

Open Elective – UG

Basic Legal awareness on Protection of Women and Rights

3 Credits

Objective: This course is intended to give the students a basic awareness on Women's rights and the legal frame work for the protection of their rights.

Unit 1

Introduction/Overview: The meaning of law, social security legislations, free legal aid to the poor, Indian Evidence Act, various modes of dispute settlement mechanisms- LokAdalats, Family Courts, Mahila Courts, Crime Against Women Cells, NCW, NHRC, State Commissions.

Women and the Constitution: Fundamental Rights, Constitutional Remedies (Writs), Electoral Law, Voting Rights for Women, participation in Panchayats and governance.

Unit 2

Women & Family Laws: Marriage Law, Separation, Divorce, Maintenance, Adoption, Right to Property and Succession, Guardianship, unmarried mother and the legitimacy of her children.

Unit 3

Criminal Law and Women: Major offences against women, Women in Custody- Arrest, grounds of arrest, kinds of offences (bailable and non-bailable), arrest warrant, powers of police, rights of arrested persons including the right to bail, the immediate procedure to be adopted in case of violation of rights.

Unit 4

Procedure in Action: Procedure for seeking redressal, Complaints to Police Station, Courts, LokAdalat.

Unit 5

Rights under different laws: Rights at work place Equal Remuneration / Minimum Wages Act / Rights under Factories Act, Maternity Benefit Act, Mines and Plantation Act, Rules of work - in such specific areas, Sexual harassment at work place, Reproductive Health Rights - Foeticide, Infanticide, Preconception and Prenatal Diagnostic Techniques (Prohibition of Sex Selection) Act 1994, The Medical Termination of Pregnancy Act 1971.

Open Elective – UG

Organic Farming

3 Credits

Unit I

Introduction to Organic farming: Definition, Basic principles of Organic farming, Chemical intensive farming versus Organic farming, Advantages and disadvantages.

Organic inputs: Advantages of using organic inputs, Organic manures, Biofertilizers, Biopesticides, Organic growth promoters, Biocontrol agents.

Unit II

Basics of Organic Vegetable cultivation: Selection of varieties, seeds or seedlings, Liming of soil, Potting mixture preparation and filling of grow-bags/pots, Precautions during planting and transplanting, Details of Organic inputs required for cultivation and its application methods, 100 day schedule for organic vegetable farmers, Nutrient management and Plant protection measures.

Unit III

Land reclamation using green manuring crops: Soil degradation due to chemical fertilizers, Crops used for green manuring, Benefits, ITK used by farmers in plant growth and protection.

Assessing the quality of organic inputs: Quality of organic manures, Analysis-agencies involved Quality standards, Governance and Legal Institutions Involved in Organic certification.

Unit IV

Introduction to organic livestock production: Conventional farming versus Organic livestock production, Principles of Organic livestock production.

Safe egg and meat production in homesteads: Selection of suitable poultry breeds, Housing requirements, Feeding management, Care and management, Vaccination and other routine medicines, Safe withholding periods, Common diseases and their management.

Unit V

Safe fish production in Homesteads: Homestead fish farming methods, Location specific models, Stepwise Installation procedure, Species selection, Feeding and management, Culture-Package of Practice, Harvesting, storage and marketing.

Storage and Value addition of excess produce: Refrigerated storage, Drying and dehydration, Pickles, Jam, Squash preparation, Home recipes.

Reference Books:

1. Palaniappan, Annadurai - Organic Farming: Theory and Practice, Scientific Publishers Journals Dept
2. AmitavaRakshit, HB Singh – ABC of Organaic Farming, Jain Brothers Publication
3. B. Subrahmanyeswari Mahesh Chander – Organic Livestock Farming, ICAR Publication
4. Handbook of Fishers and Aquaculture – ICAR Publication

18OEL231

ADVERTISING

3 0 0 3

Unit 1

Evolution of advertising; Social and economic effects of advertising; Advertising agency system; advertising budget; Legal and ethical aspects of advertising;

Unit 2

Marketing; Market segmentation; Social marketing; Consumer behaviour; Factors influencing consumer behaviour, buying behaviour, buying decision process;

Unit 3

Planning advertising campaigns; Advertising copy, visualization, illustration, layout, headline, body, colour, trademarks, slogans; Television and Radio commercials; Media selection, newspaper, magazines, radio, television, Internet, outdoor, direct mail;

Unit 4

Industrial advertising; Retail advertng; Corporate advertising; Public service advertising;

Unit 5

Evaluation of advertising effectiveness, methods of measurement. Pre-testing and post – testing methods.

BOOKS RECOMMENDED:

1. *B.S. Rathor; Advertising management*
2. *Chunnawala: Advertising theory and Practice*
3. *Sandage and others: Advertising: Theory and Practice*
4. *Thomas Russell and Glenn Verrill: Otto cleppner's advertising Procedure*
5. *Manendra Mohan: Advertising Management: Concepts and cases*
6. *Philip Kotler: Marketing Management*

7. *David Aaker and George day: Marketing Research*
8. *Mahendra Mohan: Advertising Management; Concepts and Cases*
9. *Frank Jefkins: Advertising Made Simple*

18OEL232

BASIC STATISTICS

3 0 0 3

Objectives: To develop an understanding of problem solving methods, to understand the basic concepts of statistics and to apply the results to real life problems.

Unit 1

Introduction to Statistics: Meaning and scope of statistics, limitations of statistics, purpose and scope of inquiry.

Unit 2

Methods of collecting data - primary and secondary data, classification of data, tabulation of data, frequency table.

Unit 3

Presenting data by diagrams and graphs - bar diagram - simple, multiple, component and percentage bar diagram, pie diagram, histogram, frequency polygon and frequency curve, less than ogive and greater than ogive.

Unit 4

Measures of central tendency: Arithmetic mean, median, mode.

Unit 5

Dispersion: Quartile deviation, standard deviation, coefficient of variation.

REFERENCES:

1. *P.R Vittal - Business mathematics and statistics, Margham Publications, Chennai.*
2. *Dr.C Satyadevi - Quantitative Techniques, S. Chand & Company Pvt. Ltd., New Delhi.*
3. *Dr. S.P Gupta - Statistical Methods, Sultan Chand & Sons, New Delhi.*

18OEL233

CITIZEN JOURNALISM

1 0 2 3

Objective: The course is aimed at encouraging young educated rural men and women to highlight local issues and imparting the required skills to articulate them in the media.

Unit 1

Introduction: Highlighting development problems of rural areas; pathetic condition of infrastructure in rural areas.

Unit 2

Lack of connectivity – bad roads or lack of roads.

Unit 3

Lack of potable water – women having to trek distances to fetch drinking water for the family.

Unit 4

The story of electrification of villages – Official claims and reality, Schools without teachers, primary health centres without doctors.

Unit 5

Farmers caught in between labour shortage, high wages, rising cost of inputs and indebtedness due to crop failure and middlemen taking the profit from farm products.

REFERENCES:

1. Allan, S. (2009). *Citizen journalism: Global perspectives (Vol. 1)*. Peter Lang.
2. Thorsen, E., & Allan, S. (2014). *Citizen Journalism: Global Perspectives - Volume 2*. Peter Lang International Academic Publishers.
3. Wall, M. (2012). *Citizen Journalism: Valuable, Useless, Or Dangerous?.* International Debate Education Association.
4. Allan, S. (2013). *Citizen witnessing: Revisioning journalism in times of crisis*. John Wiley & Sons.

18OEL234 CREATIVE WRITING FOR BEGINNERS 1 0 2 3

Overview of the Course: *The course focuses on those elements of writing that enhances the vivid and effective writing skill among students across genres like fiction, poetry, essay and drama drawing their attention to significant details, lyrical language and memorable images; inventive metaphor and simile; authentic voice, dialogue and characterization.*

Objectives: *To develop students talent for creative writing in English in order to enable them touse language effectively; to introduce the concept of creative writing; to acquaint students with the basic principles and techniques involved in writing poetry, fiction and drama.*

Unit 1

Introduction to Creative Writing – meaning and context of using creative writing, Difference between creative writing and functional writing.

Importance of reading – Reading practice for closer observation of the elements of creative writing.

Unit 2

Imaginative writing – idiomatic expression, use of imagery, figurative language, playing with words.

Reading from poetry and short stories – illustration of the use of imagery, allusion, figures of speech, allegory and fables.

Unit 3

Narrating anecdotes, blog writing, and discussion through SMS / WhatsApp.

Unit 4

Short story writing – Narration and description – setting the plot, rising action, climax, falling action, resolution.

Unit 5

Poetry writing – rhythm and rhyme, Types of poems – Narrative, Dramatic, Lyric.

REFERENCE BOOKS:

1. Janet Burroway, *Imaginative Writing: The Elements of Craft*, Longman, 1st Ed. ISBN: 0321081919

2. Anjana Neira Dev, Anuradha Marwah Swati Pal, *Creative writing : A Beginner's Manual*, Delhi, Pearson Longman, 2009
3. Robert Scholes, Nancy R Comely, Carl H. Klaus, Michael Silverman, *Elements of Literature : Essay, Fiction, Poetry, Drama Film*, Delhi, OUP, 2007
4. *Write from the Heart: Unkenling the power of your creativity*, Hal Zina Bennet, California Wew World Library, 2001

18OEL235 DESKTOP SUPPORT AND SERVICES

1 0 2 3

Objectives: *To create an awareness in Non Computer science background students to enable them; to generate the Computer Hardware Professionals; to Train the lower order Technicians; to generate man power at different level to enable the country to face the challenge of world modern I.T. and Instrumentation.*

Unit 1

Fundamentals of computers

Data & Information, Computer Architecture, CPU & Memory Organization, History of Computer, Generation of Computer, I/O Devices, Number System, Logic Gates.

Unit 2

Internal devices - Study of PC ATATX System Pentium Core, Core 2 Cord, Core2 Duo, I3, I5, I7 Processor, Mother Board, MB Types, Expansion Slots, Processor, Memory, Hard Disk, CD-R, RW, DVD-RW. SMPS.

Unit 3

External Devices - Dot Matrix Printer, Inkjet Printer, Laser Printer, Modem, Ports and Connectors, Batteries, Power supply, Pen Drives. Scanner: Photo Scanner, Documents Scanner, Bar Cord Scanner Introduction of Expansion Card, Assembling of Personal Computer.

Unit 4

Operating System

Basics & Installation - Introduction to OS, Types of Operating systems, System files FAT and NTFS, Dos 6.22, Windows, XP, Windows Vista, Windows 7 and Windows 8 and RedHat Linux and Multi Boot Operating System.

Unit 5

Trouble shooting - Complete introduction & Troubleshooting, Antivirus free and paid version, Downloading the Drivers from Internet, Installation of Drivers.

REFERENCES:

1. *PC AND CLONES Hardware, Troubleshooting and Maintenance B. Govindarajalu, Tata Mc-graw-Hill Publication*
2. *PC Troubleshooting and Repair Stephen J. Bigelow, Dream tech Press, New Delhi*

LAB Requirements

Required Accessories for Hardware Course

1. *Basic Measuring Instruments Multi-meters*
2. *Minimum two nos. Computer for Hardware Practice.*
3. *All generations Motherboard, Processor, Ram.*
4. *Expansion Card and Cables.*
5. *All Ports, SMPS and UPS. '*
6. *Hard disk, Floppy disk, Pen drive, CD ROM, DVD writer.*
7. *Printer, Monitor, Speakers.*
8. *Keyboard, Mouse, Modem.*
9. *Installation Kit (Bootable CD, Windows CD, All Software CD.)*
10. *Tool Kit.*
 - *Secure Driver with all bit.*
 - *Soldering with Solder and Paste.*
 - *De-soldering Pump.*
 - *Digital and Analog Multi-Meter.*
 - *Screw driver set*
 - *Internet connectivity.*

18OEL236 DEVELOPMENT JOURNALISM 2 0 1 3

Unit 1

Large-scale migration from rural to urban areas: causes and consequences. Statistics, unemployment, education, health, insurgency (lack of security), lack of infrastructure.

Unit 2

'Pull' and 'Push' factors: Urban centres provide better scope for earning livelihood through employment in industries, transport, construction, trade, services etc. They act as magnets by offering modern facilities and 'pull' people from the rural areas, while unemployment, hunger and starvation and lack of means of livelihood "push" people out of villages into towns and cities.

Unit 3

Migration from rural areas and their impact on agricultural production due to shortage of labour in those areas.

Unit 4

Mass migration into metropolitan cities – Delhi, Kolkatta, Mumbai and Chennai – and their impact on civic amenities in the cities – increasing slums, decline in standard of living and environmental degradation.

Unit 5

Nuclear family - A side effect of urbanization - Changes in family system brought about by urbanization.

