## 1.2.2. ADD-ON COURSES / CURRICULUM CONTENT

**ADD-ON COURSES OFFERED BY PG & RESEARCH DEPARTMENT OF TAMIL**

**Programme Type:** Add-on Course - I

**Title:** Reading of Imprints in Tamil (Suvadiyal)

**Programme Code:** ADTA01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the archaeological traits available in Tamil Nadu | Knowledge (Level 1) |
| Analyzing the importance of the imprints, discovered by the archaeologists | Analysis (Level 4) |
| Bringing out the importance of archaeology in Tamil to know the history of Tamil Nadu | Evaluation (level 5) |

**COURSE CONTENT**

**Unit – I:**

**தமிழ்ச் சுவடிகள்**- சுவடி நூலகங்கள் - சுவடி வரலாறு-சுவடிகள் அலமபடுத்து

**Unit – II:**

சுவடி சசகரிதல்-பதிபபிதல்-திருதம் சசயதல்

**Unit – III:**

சுவடி வலகக்ள்-பதிப்பு வரைாறு-ஐக்கிய சுவடிகள்-பல்வலகச் சுவடிகள்

**Unit – IV:**

சுவடி சசகரித்தில் உ.சவ.சா-மற்றும் ஆறுமுக நாவைர்

**Unit – V:**

பதிபபிக்கும் மலறகளை-பாதுகாக்கும் சநறிகளை.சுவடி காபபகங்கள்

**Prescribed Text Book:**

1.த.சகா.பரமசிவம்,சுவடிப்பதிப்பு சநறிமுலறகள்.தமிழ்ப் பல்கலைக்கழக சவளியீடு, தஞ்சாவூர்.

2.இராமன்,சுவடியில் பயிற்சி லகசயடு,சசன்லை உலகத் தமிழாராயச்சி நிறுவை சவளியீடு,(1982)

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - II

**Title:** Art of Adornment by Ancient Tamil (Oppanai Kalaithiran)

**Programme Code:** ADTA02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the evading arts of ancient Tamil Nadu | Knowledge (Level 1) |
| Comprehending the importance of art of adornment in the life of the ancients | Comprehension (Level 2) |
| Evaluating the quality of life lead by the people of Tamil in the olden times | Evaluation (Level 5) |

## COURSE CONTENT

**Unit – I:**

கலை வலையலை - கலைகளின் வலககள் - சிைந்த கலையிலை ஆய்தல்

**Unit – II:**

ஒப்பனையில் ஆலைகள் - கூந்தல் ஒப்பலை

**Unit – III:**

ஒப்பனையில் அணிகைன்கள் - முக மற்றும் நக ஒப்பனைகள்

**Unit – IV:**

ஒப்பனையில் நறுமணப் பபொருள்களும் வண்ணப் பபொருள்களும் - நறுமணப் பொருளின் பபயர்கள்

**Unit – V:**

ஒப்பனைக்கு உதவியவர்களும் பயன்பட்ட கருவிகளும் - இலக்கிய மாந்தர்களின் ஒப்பனைக் காட்சிகள்

**மமற்பார்லவ நூல்கள்:**

பவ.வைதைொஜன் - "தமிழரின் ஒப்பலை கலைத்திைன்"

முலைவர் பொக்கியமமரி - "கொைம்மதொறும் தமிழர் கனலகள்"

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Five Minor Epics (Ainchiru Kappiam)

**Programme Code:** ADTA03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Acquiring knowledge of the five short puranas, inter-linked with each other | Knowledge (Level 1) |
| Comprehending the concepts conveyed in the puranas | Comprehension (Level 2) |
| Reliving the days during the Purana days by enacting out dramas | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit – I:**

காப்பியம் வரையரை - காப்பிய இலக்கணம் - காப்பியம் த ாற்ை ம் - வளர்ச்சி

**Unit – II:**

நீலதகசியின் பத்து சருக்கங்கள் முழுவதும்

**Unit – III:**

சூளாமணி பன்னிரண்டு சருக்கங்கள் முழுவதும்

**Unit – IV:**

ஐஞ்சிறு - ஐம்பபருங்காப்பியங்கள் ஒற்றுமம வவற்றுமமகள் - காப்பிய கூறுகள்.

**Unit – V:**

ஐஞ்சிறு காப்பியங்களின் கமை மாந்ை ர்களின் பண்பு நலன்களும் - பாத்ை ிர பமைப்புகளும்.

**பார்வை நூல்கள்**

ை மிழ் இலக்கிய சரிை த்ை ில் காவிய காலம் - மவயாபுரி பிள்மள

சாராை ா பைிபகம் - மூலமும் உமரயும்

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**ADD-ON PROGRAMMES OFFERED BY PG & RESEARCH DEPARTMENT OF ENGLISH**

**Programme Type:** Add-on Course - I

**Title:** Dynamic Communication

**Programme Code:** ADEN01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the use of language in various occasions in day to day life | Knowledge (Level 1) |
| Analysing the skills needed for better communication | Evaluation (Level 5) |
| Applying the acquired skills to official talks and finding out the effect on the receiver | Application (Level 3) |
| Becoming better professionals by handling all sorts of official talks successfully | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit – I: Telephonic Conversation**

Telephonic conversation

**Unit – II: Telecommunication**

Video-conferencing

Presentation in webinars

**Unit – III: Interviews**

Protocol for interviewing, Eminent Personality Interview

Employment interview, Assessment interview for data collection

**Unit – IV: Types of Speeches**

Dictations, Anchoring

Conference briefing

**Unit – V: Practical Sessions**

Conducting Mock Interviews

Participating in Video Conferencing

**Book for Reference:**

Davis, Ken, *Secrets of Dynamic Communication,* Cloudtail India.

**Assessment Pattern**

Oral Practical Examination is to be conducted. Five questions are to be answered.

