 2007
2. F. Alton Everest, Master Handbook for Acoustics- V Edition, MCGraw-Hill,2010

Reference Book

1. Michael Talbot Smith, 'Sound Engineering explained', Focal Press, 2001