UNIVERSITY DEPARTMENTS

ANNA UNIVERSITY CHENNAI : : CHENNAI 600 025

REGULATIONS - 2009

CURRICULUM I TO IV SEMESTERS (FULL TIME)

M.Sc. SCIENCE AND TECHNOLOGY COMMUNICATION

SEMESTER I

SL. No	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
1	SC9111	Fundamentals of Science Communication	3	0	0	3
2	SC9112	Ethics, Laws and Opportunities	3	0	0	3
3	SC9113	Environment and Media	3	0	0	3
4	SC9114	Language for Technical Communication	3	0	0	3
5	SC9115	Science Journalism	3	0	0	3
PRACTICAL						
6	SC9116	Communication Laboratory	0	0	4	2
7	SC9117	Publication of Science Newsletters	0	0	4	2
		TOTAL	15	0	8	19

SEMESTER II

SL. No	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
8	SC9121	Web Programme Production	3	0	0	3
9	SC9122	Media Management	3	0	0	3
10	SC9123	Science Fiction and Films	3	0	0	3
11	SC9124	Radio / Audio Programme Production	3	0	0	3
12	SC9125	TV / Video Programme Production	3	0	0	3
13		Elective-I	3	0	0	3
PRACTICAL						
13	SC9126	Audio Laboratory	0	0	4	2
14	SC9127	Video Laboratory	0	0	4	2
		TOTAL	15	0	8	22

SEMESTER III

SL. No	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
15	SC9131	Technical Writing in Professional Contexts	3	0	0	3
16	SC9132	Science Communication Research	3	0	0	3
17	SC9133	Science Popularization	3	0	0	3
18	SC9134	Multimedia Production	3	0	0	3
19		Elective II	3	0	0	3
PRACTICAL						
20	SC9135	Summer Internship (Four Weeks)	-	-	-	2
21	SC9136	Science Communication Laboratory	0	0	4	2
22	SC9137	Multimedia Laboratory	0	0	4	2
		TOTAL	14	0	14	21

SL. No	COURSE CODE	COURSE TITLE	L	T	P	C
THEORY						
23		Elective III	3	0	0	3
24		Elective IV	3	0	0	3
PROJECT WORK						
25	SC9141	Project Work	0	0	20	10
		TOTAL	4	0	24	**16**

TOTAL CREDITS   : 78

LIST OF ELECTIVES

SL. No.	COURSE CODE	COURSE TITLE	L	T	P	C
ELECTIVES						
1	SC9151	Health Communication	3	0	0	3
2	SC9152	Science Communication for Corporates	3	0	0	3
3	SC9153	Animation for Science	3	0	0	3
4	SC9154	Science through Educational Broadcasting	3	0	0	3
5	SC9155	Media and Disaster Management	3	0	0	3
6	SC9156	Communicating the Climate Change	3	0	0	3

SC9111   **FUNDAMENTALS OF SCIENCE COMMUNICATION**

L T P C
3 0 0 3

AIM:

To introduce the students to principles of communication, method of science, and how to communicate science.

OBJECTIVES:
- To understand the scientific developments in India and the media's role in disseminating them.
- To know different sources of scientific information.
- To know employment opportunities in science communication.

UNIT - I   **MASS COMMUNICATION**   **9**

Communication: definition, elements - Landmarks in mass communication - Role of press in freedom movement - Role of media in Green Revolution and White Revolution - Popular communication down the ages - A few models of mass communication - Normative (political) theories of media.

UNIT - II   **SCIENCE AND COMMUNICATION**   **9**

Science and technology: definition - Science for a science communicator - Professional scientific communication - History of science and technology - History of science in India's wisdom starting from the Indus Valley civilization, and traditional wisdom the world over - Forms of scientific knowledge - Emergence of modern science - Eminent scientists: their life and achievements – Recent Nobel laureates on science - History of science journalism in India.

UNIT - III   **ROLE OF SCIENCE COMMUNICATION**   **9**

Need for science communication - Importance and use of science communication - Public Understanding of Science (PUS) - Science popularization: programmes, organizations, individuals - Method of science - Scientific temper - Scientificity - Sources of scientific information – books, scientific reports, scientific journals, magazines, feature syndicates, leaflets, tabloids, wall magazines, speeches, seminars, press releases, databases, encyclopedias on science, etc - Comparative study of science sections and supplements carried in Indian / foreign newspapers and science magazines.

UNIT - IV   **SCIENCE AND TECHNOLOGY POLICY AND SET-UP**   **9**

Science and technology policy statements - Technology statements - Policy resolutions - Science and technology set-up in India - Science Policy Resolution, 1958 - The Indian Patent Act, 1970 - intellectual property rights (IPR) – Science Communication organizations: NCSTC, NCSM, NISCAIR, Vigyan Prasad.

UNIT - V   PROSPECTS, AWARDS AND TRAINING   9

Organizations promoting science - Employment opportunities – CSIR laboratories, other scientific institutions, media organizations, NGOs, Business Process Outsourcing, Knowledge Process Outsourcing - Awards and honours for excellence in science writing / popularization - Science communication education in India and abroad - Freelance science writers - Bhatnagar award – Profiles of Kalinga Award winners and their winning formulae.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Jane Gregory and Steve Miller, Science in Public: Communication, Culture, and Credibility, Plenum, New York, 1998.
2. James G, Paradis and Muriel L. Zimmerman, The MIT Guide to Science and Engineering Communication. MIT Press, UK, 2002.
3. J.V. Vilanilam, Science Communication and Development in India, Sage, New Delhi, 1993.

REFERENCES
1. Stuart Allan, Science Journalism: Media, Risk and Science. Open University Press, London, 2002.
2. Science Magazine. http://www.sciencemag.org
3. A.N. Kothare, Sudhanshu S. Palsule, S.M. Parekh and M.P. Navalkar. Of Science
&   Scientists, National Book Trust, New Delhi, 2005.

SC9112   **ETHICS, LAWS AND OPPORTUNITIES**

L T P C
3 0 0 3

AIM:
To encourage students to understand ethical and legal issues concerning science communication.

OBJECTIVES:
*   To understand the freedom of the media and responsibility of journalists.
*   To know the laws governing presentation of science news and views.

UNIT – I   FREEDOM OF THE PRESS   9

Freedom of speech and expression - Freedom of the press and restrictions thereupon - Right to publish and the right to privacy - Overview of the Constitution of India - Fundamental Rights - Directive Principles of State Policy - Provision for declaring National Emergency - Provision for amending the Constitution - Legislature reporting - Parliamentary privileges and journalistic privileges - Centre-State relations - Legal boundaries within which print and electronic professionals must operate - The Right to Information Act, 2005.

UNIT – II   HISTORY OF PRESS LAWS IN INDIA   9

The Contempt of the Court Act, 1971 - Press Code and Ethics - Main recommendations of the Press Commissions I and II - Press Council's guide to journalistic ethics - Censorship and control of the press - Registration of newspapers - Press ownership and monopolies - The McBride Report.

UNIT – III   CIVIL AND CRIMINAL LAWS   9

Rules and laws related to science journalism - Civil and Criminal law of defamation - Contempt of court - Right to know vs. right to privacy - Relevant provisions of the Indian Penal Code with reference to sedition, obscenity, crime against women, children etc – Patenting: product patent, process patent, patent norms, international issues concerning patenting.