5 x 20 = 100 marks

**Programme Type:** Add-on Course - II

**Title:** Creation of Newspaper

**Programme Code:** ADEN02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|

| | |
|---|---|
| Gaining knowledge of the basics of journalism. | Knowledge (Level 1) |
| Comprehending the various components of a newspaper | Comprehension (Level 2) |
| Synthesizing abilities to write a variety of mass media products, including news stories and press releases. | Synthesis (Level 6) |
| Creating and designing emerging media products, including social media. | Synthesis (Level 6) |
| Mastering the skill and becoming journalists and media writers in future. | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit -I:**

Journalism as an Art

**Unit -II:**

The Components of a Newspaper

**Unit -III:**

Discussing the Features of a Newspaper

**Unit -IV:**

Display of a Newspaper Prepared by the Learner

**Unit – V:**

Describing the Newspaper Prepared by the Learner

**Book for Reference:**


- Adhikari Gautam, Press Council, Press Institute of India, New Delhi.
- Arun Bhattacharjee, The Indian Press, Profession to Industry, Vikas Publication, New Delhi, 1972.


**Assessment Pattern:**

Objective type questions / 25X2 = 50 marks

Making of a model newspaper (Practical) = 50 marks

Total marks = 100

**Programme Type:** Add-on Course - III

**Title:** Business Communication

**Programme Code:** ADEN03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|

| | |
|---|---|
| Acquire knowledge about objectives, elements, format and qualities of good business letter | Knowledge (Level 1) |
| Drafting letters related to offers and quotations trade enquiry, trade order, status enquiry, complaints and adjustments | Application (Level 3) |
| Prepare application and resume for various jobs | Creation (Level 6) |
| Draft collection letters, circular letters and banking and insurance correspondence | Creation (Level 6) |

**COURSE CONTENT**

**Unit-I:**

Communication–Meaning–Definition–Objectives – Characteristics – Elements, Types, Barriers. Business letters: Importance – Appearance – Qualities of a business letter – Format of business letters - Essentials of a good business letter.

**Unit-II:**

Trade Enquiries: Offers and Quotations – Commercial Terms- Trade Order – Confirmation of Orders.

**Unit-III:**

Letters of Credit: Status Enquiry - Complaints and Adjustments – Collection letters.

Unit-IV: Application for a Situation: circular letters – E-Mail Communications: Meaning – Features Merits and Demerits- Etiquettes

**Unit-V:**

Banking Correspondence: Opening of Account-Stop payment of cheque-Dishounour of cheque–Request for agency service-Request for overdraft/loan faciliites.Insurance Correspondence: Intimation of policy details-request for loan against policy-surrendering of policy-claim settlement

**Prescribed Text:**

- Business Communication : S.Kathirasan and Dr.V.Radha Presenna Publication and Distributors, Chennai. Books for Reference 1. Rajendra Pal & Korlahalli,J.S., Essentials of Business Communication, New Delhi, Sultan Chand& Sons.,
- Kapoor, N.D., A Guide to Business Correspondence, New Delhi,Sultan Chand Pub.,
- Pillai, R.S.N.,& Bagavathi, Modern Commercial Correspondence, New Delhi, Sultan Chand & Co Ltd.,

**Assessment Pattern:**

Written Examination is to be conducted. Five questions are to be answered. 5 x 20 = 100 marks.

## ADD-ON PROGRAMMES OFFERED BY PG & RESEARCH DEPARTMENT OF MATHS

**Programme Type:** Add-on Course - I

**Title:** Theory of Numbers

**Programme Code:** ADMA01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Acquiring the basic knowledge of divisibility, congruence, greatest common divisor, prime and prime-factorization. | Knowledge (Level 1) |
| Exploring various techniques to congruencies of various types. | Analysis (Level 4) |
| Applying the concept of Euler's function, Fermat's theorem and Wilson's theorem | Application (Level 3) |
| Evaluating the product of r consecutive integers is divisible by r! | Evaluation (Level 5) |

**COURSE CONTENT**

**Unit I:**

Theory of numbers – Prime and Composite numbers – The sieve of Eratosthenes – Divisors of a given number – Simple problems .

**Unit II:**

Euler's function – Integral part of a real number –The highest power of a prime p contained in n! - Simple problems --Product of r consecutive integers is divisible by r!

**Unit III:**

Congruence - Criteria of divisibility of number - Simple problems - Numbers in arithmetic progression .

**Unit IV:**

Fermat's theorem – Simple problems – Generalization of Fermat's theorem.

**Unit V:**

Wilson's theorem—Lagrange's theorem—Simple problems.

**Prescribed Text Book:**

- T.K.Manicavachagompillay, T.Natarajan, K.S.Ganapathi, Algebra : Vol II, S.Viswanathan printers & publishers, 2011.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - II

**Title:** Quantitative Aptitude

**Programme Code:** ADMA02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Remembering the meaning of BODMAS rule | Knowledge (Level 1) |
| Understanding the concept of percentage on simple problems | Comprehension (Level 2) |
| Applying the concept of time and work on real life problems | Application (Level 3) |
| Analyzing the problem on trains with solved examples | Analysis (Level 4) |

## COURSE CONTENT

**Unit I:**

Simplification: Introduction - BODMAS rule - Modulus of a real number - Simple problems.

**Unit II:**

Percentage: Introduction - Important facts and family - Concept of percentage - Simple problems.

**Unit III:**

Problems on ages: Problems on ages - Simple problems

**Unit IV:**

Time and work: Time and work - Simple problems.

**Unit V:**

Problems on trains: Problems on trains with solved examples.

**Prescribed Text Book:**

- R. S. Aggarwal, Quantitative Aptitude : S. Chand & Company Ltd, Ram Nagar, New Delhi, 2013.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Set Theory and Logic

**Programme Code:** ADMA03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the basic set operations | Knowledge (Level 1) |
| Comprehending the logical sequences and paradoxes | Comprehension (Level 2) |
| Analyzing and applying the logically true and logically Equivalent statement | Application & Analysis (Level 3 & 4) |

**COURSE CONTENT**

**Unit I:**

Basic set operations – Union – Intersection – Difference – Complement.