REFERENCES:

- Effects of internal Migration and Net Emigration on a City – Smriti Chand*
4 Major causes of Migration in India – Smriti Chand
Human Migration (Cause, Kinds and Theories) - Negi Mohita
UN state of the World Population Report - 2007

18OEL237

DIGITAL PHOTOGRAPHY

1 0 2 3

Objective: This course introduces the students to different aspects of photography and enable them to understand their role as a photographer.

Unit 1

Introduction to photography, role of photographer, Types of cameras - Film camera, Digital Camera, image file types.

Unit 2

SLR - Camera functions and Types of Lenses.

Unit 3

Rules of composition, Types of shots.

Unit 4

Lighting, Natural lighting, flash, studio lights, creative lighting etc.

Unit 5

Types of photographers, Post processing, image editing.

TEXTBOOKS:

1. *The Basic Book of Photography by Tom Grimm and Michele Grimm, 4th Edition*
2. *The Manual of Photography: Photographic and Digital Imaging by Ralph E Jacobson, Sidney F Ray, Geoffrey G Attridge, Norman R Axford, 9th Edition*

REFERENCES:

1. *The Basic Photography, 1973, Focal press*
2. *Advanced Digital Photography by Tom Ang, Mitchell Beazley*

18OEL238

EMOTIONAL INTELLIGENCE

1 0 2 3

Unit 1

Emotional Intelligence: Intelligence Quotient - IQ, Concept of Emotional Intelligence, History and origin of Emotional Intelligence, Science of Emotional Intelligence, Scope of Emotional Intelligence

Unit 2

Components of Emotional Intelligence: Importance of emotions, Self-awareness, Self-regulation, Self-motivation, Social awareness, Social skills.

Unit 3

Models of Emotional Intelligence: The Ability-based Model, The Trait Model of Emotional Intelligence, Mixed Models of Emotional Intelligence.

Unit 4

Emotional Intelligence at Work place: Importance of Emotional Intelligence at Work place Cost –savings of Emotional Intelligence, Emotionally Intelligent Leaders, Case Studies

Unit 5

Measuring Emotional Intelligence: Emotional Intelligence Tests, Research on Emotional Intelligence, Developing Emotional Intelligence

REFERENCES:

1. Daniel Goleman (1996). *Emotional Intelligence - Why it can Matter More than IQ*. Bantam Doubleday Dell Publishing Group
2. Geetu Bharwaney (2008) . *Increase your Emotional Intelligence - Strategies for EI Living*, Jaico Publishing House
3. Jyotsna Codaty (2012) . *Understanding Emotional Intelligence - Pustak Mahal*.

18OEL239 ESSENCE OF SPIRITUAL LITERATURE

3 0 0 3

Objectives: *To eradicate superstition to establish moral and ethical values; to check unscrupulous exploitation of nature; bring to fruition Amma's dream of the world as one village; an overview of spirituality the world over.*

Unit 1

Indian Spirituality - Bhagvath Gita: Chapter 10; Upanishad – Isavasyopanishad; Vedic Hymns.

Unit 2

Western Spirituality - The Bible.

Unit 3

Oriental Spirituality - Chinese: Confucianism - Japanese: Shinto-Buddhism.

Unit 4

Others - Jewish-Sufism – Zoroastrianism.

Unit 5

Yoga and Meditation - The Power of Meditative practices - How to Practise the power of transcendental awareness - Revising Negative trends into positive - Scientific nature of Sadhana - Spiritual Psychology - Human energy systems – Chakras.

REFERENCES:

1. Max Muller, *The Upanishad*, Max Muller, *Vedic Hymn*
2. Swami Chinmayanada - *Bhagavath Gita*
3. *The Gospel of Jesus Christ*.
4. Legge James, *Confusionism*
5. Kushner, Lawrence, *Jewish Mystical Spirituality*
6. Rahula, Walpola, *What the Buddha Taught*
7. Lings Martin, *What is Sufism*
8. Iyenga B.K.S, *Light on Yoga*
9. Harish Johari, *Chakras: Energy Centers of Transformation*

18OEL240

FILM THEORY

2 1 0 3

Objective: *The objective of this paper is to help student to have basic understanding of cinema, study different aspects of cinema world thereby enabling him to develop the analyzing skill in visual world.*

Unit 1

Introduction - Basic stages of cinema production, Pre-production, Production, Post-production, Introduction to Lighting.

Unit 2

Indian Cinema - Early Indian cinema, History of Malayalam cinema, Key directors in Malayalam cinema, Key technicians in Malayalam cinema

Unit 3

Theoretical Perspective - Expressionism, Realism, neo-realism, new wave, Auteur theory, Narrative theory.

Unit 4

Different Genres in Cinema and its Features - westerns, musicals horror, fictions, historical, Documentary.

Unit 5

Film Screening - Citizen Kane, Nanook of the north, Children of heaven, Modern times, Psycho, Dreams, Home (Documentary), Samsara (Documentary).

TEXTBOOKS:

1. *Film Art: An Introduction* - David Bordwell, Kristin Thompson
2. *Malayala Cinemayude Katha* - Vijayakrishnan

REFERENCES:

1. *The Art and Science of Cinema* - Anwar Huda
2. *Key Concepts in Cinema Studies* - Susan Hayward
3. *Film as Art* - Rudolf Arnheim
4. *Chalachithrathinte Porul* - Vijayakrishnan
5. *Movies and Meanings* - Stephen Prince

18OEL241 FUNDAMENTALS OF NETWORK ADMINISTRATION**2013**

Objectives: To understand the basic networking components and installations; to have an in-depth knowledge on network topologies; to understand the network layers and protocols implementation.

Unit 1

Network Components:

Introduction of Network Cable like UTP, STP, Fiber Optics, Hub, Unmanageable Switch, Manageable Switch, Router, Modem, Wi-Fi, Access Point, PCI Wireless Card, USB Wireless Device, Print Server, USB Network Sharer, Backup Device, Server Hardware etc.

Unit 2

Basic Network Introduction & Installation - Introduction About Network, Installing Network Operating System - Windows Server versions, Cable Crimping, Network Sharing and user Permission, Internet Connection, E-Mail, Google Drive, Dropbox etc.

Unit 3

Transmission Media and Topologies - Media types: STP cable, UTP cable, Coaxial cable, Fiber cable, Base band and Broadband transmission, Cables and Connectors, Physical and logical topologies, Bus, Star, Ring and Mesh topologies.

Unit 4

Network protocols - HTTP, FTP and other Different types of protocols, OSI Model, Media Access Method, DNS services, DHCP services, web services, Proxy Services etc.

Unit 5

IP addressing - Introduction to TCP/IP and Sub-netting, configuring IP address and Network, Routing protocol basics.

REFERENCES:

1. *Networking Complete, BPB Publication*
2. *Computer Networking - Andrew S. Tanenbaum*

18OEL242

GENDER STUDIES

3 0 0 3

Objective: To sensitize students with the contemporary discourses on gender with specialempphasis on India.

Unit 1

Women Writing in India 600 B.C. to the Present: Volume I: 600 B.C. to the Early Twentieth Century (Introduction) - Susie Tharu and K Lalitha

Unit 2 Fiction

Othappu: The Scent of the Other Side - Sara Joseph and Valsan Thampu.

Unit 3 Fiction

One Part Woman - Perumal Murugan

Unit 4 Drama

Dance like a Man - Mahesh Dattani

Unit 5 Short story

Quilt - Ismat Chughtai

18OEL243 GLIMPSES OF INDIAN ECONOMY AND POLITY

3 0 0 3

Unit 1

General Introduction, Primitive Man and his modes of exchange – barter system, Prehistoric and proto-historic polity and social organization. Early India – the Vedic society – the Varnashramadharma – socio-political structure of the various institutions based on the four purusarthas.

Unit 2

The structure of ancient Indian polity – Rajamandala and Cakravartins – Prajamandala Socio-economic elements from the two great Epics – Ramayana and Mahabharata Sarasvati - Sindhu Civilization and India's trade links with other ancient civilizations - states and cities of the Indo-Gangetic plain

Unit 3

The rise of Magadha, emergence of new religions – Buddhism and Jainism – and the resultant socio-economic impact. The emergence of the empire – the Mauryan Economy and Kautilya's Arthashastra. Of Politics and trade – the rise of the Mercantile Community. Elements from the age of the Kushanas and the Great Guptas. India's maritime trade. Dharma at the bedrock of Indian polity – the concept of Digvijaya: dharma-vijaya, lobha-vijaya and asura-vijaya. Glimpses into the South Indian Economies: political economies of the peninsula – Chalukyas, Rashtrakutas and Cholas. Medieval India – agrarian economy, non-agricultural production and urban economy, currency system.

Unit 4

The Indian Market and Economy before the arrival of the European traders. Colonisation – British attitude towards Indian trade, commerce and economy and the resultant ruining of Indian economy and business – man-made famines – the signs of renaissance – the evolution of the modern banking system. Glimpses into British administration of India and administrative models. The National Movement and nationalist undertakings in business and industry. Modern India: the growth of large-scale industry – Irrigation and Railways – Money and Credit – Foreign Trade. Towards Partition – birth of two new nations – division of property.

Unit 5

The writing of the Indian Constitution – India becomes a democratic republic – a new polity is in place. India since Independence – the saga of socio-political movements. Indian Economy since Independence – the Fiscal System – the Five Year Plans – Liberalisation – the GATT and after Globalisation and Indian Economy. Impact of science and (new/ emerging) technology on Indian economy. Histories of select Indian business houses and business entrepreneurship.

REFERENCES:

1. *The Cultural Heritage of India*. Kolkata: Ramakrishna Mission Institute of Culture.
2. Kautilya. *Arthashastra*.
3. Altekar, A.S. *State and Government in Ancient India*. New Delhi: Motilal Banarsidass.
4. Sircar, D.C. *Studies in the Political and Administrative Systems in Ancient and Medieval Times*. New Delhi: Motilal Banarsidass.
5. Dutt, R.C. *The Economic History of India*. London, 1902.
6. Dharampal. *Collected Works (Volumes IV & V)*.

18OEL244 GRAPHICS AND WEB DESIGNING TOOLS

1 0 2 3

Objectives: *To understand the basics of computer graphics; to understand the aspects of images and sound; to gain knowledge on designing aspects and to design web pages; to implement the web design using various tools and to learn about hosting websites.*

Unit 1

Introduction to Computer Graphics Definition, Application, Pixel, Frame Buffer, Raster and Random Scan display.

Unit 2

Images – Bitmaps and Grey Scale Images, Image Types – Color Graphics – Color Schemes – Palette Compositions.

Unit 3

Sound – Analog and Digital Sound – Quantization – Sampling – Sampling Rate – Sound Types.

Unit 4

Introduction to Adobe Photoshop – Image editing tools, Tracing, Static web page template designs creation – slicing – Various aspects of a static webpage.

Unit 5

Introduction to Dream viewer - tables and tools – Dynamic web page template design creation - Animations – 2D, 21/2 D and 3D perceptions with examples.

REFERENCES:

1. *Donald Hearn and M. Pauline Baker, Computer Graphics, PHI, New Delhi.*
2. *Tay Vaughan, Multimedia: Making it Work, Ninth Edition. Tata McGraw-Hill, 2014.*
3. *Edward Angel, Interactive Computer Graphics: A top-down approach with OpenGL, Fifth Edition. Addison Wesley, 2008.*
4. *Alan Watt, 3D Computer Graphics, Third Edition, Addison-Wesley, 2000.*
5. *Foley, van Dam, Feiner, Hughes. Computer Graphics Principles and Practice, Second Edition in C. Addison Wesley, 1996.*

18OEL245**GREEN MARKETING****3 0 0 3**

Objectives: This course shall examine the core principles required to create competitive advantage in the marketplace by implementing innovative green marketing strategies.

Unit 1 Introduction to Green Marketing

Meaning - Definition - Evolution of green marketing - Assumptions of green marketing - Reasons for adopting green marketing and benefits of green marketing.

Unit 2 Green Marketing Mix (GMM) and Sustainability

Meaning - concept of GMM – Strategies - Challenges. The concept of Sustainability and Green Marketing/ Consumers and pioneering efforts in India - Guiding principles of Sustainability and Green Marketing/ Consumers - Common assumptions and myths of green marketing.

Unit 3 Methods of implementation of Sustainability and Green Marketing

Method of bringing sustainability in green marketing in India and rest of the world.
Case study analysis.

Unit 4 Role of functional groups in Green Marketing

Functions within the market, Role of Wholesalers and Retailers, Role of banking institutions, funders and donors. Difference between general marketing and green marketing.

Unit 5 Governance and Legal Institutions

Role of governance in sustaining green marketing, Implications of governance.