UNIT – IV   CODE AND ETHICS   9

The Working Journalists Act, 1955 - The Press Council Act, 1968 - The Official Secrets Act, 1923 - The Cinematography Act, 1953 - GATT, Intellectual Property Rights (IPR) including the Copyright Act, 1957 - trademark and patent laws – The Young Person (Harmful Publication) Act, 1955 - The Drugs and Magic Remedies (Objectionable Advertising) Act, 1954 - The Indecent Representation of Woman Act, 1986 - Broadcasting Policy - Ethics of broadcasting - Various committees on broadcasting - Broadcast autonomy - The Prasar Bharati (Broadcasting Corporation of India) Act, 1990 - Ethics of telecasting - Codes for radio and TV - Guidelines for advertising on radio - Code of conduct for science journalism - Analysis and interpretation of court opinions on scientific issues - Case studies in journalistic ethics - Media manipulation - Ethical dilemmas - Media Council, reader's editor, media ombudsmen - Internet - Information super highway - Convergence of media - Cyber crime - The Information Technology Act, 2000 - Rights and responsibilities - Laws dealing with obscenity.

UNIT – V   OPPORTUNITIES   9

Job opportunities – Writing for the mass media – science broadcasters and webcasters – Technical writing in science laboratories such as those of CSIR – Technical writing in industries – Report writer as part of research projects – Preparation and producing training material, IEC material – Documentation for the research organization – Public relation officers in scientific organizations – Event management for science events.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Durga Das Basu, Law of the Press in India, Prentice Hall of India, New Delhi, 2003.
2. Christians, Clifford G. Media Ethics: Cases and Moral Reasoning, Pearson Education, London, 2005.
3. G.R. Poornima, The Constitution of India, Sura Publishers, Chennai, 2007.

REFERENCES
1. Cess Hameling, Ethics of Cyber Space, Sage Publications, New Delhi, 2001.
2. E. Day, Ethics in Media Communications: Cases and Controversies, Thomson Learning, 2000.
3. Philip Patterson and Lee Wilkins, Media Ethics: Issues and Cases, McGraw Hill, Boston, 1998.
4. Kiran Prasad, Ed., Media Law and Ethics: Readings in Communication Regulations,B.R. Publishing Corporation, New Delhi, 2007.

SC9113   **ENVIRONMENT AND MEDIA**

L T P C
3 0 0 3

AIM:

　　To sensitize students about the intricacies concerning environmental coverage in the media.

OBJECTIVES:
- To know the implications of the Environmental (Protection) Act, 1986.
- To know about various natural resources and their associated problems.
- To find ways to tackle the issue of environment versus development in the media.

UNIT - I   NATURE OF ENVIRONMENTAL STUDIES   9

Definition – ecology, environment - Scope and importance - Different eco-systems - Interdisciplinary nature of environmental studies - Need for public awareness – The Environmental (Protection) Act, 1986.

UNIT - II   NATURAL RESOURCES AND ASSOCIATED PROBLEMS   9

Forest resources: use and overexploitation, deforestation, mining, dams and their effects on forests and tribal people - Water resources: use and over-utilization of surface and groundwater, floods, drought, conflict over water, dams (benefits and problems) - Mineral resources: use and exploitation, environmental effects of extracting and using mineral resources - Food resources: world food problem, changes caused by agriculture effects of modern agriculture, fertilizer-pesticide problems - Energy resources: growing energy needs, renewable and non-renewable energy sources, use of alternative energy sources - Land resources: land as a resource, land degradation, man induced landslides, soil erosion and desertification - Equitable use of resources for sustainable lifestyle.

UNIT - III   ENVIRONMENTAL POLLUTION   9

Definition - Causes, effects and control measures of air pollution, water pollution, soil pollution, marine pollution, noise pollution, thermal pollution, nuclear hazards - Solid waste management: causes, effects and control measures of urban and industrial wastes - Zero waste technologies - Role of an individual in prevention of pollution - Pollution case studies.

UNIT - IV   SOCIAL ISSUES AND ENVIRONMENT   9

From unsustainable to sustainable development - Urban problems related to energy - Water conservation, rainwater harvesting, watershed management - Resettlement and rehabilitation of people - Environmental ethics - Climate change, global warming, acid rain, ozone layer depletion, sea level rise - nuclear accidents and holocaust - Wasteland reclamation - Consumer and waste products.

UNIT - V   ROLE OF MEDIA   9

Science, technology and environment - Major environmental production bodies and institutions in India and abroad - Development and environment - Designing environmental media programmes - Use of media for environmental messages - Moving from peripheral environmental coverage to holistic coverage - Media in environmental management.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Scott R. Brennan and Jay Withgott, Environment: The Science Behind the Stories, 2003.
2. Chris Park, The Environment: Principles and Applications, Routledge, UK, 2001.
3. J.V. Vilanilam, Development Communication: Implementation of the Millennium Development Goals in India, Sage, New Delhi, 2009.

REFERENCES
1. Norman Lee, Ed., Environmental Assessment in Developing and Transitional Countries: Principles, Methods and Practice, John Wiley and Sons, UK, 2000.
2. N. Luhmann, Ecological Communication, Chicago University Press, Chicago, 1989.
3. Robert Cox, Environmental Communication and Public Sphere, Sage, New Delhi, 2006.

SC9114   LANGUAGE FOR TECHNICAL COMMUNICATION

L T P C
3 0 0 3

AIM:

To prepare students to take up technical communication as a profession, both as writers and editors.

OBJECTIVES:
- To impart skills for researching for different types of audience.
- To know how to go about writing a technical report.
- To understand issues concerning patenting.

UNIT – I   UNIQUENESS OF TECHNICAL WRITING   9

Unique features of technical writing – Scientific & Technical writing & Creative writing - Technical writing as profession – Audience awareness - Technical vocabulary – Content – punctuation - Unity, coherence and logic in writing.

UNIT – II   SIMPLIFYING INFORMATION   9

Analyzing, classification, partition, formal definition, informal definition, expanded definition - Describing and illustrating: General vs specific description – Communicating technical information to non-experts.

UNIT – III   RESEARCHING   9

Researching and abstracting - Basic types of research, original research, searching the literature, researching for different audiences – Plagiarism - Documentation - Writing for scientific journals - Thesis writing & assignments.

UNIT – IV   ORAL COMMUNICATION   9

Participating in conferences – Presenting research papers: oral presentation with powerpoint presentation – Speaking to large audiences – Organizing the speech – Paper presentation.

UNIT – V   PROJECT PROPOSALS   9

Basic types of technical writing – Formal report: justification report, progress & related report - Proposals: research / project – Dissertation writing: chapterization, references, etc.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Kenneth W. Houp, Reporting Technical Information, Oxford Universtiy Press, UK.
2. Barry J. Rosenberg, Technical Writing for Engineers and Scientists, Pearson Education, U.S., 2005.
3. Philip Rubens, Science & Technical Writing: A Manual of Style, New York, Routledge, 2004.

REFERENCES
1. R.R. Jordan, Academic Writing Course, Nelson, Hong Kong, 1990.
2. Christopher Turk and John Kirtman, Effective Writing: Improving Scientific, Technical and Business Communication, Spon Press, UK, 1989.
3. Craig Harkins and Daniel L. Plung, A Guide for Better Technical Papers, IEEE, New York, 1982.
4. Gordon H. Mills and John A. Wallir, Technical Writing, Holt, Rinehart and Winston, New York, 1962.
5. Iain Maitland, Write That Letter!, Kogan Page, Philadelphia, 2000.

SC9115   **SCIENCE JOURNALISM**   **L T P C**
                                                                          3 0 0 3

AIM:

   To train students to cover news and views on science and technology for print
   media and other mass media.

OBJECTIVES:
*   To get to know how science journalism is practised in India and abroad.
*   To impart knowledge of reporting science news.
*   To learn the nuances of translating science content.
*   To imbibe the techniques of science photography.

UNIT - I   WORLD OF JOURNALISM   9

Journalism in India and the world - Present scenario - Existing and developing news
media organizations - Understanding what makes a good news story - Importance of
diversity in reporting the news - Comparing news and its sources - Defining roles and
setting goals for the newspaper, information or influence - Page layout – Science
journalism in India and abroad.