**Unit II:**

Reflexive – Symmetric – Transitive – Equivalence relation.

**Unit III:**

Logic – statements – conjunction – disjunction – negation – conditional – bi-conditional.

**Unit IV:**

Propositions and truth table – Tautology and Contradiction.

**Unit V:**

Logical Equivalence, Algebra of Propositions, logically true and logically Equivalent statement.

**Prescribed Text Book:**

- B.S. Vatssa, Discrete Mathematics.

**Reference Book:**

- Shyam, Discrete Mathematics 2000 Solved Problems.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

## ADD-ON PROGRAMMES OFFERED BY PG & RESEARCH DEPARTMENT OF CHEMISTRY

**Programme Type:** Add-on Course - I

**Title:** Laboratory Training

**Programme Code:** ADCH01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the equipments in the chemical laboratory | Knowledge (Level 1) |
| Learning and applying the basic techniques used in the laboratory in the processes like preparation, purification and identification. | Application (Level 3) |
| Practising the gained knowledge of the concept of volumetric analysis | Synthesis (Level 6) |
| Designing the employ of basic techniques used in chemistry laboratory. | Synthesis (Level 6) |
| Being cautious of and avoiding the hazardous happenings in the laboratory | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit – I:**

Laboratory rules and regulations –First Aid- Poisoning- carcinogens- electrical shock

**Unit – II:**

Handling Accidents in chemistry lab – proper waste disposal – laboratory glasswaresandinstruments – uses

**Unit – III:**

Chemical Hygiene plan-purpose-scope-standard operating procedure for laboratory chemicals.

**Unit – IV:**

Suggested chemicals storage pattern –chemical handling – Laboratory Equipments – Glassware personal protective equipments-labelling

**Unit – V:**

Basic concepts of volumetric analysis- terms of volumetric analysis –preparation of standard solutions calculation .

**Reference Books:**

- R.Kulandaivelu, Basic Principals of Practical Chemistry
- Bhuvaneshwari, Practical Chemistry, Volume-II

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - II

**Title:** Mechanism and Reactions of Chemical Substances

**Programme Code:** ADCH02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the functional groups of organic compounds | Knowledge (Level 1) |
| Analyzing the reactions and mechanisms of organic compounds. | Analysis (Level 4) |
| Comprehending the concept of urides | Comprehension (Level 2) |
| Solving the problem of vitamins deficiency | Synthesis (Level 6) |

## COURSE CONTENT

**Unit – I:**

Nomenclature of organic compounds - Types – Functional groups – IUPAC - Nomenclature of alkanes – Alkene - Alkynes

**Unit – II:**

Urides and Purines - Preparation – Properties -Structure of Uric acids and Caffeine

**Unit – III:**

Vitamins – Classification- Steroids - Anabolic Steroids - Antibiotics

**Unit – IV:**

Proteins – Classification – Isolation of Proteins – Structure – Denaturation – Importance – Determination of Proteins

**Unit – V:**

Alcohol preparation – properties - Ethyl alcohol - Allyl alcohol preparation – Properties

**Prescribed Text Book:**

- R.T.Morrision & R.Y.Boyd, Organic Chemistry, 6$^{th}$ Ed, Printice Hall of India Ltd, New Delhi,1992.
- B.Y.Paula , Organic Chemistry, 3$^{rd}$ Ed, Inc.(Singapore)

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Instrumental Analysis

**Programme Code:** ADCH03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Understanding the basic design and operating principles of some modern instruments used in chemical analysis.. | Comprehension (Level 2) |
| Applying the basic principles of spectroscopy techniques in daily life practices | Application (Level 3) |
| Acquiring knowledge of the widely used analytical instruments | Knowledge (Level 1) |
| Comprehending and adopting the skills in advanced methods of separation and analysis. | Comprehension (Level 2) |
| Designing the various instruments used in chromatography techniques. | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit – I: GC-LC-MS – Introduction Instrumentation**

Gas Chromatography-Fourier Transform-Infrared (GC-FT-IR): Principle, Instrumentation, Applications. LC-MS –Introduction Instrumentation –liquid chromatography- Mass spectrometer, Interface- Instrumental details processing.

**Unit – II: Surface Analysis Methods**

Introduction, types of surface measurements. Photon Probe Techniques: X-Ray Photoelectron spectroscopy - Principle, Instrumentation, applications.

**Unit – III: Thermal Methods of Analysis**

Thermogravimetry-Theory, Instrumentation, applications

Differential thermal analysis- Principle, Instrumentation, applications

Differential Scanning Calorimetry- Principle, Instrumentation, applications

**Unit – IV: Ion Exchange Chromatography**

Instrumentation, classification, properties, mechanism of ion exchange process, factors affecting ion exchange, methodology and applications

**Unit – V:**

Radioactivity, half life of radioactive element, radioactive isotopes, Induced radioactivity, GM Counter, Gas ionization detector, Scintillation counter, Quenching, Radio-dating, Radio-active tracer, Autoradiography.

**Prescribed Text Book:**

- Fundamentals of Analytical Chemistry, Skoog, Douglas A.; West, Donald M.
- Hobert H.Willard, D.L. Merrit & J.R.J.A. Dean, Instrumental Methods of Analysis, C.B.S Publishers and Distributors, 1992.
- Applications of ICP-MS, A.R. Date and A.L. Glay, London (Eds), Blakie, London

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**ADD-ON PROGRAMMES OFFERED BY PG & RESEARCH DEPARTMENT OF PHYSICS**

**Programme Type:** Add-on Course - I

**Title:** Renewable Energy Sources

**Programme Code:** ADPH01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Acquiring knowledge of the Renewable and Non- Renewable energy | Knowledge (Level 1) |
| Understanding the various possible renewable energies available with us | Comprehension (Level 2) |
| Analyzing and trapping the various forms of energy for utilization | Analysis ( Level 4) |
| Practising conversion of renewable energy for home appliances | Synthesis (Level 6) |

## COURSE CONTENT

**Unit I: Introduction**

A historical background of energy consumption - Energy & Environment - Forms of Energy Non-renewable energies – Advantages and Limitations Need, importance and scope of non conventional energy. Renewable energy science and technology

**Unit II: Solar Energy**

Solar Radiation, Measurements of Solar Radiation, Flat Plate And Concentrating Collectors, Solar Direct Thermal Applications, Solar Thermal Power Generation, Fundamentals of Solar Photo Voltaic Conversion, Solar Cells, Solar PV Power Generation, Solar PV Applications.