TEXTBOOKS AND REFERENCES:

1. *Green Marketing Strategies* - Amitabha Ghose
2. *Green Marketing in Indian Retail Sector* - Tanushree Purohit and A.K Das Mohapatra
3. *Green Marketing Management* - Robert Dahlstrom
4. *Green Marketing, Theory, Practise and Strategies* - Robert Dahlstrom
5. *Green Marketing Strategies and Consumer Behavior* - Monica Loss

18OEL246 HEALTHCARE AND TECHNOLOGY 3 0 0 3

Objective: To provide students with a detailed understanding about technological applications in the healthcare sector with an objective to promote better management of information regarding identification of biomedical and hospital technology planning, procurement and operation requirements.

Unit 1

Health information technology, Types of technology: Electronic Health Record, Personal health records (PHRs) Computerized provider order entry (CPOE), Application of HIT – case studies, Visualization of Medical Data.

Unit 2

Healthcare Improvement Using Analytics, Healthcare Transformation - Challenges and Opportunities, Fundamentals of Healthcare Analytics, Components of Healthcare Analytics, Advanced Analytics in Healthcare.

Unit 3

Foundations of Information Technology, Technological Innovations, Opportunities, and Challenges, Information Technology Assurance and Security.

Unit 4

Introduction to medical informatics, necessity of standards for e-health, security and cyber laws, ethical and medico legal issues in patient information exchange; Introduction to medical databases, electronic medical records, Decision Support Systems, Artificial Intelligence.

Unit 5

Integrated Health information systems, cost effectiveness; Networks, PSTN, ISDN, VSAT, TI, information compression, storage and transmission standards, wireless telemetry, e-health and telemedicine and applications.

TEXTBOOKS/ REFERENCES:

1. Shortliffe E. H. and Cimino J J, *Biomedical Informatics: Computer Applications in Health Care and Biomedicine*, Third Edition, Springer-Verlag, 2006.
2. Norris A C, *Essentials of Telemedicine and Telecare*, John Wiley & Sons, 2002.
3. *Diffusion and Value of Healthcare Information Technology*, Bower, Anthony G. RAND Corporation 2005
4. *Healthcare Analytics for Quality and Performance Improvement*. Strome, T.L., John Wiley & Sons, 2013.

18OEL247 HISTORY OF ENGLISH LITERATURE 3 0 0 3

Objective: To introduce the evolution of English as a language and culture; to acclimatize the students with the history of English Literature; to make students aware of different movements and their effects on the society and literature.

Unit 1

The Social and Literary context: Medieval and Renaissance (Evolution of English Language and Literature).

Unit 2

Restoration to the Romantic Age (Social Background and its influences).

Unit 3

The Victorian Society and Literature (features, effects on the globe).

Unit 4

Modernism and after (Social transformation, Science, World Wars).

Unit 5

Assignment, Seminar Discussion & Term Test

REFERENCES:

1. William J Long - *English Literature*, FQ Books Publication
2. Pramod K Nayar - *A Short History of English Literature*, Cambridge University Press
3. Ifor Evans - *A Short History of English Literature*, Penguin Books
4. George Sampson - *The Concise Cambridge History of English Literature*, Cambridge University Press

18OEL248

INDIAN WRITING IN ENGLISH

3 0 0 3

Objectives: To trace the rise, growth and development of Indian poetry, fiction and drama in English; to provide an overview of the various phases of the evolution of Indian writing in English, to introduce the students to the rich and varied literature available in regional languages; to expose them to the Indian mind both ancient and modern; to inculcate a sense of appreciation for the literary genius; to understand the fabric of Indian society and the cultural unity of its people.

Unit 1

Introduction to Indian writing in English - development and growth of poetry, fiction and drama - trends of Indian writing in English.

Unit 2 Poetry

Nissim Ezekiel: Goodbye party for Miss Pushpa T.S;

Kamala Das: An Introduction

A.K.Ramanujan: A River

Unit 3 Short Stories

Rabindranath Tagore: My Boyhood Days

Khushwant Singh: The Portrait of a Lady

Unit 4 Fiction

R.K.Narayan: The Vendor of Sweets

Unit 5 Drama

Girish Karnad: Nagamandala – Play with a Cobra

REFERENCES:

1. K.R.Sreenivasa Iyengar - *Indian Writing in English*, Sterling: Delhi.
2. *Poetry down the Ages*: Orient Blackswan.
3. *Best of Rabindranath Tagore: Gitanjali, My boyhood days, The Post Office, The Gardner Mashi and Other Stories*.
4. Khushwant Singh - *The Portrait of a Lady: Collected Stories*.

18OEL249 INDUSTRIAL RELATIONS AND LABOUR WELFARE 3 0 0 3

Objectives: *On successful completion of this course, the students should have understood the Legislations relating to Industrial Disputes and Labour welfare.*

Unit 1

Industrial relations - industrial disputes - causes - handling and settling disputes - employee grievances - steps in grievance handling - causes for poor industrial relations - remedies.

Unit 2

Collective Bargaining: - Concept - Principles and forms of collective bargaining - Procedure - conditions for effective collective bargaining - worker's Participation in management.

Unit 3

Factories Act 1948 - The Workman's Compensation Act, 1923.

Unit 4

The Industrial Disputes Act 1947 - The Trade Union Act, 1926.

Unit 5

The Payment of Wages Act, 1936 - The Employee's State Insurance Act, 1948

REFERENCE BOOKS:

1. P.C.Tripathi - *Personnel Management & Industrial Relations*, Sultan Chand
2. C.B.Mamoria - *Dynamics of Personnel Management*, Himalaya Publishing
3. N.G.Nair & Latha Nair - *Human Resource Management*, Sultan Chand & Sons.
4. P. Subbarao - *Essentials of Human Resource Management and Industrial Relations*, Himalaya Publishing

18OEL250 INTRODUCTION TO ANCIENT INDIAN YOGIC AND VEDIC WISDOM 3 0 0 3

Objectives: *To understand the importance of adapting a healthy lifestyle; to realize the significance of ancient Indian wisdom; to help in understanding the goal of human life*

Unit 1

Ayurvedic, Yogic and Vedic Lifestyle: Introduction to Ayurveda, Yoga and Veda, life and lifestyle, daily routine according to Ayurveda, Yoga and Veda like ablution and food system.

Unit 2

Over view of Indian Philosophy: Introduction to Indian Philosophies, difference between Indian Philosophies and western Philosophies, Basic idea on various Indian Philosophies.

Unit 3

Human mind: States of mind, virtues & vice, causes for distraction, ways to gain one pointed mind.

Unit 4

Eight Limbs of Yoga: Introduction to Yoga Philosophy, benefits of Yoga, goal of yoga, explanation on Eight Limbs of Yoga.

Unit 5

Bhagavadgita: Glory of the Bhagavadgita, Human life according to the Bhagavadgita, solution for sufferings, self management.

REFERENCE BOOKS:

1. *Bhagavad Gita – Commentary by Swami swarupananda, Advaita Ashrama*
2. *Paatanjala Yogasutra – Commentary by Swami Gambhirananda, Ramakrishna mission*
3. *Yogopanishath*
4. *Ayurvijnana Ratnakaraha – Yogendranath, Rashtriya Samkrita Samsthanam*

18OEL251 INTRODUCTION TO COMPUTER HARDWARE

2 0 1 3

Objective: The course aims to give a general understanding of the basic parts of computer and how a computer works.

Unit 1

Hardware Basics – Generation of computers, Types of computers, Parts of a computer, and Functions of System Modules, Front and rear panel view of system, Safety information while disassembling PC – Internal structure of PC.

Unit 2

Motherboards: Components and Architecture, features, components, form factor, processor support, BIOS, IDE and SATA Connectors, External interfaces and connectors, troubleshooting and maintenance of Mother Boards.

Unit 3

Popular CPU Chips and their Characteristics, Processor Architecture - Processor specifications - installing and uninstalling processor - CPU Overheating issues – common problems and solutions.

Unit 4

Memory and Storage: Memory features – Types of memory – working - Installing and uninstalling memory modules – maintenance and troubleshooting – common problems and solutions.

Storage devices – Hard disk details – Working and parts of hard disks – Installing hard disks – maintenance and troubleshooting.

Unit 5

Power supply – SMPS – features – types – installing SMPS – Specification for SMPS.

Maintenance and Troubleshooting: Preventive Maintenance and Safety Procedures - Managing Replaceable Components.

TEXTBOOKS/REFERENCE BOOKS

1. James K L, "Computer Hardware: Installation, Interfacing Troubleshooting and maintenance", PHI Learning Press (Eastern Economy Edition, 2013)
2. Manahar Lotia, Pradeep Nair, Payal Lotia, "Computer Hardware Course", BPB Publications

18OEL252INTRODUCTION TO EVENT MANAGEMENT

3 0 0 3

Unit 1

Why Event Management, Requirement of Event Manager, Analyzing the events, Scope of the Event, Decision-makers, Technical Staff, Developing Record-Keeping Systems, Establishing Policies & Procedures.

Unit 2

Preparing a Planning Schedule, Organizing Tasks, Assigning Responsibility, and Communicating, Using the Schedule Properly, The Budget, Overall Planning tips, Checklists, Expert Resources, Computer Software Required.

Unit 3

Who are the people on the Event, Locating People, Clarifying Roles, Developing content Guidelines, Participant Tips, Reference Checks, Requirement Forms, Introduction, Fees & Honorariums, Expense Reimbursement, Travel Arrangements, Worksheets.

Unit 4

Types of Events, Roles & Responsibilities of Event Management in Different Events, Scope of the Work, Approach towards Events.

Unit 5

Introduction to PR – Concept, Nature, Importance, Steps, Limitations, Objectives Media – Types of Media, Media relations, Media Management PR strategy and planning – identifying right PR strategy, Brain Storming sessions, Event organization, writing for PR.

REFERENCES:

1. Devesh Kishore, Ganga Sagar Singh - *Event Management: A Blooming Industry and an Eventful Career*, Haranand Publications Pvt. Ltd.
2. Swarup K. Goyal - *Event Management*, Adhyayan Publisher - 2009

18OEL253

INTRODUCTION TO MEDIA

3 0 0 3

Unit 1

Introduction – Media Business - Media Classification - Mass Media – Niche Media - Addressable Media and Interactive Media - Media-Intrusiveness.

Unit 2

Print – Media – Newspaper - Principles of Newspaper Business - Classified Ads, Display Ad's Display Ad's – Coverage and Audience Measurement - Sales and Pricing – magazines. Directories.

Unit 3

Broadcast Media – Radio – Television - out of Home Media - out door Advertising - Cinema and Video Non-Traditional Media.

Unit 4

An overview of Media planning - problems of media planning – Developing media plan – Market Analysis and Target - Interactive and Digital Media.

Unit 5

Establishing media objectives - Developing and Implementing – Evaluation and Follow up - Computers in Media Planning - Characteristics of Media.

REFERENCE BOOKS:

1. Tom Duncan - *“Principles of Advertising and IMC”*, Tata McGraw Hill
2. Kruti shah and Alan D'souza - *“Advertising and Promotion” – An IMC Perspective*, Tata McGraw Hill.
3. Mehra – *“Newspaper Management”*

18OEL254INTRODUCTION TO RIGHT TO INFORMATION ACT 3 0 0 3

Unit 1

Introduction to RTI Act

The evolution of the Right to Information in India - the important terms and concepts used in the Act - the salient features of the Act.

Public Authorities and their Obligations under the Act

- What is a Public Authority?
- Who are the Public Authorities covered under the Act?
- Which Public Authorities are exempted from the ambit of the Act?
- Obligations of Public Authorities.

Unit 2

Role of Public Information Officers: PIOs and APIOs - Accepting Information Request, Processing and Disposing

The requirement for designation of Information Officers - PIOs / APIOs - in public authorities

- The specific Duties & Responsibilities of Information Officers.
- The liabilities of a PIO for non-compliance with the provisions of the Act.
- How to accept information requests and assist citizens in making information requests?
- What is the process for disposal of requests?
- The time limits for disposal of information requests.
- The fees and costs to be charged for providing information.
- The grounds on which requests can be rejected and the procedure for such rejection.

Unit 3

Exemptions from Disclosure of Information, Partial Disclosure and “Third Party” Information

- Specific provisions of the Act which exempt certain kinds of information – the classification of such exempted information.
- Application of public interest test with respect to exempted information.
- *Grounds that* allow for partial disclosure of information.

The concept of 'Third Party' and the issues and considerations revolving around its involvement.

Unit 4

The roles and responsibilities of Appellate Officers within Public Authorities.

- The process involved in making first appeals to designated Appellate Officers.
- Timelines for making a first appeal and disposal of the appeal
- First Appeals and Appellate Officers - Important Provisions

Unit 5

Information Commission: Powers and Functions

- The Role and Responsibilities of the Information Commissions.
- The relevant provisions in the RTI Act dealing with Complaints to the Information Commission and the specifications thereof.
- The "Second Appeal" process and the Commissions' mandate for the same.
- The power of Information Commissions with regard to enforcing compliance of public authorities with the provisions of the RTI Act, imposing penalty/ recommending disciplinary action against erring PIOs etc.