UNIT - II   ADVANCED REPORTING   9

Criteria to identify news - Beat, assignment, special assignment - Getting the straight
scoop - Story generators - Searching for stories - Full coverage - Interview scenario -
Basics of features and interviewing - Effective interviewing - Generating open-ended
and close-ended interview questions - press conference - In-depth reporting - Using
statistics - CAR technique - Conducting informal polls - Using computers to get
answers - Spot coverage - Depth coverage - Accidents and disasters - Investigative
journalism - Coverage of S&T events (conference / speeches / seminars and
conventions / exhibitions / natural phenomena etc.) - Documentation - Reporting
scientific R&D - credibility of seminar papers - Objectivity versus reflexivity.

UNIT - III   WRITING   9

News story format - Inverted pyramid structure – 5Ws and 1H – Captions: A picture is
worth a thousand words - Writing headlines - news writing and copy editing -
Producing copy - Checklist for copy preparation - Basic sentence structure - Writing
under pressure - Writing for your listener - Writing for your announcer - Leads for
broadcast services - Body of a broadcast news story - Updating broadcast news
stories - Editing copy - Putting together a newscast - Newsroom environment -
Checklist for broadcast news writing - Story structure - Long stories and series -
Broadcast news writing, shorter is better - Editorials - Writing point-counterpoint
articles for the editorial page - House journals - scientific manuals, pamphlets.

UNIT – IV   TRANSLATION & TERMINOLOGY   9

Need, meaning and principles of translation - Guidelines for scientific translation, transliteration and transcriptions - Adaptation, socio-cultural adaptations - Technical / popular terminology - Symbols, language registers, comparative and contrasted analysis.

UNIT – V   PHOTO JOURNALISM   9

News photography - Photomicrography - Sources of scientific photographs: telephotography, astrophotography - Originality and creativity in photography - Basic knowledge about different kinds of cameras and photography - Photo feature - Infographics: Illustrations and visuals - Cropping pictures.

TOTAL : 45 PERIODS

TEXT BOOKS
1. I. Arul Aram and Nirmaldasan, Understanding News Media, Vijay Nicole, Chennai, 2006.
2. Helen Sissons, Practical Journalism: How to Write News, Sage, New Delhi, 2006.

REFERENCES
1. Anna McKane, News Writing. Sage, New Delhi, 2006.
2. Tony Harcup, Journalism Principles and Practice, Sage, New Delhi, 2004.
3. Nalini Rajan, 21st Century Journalism in India, Sage, New Delhi, 2007.
4. Susan Pape and Sue Featherstone, Feature Writing: A Practical Introduction, Sage, New Delhi, 2006.

SC9116   **COMMUNICATION LABORATORY**

L T P C
0 0 4 2

AIM:
  To give oral practice in the use of the English language for science communication.

OBJECTIVES:
  * To familiarize students with different rhetorical functions of scientific English.
  * To initiate group discussions for developing communication skills.

Presentation on science-related topics – Just a minute talk – Interview - Group discussion - Strategies for group discussion - Body language – Narrating skills – Biographies of scientists / Social awareness of scientific issues.

TOTAL : 60 PERIODS

SC9117   **PUBLICATION OF SCIENCE NEWSLETTERS**

L T P C
0 0 4 2

AIM:
          To bring out periodical newsletters and / or a web publication on science and technology as a training exercise for students.

OBJECTIVES:
  * To enable students to put into practice the principles of journalism they have learnt.
  * To bring to light several scientific works being undertaken in laboratories.
  * To interview scientists and other beneficiaries of science.

The students shall prepare a fortnightly newsletter or a web journal on science-related news and views in a printed form under a supervision of a teacher.

TOTAL : 60 PERIODS

SC9121   **WEB PROGRAMME PRODUCTION**

L T P C
3 0 0 3

AIM:

To impart knowledge of web programme production.

OBJECTIVES:

- To know the special features of online media.
- To know the difference between web journalism and journalism of other media.
- To know the impact of converging technologies on traditional media.
- To understand the role played by open source journalism.

UNIT - I   INTRODUCTION TO INTERNET   9

Net as a medium of communication - Features of the Net - World Wide Web and other services - History of the Internet - Why did the dotcom bubble burst - Factors favouring online advertising - Basics of HTML - Features of online media: multimediality, interactivity and hyper-textuality.

UNIT – II   ONLINE JOURNALISM   9

Different between web journalism and journalism of other media - Formats and styles of writing - Language of news, specialized reports, features, profiles - Writing and editing for online newspapers, e-magazines, newsletters - Presentation with audio, video, animation and digital images - Identification of relative stories for hyper-linking. Synergies between content and advertising – Developing web content on science.

UNIT – III   INTERNET TECHNOLOGIES   9

Web cameras - Bandwidth - Browser progressions - Interactive television - Architecture tools - Process of web development - Converging technologies impact on traditional mass media - Trends, strategies of news media such as Internet chat (Yahoo messenger, Google talk, Skype) and podcasting - Website designing concepts - Basics of HTML and scripting language - Deciding the information architecture - Working with templates - Page design and layout for web pages - Free web spaces for building and maintaining a website such as geocities.com - Ensuring visibility - Graphics and photographs for hyper media.

UNIT – IV   OPEN-SOURCE JOURNALISM   9

Annotative reporting - Open-source journalism - Participatory / alternative journalism – Hyper-adaptive news - Linking web pages with other related web pages - Blogs (text and visual).

UNIT – V   DIGITAL DETERMINISM   9

Determinism - Access and barrier - Convergence in technology, ownership, organizational structure, storytelling, media - Broadband - Network paradigm.

TOTAL : 45 PERIODS

TEXT BOOKS

1. Tapas Ray, Online Journalism: A Basic Text, Foundation Books, Delhi, 2006.
2. Sunil Saxena, Breaking News: The Craft and Technology of Online Journalism, Tata McGraw-Hill, New Delhi, 2004.

REFERENCES

1. Andy Dickinson, Web Design for Journalism, Butterworth-Heinemann, 2003.
2. Mike Ward, Journalism Online, Focal Press, 2002.
3. Roland De Wolk, Introduction to Online Journalism: Publishing News and Information, Pearson Allyn and Bacon, 2001.
4. James Glen Stovall, Journalism on the Web, Pearson Allyn & Bacon, 2003.

SC9122   **MEDIA MANAGEMENT**

L T P C
3 0 0 3

AIM:
To make students understand the intricacies of the organizational set-up of a media company.

OBJECTIVES:
- To learn the managerial function of a media organization.
- To get to know media economics and organizational behaviour.
- To imbibe the techniques of coordinating radio / television programme production.

UNIT – I   MANAGING PUBLISHING HOUSE   9

Commencing the publication: objectives, ownership pattern, location, organizational set-up, financial planning, production planning, layout considerations, marketing planning, registration, liaison with government departments - Managing a media organization: meaning of management, importance of management in the organization, principles of management, managerial functions in the media organization - planning, organizational structure, coordination, motivation, control, decision making, departmentalization.

UNIT - II   EDITORIAL MANAGEMENT   9

Editorial management: Importance of editing, the editorial department, functions of the editor, editing and advertising, coordination function, qualities of editor, managing editor, other editors, difficulties and weakness in editing – Coordinating radio, TV programmes.

UNIT – III   ADVERTISING MANAGEMENT   9

The vital advertising medium, limitations and challenges, classified and display advertising, advertising rates, advertising ethics, unacceptable advertisements, advertising principles, advertising associations – Audit Bureau of Circulation (ABC) - Television Rating Points (TRP) ratings - Role and relevance of strategy in advertising - Strategy planning process - Various theories and models in brand management and case studies - Public Service Advertising (PSA) - Media mix - Positioning.

UNIT – IV   MEDIA ECONOMICS   9

Significant issues in the management broadcast and web media; profits and quality; media convergence, diversity, economics and organizational behaviour and communication.