**Unit III: Wind Energy**

Wind Energy Estimation, Types of Wind Energy Systems, Performance, Site Selection, Details of Wind Turbine Generator.

**Unit IV: Ocean Energy**

Ocean Thermal Energy Conversion (OTEC), Principle of operation, development of OTEC plants, Tidal and wave energy, Potential and conversion techniques, mini-hydel power plants.

**Unit V: Bio-Mass**

Principles of Bio-Conversion, Anaerobic/aerobic digestion, types of Bio-gasdigesters, gas yield, combustion characteristics of bio-gas, utilization for cooking.

**Text Books:**

- Non conventional Energy Sources,Khanna Publication
- Reneweble energy resources: Tiwari and ghosal, Narosa publication.

**Reference Books:**

- Solar Energy/ S.P. Sukhatme, Tata McGraw-Hill.

- Renewable Energy Sources:Twidell& Weir, CRC Press.
- Renewable Energy Technologies: Ramesh & Kumar, Narosa publication.
- Biomass Energy, Oxford &IBH Publication Co.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

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**Programme Type:** Add-on Course - II

**Title:** Instrumentation of Electrical Appliances

**Programme Code:** ADPH02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the general principles and working of the electrical appliances | Knowledge (Level 1) |
| Acquiring knowledge of the wiring materials and accessories | Knowledge (Level 1) |
| Analyzing the pattern of work by the machines | Analysis (Level 4) |

**COURSE CONTENT**

**Unit-I:**

Electric Oven

Washing Machine

**Unit-II:**

Refrigerator

Air Conditioner – General Principles and Working

**Unit-III:**

Electrical Bell

Room Heater

**Unit-IV:**

Induction Stove

Lightning Conductor

**Unit-V:**

Introduction – Wiring Materials and Accessories

Types of Wiring

Basic Principles of Earthing

Types of Earthing

**Prescribed Text:**

- K.Arumugam, Instrumentation
- R.Murugesan, Electricity and Magnetism
- "How Things Work", The Universal Encyclopaedia of Machines.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Biomedical Instrumentation

**Programme Code:** ADPH03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of the principles of Bio medical instrumentation and measurement | Knowledge (Level 1) |
| Comprehending the various types of Transducers | Comprehension (Level 2) |
| Analyzing the Advancements in Biomedical Instrumentation | Analysis (Level 4) |

**COURSE CONTENT**

**Unit-I:**

Biopotentials and Electrodes: Transport through all membrane – Resting and Action potential – Bioelectric potentials – Design of Medical instruments – Components of the Biomedical instrument system.

**Unit-II:**

Transducers: Active transducers – Magnetic induction type transducer – Piezoelectric type transducer – Piezoelectric transducer as a pulse sensor – Photoelectric type transducer – Thermoelectric type transducer.

**Unit-III:**

Biopotential Recorders – I: Characteristic of a recording system – Electrocardiography origin of cardio Action potential – Ecocardiography – Electroencephalography (EEG) – Analysis of EEG

**Unit-IV:**

Biopotential Recorders – II: Electromyography (EMG) – Electro - retinography (ERG) and Electro - oculography (EOG) – Recorders with high accuracy – Pacemaker – Different types

**Unit -V:**

Advances in Biomedical Instrumentation: Computes in medicine – Lasers in medicine – Endoscopes – Computer Tomotography(CT) (Principle only) – Medical application of CT.

**Prescribed Text:**

- Dr.M.Arumugam, Biomedical Instrumentation, Anuradha Agencies,2006. Book for Reference:
- Ohio, Aston, R. Principles of Bio medical instrumentation and measurement, Merrill Publishing Company, 1990.
- R.S. Khandpur, Handbook pf Biomedical instrumentation, Tata Mc Graw- Hill Publishing Company, 1990.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

## ADD-ON PROGRAMMES OFFERED BY PG & RESEARCH DEPARTMENT OF COMMERCE

**Programme Type:** Add-on Course - I

**Title:** Practical Banking

**Programme Code:** ADBO01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Understanding the relationship between banker and customer. | Comprehension (Level 2) |
| Distinguishing the various types of deposits and loans offered by the bank. | Analysis (Level 4) |
| Drafting letters to the bank relating to stop payment, dishonor of a cheque and requisition for an overdraft and agency services. | Synthesis (Level 6) |
| Filling up application for opening account, Pay in slip, withdrawel slip, Cheque, DD Challan,NEFT and RTGS Forms | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit-I:**

Banking – Meaning – Definition – Structure of banking system in India - Banker and Customer – Special types of customers – Minor, Married Women – Relationship between Banker and Customer.

**Unit-II:**

Deposit – Current Deposit Account - Fixed Deposit Account – Savings Deposit Account – Recurring Deposit Account – Loans and Advances – Types of Loans and Advances.

**Unit-III:**

Letters to the Bank – Stop Payment for a Cheque – Dishonouring a Cheque – Request for an Overdraft – Request for Agency Services.

**Unit-IV:**

Procedures for opening a bank account - KYC Form – Fill up of application for opening account - Fill up of pay in slip and Withdrawal slip

**Unit-V:**

Fill up of cheque leaf - DD challan – NFFT - RTGS.

**Prescribed Text:**

- Banking Theory Law & Practice :E.Gordon & K.Natarajan, Himalaya Publishing House, Mumbai.