REFERENCES:

1. *S P Sathe - Right To Information, Lexisnexis India Publication*
2. *Sarbjit Sharma - Right To Information, Authors Press Publication*

18OEL255

INTRODUCTION TO TRANSLATION

3 0 0 3

Objectives: Introduce students to translation studies as separate discipline of knowledge; to introduce translations in diverse fields; to impart training in translation; increase students' awareness related to social functions of translation; develop students' contrastive knowledge and their critical thinking skills

Unit 1

What is Translation - History of translation - The rise and development of translation - Linguistic and Philological definition of translation.

Unit 2

Translation and Communication - Information and message; Communication channel - The sender and the receiver of the message Forms and types of translation.

Unit 3

Translating for the Media: print media – electronic media - Translating various News reports – Advertisements – editing – interviews – writing Screen Plays and Scripts for radio and T.V. – spoken media - symposia, conference, platform speech etc.

Unit 4

Translating for business: Translating Business Correspondence – Translating literature on consumer products – Technical writing.

Unit 5

Introducing various types of translation - Machine Translation - Computer aided translation etc. – Revising and rewriting – Proof reading – editing – submitting manuscript for publication – summary.

REFERENCE BOOKS AND SOURCES:

1. Bassnett, Susan - *Translation Studies*, London and New York, 1980 (revised edition 1991),
2. Routledge Bell, Roger T. - *Translation and Translating, Theory and Practice*, Longman, 1991
3. Callow, Kathleen - *Man and Message: A Guide to Meaning-Based Text Analysis*, 1998,
4. *Cumulative Index of United Nations Legal Materials Produced and Applied in Kosovo 1999-2004*,
5. *Central European and Euroasian Law Institute, USAID Duff, Alan, Translation, OUP, 1997*
6. Gërmizaj, Shykrane - *Translation Theory in the Classroom*, Prishtina, 2005

Websites: (newspaper Selection of websites)

<http://www.fortunecity.com/business/reception/19> <http://accurapid.com/journal/29accom.htm> http://www.ethnologue.com/show_products <http://cslu.cse.ogi.edu/HL.Tsurvey/chnode4.html> <http://fiat.gslis.utexas.edu/~palmquis/courses/project98/translation/mtlinks.htm> <http://www.fortunecity.com/business/reception/19> <http://language.home.sprynet.com/lingdex/pwood1.ht>

18OEL256

LINGUISTIC ABILITIES

3 0 0 3

Objectives: *To encourage students to develop lifelong skills, including: the ability to communicate clearly, accurately and effectively; the use of a wide range of vocabulary and correct grammar, spelling and punctuation; a personal style and an awareness of the audience being addressed.*

Unit 1

Listening – Importance of listening - Types of listening - Basic skills of listening - Barriers of listening – Activities - listening to radio, TV or Internet - Transcript.

Unit 2

Speaking - body language – Pronunciation - Introducing yourself – storytelling - speak on any topic - social etiquette.

Unit 3

Reading - Different types of reading – comprehensive test - Vocabulary building.

Unit 4

Writing – structure – letter – circular – memo - Note making - Paragraph Writing précis - Writing – essay.

Unit 5

Practical Module - Creative writing - Play reading - Role play - Dialogue.

REFERENCES:

1. O' Brien Terry - *Modern Writing Skills*, Rupa Publication
2. O' Brien Terry - *Effective Speaking Skills*, Rupa Publication
3. Olson Judith F. *Writing Skills - Success in 20 Minutes a Day*, Goodwill Publishing House
4. Meyers Judith N. - *Vocabulary and Spelling*, Goodwill Publishing House

Unit 4

Macro Economic Problem

Introduction – Determinants of Consumption, Saving and Investment - Unemployment

– Types - Definition and Characteristics of Trade Cycles - Different phases of trade cycles - Definition and types of Inflation and Deflation - Causes and consequences of Inflation.

Unit 5

Public Finance

Meaning - Scope of Public Finance - Role and Types of Direct and Indirect Taxes in India - Role of Monetary and Fiscal Policies in maintaining real economic growth with stability – International Trade.

REFERENCE BOOKS:

1. *Principles of Economics – Deviga Vengedasalam and Karunakaran Madhavan, Third Edition*
– Oxford Publication Press.

2. *Economics - Samuelson, Paul Anthony and William D. Nordhaus, 1998, Ed. 6, Tata McGraw Hill Publishing Company Ltd, New Delhi.*

18OEL259

MANAGING FAILURE

3 0 0 3

Objectives: To prepare the individual/ student to face challenges of life; to impart insights for understanding the self and adjusting with work scenario in organizations so as to become a responsible global citizen.

Unit 1

Understanding the self - self awareness - Individual psychological processes - sculpting a unique socially desirable personality - spiritual/ ethical orientation.

Unit 2

SWOT analysis at the individual level - Developing individual competencies - surviving in a competitive environment - environment and sustainable development.

Unit 3

Emotional Intelligence - life skills - inter-personal relations - Social adjustments - Soft skills.

Unit 4

Managing at work situations - Profile of today's organization - Strategic context - environment challenges - Individual challenges and responsibilities.

Unit 5

Managing failures: Envisioning the future - managing change - unleashing creative and intuitive skills to meet failures - Remodeling individuals and organizations - Indian ethos for managing self and organizations ethically.

BOOKS FOR REFERENCE:

- 1) *Soft Skills and Professional Communication - Francis, Mcgraw Hill*
- 2) *Personality Development and Soft skills - Barun Mitra, Oxford University Press*
- 3) *Social and Personality development - David R. Shaffer, Cengage learning.*
- 4) *Ethics in Management and Indian Ethos - Ghosh BB, Vikas publishing.*

18OEL260

MEDIA MANAGEMENT

3 0 0 3

Objective: The paper is aimed at giving an understanding of the media industry with the way the organization functions. This course is an introductory course aimed at students of varied domains.

Unit 1

Introduction

Introduction to principles and practice of management - Business Models and Function - Mass Media Industry Structure Media Markets - Ownership - Monopolies, Oligopolies, Conglomerates, Mergers, and Acquisitions - Media Sales Promotion and Marketing Mix.

Unit 2

Types of Media Ownership – Features Advantages & Disadvantages

Sole proprietorship – Partnership - private limited companies - public limited companies - trusts, co-operatives - religious institutions (societies) - Franchisees (Chains).

Unit 3

Ownership Patterns of Mass-Media in India

Organizational structure of newspaper and magazine - Organizational structure of Radio - Organizational structure of Television.

Unit 4

Planning & Production

Planning and execution of programme production - production terms - control practices and procedures.

Unit 5

History & Law

Historical perspective of mass media laws in India -

Basic Legal concepts Constitutional provisions for Freedom of Speech and Expressions - Article 19(1) (a) Reasonable restrictions - Article 19(2) - Freedom of the press in India Law of Defamation, Obscenity, Cinematography Act - Official Secrets Act 1923 - Copyright Act - Contempt of Court Act - Legislative Privileges and Contempt of Legislature - Working Journalist Act.

REFERENCE BOOKS:

1. Aggarwal S.K. - *Press at the crossroads in India*, UDH Pub House
2. William and Rucker - *Newspaper Organization and Management*, a State Pr. Publication
3. Frank Thayer - *Newspaper Management* - Appleton-Century Company; 1st Edition edition (1926)

18OEL261

MICRO ECONOMICS

3 0 0 3

Unit 1

Introduction to Microeconomics

Definition of economics – Scope – Scarce and End resource – Welfare Definition

- Differences between Micro and Macro economics – Basic Economic Concepts and Problems – Economic Systems.

Unit 2

Consumer's Equilibrium Demand and Supply

Consumer Equilibrium – Meaning of Utility – Law of Equi-Marginal Utility - Demand

– Law of Diminishing Marginal Utility - Law of Demand – Determinants – Types of Demands – Supply – Law of Supply – Elasticity of Demand and Supply.

Unit 3

Theory of Production

Production – Production function – Law of Production – Return to Scale – Economics and Diseconomies of Scale - Classifications – Short-run production function – Long-run production function – Isoquant Curve.

Unit 4

Cost Function

Cost and Revenue – Short run costs – Total cost – Total Fixed Cost – Variable Cost – Average Fixed – Average Variable cost and Marginal Cost – Meaning and their relationship – Average and Marginal Revenue.

Unit 5

Market Structure and Price Determination

Market – Classification of Markets – Nature – Perfect Competition - Market Structure (Monopoly, Monopolistic, Oligopoly, Duopoly) – Price Determination under Monopolistic Market – Price Discrimination.

REFERENCE BOOKS:

1. *Principles of Economics – Deviga Vengedasalam and Karunakaran Madhavan, Third Edition – Oxford Publication Press.*
2. *Economics - Samuelson, Paul Anthony and William D. Nordhaus, 1998, Ed. 6, Tata McGraw Hill Publishing Company Ltd, New Delhi.*

18OEL262 MICRO FINANCE, SMALL GROUP MANAGEMENT AND COOPERATIVES 3 0 0 3

Objective: Self Help Group and other micro-level innovative credit systems contributed significantly in Empowering underprivileged in India and abroad in recent times. Paper has two purposes—

(a) to acquaint students with the various institutional arrangements as well as recent contribution of various innovative credit systems at the micro-level for financing rural development sector; (b) management of small groups involved in micro-finance for social and economic empowerment of their group members in particular and the society in general.

Unit 1

Financial institutions for rural development - Basic understanding of rural and development credit. Institutional structure for rural financing in India: policy and schemes of NABARD, recent financing scheme of the Government.

Unit 2

Development of cooperative banks in India with special reference to PACS, CCBs, LDBs. Rural financing through commercial banks - Policies and objectives before and after nationalization of banks, Branch expansion policy and programmes.

Unit 3

Emergence of RRBs policy, objectives, functions, progress and achievements. Micro finance at small group level: concept, emergence, objectives and thrust areas. Case studies of recent success stories.

Unit 4

Management of small groups, cluster and federation from credit and trade perspectives. Role of facilitating agencies. Linkages between small group and Banks.

Unit 5

Convergence of with development programmes and implementing departments of government.
Withdrawal strategy for facilitating organizations.

SUGGESTED READINGS:

1. V S Somnath – *Microfinance, Excel Books*
2. Panda - *Understanding Microfinance, Wiley India*
3. Craig Churchill & Cheryl Frankiewicz - *Making Microfinance Work, International Labour Office Publication*

18OEL263 NEGOTIATION AND COUNSELLING

3 0 0 3

Objectives: *The objective of this course is to provide knowledge of concepts and issues of negotiation and counseling such that to equip the students with valuable skills, techniques and strategies in counseling.*

Unit 1

Negotiation: Nature, Characteristics, Strategy and Tactics of Distributive Bargaining, Strategy and Tactics of Integrative Negotiation; Strategy and Planning for Negotiation.

Unit 2

Negotiation Sub processes: Perception, Cognition and Emotion Communication: What is communicated during negotiation and how people communicate in Negotiation.

Unit 3

Best Practices in Negotiation – Fundamental Structure of negotiation and BATNA. Case I - Role Negotiation at Bokaro Steel Plant (Understanding Organizational Behaviour. By Udai Pareek, Oxford, Second Edition Page 410-415).

Unit 4

International and Cross Cultural Negotiation: Context and Concept, Influence of Culture on Negotiation: Case II - The Dabhol Debacle (Negotiation Made Simple, SL Rao, Excel Books pp.30-35 and pp. 196-197).

Unit 5

Emergence & Growth of Counselling: Factors contributing to the emergence,
Approaches to Counselling: Behaviouristic, Humanistic Approaches and Rogers Self Theory Counselling Process: Steps in Counselling Process. Modern Trends in Counselling – Trends, Role of a Counsellor and Model of Counselling.

REFERENCE TEXTS:

1. Lewicki, Saunders & Barry – *Negotiation, Tata McGraw Hill*
2. B.D.Singh - *Negotiation Made Simple, Excel Books, 1st Ed.*
3. Rao S N - *Counseling and Guidance, Tata Mc Graw Hill, 2nd Ed.*
4. Singh Kavita - *Counselling Skills for Manager, PHI, 1st Ed.*
5. Welfel, Pattersonson - *The Counselling Process, A Multi theoretical Integrative Approach, Thomson India, 6th Ed.*
6. Pareek Udai - *Understanding Organisational Behaviour, Oxford University Press*

18OEL264

NEW LITERATURES

3 0 0 3

Objectives: To introduce the emergent body of literature; to examine the approach of different writers towards the local and global social issues; to consider how literature undertakes the challenge of rethinking the world around us.

Unit 1

Introduction to new literatures, experiments in style, narrative techniques, issues of identity, selfhood and location.