UNIT – V   NETWORKING   9

Managing upstream and downstream linkages with experts, stakeholders and clients – employees' welfare – Networking with people and organizations.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Colins Hoskins, Stuart McFadyen and Adam Finn, Media Economics, Sage, London, 2004.
2. Mark Tungate, Media Monoliths: How Great Media Brands Thrive and Survive, Kogan Page, London, 2005.
3. Alan B. Albarran, Management of Electronic Media, Wadsworth-Thomson Learning.

REFERENCES
1. Gillian Doyle. Understanding Media Economics, Sage, London, 2002.
2. Gillian Doyle, Media Ownership, Sage, London, 2002.
3. David Croteau and William Hoynes, The Business of Media: Corporate Media and the Public Interest, Pine Forge Press, London, 2006.
4. Alan B. Albarran, Sylvia M. Chan-Olmsted, Michael O. Wirth Contributor John D. Abel, Kendra S. Albright, Angel Arrese Reca, Benjamin J. Bates, Randal A. Beam and Todd Chambers, Handbook of Media Management and Economics, Routledge, New York, 2005.
5. Peter K. Pringle, Michael F. Starr, Electronic Media Management, Elsevier, 2006.

SC9123   **SCIENCE FICTION AND FILMS**

L T P C
3 0 0 3

AIM:
   To impart knowledge of science fiction and science films.

OBJECTIVES:
- To know the history of science films and fiction.
- To learn the tradition of science documentary film-making.
- To make a comparative study of science fiction novels and the films made out of them.

UNIT - I   HISTORY OF SCIENCE FICTION NOVELS   9
Science fiction: definition & varieties - History of science fiction - Terminology of science fiction - Impact of science fiction on thought – Futuristic concept: imagination becoming a reality - Science fiction novels in India and abroad – Short stories on science fiction.

UNIT – II   HISTORY OF SCIENCE FICTION FILMS   9
Evolution - History of science fiction films – Special features of science fiction films - Science fiction films in India & abroad – Style & language – Themes - Differences between science-based novels and science-based films.

UNIT - III   HISTORY OF SCIENCE DOCUMENTARY   9
Evolution – What is a documentary – Common themes for documentary – Making a documentary - Science documentary films in India & abroad – Narration in a documentary – Scripting – Language.

UNIT - IV   WRITING FOR SCIENCE FICTION NOVEL   9
Vocabulary for science fiction - Science fiction: process and product - Creative writing – Appropriate language & style - Scripting

UNIT - V   SCIENCE FICTION NOVELS & FILMS – A COMPARISON   9
Jules Verne and H.G. Wells – Mary Shelley's 'Frankenstein' (1831) & Michael Crichton's 'Jurassic Park' (1990) or any two science fiction novels which have been adapted into films - Analyzing science fiction films & novels - Uniqueness of each medium and their differences - Making a short feature film / documentary on a scientific issue or science theme.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Peter W. Rea and David K. Irving, Producing & Directing the Short Film and Video, Focal Press, 2001.
2. Guin, Ursula K. Le, ed. The Norton Book of Science Fiction, W.W. Norton & Company, New York, 1993.

REFERENCES
1. Edward James, Cambridge Companion to Science Fiction, Cambridge University, Cambridge, 2003.
2. Rod Mengham, Ed., The Machine Stops and Other Stories, André Deutsch Limited, London 1997.
3. Isaac Asimov, Gold: The Final Science Fiction Collection, Mass Market Paperback, 1995.

SC9134   **RADIO / AUDIO PROGRAMME PRODUCTION**

L T P C
3 0 0 3

AIM:
To impart knowledge of audio programming in terms of producing audio CDs and radio programmes.

OBJECTIVES:
- To make students aware of the history of radio.
- To learn about news writing and presentation for radio.
- To impart knowledge for troubleshooting for audio equipment.

UNIT – I   HISTORY OF RADIO   9

Developments and advances in radio journalism and techniques since inception - Radio in today's media scenario - Future of radio - Introduction to acoustics - Audition - Different kinds of studios vis-à-vis programme formats - Varieties of microphones - Broadcast chain - Recording & transmission systems - Modulation (AM & FM) - Antennas, receivers, amplifiers, high-fidelity system - Multi-track recording technique: mono, stereo - Recording & editing consoles - Use of UPTRS - OBVAN.

UNIT – II   RADIO FORMATS   9

Audio scripts - Basic rules for radio writing - Writing & production skills vis-à-vis diverse formats: lecture / talk show / interview / discussion / symposium / radio play / radio feature & documentary / music on radio / background music / jingle / phone-in programme / radio magazine - Special audience programmes on radio: programme for children, women, youth, senior citizens, rural folk, industrial workers, defence personnel, etc - Writing on science for children - Regional magazines: Chandamama from Chennai, and Anandamela and Shuktara from Kolkata - Preparation for interviewing: techniques of interviewing - Types of discussion: group discussion, focus group discussion - Creating audio special effects.

UNIT – III   NEWS WRITING AND PRESENTATION   9

Research: collection of background materials - Writing for the ears - Principles of news writing in a public service broadcasting organization as contrasted with news in private radio - Principles of news presentation - News feature - Reporting for radio by professionals and stringers - Disaster coverage news bulletins - Planning and scripting for science programmes.

UNIT – IV   PRODUCTION MANAGEMENT   9

Radio station organization and management - Day parting - Economic production management - Principles of production planning and course of production - Pre-production, production and post-production - Management of personnel - Financial and technical resources - Budgetary planning and control: direct and indirect costs - Media fusion - Human resource development - Fixed and variable factors in planning - Conducive and non-conducive production conditions.

UNIT – V   INNOVATIVE DEVELOPMENTS IN RADIO COMMUNICATION   9

Using digital technologies: digital editing - Podcasting - Troubleshooting for audio equipment - Information service programmes on radio - Community radio - Local radio - Campus radio - Private FM radio stations.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Carole Fleming, The Radio Handbook, Routledge, 2002.
2. Maes, Jan, and March Vereammen, Digital Audio Technology, Focal Press, 2001.

REFERENCES
1. William Moylan, The Art of Recording, Focal Press, 2001.
2. David Miles Huber, Modern Recording Techniques, Focal Press, 2001.
3. Tim K. Wulfemeyer, Beginning Radio-TV News Writing, Surjeet Publications, Delhi, 2005.
4. Carole Fleming, The Radio Handbook, Routledge, 2002.

SC9125　　　　　　　**TV / VIDEO PROGRAMME PRODUCTION**

L T P C
3 0 0 3

AIM:

To train students in producing television and video programme production using high-end cameras.

OBJECTIVES:

- To learn the pre-production stage of video shooting.
- To know different techniques of video shooting.
- To know how to use voiceover.
- To know how to manage a video production.

UNIT – I　　　　　**PRE-PRODUCTION STAGE**　　　　　**9**

Brainstorming – Concept idea, Creative thinking patterns, Planning - Research: the basic script, budget, logistics, crew, location survey, talents – Roles of the production crew like the producer, production assistant, camera personnel, and the studio crew (both production and technical) and other outdoor crew: who is who – For studio and outdoor shows: set design: backdrop and properties to be used – Role of the art director or set designer - Props, wardrobe, make-up – Storyboard.

UNIT – II　　　　　**SHOOTING STAGE**　　　　　**9**

Camera equipment and accessories - Shooting techniques - Composition and framing - Types of shots - Basics of lighting - Taking notes – writing the dope sheets - Shooting techniques for current affairs programmes, documentaries, features, live-shows, events and shows - Framing interviews - Chromakeying - Creative productions like studio plays and outdoor short films - Technical inputs equipment required for various shows and crew required for the various shows - Difference between shooting for television and film.