**Books for Reference:**

- Sundaram & Varshney, S. M., Banking Theory Law & Practice,New Delhi, S.Chand& Sons.,
- Gurusamy, Banking Theory Law & Practice, Chennai, Vijaya Nicole Imprints (Pvt) Ltd.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - II

**Title:** Salesmanship

**Programme Code:** ADBO02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|

| | |
|---|---|
| Recalling the concept, objectives, elements, activities and importance of work of logistics | Knowledge (Level 1) |
| Comprehending logistics management process | Comprehending (Level 2) |
| Examining the reason for outsourcing logistics and conclude the role of logistics providers. | Analysis (Level 4) |
| Creating the strategic role of managers in strategic decisions, lean strategy and agile strategies. | Creation (Level 6) |
| Applying the order cycle system in designing distribution channels. | Application (Level 3) |

**COURSE CONTENT**

**Unit I:**

Introduction: Salesmanship – Meaning – Importance – Qualities of good salesman – Marketing channels – and its types.

**Unit II:**

Buying motives: Types – Knowledge of customers – psychology and selling – sales process - steps – presentation and demonstration of sales – overcoming objections and handling objections.

**Unit III:**

Sales organization: Organization of sales department – Meaning – need – functions of sales organization – qualities of sales manager – types of sales managers.

**Unit IV:**

Recruitment and selection: Recruitment – and selection – steps and training methods - remuneration to sales man – need for motivation to salesman.

**Unit V:**

Sales promotion: Meaning and Types of Sales Promotion.

**Prescribed Texts:**

- R.S.N. Pillai &Bagavathi, Modern Marketing, Principles and Practices, Sultan Chand & Sons 2016.

**Books for Reference:**

- Dr. C.B. Gupta &N.Rajanair, Marketing management, Sultan Chand & Sons 2006.
- S.Kathiresan & V.Radha, Marketing, Prasanna publications 2006.
- M.N.Misra, Sales promotion and Advertising Management, Himalaya Publishing House, Delhi, 2003.
- C.N.Sontakki, Advertising and Sales Management, Kalyani Publishers, New Delhi 2003.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Expertise in Business Law

**Programme Code:** ADBO03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Understanding the essentials of a valid contract and analyse the performance, termination and discharge of contract. | Comprehending (Level 2) |
| Becoming aware of the rules for creation and termination of agency contract | Comprehension (Level 2) |
| Applying the provisions of Consumer Protection Act 1986 and Right to Information Act 2005 in real life situation. | Application (Level 3) |

**COURSE CONTENT**

**Unit-I:**

Indian Contract Act 1972: Meaning – Definition – Essential of a Valid Contract Classification of Contract – Offer – Acceptance - Essentials of Valid Offer and Acceptance– Consideration- Essentials of Consideration . Capacity to Parties : Meaning - Definition and Persons Disqualifies

**Unit-II:**

Performance of Contract - Termination and Discharge of Contracts-Modes of Discharges of Contract- Remedies for Breach of Contract - Quasi Contract , Special Contract- Indemnity and Guarantee

**Unit-III:**

Contract of Agency: Definition – Creation of Agency- Agent and Principal - Classification- Termination of Agency

**Unit-IV:**

Consumers Protection Act – 1986: Meaning – Features -Definition of Important Terms- Consumer Rights- Consumer Protection Council- Consumers Dispute Redressed Agencies

**Unit-V:**

Right to Information Act, 2005 - Meaning of Information, Right To Information - Need for Right to Information - Public Information - Request for Obtaining Information - Grounds for Rejection of Information - Central Information Commission : Constitution and Powers

**Prescribed Text**:

Business Law : R.S.N.Pillai and Bagavathi S.Chand Co Ltd, New Delhi.

**Books for Reference:**

Kapoor, N.D., Business Law ,New Delhi ,Sultan Chand & Sons.,
Shukla, M.C., Mercantile Law, New Delhi, S.Chand Co Ltd.,
Kuchal, M.C., Mercantile Law, New Delhi, Vikas Publications.,

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

## ADD-ON PROGRAMMES OFFERED BY PG DEPARTMENT OF COMMERCE WITH (CA)

**Programme Type:** Add-on Course - I

**Title:** Commercial Practices

**Programme Code:** ADCA01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Drafting letters and applications to the local bodies under various circumstances. | Synthesis (Level 6) |
| Fixing brand name, prepare sales report, write minutes, agenda and advertisement slogan | Synthesis (Level 6) |
| Filling up of forms relating to banking transactions and prepare saral form. | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit-I:**

Letters to the Local Bodies-Preparation of sales report.

**Unit-II:**

Fixing Brand Name – Writing AdvertisementSlogans.

**Unit-III:**

Writing of Minutes – Agenda-GST Registration form.

**Unit-IV:**

Filling up of Pay-in-Slip – Withdrawal Slip – Cheque Leaf – DD Challan- NEFTRTGS.

**Unit-V:**

Computation of Tax Liability – Filing of Form 16 – Preparation of Saral Form.Application for PAN Card.

**Prescribed Texts:**

- R.S.N. Pillai &Bagavathi, Modern Marketing, Principles and Practices, Sultan Chand & Sons 2016.

**Books for Reference:**

- Dr. C.B. Gupta &N.Rajanair, Marketing management, Sultan Chand & Sons 2006.
- S.Kathiresan & V.Radha, Marketing, Prasanna publications 2006.
- M.N.Misra, Sales promotion and Advertising Management, Himalaya Publishing House, Delhi, 2003.
- C.N.Sontakki, Advertising and Sales Management, Kalyani Publishers, New Delhi 2003.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - II

**Title:** Principles and Practices of Insurance

**Programme Code:** ADCA02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Understanding the fundamental principles, importance and essentials of Insurance and gaining knowledge about IRDA | Comprehension (Level 2) |
| Differentiating various types of insurance policies such as life, marine and fire insurance | Analysis (Level 4) |
| Analysing the features of motor, health, personal, accident , sickness, burglary, cattle and crop insurance | Analysis (Level 4) |

**COURSE CONTENT**

**Unit-I:**

Insurance – Meaning – Definition - Nature – Principles – Kinds - Functions - Importance - Essentials of a Sound Insurance Plan -Salient features of IRDA Act - Administration of IRDA Act - Regulatory measures of IRDA

**Unit-II:**

Life Insurance Contract – Features – Classification of Policies – Economic Uses of Life Insurance- Advantages of Life Insurance - Principles of Life Insurance- Procedure for taking a Life Policy - Policy Conditions - Kinds of Policy.