Unit 2 Fiction

Shyam Selvadurai – Cinnamon Gardens
Amitav Ghosh - The Hungry Tide

Unit 3 Poetry

Kamala Das – An Introduction
Derek Walcott – A Far Cry From Africa
Kishwar Naheed – We Sinful Women

Unit 4 Drama

Wole Soyinko – The Road

Unit 5

Assignments, Discussions, Term Test

REFERENCES:

1. G. H. Mair - *English Literature*, Discovery Publishing House
2. Kamaladas - *The Old Playhouse and other Poem*, Orient Blackswan
3. Derek Walcott - *Selected Poems*, Farrar, Straus and Giroux Publication
4. Judith Wright - *Woman to Man*, Angus and Robertson Publication

18OEL265

NON-PROFIT ORGANIZATION

3 0 0 3

Objectives: To introduce the students to NGO Sector; to provide an overview of NGOs; to introduce the Basic Concepts; to provide basic managerial skills for NGO personnel.

Unit 1

NGOs – An Introduction, Concepts and Functions, evolution in India, Types of non-profits, Issues in NGO Management, challenges of NGO Management.

Unit 2

Legal procedures for establishment of NGOs – Trust and Society and their differences. Formation of Trust and Society. Registration procedure for NGO.
Corporate Social Responsibility and Social Marketing.

Unit 3

Development issues, Development indicators, Poverty (Exploitation, Vulnerability and Powerlessness) and Development. HIV/AIDS, Child labor, Education and Tribal welfare. (This is to increase the level of awareness among students on issues).

Unit 4

Strategy and planning for NGOs – Elements of Strategy, SWOT analysis, Process of Management – Planning, Organization, Delegation, Co-ordination, Core-Competency and Capacity Building

Unit 5

NGOs and changing trends of development. State, market and third sector, Self-Help Group (SHG) and Empowerment of Women, Role of NGOs in Civil Society.

REFERENCE BOOKS:

1. *Management of Non -Governmental Organizations towards a Developed Civil Society*, JM Ovasdi, ISBN 1403928681 Macmillan India Lid,2006
2. *Managing the Nonprofit organizations: Principles and Practices*, Peter F Drucker, ISBN –B : 9780060850049 Harper Collins publishers May 2006
3. *Nonprofit Management: Principles and Practices*, Michael, J Worth, The George Washington University, Sage publications, September 2008

18OEL266

PERSONAL EFFECTIVENESS

3 0 0 3

Unit 1

Personal growth - Meaning and concepts, Self-awareness and self-esteem, Life Roles, Social roles and Organizational roles. Nature and scope of personal growth. Feeling, thinking and behaviours, Personality theories, Carl Jung's theory of personality types and Myers Briggs Type Indicator test (MBTI), Trait theories - Guilford Peogut, Emotional intelligence.

Unit 2

Pedagogy and Androgogy. Adult Learning Process; learning styles and its relatedness to personality development.

Unit 3

Attitudes, beliefs, Values and their impact on behaviour. Personal change - meaning, nature and requisites. Social adjustments and habit formation. Habits of personal effectiveness. Seven habits of highly effective people.

Unit 4

Basic functions of mind - Creativity and innovation. Blocks to creativity. Creativity processes and tools - convergent and divergent thinking. Neuro Linguistic Programming - Interpersonal relations and personal growth. Interpersonal needs, motivation and behavior - FIRO-B and Johari Window. Defense Mechanism in groups.

Unit 5

Transactional Analysis - Ego states, types of transactions and time structuring. Life position, scripts and game Experience learning methodologies - T-group, sensitivity training, encounter groups and human process labs (students may go through three days personal growth lab for experiential learning)

REFERENCE BOOKS:

1. *John. W. Newstrom and Keith Davis - Organizational Behaviour: Human Behavior at work*, Tata McGraw Hill
2. *Robert N. Lussier - Human Relations in organizations*, Mc-Graw Hill Education
3. *Whetten & Cameron - Development Management Skills*, 7th Ed. Pearson, PHI.
4. *Calvin S Hall Et Al - Theories of Personality*, Wiley Publication
5. *Stephen R Covey, Simon & Schuster - Seven Habits of Highly Effective People*, Simon & Schuster
6. *Training in Interpersonal Skills – tips for managing People at work*, Stephen Robbins, Et al, Pearson, PHI.

Unit 1

Historical Introduction - Copernicus, Galileo - Solar system-Planets, Comets, meteorites, asteroids, satellites, Constellations and Astrology. Olvers paradox.

Unit 2

Constellations, Distance scales and measurements - Parallax methods - Moving cluster, Statistical and Spectroscopic and dynamic parallax methods.

Unit 3

Introduction to Celestial Mechanics – Kepler's laws. Black body temperature of stars Hertz-Sprung Russel diagram - Stellar evolution - white dwarfs, red giants, neutron stars, pulsars, black holes.

Unit 4

Special Relativity – Minkowski space, Introduction to General Relativity - space-time curvature.

Unit 5

Cosmology - Red shift – Galaxies - CMBR Big bang, Various cosmic models - Horizon and Flatness problem Dark matter and Energy. Anthropic Principle. Relation to Biology.

REFERENCES:

1. *Arnab Rai Choudhuri, Astrophysics for Physicists, Cambridge University Press, 2010.*
2. *An Introduction to Astrophysics, BAIDYANATH BASU, TANUKA CHATTOPADHYAY, 2nd Edition, PHI Learning Pvt. Ltd.*
3. *The New Physics and Cosmology Zanjoc, Oxford 2004.*
4. *An Introduction to Modern Astrophysics, 2nd Ed. by Caroll Ostie, Pearson, Addison Wesley*

Objective: To provide exposure to the students about principles of marketing and the knowledge of E-business.

Unit 1

Marketing, Introduction, Definition of market and marketing, Objects of marketing, features, Classification of markets, marketing and selling, Importance of marketing, modern marketing, features, marketing management, characteristics of marketing management, marketing management and sales management, Green Marketing, Market Segmentation and Target Marketing, Marketing mix, definition, elements of marketing mix, Marketing process, marketing functions, functions of exchange, functions of physical supply, facilitating functions.

Unit 2

Marketing Research, market research and marketing research, marketing research and marketing information system, procedure of marketing research.

Unit 3

Product, classification, product policies, product line, product mix, product life cycle, different stages in product life cycle, Pricing, pricing objectives, factors affecting price decisions, price determination procedure, types of pricing.

Unit 4

Promotion, objectives, forms of promotion, sales promotion, tools of sales promotion, advertising, definition, kinds of advertising media, personal selling, features, personal selling process, channels of distribution.

Unit 5

Consumer behaviour: introduction, market analysis, marketing strategy, factors influencing consumer behaviour, individual determinants, external environmental factors affecting consumer behaviour.

TEXTBOOKS:

1. *R.S.N. Pillai and Bagavathi – Modern Marketing Principles and Practices, S. Chand.*
2. *Brahm Canzer – E-Business and Commerce: Strategic Thinking and Practice, Biztantra Publishers, New Delhi*

REFERENCE BOOKS:

1. *Martin Khan – Consumer Behaviour, New Age International Publishers*
2. *Philip Kotler – Marketing Management, Prentice Hall of India*
3. *Stephen P Robbins, David A Decenzo – Fundamentals of Management of E-Business, Prentice Hall.*

18OEL269

PRINCIPLES OF PUBLIC RELATIONS

3 0 0 3

Unit 1

Purpose & Philosophy of PR, What PR Is, Objectives of Public Relations, the Primary Purpose of PR, Hostility, Prejudice, Apathy, Ignorance, Emergence of Public Relations, Public Relations Today, Public Relations and Propaganda, Defining Objectives and Planning a Programme.

Unit 2

Four Steps Public Relations Process, Defining PR Problems, Planning and Programming, Taking action and Communicating, Evaluating the Program, Elements of Public Relations, Human Relations, Empathy, Persuasion, Dialogue, Objectives of Public Relations.

Unit 3

Public Relations as a Profession, Overview, Profession, Codes of Professional Conduct, Functions of Public Relations Department, Policy, Publicity, Product Publicity, Relations with the Government, Community Relations, Shareholders Relations, Promotion Programmes, Donations, Employee Publications, Guest Relations, Establishment of Relations with the Public, The Need for Public Relations, Scope of Public Relations, Professional Code - Public Relations.

Unit 4

Ethics and Challenges of Public Relations, International Public Relations Association (IPRA) Code of Conduct, the European Code of Professional Conduct, All about Marketing, Advertising, Functions of Advertising, PR as a Component of Communication and Strategies, Strategic Management, Theories of Communication, Mass Communication Theory and Research. Functional Approach to Mass Communication Theory, Human Action Approach.

Unit 5 Models of Communication, Communication Models, The advantages of Models, Limitations of Models, Classical Communication Models, Transmission Model and its Criticism, Report Writing, Copyright and Other Legal Issues.

REFERENCE BOOKS:

1. *Geroge E-Belch & Michael. A. Belch - “Advertising and Promotion”, Tata McGraw Hill – Sixth Edition.*
2. *Kruti shah and Alan D’souza - “Advertising and Promotion”, Tata McGraw Hill*
3. *Tom Duncan - “Principles of Advertising and IMC”, Tata McGraw-Hill - Second Edition*

Objectives: *This introductory paper is intended to acquaint the students with sociology as a social science and the distinctiveness of its approach among the social sciences. It is to be organized in such a way that even students without any previous exposure to sociology could acquire an interest in the subject and follow it.*

Unit 1 The nature of Sociology

The meaning of Sociology: Origin, Definition, Scope, Subject matter, Nature and relation of sociology with other social sciences. Humanistic orientation to Sociological study.

Unit 2 Basic concepts

Society, community, Institution, Association, Group, Social structure, status and role, Human and Animal Society.

Unit 3 Institutions.

Family and kinship, religion, education, State.

Unit 4 The individual and Society.

Culture, Socialization, Relation between individual and society.

Unit 5 The use of Sociology.

Introduction to applied sociology - Sociology and social problems, Ecology and Environment: Pollution, Global warming and Greenhouse effect. Impact of Industrialization and Urbanization on Environment.

REFERENCE TEXTS:

1. Harlambos, M - *Sociology: Themes and perspectives*, Oxford University Press.
2. Inkeles, Alex - *What is Sociology*, Prentice-Hall of India.
3. Jaiaram - *What is Sociology*, Macmillan
4. Johnson, Harry M, *Sociology: A Systematic Introduction*, Allied Publishers.

Objective: *To understand the concepts of statistical analysis and to apply the results in real-life business problems.*

Unit 1

Correlation Analysis: meaning and definition - positive correlation - negative correlation - no correlation - scatter diagram - Karl Pearson's correlation coefficient - interpretation.

Unit 2

Regression Analysis: introduction – uses of regression analysis – regression lines - the two regression equations.

Unit 3

Time series Analysis: meaning – components of time series - methods of estimating trend – graphic method – semi-average method – moving-average method.

Unit 4

Probability: introduction - classical definition- relative frequency theory-subjective approach - Axiomatic approach to probability - Addition theorem - Multiplication theorem -- conditional probability.

Unit 5

Theoretical distributions: discrete and continuous distributions - Binomial distribution
– Normal distribution.

REFERENCE BOOKS:

1. *S P Gupta – Statistical Methods, Sultan Chand & Sons, New Delhi.*
2. *Dr.P.R.Vittal & V.Malini -Statistical and Numerical Methods, Margham Publications; 1 edition (2012)*

18OEL272 TEAMWORK AND COLLABORATION

2 0 1 3

Unit 1

Leadership – Meaning, Concepts and Myths about Leadership, Components of Leadership - Leader, Followers and situation. Assessing Leadership & Measuring Its effects.

Unit 2

Focus on the Leader – Power and Influence; Leadership and Values. Leadership Traits; Leadership Behaviour; Contingency Theories of Leadership; Leadership and Change.

Unit 3

Groups, Teams and Their Leadership. Groups – Nature, Group Size, Stages of Group Development, Group Roles, Group Norms, Group Cohesion.

Unit 4

Teams – Effective Team Characteristics and Team Building, Ginnetts Team Effectiveness Leadership Model.

Unit 5

Leadership Skills – Basic Leadership Skills, Building Technical Competency, Advanced Leadership Skills, Team Building for Work Teams, Building High Performance Teams.

REFERENCE TEXTS:

1. *Hughes, Ginnett, Curphy - Leadership, Enhancing The Lessons of Experience, Tata McGraw Hill, 5th Ed.*
2. *Yukl G - Leadership in Organisations, Pearson, 6th Ed.*
3. *West Michael - Effective Team Work, Excel Books, 1st Ed.*
4. *Sadler Philip – Leadership, Crest Publishing House*

18OEL273 THE MESSAGE OF BHAGAVAD GITA

3 0 0 3

Unit 1

Introduction: Background of the Bhagavad Gita – The Epic of Mahabharatha.
Arjuna Vishada Yoga: Scene at Kurukshetra – Arjuna’s anguish and confusion.
Symbolism of the war within – Psychological analysis of the human condition.