UNIT – III　　　　　**POST-PRODUCTION STAGE**　　　　　**9**

Editing – linear, nonlinear equipment - Techniques in editing - Digitizing, format conversion, preparation of edit-list, use of the Dope sheet - Editing schedule – editing of the programme - Special effects - Writing for the programme - Recording the audio - Use of voiceover for the documentary - Musical score recording and using the music laying of the tracks - Computer graphics (titling etc) - Programme output - Meet the deadlines.

UNIT- IV　　　　　**PRODUCTION MANAGEMENT**　　　　　**9**

Managing personnel - Financial management - Programming strategy and distribution - Programming economics - Packaging - From capsuling to delivery platform - Strategic alliances and partnerships - Regulatory influences - TRP - Professional practices - Management - Legal issues and Ethics - Curtain raiser - Teaser - Marketing: getting sponsors -　Publicity - Troubleshooting for video equipment.

UNIT – V   PRODUCTION FORMATS   9

Difference between factual and fictional programmes - Introduction to documentary, films, features, PSA, teleplay, telefilm - Programme formats – wildlife films, informative films, nature films, short films, children films - Science plays – stage, lighting, dialogue, plot, characterization, direction and production, humour, comedy, tragedy, futuristic, satire, suspense / emotions, climax - Video training materials, manuals.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Esta Defossard and John Riber, Writing & Producing for Television Film, Sage Publications New Delhi, 2005.
2. Anthony Friedmann, Writing for Visual Media, Oxford: Focal Press, 2006.
3. Gerald Millerson, Video Production Handbook, 3rd Edition, Focal Press, 2002.

REFERENCES
1. Des Lyver and Graham Swainson, Basics of Video Production, Focal Press, 2001.
2. Gerald Millerson, Television Production, Oxford: Focal Press, 2003.
3. Barbara Clark, Guide to Post Production for TV and Film: Managing the Process, Focal Press, 2002.

SC9126   **AUDIO LABORATORY**

L T P C
0 0 4 2

AIM:
To impart practical training in audio programme production.

OBJECTIVES:
- To learn the techniques of audio mixing consoles.
- To produce audio programmes on science-based themes.

Measurement of reverberation time - Radiation pattern measurement of microphone - Radiation pattern measurement of loudspeaker - Selection of microphone for programme formats - Audio recording using workstations - Study of audio mixing consoles - Art of interview - Moderated discussions - Scripting for radio - Write a radio drama - Interactive radio formats - Production of musical programmes - Sourcing of folk arts - Audio library and audio archives - Production of science-based programmes such as on organic farming and nanotechnology applications.

TOTAL : 60 PERIODS

SC9127   **VIDEO LABORATORY**

L T P C
0 0 4 2

AIM:
To impart practical training in video and television programme production.

OBJECTIVES:
- To learn the techniques of video mixing consoles.
- To produce video and television programmes on science-based themes.
- To digitize and edit video rushes.

Selection of topic - Prepare the basic script - Planning the shooting: budget, location, survey, people to contact and fix appointments before shoot, logistics permissions - Shooting: requisition of equipment to be used (camera and audio and accessories like tripod, microphones, cables tapes etc) - Identify the crew - Prepare the shooting schedule and meet the deadlines: use of dope sheets for recording the details of the shoot (like the OK and the NG takes) - Post production: Prepare the edit-list and have an editing schedule - Editing of the programme - writing the commentary or voiceover for the documentary - musical score and graphics (titling etc) - meet the deadlines.

TOTAL : 60 PERIODS

SC9131   **TECHNICAL WRITING IN PROFESSIONAL CONTEXTS**

L T P C
3 0 0 3

AIM:

To train students in different professional contexts of scientific communication.

OBJECTIVES:

*   To create scientific communication based on data / content collected from scientists.
*   To communicate expert knowledge to non-experts.
*   To acquire the necessary language and style to create scientific communication.
*   To communicate in a way that accommodates technology to the user.

UNIT – I   SCIENCE WRITING   9

Writer/Editor for science publications – Trainer or independent writing consultant (freelancing) –Teach effective writing: set the style and format – Presentation of data in the clearest possible way – Preparing manuals and brochures – Developing courses for big companies and scientific writers as part of continuing education.

UNIT – II   WRITING FOR ENGINEERING FIELDS   9

Technical communicator – Technical editor/writer – Documentation analyst, developer, engineer, specialist – Information analyst, marketing writer – Multimedia developer –Online information developer – Proposal specialist – Graphic artist – Communication manager – Publication Manager – Publication supervisor – Trainer – Developing, designing and managing print, non-print and multimedia-based technical material in support of engineering and engineering-related industries.

UNIT – III   WRITING FOR ENVIRONMENTAL SCIENCES   9

Environmental educator – Environmental journalist – Proposal writer – Grant writer – Public information officer – Regulatory compliance specialist – Identifying information needed by the audiences to understand the environmental protection or natural resources management issues and provide that information in understandable, accurate and interesting ways.

UNIT – IV   MEDICAL AND HEALTHCARE   9

Medical writer – Freelance writer – Author's editing – Copy editor, proof reader, medical journalist, medical meeting reporter, etc – Write, edit or manage publication of scientific manuscripts, articles, books – Documentation for medical equipment or medically-directed computer programs – Newsletters, journals – Manage medical projects and publications – Medical transcription.

UNIT – V   PHARMACEUTICAL WRITING   9

Bio-medical writer – Clinical writer: writer and editor – Writing documents according to specified guidelines – Preparing abstracts, poster presentations, review articles – Copy for slides or videos, handbooks, newsletters.

TOTAL : 45 PERIODS

TEXTBOOKS

1. Jean A. Lutz and C. Gilbert Storms, The Practice of Technical and Scientific Communication: Writing in Professional Contexts, Ablex Publishing, Westport, 1998.
2. Joan van Emden, Effective Communication for Science and Technology, Palgrave, New York, 2001.

REFERENCES

1. Robert A. Day, Scientific English: A Guide for Scientists and Other Professionals, Oryx Press, USA, 1992.
2. Martin Cutts, The Plain English Guide: How to Write Clearly and Communicate Better, Oxford University Press, USA, 1996.

SC9132   **SCIENCE COMMUNICATION RESEARCH**

L T P C
3 0 0 3

AIM:

To impart various research methodologies to study the problems of science communication.

OBJECTIVES:

- To learn about quantitative and qualitative methods to do research in science communication.
- To understand how to go about achieving validity and reliability in research.
- To learn statistical techniques for applying them in science communication research.

UNIT – I   NATURE AND SCOPE OF COMMUNICATION RESEARCH   9

Nature of enquiry and distinction between research in natural and social sciences - Nature and scope of communication research - Ethics of research - Review of Literature - Role of theories in research.

UNIT – II   ELEMENTS OF RESEARCH   9

Applied vs. Basic - Inductive vs. deductive - Descriptive vs. exploratory - Hypotheses – variables (dependent, independent, intervening) - Validity & reliability – Pilot study - Chapterization - Use of body notes and references.

UNIT – III   QUANTITATIVE RESEARCH   9

Quantitative research: definition - Questionnaire - Interview - Experimental design - Content analysis.

UNIT – IV   QUALITATIVE RESEARCH   9

Qualitative research: definition - Ethnography (participant / non-participant observation, in-depth interview, focus group) – Semiotics - Discourse analysis - Cultural studies.

UNIT – V   ROLE OF STATISTICS   9

Descriptive and inferential statistics - Measure of central tendency - Frequency analysis - Estimation and confidence interval - Probability theory - Chi-square, t-test, correlation coefficient - SPSS - Problem of interpretation - Presentation of findings in bar diagram, pie charts, etc - Writing a research project.