**Unit-III:**

Marine Insurance – Meaning – Definition – Principles - Kinds of Marine Policies – Procedure for taking out a marine policy– Policy conditions – Marine Losses – Payment of claims.

**Unit-IV:**

Fire Insurance – Meaning – Definition – Features –Scope- Principles –Procedure for effecting Fire Insurance Policy- Rights of Insurer- Kinds of Policies – Policy Conditions – Payment of Claims.

**Unit-V:**

Miscellaneous Insurance: Motor Insurance –Health Insurance-Personal Accident and sickness Insurance — Burglary Insurance – Cattle Insurance – Crop Insurance-Property Insurance.

**Prescribed Text:**

- Insurance Principles and Practices: M.N. Mishra, S. Chand Publications, Delhi.

**Books for Reference:**

- Kothari and Paul, SahityaBhawan, Principles and Practice of Insurance, Agra,
- Murthy,A., Principles and Practice of Insurance,Chennai,MarghamPublication.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Entrepreneurship Development

**Programme Code:** ADCA03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining Knowledge in entrepreneurship, steps to start business, preparation of project and decision making process. | Knowledge (Level 1) |
| Understanding the role of institutional Finance to promote entrepreneurship | Comprehending (Level 2) |
| Outlining project formulation and network analysis | Synthesis (Level 6) |
| Comprehending decision making process oriented with cost benefit analysis sensitivity analysis and system analysis | Comprehending (Level 2) |

## COURSE CONTENT

**Unit – I:**

Entrepreneurship –Definition – Importance –Functions, Qualities and problems of an entrepreneur- Entrepreneurship Development in India – Women entrepreneurship in India Problems of Women entrepreneurship.

**Unit II:**

Steps to be taken to start a business – Licensing – Registration.

**Unit III:**

Institutional arrangements for entrepreneurship development – DIC, SIPCOT, ITCOT, SIDCO, NSIC, SISI – Institutional finance to entrepreneurs – TIIC, SIDBI, Commercial banks.

**Unit IV:**

Project Report – Meaning & Importance of project – format for Report – Project appraisal – Market feasibility and Economic feasibility-Project Formulation and network analysis: Need for Project Formulation –elements –project selection. Project network analysis-classification of network techniques-basic concepts in network analysis- formulation of budget.

**Unit V:**

Managerial decision making: Concepts and process- types of decisions- creativity in decision making- approaches: cost benefit analysis-system analysis- sensitivity analysis.

**Books for Reference:**


- R.V. Badi& N.V. Badi, Entrepreneurship.
- Vasanth & Desai, Dynamics of Entrepreneurship, Himalaya Publishing House, 2005.
- C.B. Gupta and N.P. Srinivasan, Entrepreneurial Development, Sultan Chand and Sons 1999.


**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**ADD-ON PROGRAMMES OFFERED BY PG DEPARTMENT OF COMPUTER SCIENCE**

**Programme Type:** Add-on Course - I

**Title:** Computer Fundamentals and MS Office

**Programme Code:** ADCS01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Using various Office Automation Tools like MS Word, MS Excel & MS Power Point | Application (Level 3) |
| Understanding the dynamics of an office environment | Comprehension (Level 2) |
| Applying application software in an office environment | Application (Level 3) |

**COURSE CONTENT**

**Unit - I:**

Windows Introduction – Elements of window – Various types of icons - run through on window – Windows basic – Program Manager – The file manager – Control panel.

**Unit - II:**

MS-Word MS Word: Creating and Editing Documents –Menus, Commands, Toolbars and Icons— Formatting document – Creating Tables – Mail Merger.

**Unit - III:**

MS-Excel MS Excel: Spreadsheet Overview – Menus, Toolbars, Icons-Creating worksheets – Editing and Formatting – excel Formulas and Functions – Creating a Chart Data Forms, Sort, and Filter.

**Unit - IV:**

MS-Power Point MS Power Point – Introduction – Menus – Toolbars – Text and Formats – Animation, Art and Sound – Making the presentation template

**Unit - V:**

MS-Access MS Access: Database overview – Creating a database – Modifying table and Creating Form – Query – Creating reports – Mailing Labels

**Prescribed Text:**

- Sanjay Saxena, MS Office 2000 for Everyone.

**Programme Type:** Add-on Course - II

**Title:** Multimedia and Animations

**Programme Code:** ADCS02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of Multimedia and its components | Knowledge (Level 1) |
| Evaluating the power of multimedia in increasing human-computer interaction | Evaluation (Level 5) |
| Examining multimedia applications in several areas. | Analysis (Level 4) |

## COURSE CONTENT

**Unit – I:**

Introduction to Computers & Networks-Multimedia Hardware-Multimedia Software -Multimedia operating systems-Multimedia communication systems

**Unit – II:**

Content Development & Distribution-Desktop publishing (Coral Draw, Photoshop, Page maker) -Multimedia Animation &Special effects (2D/3D animation, Flash) -Social Networking &Publishing (Blogging, Facebook, Youtube, Instagram etc.)-Content Distribution Systems (CD/DVD, Internet, Radio, Television)

**Unit – III:**

Art & Science of Multimedia -Audio fundamentals (Audio quality, formats and devices) -Understanding Image and Video (Resolution, Color, Video standards, formats) -Film and Digital photography (technology, techniques, composition & lighting etc.) -Introduction to Printing technology

**Unit – IV:**

Programme Production Techniques -The Media Industry: Structure and Strategies -Audio-Video programme production(Concept to Mastering) -Compositing and Audio-Video Editing -Web Design and Publishing (Web design and development)

**Unit – V:**

Media Management & Marketing -Ownership of Media, Media as Business & Media Economics -Income sources of Different Media -Government Policies for Media Ownership -Career avenues in multimedia

**Prescribed Text Book:**

- Hypermedia and the Web: An Engineering Approach, D.
- Multimedia Systems, J.F.K, Buford, ACM Press, 1994.
- Understanding Networked Multimedia, Fluckiger, Prentice Hall.