Unit 2

Sankhya Yoga: Importance of Self-knowledge. Body–Mind-Intellect Chart, Concept of Pancha Kosas, Concept of Vasanas. Nature of the Self–Indestructibility of Consciousness.

Unit 3

Karma Yoga: Yoga of Action – Living in the Present – Dedicated Action without Anxiety over Results - Concept of Swadharma

Unit 4

Sthitaprajna: Qualities of a person established in wisdom. Dynamics of the Three Gunas: Tamas, Rajas, Sattva – Going Beyond the Three Gunas – Description of a Gunatheetha.

Unit 5

Other topics: Tuning the Mind – Quantity, Quality and Direction of Thoughts – Reaching Inner Silence. Yoga of Devotion – Form and Formless Aspects of the Divine – Inner Qualities of a True Devotee.

TEXTBOOKS/ REFERENCES:

1. Swami Chinmayananda, “The Holy Geeta”, Central Chinmaya Mission Trust, 2002.
2. Eknath Easwaran, “The Bhagavad Gita”, Nilgiri Press, 2007.

18OEL274 UNDERSTANDING TRAVEL AND TOURISM

3 0 0 3

Objectives: To create a basic knowledge on the growth and development of tourism, to have an understanding of various national and international tourism organizations.

Unit 1 Growth and Development of Tourism

Tourism as an ancient phenomenon - pleasure travel - religion as a motivator Industrial revolution and development of tourism. Effects of Great World Wars on transport system - advent of jet and high speed trains. Causes of rapid growth - meaning, nature and components of tourism-basic travel motivations.

Unit 2 Need for Organization - factors influencing types of organization - the National tourist organization - tourist organization in India - International organization of Tourism International Union on Official Travel Organization (IUOTO) - World tourism Organization (WTO) – Pacific Area Travel Association (PATA) – International Air Transport Association(IATA) – American Society of Travel Agents (ASTA).

Unit 3 Measurement of Tourism

Need for measuring tourism phenomenon - methods of measurement - importance of tourist statistics - types of tourist statistics. Definition of the terms tourist, domestic tourism and international tourism - tourism planning and development - planning for tourism. Assessment of tourist demand and supply - basic infrastructure - financial planning - human resources planning - tourism marketing - environmental and regional planning.

Unit 4 Tourism and Economic Development

Economic and social significance of tourism - economic benefits - multiplier effect - infrastructure development - regional development – employment opportunities - cultural tourism - international understanding.

Unit 5 Role of travel agencies in tourism

Thomas Cook and organization of travel - introduction of railway and air travel - travel agency - tour operator, Need for legislation - travel agencies in India – TAA.

TEXTBOOKS:

1. Vara V V Prasad - *Travel and Tourism Management*, Excel books
2. Ghosh, Biswanath – *Tourism and Travel Management*, Vikas Publishing House

REFERENCES:

1. Douglas Foster – *Travel and Tourism Management*, Palgrave MacMillan
2. B S Badan, Harish Bhatt – *Travel Agencies and Tourism Management*, Common Wealth Publishers

18OEL275**VIDEOGRAPHY****1 0 2 3****Unit 1**

Fundamentals of TV production techniques; Principle of video; TV camera, components of camera lens, basic shots and its composition, sound and lighting and its types, special effects,

Unit 2

Lighting for television - types of lights, Three point and Multi-point lighting; Sound - Types of microphones and characteristics of sound; Sound recording - tape and tapeless;

Unit 3

Stages of TV programmes - pre-production, rehearsal and set-up, actual production and post-production, graphics-CG and VG, animation, ENG-DSNG and OB broadcasting.

Unit 4

Type of editing - Assemble and Insert; Modes of editing - Online, Offline, Linea and Non – linear type software's and graphics early.

Unit 5

Writing for television - script writing - genres of TV programmes - news, documentary, talk shows, panel discussion, quiz, current affairs and special audience programmes - women, children, youth - post production, reviews, sports, musical and dance programmes, phone-in programmes.

BOOKSRECOMMENDED:

1. Allan Wurtzel: *Television Production*
2. Zettl Herbert: *Television Production*
3. Gerald Millerson: *The Technique of Television Production*
4. Hartwig, Robert: *Basic TV Technology, digital and Analog*
5. Chattedji P.C: *Broadcast News*
6. John Watkinson: *An Introduction to Digital Video*

18OEL276**VISTAS OF ENGLISH LITERATURE****3 0 0 3****Unit 1**

- 1 Introduction – What literature is – enjoyment of literature – Holding a mirror to life
– Ages of literature – Different literatures
- 2 WH Auden – The Unknown Citizen

Unit 2

- 3 Rabindranath Tagore – The Child
- 4 RK Narayan – Sweets for Angels
- 5 Toru Dutt – Lakshman

Unit 3

6 Jane Austen – Pride and Prejudice (Chapter 1)

7 Sarojini Naidu – The Queen

8 AG Gardiner – A Fellow Traveller

Unit 4

9 Shakespeare – Macbeth: The Murder Scene

10 Oliver Goldsmith – The Man in Black

Unit 5

11 Robert Browning – My Last Duchess

18OEL277

WEB-DESIGNING TECHNIQUES

1 0 2 3

Unit 1

Introduction to web technologies, How the website works?, Client and Server scripting languages, Difference between a web designer and web developer, Types of websites (Static and Dynamic), Web standards and W3C recommendations.

Unit 2

HTML: Introduction to Internet, Understanding Browsers, Starting with HTML, HTML Page Structure. Defining Web Layout(Head & Body), Head Tags, BODY tag with Background color, Background with image and text color. Text formatting, Text attributes. Importance of heading tags (H1–H6). Marquee text with or without background, Blink the text attributes. Divide section using <HR> line with width, align, size.

Knowing Images format for web: Working with images, Images attributes. Working with Tables: Table attributes, Colspan, Rowspan, Table Border, Align, Valign, Table background image, color to cell, Nesting tables.

Unit 3

Using list: Ordered list, Unordered list. Working with Links: Internal Links, External Links, Anchor Link, Email Link, Linking with text, Links with images. Working with controls. Working with forms: knowing get and post action.

Unit 4

CSS: Introduction to Cascading Style Sheets, Types of Style Sheets , Class Selector, ID Selector, Absolute Relative Positioning, Inline menu, DIV + CSS Layout Design, PSD to CSS Conversion.

Unit 5

JavaScript: Introduction to JavaScript, Understanding variables & functions, Working with alert, confirm and prompt, Understanding loop, arrays, Creating rollover image, Working with operators.

TEXTBOOK/ REFERENCES:

1. Ivan Bayross - *Web Enabled Commercial Application Development Using HTML, JavaScript, DHTML and PHP*, BPB Publicationa
2. Dionysios Synodinos, Michael Bowers, Victor Sumner - *Pro HTML 5 and CSS 3 Design Patterns*, Springer India Publication
3. Jennifer Niederst Robbins - *Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics*, Shroff Publishers
4. David Pitt - *Modern Web Essentials Using JavaScript and HTML5*, InfoQ Publications

Unit I

Introduction to Organic farming: Definition, Basic principles of Organic farming, Chemical intensive farming versus Organic farming, Advantages and disadvantages.

Organic inputs: Advantages of using organic inputs, Organic manures, Biofertilizers, Biopesticides, Organic growth promoters, Biocontrol agents.

Unit II

Basics of Organic Vegetable cultivation: Selection of varieties, seeds or seedlings, Liming of soil, Potting mixture preparation and filling of grow-bags/pots, Precautions during planting and transplanting, Details of Organic inputs required for cultivation and its application methods, 100 day schedule for organic vegetable farmers, Nutrient management and Plant protection measures.

Unit III

Land reclamation using green manuring crops: Soil degradation due to chemical fertilizers, Crops used for green manuring, Benefits, ITK used by farmers in plant growth and protection.

Assessing the quality of organic inputs: Quality of organic manures, Analysis-agencies involved
Quality standards, Governance and Legal Institutions Involved in Organic certification.

Unit IV

Introduction to organic livestock production: Conventional farming versus Organic livestock production, Principles of Organic livestock production.

Safe egg and meat production in homesteads: Selection of suitable poultry breeds, Housing requirements, Feeding management, Care and management, Vaccination and other routine medicines, Safe withholding periods, Common diseases and their management.

Unit V

Safe fish production in Homesteads: Homestead fish farming methods, Location specific models, Stepwise Installation procedure, Species selection, Feeding and management, Culture-Package of Practice, Harvesting, storage and marketing.

Storage and Value addition of excess produce: Refrigerated storage, Drying and dehydration, Pickles, Jam, Squash preparation, Home recipes.

Reference Books:

5. Palaniappan, Annadurai - Organic Farming: Theory and Practice, Scientific Publishers Journals Dept
6. Amitava Rakshit, HB Singh – ABC of Organic Farming, Jain Brothers Publication
7. B. Subrahmanyeswari Mahesh Chander – Organic Livestock Farming, ICAR Publication
8. Handbook of Fishers and Aquaculture – ICAR Publication

Objective: This course is intended to give the students a basic awareness on Women's rights and the legal frame work for the protection of their rights.

Unit 1

Introduction/Overview: The meaning of law, social security legislations, free legal aid to the poor, Indian Evidence Act, various modes of dispute settlement mechanisms- Lok Adalats, Family Courts, Mahila Courts, Crime Against Women Cells, NCW, NHRC, State Commissions.

Women and the Constitution: Fundamental Rights, Constitutional Remedies (Writs), Electoral Law, Voting Rights for Women, participation in Panchayats and governance.

Unit 2

Women & Family Laws: Marriage Law, Separation, Divorce, Maintenance, Adoption, Right to Property and Succession, Guardianship, unmarried mother and the legitimacy of her children.

Unit 3

Criminal Law and Women: Major offences against women, Women in Custody- Arrest, grounds of arrest, kinds of offences (bailable and non-bailable), arrest warrant, powers of police, rights of arrested persons including the right to bail, the immediate procedure to be adopted in case of violation of rights.

Unit 4

Procedure in Action: Procedure for seeking redressal, Complaints to Police Station, Courts, Lok Adalat.

Unit 5

Rights under different laws: Rights at work place Equal Remuneration / Minimum Wages Act / Rights under Factories Act, Maternity Benefit Act, Mines and Plantation Act, Rules of work - in such specific areas, Sexual harassment at work place, Reproductive Health Rights - Foeticide, Infanticide, Preconception and Prenatal Diagnostic Techniques (Prohibition of Sex Selection) Act 1994, The Medical Termination of Pregnancy Act 1971.

15OEL282

FABRICATION OF ADVANCED SOLAR CELL

3 0 0 3

Unit 1

The Solar Resource and types of solar energy converters, Requirements of an ideal photoconverter, Principles of a solar cell design, material and design issues; Revisions of Semiconductor Physics, Physics of semiconductor Junctions; p-n junction under dark and under illumination, effect on junction characteristics, Other device structures. Photovoltaic cell and power generation, Characteristic of the Photovoltaic Cell.

Unit 2

Silicon Solar cell, Mono -crystalline and poly-crystalline cells, Metallurgical Grade Si, Electronic Grade Si, wafer production, Mono-crystalline Si Ingots, Poly-crystalline Si Ingots, Si-wafers, Si-sheets, Solar grade Silicon, Si usage in solar PV, Commercial Si solar cells, process flow of commercial Si cell technology, Process in solar cell technologies, Sawing and surface texturing, diffusion process, thin film layers, Metal contact.

Unit 3

2nd generation solar cell, Thin film solar cell, Advantage of thin film, Thin film deposition techniques, Evaporation, Sputtering, LPCVD and APCVD, Plasma Enhanced, Hot Wire CVD, closed space sublimation, Ion Assisted Deposition, Substrate and Super-state configuration, Thin film module manufacturing, Thin film and Amorphous Si Solar cell, Cadmium Telluride Solar Cell, CIGS solar Cell, CZTS solar cell, New materials for thin film solar cell.

Optics in solar energy conversion: antireflection coatings, concentration of light: Light confinement, photon recycling, multiple exciton generation.

Unit 4

3rd generation Solar cell; **Advances in Photovoltaics**, Photochemical and photosynthetic energy conversion; DSSC,, Solution processed thin film, Organic Solar Cell, Hydride Perovskite solar cell and multi junction tandem solar cells;

Solar PV modules: Series and Parallel connections, Mismatch between cell and module, Design and structure, PV module power output, PV system configuration, standalone system with DC / AC load with and without battery, Hybrid system, Grid connected systems.

Unit 5

Hand on experience on solar cell fabrication, DSSC fabrication, Perovskite solar cell fabrication, Thin-film solar cell fabrication.