TOTAL : 45 PERIODS

TEXT BOOKS

1. Arthur Asa Berger, Media and Communication Research Methods: An Introduction to Qualitative and Quantitative Approaches, Sage Publication, New Delhi, 2000.
2. Susanna Hornig Priest, Doing Media Research: An Introduction, Sage, New Delhi, 1996.

REFERENCES

1. C.R. Kothari, Research Methodology Methods and Techniques, New Age International Publishers, New Delhi, 2004.
2. Roger D. Wimmer and Joseph R. Dominick, Mass Media Research: An Introduction Thomson Wadsworth Publications, 2003.
3. Science and Technology Survey, UNESCO Institute for Statistics.
http://www.uis.unesco.org/ev.php?URL_ID=5746&URL_DO=DO_TOPIC&URL_SECTION=201

SC9133   **SCIENCE POPULARIZATION**

                                                              L T P C
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AIM:
     To know the methodologies to popularize science through science museums, exhibitions, modelling, folklore, rallies and the like.

OBJECTIVES:
- To understand the role of traditional and modern media in popularizing science.
- To make static and dynamic models for science popularization.
- To learn the techniques of organizing science museums and exhibitions.

1. NEED FOR POPULARIZAION OF SCIENCE   **9**
Eradication of superstition - Role in improvement of quality of life of masses in rural and urban areas - Improving human development index - Issues such as reproductive rights, public health and entrepreneurship - Science popularization among children - Role of traditional and modern media.

2. POPULARIZATION METHODOLOGIES   **9**
Development of science museums - Science clubs - People's Science Movements: Jan Vigyan Jatha, Kerala Sasthra Sahitya Parishad, Tamil Nadu Science Forum, NISTAD, Planetarium - Science City - Quiz - Satire - Cartoons - Caricatures - Scientoons - Traditional media – puppetry, theatre, street plays, folk songs, folk dance, jatha, etc - Mass media.

3. SCIENCE MODELLING   **9**
Models for science communication – static and dynamic models - Creating science models - Low-cost models – Varied materials for creating models – Using local raw material.

4. SCIENCE EXHIBITION   **9**
Exhibition development – planning and designing, selection of sites and exhibits - Organization and training of guides - Critique of exhibitions from a curatorial standpoint - New approach to collections at museums – National Council for Science Museums (NCSM).

5. SCIENCE MUSEUMS   **9**

Preserving science exhibits – Attractive and systematic way of exhibiting objects.

                                                        TOTAL : 45 PERIODS

TEXT BOOKS
1. Jane Gregory and Steve Miller, Science in Public: Communication, Culture, and Credibility, Plenum, New York, 1998.

REFERENCES
1. Stuart Allan, Science Journalism: Media, Risk and Science, Open University Press, London, 2002.
2. Sharon Dunwoody, The Challenge for Scholars of Popularized Science Communication: Explaining Ourselves, 1992.
http://pus.sagepub.com/cgi/reprint/1/1/11.pdf

SC9134   **MULTIMEDIA PRODUCTION**

L T P C
3 0 0 3

AIM:
To impart training on multimedia production, particularly graphics.

OBJECTIVES:
- To know the properties of multimedia systems.
- To learn to design graphics and digital painting.
- To learn about the techniques of image processing.
- To impart the skills of working on Adobe Photoshop, CorelDraw and Flash software.

UNIT – I   BASICS OF MULTIMEDIA   9
Multimedia: concepts - Media and data stream - Graphics design techniques, visual thinking, concept development, composition and typography – Scripting and Storyboard – Elements of art such as objects, texture, colour, space and character design - Basics of colours - Resolution - Raster and vector graphics - Compression techniques – Demography.

UNIT – II   TYPES OF MEDIA   9
Different types of media - Application of multimedia, properties of multimedia systems - Advertising kiosks - Interactive science products - putting the content on the Web - business graphics - Logo designing - Graphics for print media such as brochures, flyers, artwork and presentations.

UNIT – III   FORMATS OF MULTIMEDIA   9
Audio, video, music, image, graphic, digital images - Video streaming - Graphics for Web content, product models.

UNIT – IV   IMAGE PROCESSING   9
Multimedia image processing - Image editing tools - Edit images - Special effects – Working with filters, Colour balance, dynamic graphics for the web with interactive buttons and rollovers – Developing dynamic web pages.

UNIT – V   INCLUSION OF ANIMATION   9
2 Dimensional animation – Compression techniques – Web animation –Web advertisement, Designing interactive elements - Sound mixing – Sound editing tool.

TOTAL : 45 PERIODS

TEXT BOOKS
1. Tay Vaughan, Multimedia: Making It Work, Osborne: McGraw Hill, 2002.
2. Source Training Manuals from Macromedia Flash and Adobe Photoshop.

REFERENCES
1. Donald Hearn and M. Paulline Baker, Computer Graphics, Prentice-Hall, NJ, USA 2001.
2. Peter Shirley, Fundamentals of Computer Graphics, AK Peters, 2002.
3. Steven Heller and Karen Pomeroy, Design Literacy: Understanding Graphic Design, Allworth Press, New York 1997.
3. Training Manuals from Macromedia Flash.

SC9135   **SUMMER INTERNSHIP**

                                                        L T P C
                                                        - - - 2

The students shall undertake an internship for four weeks in a media organization, preferably in a science-related area, during the summer vacation and submit consolidated diary of the work done within a fortnight after the beginning of the third semester.

SC9136   **SCIENCE COMMUNICATION LABORATORY**

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AIM:
To impart practical skills in diverse media of science communication.

OBJECTIVES:
- To experiment with different media to communicate a science theme.
- To use traditional media such as puppetry or street theatre for science communication.
- To organize a comprehensive science campaign involving the use of diverse media including emergent ones.

The training in practical skills shall involve group discussions, puppetry, street plays, exhibitions, rural campaigns, audio recording, video shoot, and new media writing on science themes.

                                                TOTAL : 60 PERIODS

SC9137   **MULTIMEDIA LABORATORY**

                                                        L T P C
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AIM:
To design multimedia presentations on science themes.

OBJECTIVES:
- To try out skills in multimedia in presentation of science themes.
- To build a website to communicate science.

Designing multimedia presentation – Creating audio files and editing them – Photoshop and CorelDraw: creating graphic files / compression – Introduction to 2D animation - Flash concepts and working with flash – Building a website - Students shall produce animation programmes on science-related areas, and submit their assignments in CDs.

                                                TOTAL : 60 PERIODS

SC9141   **PROJECT WORK**

L T P C
0 0 20 10

AIM:
      To undergo industrial training and do a research project on science communication for a semester.

OBJECTIVES:
- To gain industrial training to put into practice the skills learnt in the three semesters that went by.
- To do a research project in an area related to the area of industrial training.
- To help smooth transition of students from university to industry.

The project will be of one semester duration. The students will be sent to different organizations involved in science communication activities as per interest and specialization of students, mostly located in the place of the study which is Chennai. The students will get working training in the organization. They will have to carry out a research project related to the area of training and submit a research project report at the end of the semester. The students shall defend their dissertation in front of experts during viva-voce.

SC9151   **HEALTH COMMUNICATION**

L T P C
3 0 0 3

AIM:
   To impart knowledge of various issues concerning health communication.

OBJECTIVES:
- To gain skills to campaign for creating public awareness against an epidemic.
- To gain skills in using a multi-pronged strategy towards AIDS communication.
- To understand the capabilities of telemedicine application.
- To know about intricacies related to occupational health.

UNIT – I   HEALTH REPORTING   12
Public understanding of health issues – Malnutrition - Malaria - Hygiene - Contagious diseases - Chronic diseases - Checking epidemic – Public awareness about epidemics - Reproductive rights including birth control - Advancement in health sciences - Use of optical fibre in surgery - Implication of nanotechnology in medical field - Problems of the terminally-ill patients - Patient groups acting as pressure groups - Professional associations – Vaccination campaigns including Plus Polio – Community health.