- Design for Multimedia Learning, Boyle, Prentice Hall.

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Python Programming

**Programme Code:** ADCS03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Implementing database using SQLite. | Application (Level 3) |
| Developing web applications using python programming. | Synthesis (Level 6) |
| Writing clear and effective Python code. | Synthesis (Level 6) |

## COURSE CONTENT

**Unit – I:**

Introduction to Python: Python variables, Python basic Operators, Understanding python blocks. Python Data Types, Declaring and using Numeric data types: int, float etc.

**Unit – II:**

Python Program Flow Control Conditional blocks: if, else and else if, Simple for loops in python, For loop using ranges, string, list and dictionaries. Use of while loops in python, Loop manipulation using pass, continue, break and else. Programming using Python conditional and loop blocks.

**Unit – III:**

Python Complex data types: Using string data type and string operations, Defining list and list slicing, Use of Tuple data type. String, List and Dictionary, Manipulations Building blocks of python programs, string manipulation methods, List manipulation. Dictionary manipulation, Programming using string, list and dictionary in-built functions. Python Functions, Organizing python codes using functions.

**Unit – IV:**

Python File Operations: Reading files, Writing files in python, Understanding read functions, read(), readline(), readlines(). Understanding write functions, write() and writelines() Manipulating file pointer using seek Programming, using file operations. Database Programming: Connecting to a database, Creating Tables, INSERT, UPDATE, DELETE and READ operations, Transaction Control, Disconnecting from a database, Exception Handling in Databases.

**Unit – V:**

Python packages: Simple programs using the built-in functions of packages matplotlib, numpy, pandas etc. GUI Programming: Tkinter introduction, Tkinter and Python Programming, Tk Widgets, Tkinter examples. Python programming with IDE.

**Prescribed Text Book:**

- Wesley J. Chun, “Core Python Applications Programming”, 3rd Edition , Pearson Education, 2016
- Charles Dierbach, “Introduction to Computer Science using Python”, Wiley, 2015
- Jeeva Jose & P.SojanLal, “Introduction to Computing and Problem Solving with PYTHON”, Khanna Publishers, New Delhi, 2016


**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

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**ADD-ON PROGRAMMES OFFERED BY PG DEPARTMENT OF COMPUTER APPLICATIONS**

**Programme Type:** Add-on Course - I

**Title:** Computer Applications for Automation

**Programme Code:** ADCA01 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Understanding the dynamics of an office environment | Comprehension (Level 2) |
| Applying application software in an office environment | Application (Level 3) |
| Using various Office Automation Tools like MS Word, MS Excel & MS Power Point. | Synthesis (Level 6) |

**COURSE CONTENT**

**Unit – I:**

Windows Introduction – Elements of window – Various types of icons - run through on window – Windows basic – Program Manager – The file manager – Control panel.

**Unit – II:**

MS-Word MS Word: Creating and Editing Documents –Menus, Commands, Toolbars and Icons— Formatting document – Creating Tables – Mail Merger.

**Unit – III:**

MS-Excel MS Excel: Spreadsheet Overview – Menus, Toolbars, Icons-Creating worksheets – Editing and Formatting – excel Formulas and Functions – Creating a Chart Data Forms, Sort, and Filter.

**Unit – IV:**

MS-Power Point MS Power Point – Introduction – Menus – Toolbars – Text and Formats – Animation, Art and Sound – Making the presentation template

**Unit – V:**

MS-Access MS Access: Database overview – Creating a database – Modifying table and Creating Form – Query – Creating reports – Mailing Labels

**Prescribed Text Book:**

Sanjay Saxena , MS Office 2000 for every one

**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - II

**Title:** Python Programming

**Programme Code:** ADCA02 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Implementing database using SQLite. | Application (Level 3) |
| Developing web applications using python programming. | Synthesis (Level 6) |
| Writing clear and effective Python code. | Synthesis (Level 6) |

## COURSE CONTENT

**Unit – I:**

Introduction to Python: Python variables, Python basic Operators, Understanding python blocks. Python Data Types, Declaring and using Numeric data types: int, float etc.

**Unit – II:**

Python Program Flow Control Conditional blocks: if, else and else if, Simple for loops in python, For loop using ranges, string, list and dictionaries. Use of while loops in python, Loop manipulation using pass, continue, break and else. Programming using Python conditional and loop blocks.

**Unit – III:**

Python Complex data types: Using string data type and string operations, Defining list and list slicing, Use of Tuple data type. String, List and Dictionary, Manipulations Building blocks of python programs, string manipulation methods, List manipulation. Dictionary manipulation, Programming using string, list and dictionary in-built functions. Python Functions, Organizing python codes using functions.

**Unit – IV:**

Python File Operations: Reading files, Writing files in python, Understanding read functions, read(), readline(), readlines(). Understanding write functions, write() and writelines() Manipulating file pointer using seek Programming, using file operations. Database Programming: Connecting to a database, Creating Tables, INSERT, UPDATE, DELETE and READ operations, Transaction Control, Disconnecting from a database, Exception Handling in Databases.

**Unit – V:**

Python packages: Simple programs using the built-in functions of packages matplotlib, numpy, pandas etc. GUI Programming: Tkinter introduction, Tkinter and Python Programming, Tk Widgets, Tkinter examples. Python programming with IDE.