TEXTBOOKS/ REFERENCES:

1. *Physics of Solar cells-Jenny Nelson, Imperial College Press (2006)*
2. *Crystalline Silicon Solar Cells, by A. Goetzberger, J. Knobloch, and B. Voss (Wiley, 1998)*
3. *Third Generation Photovoltaics: Advanced Solar Energy Conversion, by M. A. Green (Springer, 2006)*
4. *Semiconductor Materials for Solar Photovoltaic Cells; Paranthaman, M.P. (et al.) (Eds.) (2016)*

15OEL283

BASIC CONCEPTS OF X-RAY DIFFRACTION

3 0 0 3

Unit 1

The geometry of the crystalline structure

Unit 2

X-RAY BASICS

The scattering of X-rays, Diffraction from a crystal

X-ray interaction with matter, X-ray sources, X-ray optics, X-ray detectors

Unit 3

X-RAYDIFFRACTOMETERS

High-ResolutionDiffractometers

Powder Diffractometers

Unit 4

Experimental Collection of Diffraction Data

The factors affecting the X-ray intensities

Unit 5

Determination of Space group and crystal structures

Accuracy and refinement process

REFERENCES:

1. *Emil Zolotoyabko; Basic Concepts of X-Ray Diffraction; John Wiley & Sons, 21-Apr-2014 - Science*
2. *M. M. Woolfson; An Introduction to X-ray Crystallography; Cambridge University Press*
3. *Werner Massa; Crystal Structure Determination; (March 31, 2004) ISBN-10: 3540206442*

15OEL284

INTRODUCTION TO FORTRAN AND GNUPLOT

3 0 0 3

Unit 1 Introduction

Introduction to Computing, Basic Fortran, Data Types, Constants and Variables, Naming Convention. Operation and Intrinsic Functions, Expressions and Assignment Statements, Logical Operators and Logical Expression.

Unit 2 Control Statements and I/O

IF statement and construct, nested if statement, GOTO, Case Construct, Do Loop, nested do loop, do while loop. Fortran I/O and External Files, Formatted Output, Formatted Input, File Processing.

Unit 3 Subroutines and Functions

Defining and referring subroutine and function, arguments, conditions on arguments, Dummy arguments or parameters and actual arguments, Scope of variables.

Unit 4 Arrays

Arrays and elements, Array properties, Array storage, Whole array assignment, Array section assignment, Array Operations, Array Processing, Mask Array, Allocatable Arrays, Functions Return Arrays.

Unit 5 Gnuplot

Introduction to gnuplot, function plot, data plot, analyse a function, various options in gnuplot, Scientific Graphic Library, Linking Fortran Programs to gnuplot Graphic Library.

TEXTBOOK:

Stephen J. Chapman, "Fortran 95/2003 for Scientists and Engineers", McGraw-Hill (3rd edition).

REFERENCES:

1. Michael Metcalf and John Reid, "Fortran 90/95 Explained", Oxford University Press (2007).
2. Jeanne C. Adams, Walter S. Brainerd, Richard A. Hendrickson, Richard E. Maine, Jeanne T. Martin and Brian T. Smith, "The Fortran 2003 Handbook", Springer (2009).
3. Michael Metcalf, John Reid and Malcolm Cohen, "Modern Fortran Explained", Oxford University Press (2011).
4. William H. Press, Saul A. Teukolsky, William T. Vetterling and Brian P. Flannery, "Numerical Recipes in Fortran Vol. 1 & 2", Cambridge University Press (1996).
5. Documentation given with gnuplot software (2015).
6. Lee Phillips, "gnuplot Cookbook", Packt Publishing (2012).

15OEL285

INTRODUCTION TO POROUS MATERIALS

3 0 0 3

Unit 1 General introduction to porous materials

Introduction to porous materials, Classification based on the pore size: microporous materials, mesoporous materials and nanoporous materials; Classification based on materials: Zeolites, Transition metal oxides, Metal organic frameworks and types-new era of porous materials.

Unit 2 Metal organic frameworks, Mesoporous materials and Zeolites

Introduction, significance of metal organic frameworks, covalent organic frameworks and their evolving applications at lab scale and industrial scale. Zeolites: Definitions, Structure, Chemical composition and Types, Mesoporous Materials: SBA-15, MCM-41

Unit 3 Characterization of porous materials

Introduction to adsorption, classification-physical and chemical adsorption, surface area, factors affecting the surface area, gas adsorption for surface area analysis, adsorption isotherms and their classification, Langmuir and BET adsorption isotherms, pore analysis: calculation of pore size and pore volume, mercury porosimetry.

Unit 4 Synthesis of porous materials

Sol-Gel Processing for synthesis of porous materials: factors affecting the sol gel process, xerogels and aerogels, Template based methods for the synthesis of porous materials: Brief introduction to the synthesis of porous materials like MCM 41 and SBA 15 and hydrothermal methods for the synthesis of MOFs and zeolites

Unit 5 Applications

Applications of mesoporous materials in catalysis, gas adsorption and drug delivery; importance of zeolites in petroleum industry, application of MOFs

REFERENCE BOOKS:

1. Lowell, S., Shields, J. E., Thomas, M. A., Thommes, M., *Characterization of Porous Solids and Powders: Surface area, Pore size and Density*; Springer Publications, 2004.
2. Liu, P.S., Chen, G.F., *Porous Materials: Processing and Applications, First Edition, Elsevier Publications, 2014.*
3. Ishizaki, K., Komarneni, S., Nanko, M., *Porous Materials Processing Technology and Applications, First Edition, Springer Publications, 1998.*
4. Kicelbick, G., (editor) *Hybrid Materials: Synthesis, Characterization and Applications; First Edition, Wiley-VCH, 2007*
5. Bruce, D.W., O'Hare, D., Walton, R.I., (editors) *Porous Materials (Inorganic materials series) First Edition, John Wiley and Sons, 2011*

Unit 1 Introduction

Origin of forensic science, need for forensic science, trace and contact evidence, marks and impression, examination of documents, blood stain analysis, microscope in analysis, explosives, chemical analysis of explosives, forensic laboratories and courses in India.

Unit 2 Narcotics

Narcotics, classification of drugs, specific drugs- Psychotropic drugs, chemical screening of drugs, chemical extraction and sample preparation, chemical identification of drugs using analytical methods.

Unit 3 Fingerprinting and Firearm Analysis

History of fingerprinting, principles of fingerprinting, constituents of latent finger marks, fingerprint detection, chemical methods of detection, firearm examination, chemical analysis of firearm, analysis of gunshot residue.

Unit 4 Toxicology

Introduction to Toxicology, alcohol and human body, testing of blood alcohol concentration, Toxins & Biological Poisons, Measuring Toxicity as LD50, sample and analysis, inorganic poisons, nerve agents, radioactive toxins, Pharmacokinetics and Toxicokinetics, tests for toxins, reported case studies.

Unit 5 Postmortem Toxicology

Introduction, tissue and fluid specimens, specimen collection and storage, extraction procedure, analytical techniques, interpretation, case studies.

REFERENCE BOOKS:

1. Lawrence Kobilinsky, *Forensic Chemistry Handbook*, John Wiley & Sons, New Jersey, 2012
2. David E. Newton, *Forensic Chemistry, Facts On File, Inc, New York, 2007*
3. Jay A. Siegel, *Forensic Chemistry fundamentals and applications*, Wiley Blackwell.
4. Suzanne Bell, *Drugs, Poisons, and Chemistry, Facts On File, Inc. New York, 2009.*

Unit 1 Sun

Solar parameters: Mass, Radius, Distance and Luminosity, Spectral energy distribution, Construction of a Model, Conservation law, Equation of State, Nuclear Energy Source and Energy transport, Chemical composition of the Sun.

Unit 2 Tools for Solar Observation

High-Resolution Telescope, Spectrographs and Spectrometers, Filters and Monochromators, Polarimetry, Special purpose Instruments.

Unit 3 Sun's Oscillations and Rotations:

Linear Adiabatic Oscillations of Non-Rotating Sun, Helioseismology, Excitation and Damping, The Angular Velocity of Sun, Models of Rotating Convection Zone.

Unit 4 Magnetic properties of Sun:

Fields and Conducting Matter, Flux tubes, Sunspots and Solar Cycle.

Unit 5 Chromosphere, Corona and Solar Wind

Empirical Facts, Consequence of High Temperature, Outer Atmosphere, Energy Balance, Explosive Events.

TEXTBOOK:

The Sun: An Introduction second edition by Michael Stix

Unit 1 Biowaste

Agrowaste - Biopesticide from solid waste, biomass to bioethanol, biowaste as carbon source, other applications of agrowaste.

Animal waste – bio-digester - generation of renewable energy, biogas from animal waste-daily consumption, Equipment sizing and design.

Food waste-management, anaerobic digestion of food waste – kitchen waste composting.

Unit 2 Plastic & Rubber

Recycling plastic fibre and packaging waste – methods of recycling – Erema Process, Erema vented process for recycling plastics.

Recycling of rubber – Devulcanisation - thermal, mechanical and microbial process - characterization of devulcanized rubber - products from rubber waste.

Pyrolysis of plastics and rubber - Catalytic process of treatment- plastic waste to fuel, oil and wax.

Unit 3 Utilized Products recycling

Paper recycling - types of paper, Mechanical and chemical re-pulping,

Glass waste - bottle recycling, cullet recycling, process in glass recycling

Metals - Iron & steel, iron & steel remanufacturing, Aluminium remanufacturing

Unit 4 Electronic waste

Electronic wastes – printed circuit board, monitors and batteries, Processing - hydrometallurgical and pyrometallurgical route. Recovery of heavy metals from electronic waste.

Unit 5 Biomedical & Hazardous Waste

Biomedical waste and its category, Treatment - autoclaving, shredding, deep burial & chemical treatment of biomedical waste

Radioactive waste – Nuclear waste type and source, long lived and short lived radionuclide, treatment of radioactive waste - immobilization-cement based material for disposal of waste.

REFERENCES:

1. *Thomas H. Christensen, Solid Waste Technology & Management, Vol.1, Blackwell Publishing Ltd, 2011.*
2. *Elena Cristina Rada, Biological Treatment Of Solid Waste, CRC press, 2016.*
3. *Martin Forrest, Recycling and Re-use of Waste Rubber, Smithers Rapra Technology Ltd, 2014.*
4. *Jonathan W.-C. Wong, Rajeshwar D. Tyagi, Ashok Pandey, Current Developments in Biotechnology and Bioengineering, Elsevier, 2017.*
5. *John scheirs and Walter kaminsky, Feedstock Recycling and Pyrolysis of Waste Plastics, John Wiley & Sons Ltd, 2006.*
6. *Ramesha Chandrappa, Diganta Bhusan Das, Solid Waste Management: Principles and Practice, Springer, 2012.*
7. *Shinya Nagasaki, Shinichi Nakayama, Radioactive Waste Engineering and Management, springer, 2011.*
8. *Ronald E. Hester, Roy M. Harrison, Electronic Waste Management, RSC publishing, 2009.*
9. *Hugo Marcelo Veit, Andréa Moura, Electronic Waste: Recycling Techniques, springer, 2015.*
10. *Lifeng Zhang, Gregory K. Krumdick, Recycling of Electronic Waste II: Proceedings of the Second Symposium, John Wiley & Sons, Inc, 2011.*

16OEL289

ACTING AND DRAMATIC PRESENTATION

2023

Objective: To cultivate communication skills of students through teaching of theory and skills of theatre and Dramatics.

Unit 1

Rasa theory in Bharata's Natyasastra. Classical theatre in India.

Practical: Warming-up exercises - Relaxation Exercises.

Unit 2

Greek drama and dramatic theories. Use of masks.

Practical: Voice modulation - Breath control.

Unit 3

Shakespearean theatre.

Practical: Practice in Monologues - Training in articulation of emotions through dramatic speech.

Unit 4

20th century theatre. Stanislavskian method, and Brechtian epic theatre.

Practical: Developing body and facial expressions in drama - Articulating narratives through body movements - Building up a repertoire of gestures.

Unit 5

Theatre semiotics and dramaturgy.

Practical: Building up units of action to create a Theatrical Ensemble - Plotting movements of different characters within a scene.

TEXTBOOK:

The Semiotics of Theatre and Drama by Keir Elam

REFERENCES:

1. *Theatre as Sign System: A Semiotics of Text and Performance* By Elaine Aston, George Savona
2. *Theatre Semiotics: Text and Staging in Modern Theatre* By Fernando de Toro
3. *Acting For Real: Drama Therapy Process, Technique, And Performance* By Renee Emunah
4. *Natyasastra by sage Bharata.*

16OEL290

COMPUTERISED ACCOUNTING

2023

Objectives: The course will provide an understanding of the Accounting practices including the final accounts, inventory keeping practices, financial reporting and printing. Tally is proposed to be used as the mail tool.

Unit 1

Business, meaning, Book Keeping, Accounting – meaning, functions and importance and objectives – users of accounting – branches of accounting – accounting terminologies – Accounting Concepts and Conventions – Accounting Standards in India, Accounting Systems – Double Entry System and Single Entry System – Account – types of accounts – Rules for Debit and Credit – Accounting Equation – Journal – Journal entries – journalizing – compound entries – Banking transactions.

Unit 2

Sub Divisions of Journal or Subsidiary Books: Advantages of Subsidiary Books and limitations of journal – Purchase Day Book – Purchase Returns Book – Sales Book – Sales Returns Book – Cash Book – Petty Cash Book – Imprest System.

Ledger: Meaning and importance – preparation of ledger accounts or posting – balancing an account – account balance – Trial Balance – objectives and functions of trial balance.

Unit 3

Final Accounts: Trading and Profit and Loss Accounts, Balance Sheet – simple adjustments like outstanding expenses, prepaid expenses, bad debts, accrued income, unearned income.

Depreciation: Meaning and definition – causes of depreciation – need for depreciation – Fixed Installment Method and Diminishing Balance Method.

Unit 4

Getting started with Tally – Company information - Tally accounting - Chart of accounts – Ledgers and Groups - financial and trading vouchers – Voucher creation and entry.

Unit 5

Tally Inventory – inventory vouchers - Display and reporting – reporting and printing

Reference Books:

1. Goyal and Ruchi Goyal – Financial Accounting, Prentice Hall India
2. Jain and Narang – Advanced Accounts Volume 1, Kalyani Publishers
3. Tally for everyone – Roopa, Add to Cart Publishing
4. Nadhani – Tally ERP 9 Training Guide – BPB Publication

16OEL291

KERALA MURAL ART AND PAINTING

2023

Objective: Mural painting is an offshoot of the devotional tradition of Kerala. In the contemporary scenario Mural painting is not restricted to permanent structures and are being done even on canvas. Kerala Mural painting are the frescos depicting mythology and legends. Learning Mural painting through the theory and practical workshop is the objective of this course.

Unit 1 Introduction, history and evaluation, preparation method of pigments.

Unit 2 Technical details, methods and techniques of wall preparation, preparation of the colors and brushes.

Unit 3 Basics of mural drawing and traditional style, drawing anatomy and study of mural style.

Unit 4 Basics of mural painting.

Unit 5 Mural painting in acrylic colours, drawing and painting.

ReferenceBooks:

1. Chithrasoothram - Translated by K.K. Warriar.
2. Chithralakshanam - K.K Warriar.

16OEL292

PAINTING

2023

Objective: Painting and artistry has become an effective media to propagate the messages to the community. The methodologies of imparting artistic skills have become highly scientific and technical. Our objective is to cultivate the

artistic skills of matured adults through teaching of theory and skills of painting using different media, techniques and tools.

Unit 1

Introduction to Materials and Medium: Water colours, Oil colours, Acrylic colours, Gouache, Oil Pastels and Dry Pastels, Additives and Solvents, Brushes, Paper-types and texture, Canvas types.

Basic sketching with charcoal, pencil and pen.

Unit 2

Watercolour and Gouache Painting - Styles and techniques - wet on wet, wet on dry, ink and pen techniques, painting with water colour pencils, Wash techniques, Layer on Layer technique.

Unit 3

Oil Painting - stretching canvas, surface preparation with gesso; Styles and technique - Wet on wet, wet on dry, impasto, finishing touches.

Unit 4

Acrylic Painting - Acrylic on Paper; Acrylic on canvas, using acrylic retarders and medium, Wet on wet, wet on dry, impasto, finishing touches.

Unit 5

Oil and Dry Pastels, Pastels on Coloured Paper, Pre colouring, hatching and cross hatching, Blending techniques, Fixing techniques.

BOOKS RECOMMENDED:

Reader's Digest - Complete Guide to Drawing and Painting ISBN-10: 0895779560 ISBN-13: 978-0895779564

15OEL278

DOCUMENTING SOCIAL ISSUES

3 0 0 3

Objective: *Visual documentation of key social issues: The student will write the script and shoot a documentary film of 5-10 minutes, highlighting a key issue.*

Unit 1

Screening documentary films on various social issues – gender discrimination, women empowerment, dowry, female infanticide and skewed sex ratios, maternal and child care, role of technology in transforming societies, changing caste and class barriers etc. etc.,

Unit 2

Selecting the topic: Migration of labour from other regions to the southern states due to labour shortage and their integration in the society as local youth turn away from traditional occupations of their families and go in search of white-collar jobs, alcohol consumption and rising crime, drug addiction among students etc. etc..

Unit 3

Data collection on the ground, interviews and shooting schedule.

Unit 4

Pre-production, production and post-production processes with approval from the guide.

Unit 5

Preview of the film & analysis.

REFERENCES:

1. Aufderheide, Patricia (1997) *Public Intimacy: The Development of First-Person Documentary*, New York: Afterimage-Rochester. 25, 16-18.
2. Nichols, B. (2010). *Introduction to documentary*. Indiana University Press.
3. Rosenthal, Alan (1990) *Writing, Directing, and Producing Documentary Films and Videos*. Carbondale: Southern Illinois University Press.
4. Walker, J., & Waldman, D. (1999). *Feminism and Documentary*. University of Minnesota Press

FILMS:

5. Flaherty, Robert J (1922) *Nanook of the North*
6. Kauffman, R., and Briski, Z. (2005). *Born into brothels*. ThinkFilm.
7. Srinivasan, R R (2009) *En Peyar Palaru*
8. Srinivasan; R R (2000) *Nadhiyin Maranam*

15OEL279

REPORTING RURAL ISSUES

3 0 0 3

Objectives: News coverage of rural areas: Issues ranging from health, education and civic amenities to government welfare schemes and the state of agriculture with farming losing its sheen among rural youth and resultant urban migration. New trends like mechanization of farming due to shortage of labour, the growth of self-help groups and mushrooming cottage industries, changes in the social and political life of the rural communities, inter-caste and class dynamics and how technological penetration is changing rural life and aspirations, success stories, best practices in farming, growing consumerism and its impact on environment, rural businesses and innovations.

Unit 1

Reporting rural India - problems and prospects: Poor connectivity and infrastructure, electrification and drinking water supply, state of primary healthcare centres, growing literacy and education breaking down caste and class barriers

Unit 2

Role of women in rural areas, gender discrimination, female infanticide and patriarchy, women role models who have asserted themselves in social, political and economic life of the society overcoming all odds and helped breakdown social barriers.

Unit 3

Government development programmes for rural areas. Are they reaching the intended beneficiaries? Success and failure stories, women empowerment and youth upliftment programs.

Unit 4

Agriculture – shrinking areas under cultivation, drying irrigation sources, high cost of inputs, labour shortage and rising wages. Need to ensure fair prices for the farmers' produce by setting up agro-industries and cold storage chains in rural areas and introducing appropriate technology.

Unit 5

Role of media in highlighting rural issues so that authorities in the cities take note and take remedial measures.

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1. Bang, R., Khorgade, S., and Chinai, R (2010) *Putting Women First: Women and Health in a Rural Community*. New Delhi: Stree and Samya.
2. Fukuoka, M. (2009). *The One-Straw Revolution: An Introduction to Natural Farming*. New York: Review of Books.
3. Patra, S.C., and Vachhani, A. (2012). *Socio Economic Profile of Rural India: Series II, Volume II: North East India (Assam, Manipur, Tripura and Nagaland)*. New Delhi: Concept Publishing.
4. Patil, D.A. (2010). *Communication for Rural Development in India: From Green Revolution to 'E' Revolution*. New Delhi: Serials Publications
5. Pokharapurkar, R. (1993). *Rural Development Through Community Television (CISCED)*. New Delhi: Concept Publishing

6. Islam, N. (2006). *Reducing Rural Poverty in Asia: Challenges and Opportunities for Microenterprises and Public Employment Schemes*. New York, London, Oxford: Food Products Press

VIDEOS:

The Noer

Faces of Prestea

Hotville Alabama

WEB REFERENCES:

http://www.un.org/en/ecosoc/docs/pdfs/an_integrated_approach_to_rural_development.pdf

http://www.epw.in/frontpage?0=ip_login_no_cache%3D4806b5974dc3439b9a9343b7b5674286

<http://www.worldbank.org/en/news/feature/2012/05/17/india-agriculture-issues-priorities>

<https://www.youtube.com/watch?v=eCB1cWAwOds>

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RITUAL PERFORMANCES OF KERALA

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Objectives: To provide an overall view of Ritual Performances of Kerala in general and 'Padayani', 'Mudiyettu' and 'Theyyam' performances in particular. Land, people, social and political system and worldview are the deciding factors of ritual performances. The course aims to give a clear understanding of these performances and their unique features. The classes will be supported with PowerPoint and video clippings of the respective ritual performances.

Unit 1

Introduction: Kerala – Land and People – social structure – Agrarian society – Kerala society today. Meta Physical World: mythology and religion and its relation to the festivals and rituals of Kerala – special reference to Kali.

Padayani: Legend behind the dance ritual – description of performances – musical instruments and music of Padayani – rhythm of Padayani songs. Main Kolams in Padayani: – its artistic features of making marks – drawing on arecanut sheaths. Dance in Padayani: different Kolams and its dance features. Padayani as a Performance, Devotional Aspects, Eminent artists of this dance form.

Unit 2

Mudiyettu: Geographical area of Mudiyettu – land and people – main centers of performances – a complete folk drama – myth behind Mudiyettu – Kali – Darika fight – scenes in Mudiyettu and its contents. Characters in Mudiyettu: Naradan, Darikan, Danavendran, Kali, Kooli, Koimbadaran. Abhinaya in Mudiyettu: Aangikam, Vachikam, Aaharyam. Rituals in Mudiyettu: Mudiyettu itself is a ritual – ritual inside Mudiyettu – drawing of Kolam, Kolam Pooja, uzhiyal, etc. Devotional aspects of Mudiyettu.

Unit 3

Teyyam: Kolathunad – land and people – folk religion of Kolathunad and its features. Deities in Teyyam: Hindu Gods and Goddesses – heroine cult – deities defied after death – family deity – caste deity – local deity. Teyyam as a Ritual Performance – principles of bringing down deities – appease – bringing down – sending back. Ritual Acts: kodiya vangal, kodiya tottam, tottam/ vellattam, teyyam, mudiyazhikkal. Features of Tottam Songs – varavili, tottam songs – mumbsthanam. Ornaments and Decorations of Teyyam – thalachamayam kaikkaru, arachamayam kaikkaru. Mukhattezhattu and Mekkezhattu. Devotional Aspects of Teyyam.

Comparative aspects of Padayani, Mudiyettu and Teyyam – theme, decorative elements and form, dance, enactment, faith and other aspects.

REFERENCE BOOKS:

1. Kadammanitta Vasudevan Pillai, 'Palayile Kolangal', Kerala Bhasha Institute.
2. Kadammanitta Vasudevan Pillai, 'Padayani'.
3. Chummar Chhondal, 'Mudiyettu'.
4. M V Vishnu Namboodiri, 'Teyyam', D C Books, Kottayam.
5. Raghavan Payyanad, 'Methodology for Folkloristics', English Dept., Farook College, Farook, 2013.
6. C Achutha Menon, 'Keralathile Kali Seva', Madras University, 1943.
7. M D Raghavan, 'Folk plays and Dances of Kerala'.
8. Sreedhara Menon, 'Cultural History of Kerala'.

Unit 1

Introduction: Farming and Organic Farming, concept and development of Organic Farming, principles and benefits of organic farming, need and importance, types of organic farming, Agencies and institutions related to organic agriculture, Conventional farming vs organic farming, Requirements for organic farming and farm components for an organic farm.

Unit 2

Organic farming systems, seed and seed treatment, potting mixture, Plant nutrients, Functions of Nutrients in plant growth and Development, Organic, liquid and green manure, Composting - principles, stages, types and factors, preparation of compost, and vermi compost, Bio fertilizers - methods and applications, advantages and disadvantages.

Unit 3

Plant protection, botanical pesticides and bio pesticides, bio control agents, Standards for organic inputs - fertilizers, Bio fertilizers, Pheromones, quality control and organic certification, certification bodies in India.

Unit 4

Aquaculture, meaning, principles of organic aquaculture, aquaculture methods, types of farming, water quality, procedure in aquaculture.

Unit 5

Organic livestock production, meaning and need, criteria to be followed in animal husbandry, characteristics of organic livestock production systems, breeds and breeding, housing of animals, disease prevention.

REFERENCE BOOKS:

9. Palaniappan, Annadurai - *Organic Farming: Theory and Practice*, Scientific Publishers Journals Dept.
10. Amitava Rakshit, HB Singh – *ABC of Organic Farming*, Jain Brothers Publication
11. B. Subrahmanyeswari Mahesh Chander – *Organic Livestock Farming*, ICAR Publication
12. *Handbook of Fisheries and Aquaculture – ICAR Publication*