UNIT – II   CLINICAL RESEARCH   12
Issues related to clinical researches - Manipulation in conducting trials and reporting - Consent of voluntaries - Pharmaceutical companies influencing research, policies - Conflict of interests – Bio-medical waste management.

UNIT – III   HIV/AIDS COMMUNICATION   12
HIV/AIDS prevention and treatment - Stigma - Reporting with sensitivity – Strategies: abstention, no sex outside marriage, safe sex - Multi-pronged approach – Creating public awareness of issues.

UNIT – IV   TELEMEDICINE   12
Familiarizing with technology of telemedicine – scanner, electro stethoscope - data reception equipment, etc. - Paramedics with information technology skills – Training of doctors.

UNIT – V   OCCUPATIONAL HEALTH   12
Physical hazards: noise and vibration - Chemical hazards: TLV for air, gas and chemical contaminants - Equipment for the assessment physical and chemical hazards - Industrial toxicology: definitions, hazard, toxicity - Optimization: shift work - Job and personal risk factors - Selection and training - Fatigue and vigilance – Hygiene.

TOTAL : 60 PERIODS

TEXT BOOKS
1. Richard K. Thomas, Health Communication, Springer, 2005.
2. Nova Corcoran, Communicating Health, Sage, New Delhi, 2007.

REFERENCES
1. Health Communication journal. LEA Online. http://www.leaonline.com/loi/hc
2. Encyclopedia of Occupational Health and Safety, Vol. I & II, International Labour Organization, Geneva, 1985.
3. Handbook of Occupational Health and Safety, NSC, Chicago, 1982.
4. Arving Singh and Everett M. Rogers, Combating AIDS: Communication Strategies in Action, Sage, New Delhi, 2006.

SC9151   **SCIENCE COMMUNICATION FOR CORPORATES**

L T P C
3 0 0 3

AIM:

   To learn how to communicate in a corporate firm dealing with some science-based product or service.

OBJECTIVES:
- To understand how to bring out an in-house journal for a corporate firm.
- To know means to undertake corporate social responsibility activities.
- To gain skills for event management in a science-related activity.

UNIT – I   OVERVIEW OF ADVERTISING   12

Evolution and history of advertising - Relevance of advertising in marketing-mix - Overview of the advertising scene in India - Social, scientific and economic impact of advertising - Advertising promotes products and services - Difference among publicity, propaganda and advertising - Difference between product advertising and institutional advertising - Laws and ethics in advertising - Audit Bureau of Circulation (ABC) - Television Rating Points (TRP) ratings.

UNIT – II   DESIGNING & IMPLEMENTING CORPORATE COMMUNICATION 12

Public relations – Media relations – Press conference – Creating press contacts and space in science magazines and journals – Advertorials – Image building.

UNIT – III   COMMUNITY WELFARE   12

Creating model villages – Social responsibility – Imparting and developing local knowledge and management – Workshops, training – Grassroots science campaigns.

UNIT – IV   HOUSE JOURNALS   12

House journals – Annual reports – Promotional material such as brochures, pamphlets, posters, CDs – Motivational videos, Instructional videos.

UNIT – V   OVERVIEW OF PUBLIC RELATIONS   12

Evolution and history of PR - PR concepts and principles - Various theories of PR - Interface of PR with various other management disciplines - Publics in PR - PR in Government - PR in public sector - Laws and ethics in PR - Strategic PR management, Crisis communication and Management - Role and scope of writing in PR - Role of research in PR - Corporate communication - Event management - Reporters grappling with PR material – Image audit on research organization.

TOTAL : 60 PERIODS

TEXT BOOKS
1. Fred R. David, Strategic Management: Concepts and Cases, Prentice Hall, New Jersey, 1999.
2. Donald Treadwell and Jill B. Treadwell, Public Relations Writing, Response Books, New Delhi, 2005.
3. Gerard J. Tellis, Effective Advertising: Understanding When, How, Why Advertising Works, Response Books, New Delhi, 2004.

REFERENCES
1. David Aaker, Brand Equity, Tata McGraw Hill, 2003.
2. Robert L. Heath, Ed. Handbook of Public Relations, Sage, New Delhi, 2001.
3. Danny Moss, Public Relations in Practice: A Casebook, Routledge, New York, 2000.
4. D.S. Mehta, Handbook of Public Relations in India, Allied Publishers Ltd., 2001.

SC9153   **ANIMATION FOR SCIENCE**

L T P C
3 0 0 3

AIM:
    To learn skills to prepare 3D animation in science themes.

OBJECTIVES:
- To prepare storyboard.
- To learn modelling, rigging, lighting, texturing and animating.
- To prepare demo reels in 3D animation using Maya software.

UNIT – I   BASICS OF ANIMATION   12

Concepts, principles of 3D animation – Illustrations and visual design – Graphic applications – Digital imaging techniques – Compositing.

UNIT – II   STORYBOARD   12

Storyboard for animation - Fundamentals of 3D animation: views, maps, lighting, character modelling and types of rendering.

UNIT – III   CHARACTER DESIGNING   12

3D animation – Software such as Maya – Creation of organic and inorganic characters - Interface and tools to model 3D objects - 3D object modelling techniques – texturing and mapping – Working with lights and camera -- Materials on 3D objects - Dynamic motion for characters – Inverted kinematics.

UNIT – IV   SPECIAL EFFECTS   12

Rigging – Lighting – Texturing – Compositing and editing - Animating – Special effects of Morphing and warping.

UNIT – V   USING ANIMATION FOR SCIENCE   12

3D - Demo reels - Creating animation for science themes - Analyzing how animation is used in science.

TOTAL : 60 PERIODS

TEXT BOOKS
1. Suzanne Patmore, Cheryl Morse and Bryan Morse, Graphics and Animation Basics, Thomson Corze Technology, Singapore, 2004.

REFERENCES
1. Chris Patmore, The Complete Animation Course: The Principles, Practice and Techniques of Successful Animation.

SC9154   SCIENCE THROUGH EDUCATIONAL BROADCASTING

L T P C
3 0 0 3

AIM:
To learn how to impart science through educational broadcasting.

OBJECTIVES:
- To understand the significance of educational broadcasting.
- To understand how to go about content creation for science broadcasting.
- To know the techniques of managing an educational medium.

UNIT – I   OVERVIEW OF EDUCATION   12

Education for national development – Rural-urban divide – National policies on education - Educational experiments in India - Partners in augmenting learning opportunities - Educational media centres - Evaluation and monitoring committees - Revolution of open and distance learning.

UNIT – II   TECHNOLOGIES FOR EDUCATION   12

Telecommunications, Cable, Broadband: Instructional design, block diagram of system setup – Educational radio and television - Satellite for education, INSAT, EDUSAT – network configuration, space segment, ground segment, teaching end, receiving end, spacecraft, and collaborators.

UNIT – III   CONTENT   12

Content generation - Types of content - Programme designing - Production formats for different education sectors - Research processes: formative, process, summative - Management of interactivity in educational media - Content management: deployment and dissemination - Community mobilization and participation - Process of content conversion and delivery - Introduction to multimedia elements for e-content development – e-Learning: pedagogy, process and people.

UNIT – IV   EDUCATIONAL MEDIA DATABASE   12

Media convergence - Archival video server - IP/ Interactive multicasting - Point/multipoint videoconferencing - Voiceover IP (VoIP) - Pay per view - Video on demand - Internet access on LAN, External data sharing, Learning management systems - Learning object repositories - Feedback mechanisms

UNIT – V   MANAGEMENT OF EDUCATIONAL MEDIA   12

Managing personnel - Financial management - Programming strategy and distribution - Programming economics - Packaging: from making capsules to delivery platform, marketing, strategic alliances and partnerships - Regulatory influences.