**Prescribed Text Book:**

- Wesley J. Chun, “Core Python Applications Programming”, 3rd Edition , Pearson Education, 2016
- Charles Dierbach, “Introduction to Computer Science using Python”, Wiley, 2015
- Jeeva Jose & P.SojanLal, “Introduction to Computing and Problem Solving with PYTHON”, Khanna Publishers, New Delhi, 2016


**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

**Programme Type:** Add-on Course - III

**Title:** Multimedia and Animations

**Programme Code:** ADCA03 **Contact Hours**: 30 Hours **CIA:** 100

**Course Outcomes:**

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Gaining knowledge of Multimedia and its components | Knowledge (Level 1) |
| Evaluating the power of multimedia in increasing human-computer interaction | Evaluation (Level 5) |
| Examining multimedia applications in several areas. | Analysis (Level 4) |

## COURSE CONTENT

**Unit – I:**

Introduction to Computers & Networks-Multimedia Hardware-Multimedia Software -Multimedia operating systems-Multimedia communication systems

**Unit – II:**

Content Development & Distribution-Desktop publishing (Coral Draw, Photoshop, Page maker) -Multimedia Animation &Special effects (2D/3D animation, Flash) -Social Networking &Publishing (Blogging, Facebook, Youtube, Instagram etc.)-Content Distribution Systems (CD/DVD, Internet, Radio, Television)

**Unit – III:**

Art & Science of Multimedia -Audio fundamentals (Audio quality, formats and devices) -Understanding Image and Video (Resolution, Color, Video standards, formats) -Film and Digital photography (technology, techniques, composition & lighting etc.) -Introduction to Printing technology

**Unit – IV:**

Programme Production Techniques -The Media Industry: Structure and Strategies -Audio-Video programme production(Concept to Mastering) -Compositing and Audio-Video Editing -Web Design and Publishing (Web design and development)

**Unit – V:**

Media Management & Marketing -Ownership of Media, Media as Business & Media Economics -Income sources of Different Media -Government Policies for Media Ownership -Career avenues in multimedia

**Prescribed Text Book:**

- Hypermedia and the Web: An Engineering Approach, D.

- Multimedia Systems, J.F.K, Buford, ACM Press, 1994.
- Understanding Networked Multimedia, Fluckiger, Prentice Hall.
- Design for Multimedia Learning, Boyle, Prentice Hall.


**Assessment Pattern:**

Objective Type Questions (50X2=100 marks)

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**ADD-ON PROGRAMME OFFERED BY MOTHER TERESA WOMEN'S UNIVERSITY, SINCE JUNE 2020**

**Programme Type:** Add-on Course to students of I UG Programmes

**Title:** Professional English

**Programme Code:** UPEAS11/ UPEPH11/ UPECM11

**Contact Hours**: 02 hrs/week **CIA:** 100

**Course Outcomes:**

(Outcomes based on guidelines in UGC LOCF – Generic Elective)

After completion of the programme, certain outcomes are expected from the learners.

| Description of COs | Blooms' Taxonomy Level |
|---|---|
| Understanding the importance of reading for life | Comprehension (Level 2) |
| Understanding the importance of writing in academic life | Comprehension (Level 2) |
| Using language for speaking with confidence in an intelligible and acceptable manner | Application (Level 3) |
| Recognizing their own ability to improve their competence in using the language | Analysis (Level 5) |
| Doing independent reading and comprehending unfamiliar texts | Synthesis (Level 6) |
| Writing simple sentences without committing error in spelling or grammar | Synthesis (Level 6) |

## COURSE CONTENT

### UNIT 1: COMMUNICATION

1. **Listening**: Listening to instructions
2. **Speaking**: Telephone etiquette and official phone conversations
3. **Reading:** Short passages (3 passages, one from each – Physics, Chemistry, Mathematics/Computer Science)
5. **Writing:** Letters and Emails in professional context
6. **Grammar in Context:**
    - Wh and Yes/No questions
    - Question tags
    - Imperatives
7. **Vocabulary:** Word formation
    i) Creating antonyms using Prefixes

ii) Intensifying prefixes (E.g inflammable)

iii) Changing words using suffixes

A) Noun Endings

B) Adjective Endings

C) Verb Endings

**UNIT 2: DESCRIPTION**

**Listening:** Listening to process description

**Speaking:** Role play

Formal:

- With faculty and mentors in academic environment
- Workplace communication

Informal:

- With peers in academic environment
- Workplace communication

**Reading:** Reading passages on products, equipment and gadgets

**Writing:** Writing sentence definitions (e.g. computer) and extended definitions (e.g. artificial intelligence)

Picture Description – Description of Natural Phenomena (100 words)

**Gramma**r **in Context**: Connectives and linkers.

**Vocabulary:** Synonyms (register) - Compare & contrast expressions.

**UNIT 3: NEGOTIATION STRATEGIES**

**Listening:** Listening to interviews of specialists / inventors in the field (Subject specific)

**Speaking**: Brainstorming (mind mapping). Small group discussions (subject-specific)

**Reading:** Longer Reading text**.** (Comprehensive passages)

**Writing**: Essay Writing (250 word essay on topics related to subject area, like pollution, use of pesticides in cultivation, merits and demerits of devices like mobile phones, merits and demerits of technology in development)

**Grammar in Context:**

- Active voice & Passive voice
- If conditional

**Vocabulary:**

- Collocations
- Phrasal verbs

**UNIT 4: PRESENTATION SKILLS**

**Listening**: Listening to presentations, listening to lectures, watchingdocumentaries (discovery / history channel videos with subtitles)

**Speaking:** Short speech.Making formal presentations (PPT)

**Reading:** Reading a written speech by eminent personalities in the relevant field /short poems / short biography.

**Writing:** Writing Recommendations

Interpreting visuals - charts / tables/flow diagrams

**Grammar in Context**: Modals

**Vocabulary:** Single word substitution (register)

**UNIT 5: CRITICAL THINKING SKILLS**

**Listening:** Listening to advertisements/news and brief documentary films (with subtitles)

**Speaking**: Problem-Solution Speeches (Brief speeches). E.g. Should the use of public transport be promoted to curb pollution?

**Reading**: Motivational stories

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