TOTAL : 60 PERIODS

TEXT BOOKS

1. Penelope Semrau and Barbara Boyer, Using Interactive Video in Education, Pearson Allyn & Bacon, 1993.
2. Interactive Video (Educational Technology Anthology Series, Vol I), Educational Technology Publication, 1998
3. Bagulia, Abduk Mannan, Modern Education Audio Visual Aids, Anmol Publications, 2005.

REFERENCES

1. Alan B. Albarran, Management of Electronic Media, Wadsworth, 2002.
2. Nicolas Imke, Interactive Video Management and Production, Educational Technology Publications, May 2003.
3. Nicolas Viuppa and Nicolas Viuppa, A Practical Guide to Interactive Video Design, Knowledge Industry Publications, March 2001.
4. I. Arul Aram, Television in Education, Orient Longman, Chennai, 1993.

SC9155   **MEDIA AND DISASTER MANAGEMENT**

L T P C
3 0 0 3

AIM:
To understand the crucial role the media can play in disaster management and disaster mitigation.

OBJECTIVES:
- To know about various natural and man-made disasters.
- To learn how to undertake risk assessment.
- To stress the importance of disaster mitigation and the media's role in it.
- To know the means to sensitize journalists on disaster management.

UNIT – I   NATURAL AND MAN-MADE DISASTERS   12

Natural forces and life, Development as causes of disasters - Fundamentals of disasters - Causal factors: poverty, population growth, rapid urbanization, transitions in cultural practices, environmental degradation, lack of awareness, war and civil strife - Characteristics of hazards and disasters: earthquakes, tsunamis, tropical cyclones, floods, landslides, droughts, environmental pollution, deforestation, desertification, epidemics, chemical and industrial accidents - Loss of resources - Impact on climate.

UNIT – II   RISK ASSESSMENT AND DISASTER MANAGEMENT   12

Objectives of assessment - Disaster due to hydrological and meteorological phenomena - Environmental health risks - Risk adjustment - Disaster aid - Insurance - Risk management - Stocktaking and vulnerability analysis (SWOT analysis) - The UN disaster management team - Preparedness for slow onset and sudden onset of disasters - Checklist of basic information required by a UN-DMT - National policies - Government structures for warning and emergency response - Emergency and post-disaster assistance - Forecasting and warning - Land use planning - Management of epidemics, casualties - Importance of coordination and information, rehabilitation and reconstruction.

UNIT – III   POLICY INITIATIVES AND FUTURE PROSPECTS   12

The International Decade for Natural Disaster Reduction - Policy for reduction of disaster consequences - Role of the civil defence during disasters - Training of emergency management personnel, UN Draft Resolution on strengthening of coordination of humanitarian emergency assistance: prevention, early warning, standby capacity, coordination - Continuum from relief to rehabilitation and development.

UNIT – IV   DISASTER MITIGATION   12

Disaster risk appraisal of projects in hazardous area - Disaster risk reduction planning checklist - Targeting mitigation: where it has most effect - Mitigation through capacity building - Legislative responsibilities of disaster management - Disaster mapping, Pre-disaster risk & vulnerability reduction – Post-disaster recovery & rehabilitation – Quick reconstruction technologies – Metrological and Remote Sensing satellites: real-time monitoring, prevention and rehabilitation – GIS and GPS applications - Use of information technology in disaster management - Wireless emergency communication.

UNIT – V   ROLE OF MEDIA   12

Media coverage of disasters - Role of media in disaster mitigation, management and relief - Linkage between disaster warning systems and media – Media in reconstruction process - Coverage of disaster-related trauma - Coverage of grassroots initiatives in disaster management - Media and NGOs / donors – Sensitizing journalists on disaster management - Case studies on media and disaster – The Disaster Management Act, 2005.

TOTAL : 60 PERIODS

TEXT BOOKS
1. Larry Collins and Schneid D. Thomas, Disaster Management and Preparedness, Eastern Kentucky University, Kentucky, USA, 2000.
2. Angus M. Gunn, Unnatural Disaster: Case Studies of Human-Induced Environmental Catastrophes, Greenwood Press, US, 2003.
3. Galal El Mahdy, Disaster Management in Telecommunications, Broadcasting and Computer Systems, John Wiley & Sons (Asia) Pvt. Ltd., 2001.

REFERENCES
1. G.K. Gosh, Disaster Management, Vol. 1 to 3, APH Publishing Corporation, New Delhi, 2006.
2. Carter W. Nick, Disaster Management: A Disaster Manager's Handbook, Asian Development Bank, Philippines, 1991.

SC9156   **COMMUNICATING THE CLIMATE CHANGE**
                                                           L T P C
                                                           3 0 0 3
AIM:
       To impart the students the knowledge about climate change and its impact, and to understand the role of media in communicating climate change effectively to diverse sections of people.

OBJECTIVES:
   - To know the natural and anthropogenic causes of climate change.
   - To know about atmospheric and oceanic impacts of climate change.
   - To use the media for adaptation and mitigation of climate change.

UNIT – I   EARTH SYSTEM   9

Components of the earth system: atmosphere, hydrosphere, lithosphere, biosphere – Radiation and planetary energy exchange – Atmospheric temperature and heat – Formation of clouds, fog, dew, frost, hailstorms – Precipitation and atmospheric optics – Activity: understanding the greenhouse effect – Interactions in a multi-component system: origin, solar system, earth, atmosphere, ocean.

UNIT – II   CLIMATE   9

Difference between weather and climate – Climate system: the Sun, the atmosphere, the ocean, Ice, the energy balance of the earth – Activity: Modelling the greenhouse effect – Climate change 1,00,000 years (glacial cycles) – thousands of years (interglacials, insterstadial events) – Natural and anthropogenic causes of climate change – Impacts of changing climate – Ozone depletion, Photochemical ozone creation, Acid rain, Ambient air quality.

UNIT – III   NATURAL CLIMATE CHANGE   9

Records of climate change: written history, glaciers and their deposits, ice cores, ocean sediments and corals, terrestrial deposits, sea level rise – Climate change and human health – Climate change and water resources: impacts and adaptation.

UNIT – IV   GREENHOUSE GASES AND GLOBAL WARMING   9

Greenhouse gas concentration trends – Global temperature trends – Global distribution of emissions – Intergovernmental Panel on Climate Change (IPCC) – Activity: sources of CO_2 in the atmosphere, CO_2 emissions – Carbon cycling – Impacts of climate change – Ecosystems and species interaction – Role of methane – Climate change and ecosystems – Evidence of past climate change – Evidence of recent climate change – Climate change in South Asia including the Maldives.

UNIT – V   MEDIA AND CLIMATE   9

Societal issues and global warming – Indigenous vs scientific knowledge – Different concerns of rich and poor countries – Low carbon energy technologies and renewable energy technologies – Mitigation and adaptation – Climate change policy of India – Worldwide effects of climate change and media coverage – The precautionary principle – The polluter pays principle – Community participation – Indigenous knowledge and folk media.

                                                TOTAL : 45 PERIODS

TEXT BOOK
1. Frank Ackerman and Elizabeth Stanton, Climate Change: the Costs of Inaction, Tufts University, Boston, 2006.

REFERENCES
1. ISO14000 Environmental Management Systems: Requirements with Guidance for Use, 2004.
2. Moran and Morgan, Meteorology: Atmosphere and Science of Weather, Prentice Hall, Florida, 1997.
3. T.E. Graedel and Paul J. Rutzen, Atmospheric Change: An Earth System Perspective, W.H. Freeman & Co., 1992.
4. A Climate Change Plan for the Purposes of the Kyoto Protocol Implementation Act, 2007, Environment Canada, Quebec, 2007.
5. IPCC Fourth Assessment Report. Intergovernmental Panel on Climate Change, 20 June 2008, http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf