

PROGRAMME OUTCOMES
ARABIC : BA/B.SC/B.COM/BBA

UP TO COMPLETION OF DEGREE PROGRAMME, THE GRADUATES WILL BE ABLE TO:

1. Build themselves with rich life skills.
2. Secure prospective careers in international bodies, journalism, translation and Administrative services and teaching Arabic.
3. Pursue critical research in methods of Arabic language learning and literature teaching.

SEMESTER - I CLASSICAL PROSE

1. Students will understand the style of classical prose.
2. Students evaluate the narrative style of the classical and modern prose writing.
3. Students will understand the morals and ethics of Arabic traditional stories.
4. They analyze the different style of writings.
5. Enhance knowledge about the stylistic features of the classical and modern prose.

SEMESTER - I MODERN PROSE

1. Students gain the knowledge of Conversation in Arabic
2. Students came to know about the importance of cleanliness in Islam.
3. Students learn about the life & work of prophet Mohammed (SAW).
4. Students gain more knowledge of hadith reading cleanliness.

SEMESTER - I HISTORY OF ARABIC LITERATURE

1. closely observe the customs and cultures of the Arabs.
2. Know the features of Arabic language.
3. learn the literature poets n poetry in pre Islamic period.

4. Gain the knowledge of **المعلقات السبع**

SEMESTER - II

CLASSICAL PROSE

1. Students gain the knowledge about the Female companions of prophet (saw)
2. Students came to know about the battle of Islam.
3. Students came to know how prophet Mohammed saw face difficulties while preaching of Islam
4. They educate themselves with the brief life history of Prophet Mohammed (saw)

SEMESTER - II

GRAMMAR

1. Learn the classification OFCompound.
2. Understand the rules of Arabic Grammar.
3. Understand & evaluate the types of Arabic Sentences.
4. Students Analyze the functioning of Arabic Prepositions.

SEMESTER - II

MODERN PROSE

1. Students understand the style of classical prose.
2. Students gain their knowledge about industrial exhibition.
3. Students gain the knowledge of life n work of Nizam mir osman Ali khan.

SEMESTER - II

HISTORY OF ARABIC LITERATURE

1. Students gain the knowledge about the features of Arabic language.

2. Students are familiar with the social environment of Arabs.

3. They know about the Compilation of Quran.

4. They educate themselves with the lessons gained from the eminent poets of pre Islamic period.

SEMESTER - III

CLASSICAL PROSE

1. Students came to know about the introduction of Quran.

2. Students understand the style of classical prose.

3. Students are critically examine the niceties of the Quran verses.

4. Students Develop proficiency in comparative analysis of classical and modern prose.

SEMESTER - III

MODERN PROSE

1. Students gain their knowledge about the dialogue writing.

2. Students know about the honesty.

3. They learn about the knowledge of hadith.

4. Students understand and assimilate the crux of the hadeeth.

SEMESTER - III

GRAMMAR

1. Students came to know about verb and its kinds.

2. Students understand imperative n prohibitive verb.

3. Students are identify grammatical errors in sentences.

4. Students Develop proficiency in writing flawless sentences in Arabic.

SEMESTER - III

HISTORY OF ARABIC LITERATURE

1. Students gain their knowledge about the literature in Abbasid period.
2. Students learn how the compilation of Quran takes places.
3. They learn about poets of Abbasid period.
4. Students learn about the companions of prophet (saw)/ poets of AP.

SEMESTER - IV**CLASSICAL PROSE**

1. Students gain the knowledge about the Female companions of prophet (saw)
2. Students came to know about the battle of Islam.
3. Students came to know how prophet Mohammed saw face difficulties while preaching of Islam
4. They educate themselves with the brief life history of Prophet Mohammed (saw)

SEMESTER - IV**GRAMMAR**

1. Learn about verb and its kinds.
2. Students understand and learn to make sentences.
3. Students learn about imperfect and perfect verb
4. learn the conjugations.

SEMESTER -IV**HISTORY OF ARABIC LITERATURE**

1. Closely observe the customs and culture of the Arab.
2. They came to know about the d development of Umayyad period.
3. Enrich themselves with the knowledge of the eminent writers of Umayyad period.
4. Educate themselves, changes takes place in Umayyad Period.

SEMESTER - V**TRANSLATION**

1. Students understand the skills required to become a professional translator.
2. Students get the jobs in it companies.
3. Translation skills help in translation assignments, both oral and written.
4. medical tourism and B.P.O s provide ample opportunities for oral translation.
5. Numerous books that need to translate await translators with writing skills in Arabic and one other language.

SEMESTER - V**COMPOSITIONS/ ESSAY WRITING**

1. Students gain the knowledge, understand and evaluate the types of Arabic sentences.
2. Students learn the art of writing. develop observations skill, imaginative creation
3. Students will improve communicative skills.
4. They develop felicity of expression in today's context.
5. Students able to write short stories.

SEMESTER - V**HISTORY OF ARABIC LITERATURE**

1. Students gain the knowledge, of Islamic literature in Abbasid period.
2. Students came to know the eminent writers of Abbasid period.
3. Students derive illumination and insight from the glorious Islamic political history and lay the foundation for future development.
4. Elaborately analyze the political and social condition prevailed during the time of the prophet Mohammed.

SEMESTER - VI**TRANSLATIONS**

1. Enhancement of translation skills from Arabic to English and vice versa.
2. Translation skills help in translation assignment.
3. Medical tourism provide ample opportunities for oral translation.
4. No. Of books that need to be translated awaited translators with writing skills in Arabic and one other language.

SEMESTER - VI

POETRY

1. Study in depth some eminent pieces of classical poetry in Arabic.
2. learn critically the most prominent modern poetry in Arabic.
3. Develop skills in attempting a comparative analysis of the classical and the modern poetry.
4. Distinguish the poems that deal with love, death, sarcasm, encomium and eulogy.

SEMESTER -VI

HISTORY

1. Enrich themselves with the knowledge of the eminent writers of Abbasid period.
2. Educate themselves, changes takes place in Islamic Period.
3. Identify and study the creative writers who emerged during the last two centuries and their eminent works.
4. Learn about the great writers of hadith.


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DEPARTEMENT OF BUSINESS ADMINISTRATION

A.Y: 2022-2023

Programme Outcomes (General)


- PO-1: Develop leadership and communication skills to become successful business leader.
- PO-2: Develop entrepreneurship, administrative and managerial skills to become successful entrepreneur, good administrator and managers.
- PO-3: Understand the concepts of various functional areas of business.
- PO-4; Able to understand various functional issues affecting the Organizations.
- PO-5: Able to analyze and interpret the data which is used in decision making.
- PO-6: Understand global environment and its impact on business.
- PO-7: To be able to analyze, investigate and solve critical business issues.
- PO-8: To be able to apply technological knowhow for business advancement.
- PO-9: Demonstrate maturity. professionalism and team work skills.
- PO-10: Apply technological knowhow for business advancements.
- PO-11: Understand professional ethics and responsibilities and norms of the Management practice.

Programme Outcomes (Specific)

- PSO-1: Understand the ecosystem of start up in the country.
- PSO-2. Analyze global environment and its impact on business.
- PSO-3: Demonstrate Ability to work in Groups.
- PSO-4: Demonstrate the Ability to create Business Plans
- PSO-5: Demonstrate the ability to develop models / frameworks to reflect critically on specific business contexts

Programme Course Outcomes

- CO-1: To understand the theoretical knowledge with the practical aspects of Organizational setting and techniques of management.
- CO-2: To prepare and analyze the various financial statements.
- CO-3: Analyze the various aspect of business research in the area of marketing, human resource and finance.
- CO4: Ability to analyze various functional issues affecting the Organizations
- CO5: the students will have developed cross-disciplinary skills in statistics, Artificial Intelligence, Data Science and machine learning.


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Course Objectives

A.Y. 2022-2023

Semester / Subjects	Course objectives
Semester – I 101 :Principles of Management (BBA/BBM/BBA-AI & DATA SCIENCE)	CO1: To provide an understanding of Management concepts- theory & practice. CO2: To provide an understanding of planning as a Management function. CO3: To provide an understanding Organizing and Staffing as Managerial functions. CO4: To provide an understanding of Managerial functions of Decision Making- Control & Co-ordination CO5: To provide an understanding of Emerging trends in Management.
102:Basic of Marketing (BBA/ BBA-AI & DATA SCIENCE)	CO1:To make the Students understand the basic Marketing Concepts and tools of Marketing Management. CO2: The Concept of Product Life Cycle and Marketing Strategies CO3: The Concept of Market Segmentation and Product Mix CO4: The concept of New Product Development CO5: To understand the concept of Micro & Macro Environment
102:Financial Accounting (BBM)	CO1: To provide and understand the concepts of Financial Accounting CO2: To provide and understand the skills of recording books of accounts CO3: To provide to ability to prepare Financial Reports CO4: To learn Ratio analysis CO5: To gain knowledge of Indian Accounting Standards
103:Business Economics (BBA/BBM/BBA-AI & DATA SCIENCE)	CO1:To provide the knowledge Micro Economy concepts for Business Applications CO2: To provide an understanding of Demand and related concepts. CO3: To provide an understanding of Production and Cost concepts CO4: To provide an understanding of Economic of Scales and scope CO5: To provide an understanding of marketing structure and pricing
AECC-I Environmental Studies	CO1:To create awareness about environmental problems among people. CO2:To develop attitude of concern for the environment in the students. CO3:To help students to explore possible solutions of environmental problems- and to lay the foundation for a fully informed and active participation of individual in the protection of environment and the prudent and rational use of natural resource.
Semester- II 201:Fundamental of Marketing (BBM)	CO1:To provide an exposure to the students pertaining to the nature and scope of Marketing CO2:To Understand the concepts of Market Segmentation CO3:To provide and understand the concept of Product Life Cycle & its relevant functional management CO4:To provide and understanding the Marketing Mix element, strategies PPL CO5:To give concepts of Factors, Promotion Mix, and its Tools.
201 Organization Behaviour(BBA)	1.To gain the understanding of concept of Organizational Behavior. 2.To Understand the theories of Motivation, Group processes and Group dynamism 3.To understand the concept of change in organization. 4.To understand the factors of organizational change and organizational Development 5. To gain insights on factors influencing Organizational Culture
202:IT for Business (BBA – AI & Data Science)	CO1:The Objective of this course is to familiarized management students to basics of IT CO2:To familiarized the students with Multimedia devices. CO3:Student can learn the concepts of Internet and its securities. CO4:To impart the students the knowledge of Ms. Word & its Applications.


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	CO5:To familiarized the students with Office Management Applications
202:Business Statistics (BBA/ BBM/ BBA-AI & Data Science)	CO1: To provide the student an understanding of basic statistical tools to apply for Management problems and analysis. CO2: To learn data gathering and tabulation CO3: To apply measures of central tendency CO4: To understand the significance of dispersion CO5: To learn about skewness- kurtosis- correlation and regression
203:Business Corresponding and Communication (BBM)	CO1:To provide an overview of Prerequisites to Business Communication. CO2:To put in use the basic mechanics of Grammar. CO3:To provide an outline to effective Organizational Communication. CO4: To underline the nuances of Business communication. CO5: To understand the Internal communication occurs within the organization through orders, instructions, suggestions, opinions, etc.
203:Financial Accounting (BBA & AI & DS)	CO1: To provide and understand the concepts of Financial Accounting CO2: To provide and understand the skills of recording books of accounts CO3: To provide to ability to prepare Financial Reports CO4: To learn Ratio analysis CO5: To gain knowledge of Indian Accounting Standards
AECC-II Basic Computer Skills	CO1:To enable students to understand basic computer concepts related to day-to-day environment. CO2: To know the different input and output devices that makes a computer operational. CO3:..To understand Information systems and Word processors.
Semester – III/ 301:Human Resource Management (All groups)	CO1:To equip the students with the basic concepts of Human Resource Management. CO2:To impart knowledge on the development of Human Resources in the organization. CO3:To provide insights on the concepts of Industrial Relations CO4:To study different methods of performance appraisal CO5:To understand organizational climate and culture.
302:Information Technology for Business (BBA / BBM)	CO1.The Objective of this course is to familiarized management students to basics of IT CO2.To familiarized the students with IT applications and importance to present day management and organization CO3.To produce the graduates who are able to achieve the Business objectives: CO4.To impart the students the knowledge of Business Applications of Multimedia. CO5.To familiarized the students with Office Management Applications
303:Accounting for Management (BBM)	CO1: To provide a conceptual understanding of accounting as a tool for Managerial CO2: To provide the ability to analyze Financial Statements CO3: To provide the skills to apply Ratio Analysis in Managerial decision Making. CO4: To familiar the CO5: To provide the ability to use Management Information System
303:Financial Management(BBA)	CO1:To learn about the scope and goal of financial management. CO2:To familiarize the student with the concepts of long term and short-term investment decisions. CO3:To understand the sources of capital. CO4:To learn about receivables and inventory management


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	CO5:To familiarize the students with Receivable Management
SEC-I Communication Skills	CO1: Identify common communication problems that may be holding learners back CO2: Identify what their non-verbal messages are communicating to others CO3: Understand role of communication in teaching-learning process CO4: Learning to communicate through the digital media, importance of empathetic listening CO5: Explore communication beyond language.
SEC-II Business Policy & Strategy	CO1:To acquaint the students with understanding the business environment and design strategies to meet challenges. CO2:Learn about the role of Macro Economic factors that affect Business Policy CO3:To focus on designing plans and policies.
Semester – IV / 401:Business Law & Ethics(BBA/ BBM)	CO1:To provide knowledge of the legal principles and environment in which a consumer and Business operates CO2:The appreciate the relevance of business law to individuals and businesses CO3:To understand various negotiable instruments CO4:To study consumer protection laws in India. CO5:To team about ethical considerations of business
402:Digital Marketing (BBM)	CO1:To understand the importance of digital marketing and its applications CO2:To understand the basics of Digital Marketing CO3:To understand the Channels of Digital Marketing CO4:To develop the capability to form Digital Marketing strategy CO5:To enable the students to use new media such as Search Engine and Social Networking
403: Financial Management(BBM)	CO1:To learn about the scope and goal of financial management. CO2:To familiarize the student with the concepts of long term and short-term investment decisions. CO3:To understand the sources of capital. CO4:To learn about receivables and inventory management CO5:To familiarize the students with Receivable Management
402:Market Research (BBA)	CO1:To provide an exposure to the students pertaining to the nature and Scope of marketing CO2:To give the students an understanding of the basic techniques and tools of marketing research CO3:To familiarized the students with the sampling techniques CO4:To impart the knowledge of various sources of data. CO5:To familiarized the students with the various tests used in Research.
403:Management Science (BBA)	CO1:To provide the student with adequate knowledge regarding the basic manufacturing facilities CO2:To provide the student with the knowledge of how service activities have attained significance and need managerial skills to address the problems. CO3:To familiarized the students with store management CO4:To provide the student to understand the concepts of Operation Research CO5: To familiarized the students with concepts Transportation problems, Assignment problem & Queue.
SEC-III Leadership and Management Skills	CO1:To develop critical thinking- managerial abilities and organisation skills in students CO2:..To equip the students to take effective decisions by coordinating the teams


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	<p>CO3:To enhance the capabilities of being team members and manage networks</p> <p>CO4: Help students to develop essential skills to influence and motivate others.</p> <p>CO5: Inculcate emotional and social intelligence and integrative thinking for effective leadership</p>
SEC-IV Basic Quality Management	<p>CO1:The students towards the importance of quality as a management tool.</p> <p>CO2:Towards understanding the principles and practices of total quality management</p> <p>CO3:Introducing the various tools and techniques used in the measurement of quality</p> <p>CO4:Understanding the importance of six sigma as a quality tool</p> <p>CO5:Sensitizing the participants to the importance of quality in services sector</p>
Semester – V GE-I Mobile Commerce	<p>CO1:To acquaint the students with the Mobile Commerce concepts and environment and customer value.</p> <p>CO2:To understand the M-Commerce Technology</p> <p>CO3:To learn about the wireless technology</p> <p>CO4:To understand the M-Commerce applications</p> <p>CO5:To learn about the development of wireless technology</p>
SEC- 3 Personality Development	<p>CO1: To make the personal and Social life</p> <p>CO2: To study the personality Development, Positive Attitude, Self Respect, Knowledge, Self Confidence, Thoughts, Organizational Efficiency.</p>
501:Financial Market and Services (BBA)(F)	<p>CO1:The Course aims at providing the students- basic knowledge about the Finance concepts- markets and various services provided in those markets</p> <p>CO2:To explain the structure of Indian Financial System.</p> <p>CO3:To understand leasing- hire purchase and Mutual funds.</p> <p>CO4:To understand Mutual Fund Services in India</p> <p>CO5:To know the non-fund financial services</p>
501:Brand Management(M)	<p>CO1:Understand the concept of branding and its significance.</p> <p>CO2:Understand and learn the methods of managing brands and strategies for brand management.</p> <p>CO3:Learn the concept of Brand extension and its pros and cons.</p> <p>CO4:Learn how to brand personality benefit the firm.</p> <p>CO5:Learn how to branding contributes to a company's' value.</p>
501:Organization Behaviour(HR)	<p>CO1:To lay conceptual foundation in students to lead and manage planned change in organization</p> <p>CO2:To understand Organizational Development process and programs</p> <p>CO3:To familiarize with various interventions and techniques of Organization development</p> <p>CO4:To study about the OD interventions and consultation process</p> <p>CO5:To understand various applications of OD</p>
502:Analysis of Investment in Financial Assets (F)	<p>CO1:To provide the students with a basic view of valuation and investment in financial assets & the basic concepts of risk and return</p> <p>CO2:To explain the concept of YTM.</p> <p>CO3:To explain the concept of and various methods of analysis.</p> <p>CO4:To explain the concept of portfolio</p> <p>CO5:To explain the various portfolio theories and evaluation methods</p>
502:Retail Management(M)	<p>CO1:Student learn the role of retailing and various formats and theories.</p> <p>CO2:Students learn the concepts of theories of Retail Development</p> <p>CO3:It focuses on Merchandise Management.</p> <p>CO4:It exposes the learner to important elements of retail marketing like merchandisemanagement and store design.</p> <p>CO5:Learn and understand the functions of Channels of Distribution.</p>
502:Performance Appraisal and Counselling (HR)	<p>CO1:To provide understanding of employee performance and measures to improve through HRD</p>


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	<p>CO2:To study the dimensions and methods of performance appraisal and its effectiveness</p> <p>CO3:To familiarize the students with techniques of performance measurement</p> <p>CO4:To diagnose performance measurement methods and strategies for improvement</p> <p>CO5:To understand the role of managers in employee counseling</p>
503:Insurance Services(F)	<p>CO1: Students to know about the Insurance</p> <p>CO2: Learn and understand the types of Insurance</p> <p>CO3: Learn the concepts of General Insurance</p> <p>CO4: understand the concepts of Policy Documents</p> <p>CO5: understand the types of Policy Claims</p>
503:Customer Relationship Management (M)	<p>CO1: To know the importance of Customer involvement and relations with corporations.</p> <p>CO2: The students know and build beneficial relations.</p> <p>CO3:To familiarize about the customer Relationship Management and Marketing Strategy.</p> <p>CO4: understand the concepts of Campaign Management</p> <p>CO5: Students understand the implementation of CRM Road Map.</p>
503:Compensation Management (HR)	<p>CO1: To impart techniques and methods for competing employer.</p> <p>CO2: To understand the concepts of HR strategy and Plans.</p> <p>CO3: Learn and understand the Designing Compensation System.</p> <p>CO4: Understand the concepts of Designing and Planning Benefit Program.</p> <p>CO5: To familiarize the concepts of Contemporary strategic Compensation Challenges.</p>
Semester – VI GE- II Business Analytics	<p>CO1:To gain an understanding of how managers use business analytics to formulate and solvebusiness problems and to support managerial decision making.</p> <p>CO2:To become familiar with the processes needed to develop, report, and analyze business data.</p> <p>CO3:To learn how to use and apply Excel and Excel add-ins to solve business problems.</p> <p>CO4:To learn the concepts of Prescriptive Analytics</p> <p>CO5:To learn about the R environment</p>
SEC-4 Business Intelligence and Data Visualization	<p>CO1:To understand the concepts of Business intelligence</p> <p>CO2:To understand the relevance of Data Visualization in Business</p> <p>CO3:To provide hands on working with Tableau software.</p> <p>CO4:To understand the methods of presentation,</p> <p>CO5:To understand creating dashboards and animations.</p>
601:Banking (F)	<p>CO1:The course helps the students to know about banking and its regulations.</p> <p>CO2:To understand the functions of Monetary policy.</p> <p>CO3:To Learn and understand the concepts of Negotiable Instruments.</p> <p>CO4:Learn the types of Loans</p> <p>CO5:It focuses on latest trends in banking.</p>
601:Buyer Behaviour (M)	<p>CO1.To understand the depth concept & theories of Consumer buying Behaviour</p> <p>CO2.To Focus on Learning theories</p> <p>CO3.To Know the impact of culture on Buyer Behaviour</p> <p>CO4. To understand the buyer behaviour decisions</p> <p>CO5. To understand the basic Model of Buyer Behaviour</p>


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601:Leadership and Change Management (RM)	CO1:To understanding into Leadership Activities and its influence on the Management of change in the organizations. CO2:To know organizational culture and change management- CO3:To understand frame work of change management. CO4:To understand the six belief changers that influence change. CO5:To understand the concepts of leaderships and types of culture.
602:Risk Analysis and Management (F)	CO1: Students to understand the Risk associated with Financial Institutions and helps to manage risk effectively. CO2: Students understand the guidelines of Reserve Bank of India CO3: Students learn and understand the concepts of Derivations CO4: To familiarize the concepts of SWAP and its types CO5: To know the concepts and scope of Financial Engineering
602:Advertising and Sales Promotions (M)	CO1: It helps the students to understand the important of Advertisements for promotion of Products. CO2: Students understand the types of Advertisement CO3: Students learn and understand the Media Planning and its types CO4: Students learn and understand the theories of Personal Selling CO5: Understand the Sales Promotion and its types.
602:Talent and Knowledge Management(HR)	CO1: Students learn the various approaches to talent management in business organizations. CO2: Students learn the concepts of Career Planning CO3: Students learn the various approaches to knowledge management in business organizations CO4: To familiarize the types of Knowledge and its Mechanism CO5: Students learn and understand the impact of Knowledge Management.
603:International Finance(F)	CO1: To understand the theory of international Finance CO2: To Familiarize with Balance of Payment CO3: To know the International Capital Markets CO4: Learn about the Derivatives Instruments CO5: Student should know the concepts of Foreign Exchange
603:Rural Marketing (M)	CO1: Students learn Rural behaviour and factor CO2: Students understand the buying decision process CO3: To familiarize the concept of Product Strategy and Product Mix Decision. CO4: To familiarize the concept of Pricing and Promotion Policy. CO5: Students understand the Rural Distribution and its Electronic Applications.
603:Employee Relation (HR)	CO1: Students learn Approaches of Industrial Relations CO2: Students understand the Collective Bargaining CO3: To module examines the relationship existing between employer and employee. CO4: To familiarize the concept of International Labour Organizations. CO5: Students understand the Wage Legislation and Administrations



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COURSE OUTCOMES

Semester / Subjects	Course Outcomes
Semester -I 101: Principles of Management (BBA/BBM/BBA-AI & DATA SCIENCE)	CO1: The student learns to integrate the theory & practice of management CO2: The student learns the various functions of Management CO3: The student learns the various staffing & organizing processes CO4: The student gains the ability to decide- Control & Co-ordinate as a Manager CO5: The student gains an insight into the emerging issues in Management theory & Practice.
102:Basic of Marketing (BBA/ BBA-AI & DATA SCIENCE)	CO1:An awareness about the Marketing Concepts and Marketing Environment CO2:An understanding of the Bases for Market Segmentation CO3:An ability to formulate Strategies for Developing new Products- Concepts- goods and Services that respond to evolving Market needs. CO4:A capacity to develop Strategies for the efficient and effective placement distribution of Products- Concepts- goods- and Services that respond to evolving Markets. CO5:A competence to evaluate the impact of using different Marketing Strategies for a Product- Concept- good and/or service on the (i) Finances- (ii) Return on Investment (ROI)- and (iii) the Business goals of an Organization
102:Financial Accounting (BBM)	CO1: The student learns the concepts of Financial Accounting CO2: Demonstrate the concepts of Accounting Information CO3: Demonstrate the concepts of Financial Statement of a Joint Stock Company as per the Companies Act 2013. CO4: Student gains the knowledge of Ratio Analysis CO5: Students can demonstrate about Indian Accounting Standards.
103:Business Economics (BBA/BBM/BBA-AI & DATA SCIENCE)	CO1: The students gain the knowledge of Micro Economics concepts CO2: The students understand the demand &Elasticity of Demand CO3: The students gain the knowledge of Production and Cost concepts CO4: The students learn Economic Scale and scopes CO5: The student learns & understands the Marketing Structure & Pricing
AECC-I Environmental Studies	CO1: Understand the transactional character of the environmental problems and ways of addressing them- including the interaction across local and global scales CO2: Appreciate the ethical- cross-cultural- and historical context of environmental issues and the links between human and Natural systems. CO3: Understand the importance of sustainable development and modern approaches that enable humans to protect the environment.
Semester- II 201:Fundamental of Marketing	CO1: The students learn & understanding about Marketing Environment CO2: An understanding about bases of Market Segmentation CO3: The students learn & Demonstrate the Stages in New Product Development CO4: The students understanding and learning the Product Life Cycle(PLC) , Price and Pricing strategies CO5: Students demonstrate about the Promotion Mix.
201:Organizational Behaviour	At the end of the course the students will be able- CO-1 : Upon the Completion of the course, students will be able to demonstrate the applicability of the concept of Organizational behavior to understand the behavior of people in the organization. CO-2 : Demonstrate the applicability of analyzing the complexities associated with management of individual behavior in the organization. CO-3: Analyze the complexities associated with management of the group behavior in the organization. CO-4: Demonstrate how the organizational behavior can integrate in understanding the motivation (why) behind behavior of people in the organization. CO-5: Demonstrate the factors influencing Organizational Culture


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201:Financial Accounting (BBA&AI)	CO1: Explain the concepts of Financial Accounting CO2: Demonstrate the concepts of Accounting Information CO3: Demonstrate the concepts of Financial Statement of a Joint Stock Company as per the Companies Act 2013. CO4: Student gains the knowledge of Ratio Analysis CO5: Students can demonstrate about Indian Accounting Standards.
202:Business Statistics (BBA/ BBM/ BBA-AI & Data Science)	CO1: students learn the Statistical Methods & also Demonstrate Tabulation & Presentation CO2: Students can demonstrate the techniques of Mean, Median & Mode CO3: Demonstrate the Characteristics, Types, construction of Factor reversal Test & Time Reversal Test CO4: Students learn the concepts of Sampling CO5: Students can demonstrate the Correlation & Regression Analysis.
203:Business Corresponding and Communication (BBM)	CO1: Students are able to demonstrate a good understanding of: effective business writing CO2: Effective business communications CO3: Research approaches and information collection CO4: Developing and delivering effective presentations, effective interpersonal communications skills that maximize team effectiveness CO5: Good time management & effective problem solving
202:IT for Business (BBA- AI & Data Science)	CO1: Demonstrate that history of computer, Input / Output devices, Memories And types of Network CO2: Demonstrate about the use of Multimedia devices CO3: demonstrating the internet & Securities issues. CO4: Demonstrate that they can use of Ms. Word and its applications CO5: Demonstrate that they can evaluate and present PowerPoint presentation.
AECC-II Basic Computer Skills	CO1: Identify basic terms- concepts- and functions of computer system components. CO2: Select and use the appropriate software application to complete a particular task such as Word- Processing skills to create- save- modify business documents. CO3: Identify basic concepts and procedures for creating- viewing- and managing files- and folders for different operating systems.
Semester – III 301:Human Resource Management(All Groups)	CO1: Understand theories and practices in the field of Human Resources Management CO2: Identify different methods of developing Human Resources CO3: Demonstrate understanding of different appraisal methods CO4: Understand organizational culture and climate and its implications for HRM CO5: Understand the concept of the Performance Appraisal
302:Information Technology for Business(BBA/ BBM)	CO1: Demonstrate that they can use a personal computer or mobile device for accessing the internet and use basic computer applications such as e-mail- Power Point- Excel and common webpage creation tools. CO2: Demonstrate that they can apply a variety of information technologies to their own work- demonstrating their competence in researching- creating- and presenting projects using a variety of digital information tools. CO3: Demonstrate that they can use digital technology in research- analysis- and critical inquiry. CO4: Demonstrate that they can evaluate and explain the on-going changes in digital technology and their impacts on society. CO5: Demonstrate the techniques of Internet, Intranet & Extranet.
303:Accounting for Management (BBM)	CO1: The student gains an understanding of Managerial Accounting CO2: The student gains the ability to analyze Financial Statements. CO3: The student learns the application of Ratio Analysis CO4: The student learns to apply Cash Flow & Fund Flow Analysis in Managerial decision. CO5: The student gains the ability to use M.I.S.


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303:Financial Management (BBA)	CO1:Apply project appraisal methods to cash flows. CO2:Understand the determinants of capital structure CO3:learn about dividend practices of companies CO4:calculate working capital requirements of firms CO5: Student can communicate standard business terminology
SEC-I Communication Skills	CO1: Students will understand the importance of communication skills CO2: Develop competence in oral- written and visual communication CO3: Understand current technology related to the communication field CO4: Demonstrate the concepts of Digital Media CO5: Students can demonstrate the Non – Verbal Communication
SEC-II Business Policy & Strategy	CO1: Critically analyze the internal and external environments in which businesses operate and assess their significance for strategic planning. CO2: Apply understanding for the theories- concepts and tools that support strategic management in organizations CO3: Build understanding of the nature and dynamics of strategy formulation and implementation processes at corporate and business level.
Semester – IV/ 401:Business Law & Ethics(BBA / BBM)	CO1: Identify the fundamental legal principles behind contractual agreements CO2: Understand companies act and its implications for employers and employees CO3: Understand legal obligations of businesses towards consumers CO4: Demonstrate knowledge of negotiable instruments. CO5: Understand consumer protection laws and their implications
402:Digital Marketing (BBM)	CO1: Apply digital marketing in the globalized market CO2: Define Channels of Digital Marketing CO3: Design and develop Digital marketing plan CO4: Understand Search engine marketing CO5: Acquainted with Online Advertising
402:Market Research(BBA)	CO1: Apply a range of Quantitative and/or Qualitative Research Techniques to business and Management problems / issues CO2:Necessary critical thinking skills in order to evaluate different Research Approaches utilized in the service industries CO3:Identify the overall Process of designing a Research study from its inception to its Report. CO4-Define the Meaning of a variable, and to be able to identify independent, dependent, and mediating variables. CO5:Acquire familiarization with good practices in conducting a Qualitative Interview and observation
403:Financial Management (BBM)	CO1:Apply project appraisal methods to cash flows. CO2:Understand the determinants of capital structure CO3:learn about dividend practices of companies CO4:calculate working capital requirements of firms CO5: Student can communicate standard business terminology
403:Management Science(BBA)	CO1: Demonstrate the functions of Product Life Cycle CO2: Student learns the concept and various techniques of methods analysis and work measurement. CO3: Demonstrate the Economic Order Quantity, Selective Inventory Control Techniques: ABC- VED- FNSD & XYZ. CO4: student learns the Types of Operation Research Models, Linear Programming: Mathematical model- Formulation of LPP- assumptions underlying LPP. CO5: Student gains the knowledge of Types of Operation Research Models, Linear Programming: Mathematical model


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SEC-III Leadership and Management Skills	CO1: Student will understand and use the process of effective decision making CO2: Develop self-awareness and self-management skills CO3: Demonstrate effective interpersonal competence CO4: Examine various leadership models and understand/assess their skills-strengths and abilities that affect their own leadership style and can create their leadership vision CO5: Learn and demonstrate a set of practical skills such as time management- self management- handling conflicts- team leadership- etc.
SECC-IV Basic Quality Management	CO1: Students get to know about the evolution and importance of quality management. CO2: Helps the students get aware of various tools used for quality management in the organizations. CO3: Students will be able to know about the quantitative and qualitative techniques used to measure the effectiveness of quality management tools. CO4: Students will be able to use the six sigma applications for quality check. CO5: Students can understand the use of total quality management in various service organizations
Semester – V GE-I Mobile Commerce	CO1:Learn the fundamental principles of e-business and e-commerce. CO2:Understand the impact of information and communication technologies on business. CO3:Develop an understanding of the tools and services used by virtual e-commerce sites. CO4:Awareness of the developments in M-Commerce Applications CO5:Awareness of the developments in Wireless technology
SEC- 3 Personality Development	CO1: Demonstrate the personal and Social life CO2: Demonstrate the concepts of personality Development, Positive Attitude, Self Respect, Knowledge, Self Confidence, Thoughts, Organizational Efficiency.
501:Financial Market & Services	CO1:Understand what a financial system is and does, and the distinct functions of each component. CO2:Understand some important financial instruments and the economic principles underlying their use. CO3:Understand the classification of Leasing. CO4:Learn about the categories of Merchant Banking and their functions. CO5:Understand the process of IPO
501:Brand Management	CO1:Demonstrate knowledge of the nature and processes of branding which can attract customers CO2: Evaluate the scope of brand management activity to deal to customers. CO3: Appraise the key issues in managing a brand portfolio and making strategic brand decisions for effective marketing mix. CO4: Formulate and justify brand development decisions for a right brand image. CO5: Analyze contemporary brand related problems and develop appropriate strategies and initiatives to increase the brand equity
501:Organization Behaviour	CO1:Students would gain the conceptual clarity of OD and its process. CO2:Students would learn the concept of planned change in organizations. CO3:Students gets familiarized on various techniques and interventions of OD CO4:Learn about the OD consultation process CO5:Students will be able to use various applications of OD.
502:Analysis of Investment in Financial Assets	CO1:To make calculations for Risk Return of Individual Stocks CO2:To determine the Intrinsic Value of Bonds and also finding the YTM CO3:To determine the Intrinsic Value of Equity by applying different methods CO4:To apply the concept of diversification for portfolio valuation


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	CO5: Demonstrate the various portfolio theories and evaluation methods
502:Retail Management	CO1: Demonstrate the concepts of strategies of retailers. CO2: Explain the concepts of theories of Retail Development. CO3: Student is made aware of the practices of merchandise management and store layout of retailers CO4: Demonstrate the retail management practices in real world CO5: Explain the Role and functions of Channels of Distribution.
502:Performance Appraisal & Counseling	CO1: Students would gain the process of employee performance through HRD CO2: Students would be familiarized with the dimensions of performance appraisal and its effectiveness. CO3:Students gets familiarized on various techniques performance measurement CO4:Learn about the performance measurement methods and improvement strategies CO5:Students will be able know the about the various counselling methods for improving the Mental health of employees.
503:Insurance Services	CO1: Demonstrate the Insurances and its products CO2: Explain the types of Insurance CO3: Demonstrate the concepts of General Insurance CO4: Explain the concepts of Policy Documents CO5: Demonstrate the types of Policy Claims
503:Customer Relationship Management	CO1: Explain the importance of Customer involvement and relations with corporations. CO2: Explain the beneficial relations. CO3:Demonstrate the customer Relationship Management and Marketing Strategy. CO4: Explain the concepts of Campaign Management CO5: Demonstrate the implementation of CRM Road Map.
503:Compensation Management	CO1: Demonstrate the techniques and methods for competing employer. CO2: Explain the concepts of HR strategy and Plans. CO3: Demonstrate Designing Compensation System. CO4: Explain the concepts of Designing and Planning Benefit Program. CO5: Explain the concepts of Contemporary strategic Compensation Challenges.
GEII- Business Analytics	CO1:To understand the Business Analytics in practice CO2:To understand concepts of Descriptive Analytics CO3:To learn about Data mining for business CO4:To understand concepts of Prescriptive Analytics CO5:Explain the use of R environment
SEC-4 Business Intelligence & Data Visualization	CO1: Apply visualization techniques for various data analysis tasks. CO2: Presenting data through charts and maps CO3: Presenting the data through tables, graphs, scatter plots. CO4: Explain the Logical Functions CO5: Design information dashboard and animation.
601:Banking (F)	CO1:The learners will be able to apply necessary skills in managing a financial service company CO2:They will be able to apply financial concepts- theories and tools CO3:To evaluate the legal- ethical and economic environment related to financial services. CO4:Demonstrate the modes of Loans. CO5:Demonstrate the concepts of Negotiable Instrument.
601:Buyer Behaviour (M)	CO1: To Establish the relevance of consumer behaviour theories and concepts to marketing decisions


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	<p>CO2: To implement appropriate combinations of theories and concepts.</p> <p>CO3: Demonstrate the impact of culture on Buyer Behaviour.</p> <p>CO4: Demonstrate the steps between evaluation of alternatives and purchase decision</p> <p>CO5: Explain the basic model of Buyer Behaviour.</p>
601:Leadership & Change Management (RM)	<p>CO1:To enhance students' appreciation of challenges facing businesses and the importance of ethical principles.</p> <p>CO2: To Provide students with the analytical and managerial skills required.</p> <p>CO3: To analyze data to address business problems- manage risk.</p> <p>CO4: To identify and create new business opportunities.</p> <p>CO5: Demonstrate the concepts of leadership and types of culture.</p>
602:Risk Analysis and Management (F)	<p>CO1: Explain the Risk associated with Financial Institutions and helps to manage risk effectively.</p> <p>CO2: Demonstrate the guidelines of Reserve Bank of India</p> <p>CO3: Explain the concepts of Derivations</p> <p>CO4: Demonstrate the concepts of SWAP and its types</p> <p>CO5: Explain the concepts and scope of Financial Engineering</p>
602:Advertising and Sales Promotions (M)	<p>CO1: Explain the important of Advertisements for promotion of Products.</p> <p>CO2: Explain types of Advertisement</p> <p>CO3: Demonstrate the Media Planning and its types</p> <p>CO4: Demonstrate the theories of Personal Selling</p> <p>CO5: Explain the Sales Promotion and its types.</p>
602:Talent and Knowledge Management(HR)	<p>CO1: Demonstrate the various approaches to talent management in business organizations.</p> <p>CO2: Explain the concepts of Career Planning</p> <p>CO3: Demonstrate the various approaches to knowledge management in business organizations</p> <p>CO4:Explain the Knowledge and its Mechanism</p> <p>CO5: Explain the impact of Knowledge Management.</p>
603:International Finance(F)	<p>CO1: Demonstrate the theory of international Finance</p> <p>CO2: Explain the Balance of Payment</p> <p>CO3: Demonstrate the International Capital Markets</p> <p>CO4: Demonstrate the Derivatives Instruments</p> <p>CO5: Explain the concepts of Foreign Exchange</p>
603:Rural Marketing (M)	<p>CO1: Demonstrate the Rural behaviour and its factor</p> <p>CO2: Explain the buying decision process</p> <p>CO3: Explain the concept of Product Strategy and Product Mix Decision.</p> <p>CO4: Demonstrate the concept of Pricing and Promotion Policy.</p> <p>CO5: Demonstrate the Rural Distribution and its Electronic Applications.</p>
603:Employee Relation (HR)	<p>CO1: Demonstrate the Approaches of Industrial Relations</p> <p>CO2: Explain the Collective Bargaining</p> <p>CO3: Demonstrate and examines the relationship existing between employer and employee.</p> <p>CO4: Explain the concept of International Labour Organizations.</p> <p>CO5: Demonstrate the Wage Legislation and Administrations</p>

ANWARUL ULOOM COLLEGE

DEPARTMENT OF BIOTECHNOLOGY


B.Sc. (BT.MC) 2022-2023

- **Programme Outcomes (General)**

PO1.	Critical Thinking: Apply critical thinking and enhance learning in the three major subjects of their choice with scientific reasoning and analytical skills.
PO2.	Problem solving: Think logically and organize task into a structured form for problem solving by applying the knowledge of basic science.
PO3.	Effective communication: To develop the ability of effective communication of scientific information in written and oral format.
PO4.	Individual and team work: Function effectively as an individual and as a member or leader in diverse teams and in multi-disciplinary settings.
PO5	Ethics: Apply ethical, moral and social values in personal and professional life leading to holistic development of the individual.
PO6.	Environment and sustainability: Develop interdisciplinary approach to provide better solution and innovative ideas for sustainable development and conservation of natural resources.
PO7.	Self-directed and lifelong learning: Recognize the need for and have the ability to engage in independent, lifelong learning and adapt to technological changes to be globally competent.


- **Programme Objective (General)**

PO1	To make our students competent in the field of biotechnology and its allied areas.
PO2	To inculcate the capability to work as entrepreneurs and techno managers with strong ethics and communication skills.
PO3	To equip the students to pursue higher education and research in reputed institutes at national and international level
PO4	. To develop a working knowledge of biotechnology product and processes.


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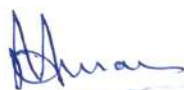
• **Programme Specific Outcome (General)**

PSO -1	Student is empowered with knowledge of disciplinary and interdisciplinary aspects of Biotechnology.
PSO - 2	Develops critical thinking and is able to apply appropriate tools and techniques in Biotechnological manipulation.
PSO - 3	Develops an ability to justify social, health, safety, legal issues and understand the responsibility towards ethical practices in biotechnology
PSO - 4	Acquire laboratory skills necessary for Biotechnology research, gains practical and theoretical knowledge in Biological chemistry, Structure and functions of carbohydrates, proteins and lipids.
PSO - 5	Acquires knowledge on fundamentals of Microbiology, basic concepts of Prokaryotes, Eukaryotes and different branches of Microbiology.
PSO - 6	Gains an insight into various aspects of Immunology, Virology and realizes the principles of prevention and treatment of microbial diseases
PSO - 7	Grasps the fundamental aspects in the field of Environmental Microbiology and Quality sustenance in industry.
PSO - 8	Understands the concepts and application aspects of Microbiology in Food and Dairy industry, production of metabolites and bioinoculants
PSO - 9	Students can effectively translate the metabolic processes in biological research
PSO - 10	Acquire methodical and logical understanding of the fundamental concepts in Physical, Organic, Inorganic, Analytical and all other integrated Chemistry subjects
PSO - 11	Achieve the ability to synthesize, separate, estimate and characterize compounds using experimental and instrumentation techniques
PSO - 12	Develop critical thinking and problem solving skills through solving by adopting research based pedagogical tools


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• **Course Objective (B.Sc. Biotechnology)**

1	Semester I Cell Biology and Genetics	To comprehend the Mendelian Genetics principles in human, plants and animals. Understand the basic aspects of intracellular organization of Eukaryotic cell.
2	Semester II Nucleic acid, Biostatistics and Bioinformatics	To understand the structure of Nucleic acid. To understand the significance of sampling and data alignment and to deal with computational Biology.
3	Semester III Biological Chemistry	To understand the carbohydrate classification. To comprehend metabolism of lipids, nucleic acid and amino acids.
4	Semester IV Microbiology and Immunology	To learn about Viruses, Algae, Fungi, Protozoa. To learn about the general characteristics of Immune System.
5	Semester VA - Molecular Biology	Deals with nucleic acids and proteins and how these molecules interact. It emphasizes the molecular mechanism of DNA replication, repair and protein synthesis.
6	Semester VB- r.DNA Technology	To know the technologies-cloning and DNA sequencing. It is used to identify, map and sequence genes.
7	Semester VI A and B- Microbial Technology	It imparts fundamental knowledge of metabolic reactions in Bacterial cell; their growth and development and relevance to applied microbiology.


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- **Course Outcome (B.Sc. Biotechnology)**

CO - 1	Semester I Cell Biology and Genetics	Ability to apply Mendelian inheritance principles to humans, plants and animals
CO - 2	Semester II Nucleic acid, Biostatistics and Bioinformatics	Understanding the basics of enzymology. Help in derive inferences based on statistical comparison
CO - 3	Semester III Biological Chemistry	Acquaintance with carbohydrate metabolism and networks.
CO - 4	Semester IV Microbiology and Immunology	Understanding the basics of microbiology and microbial classification and immunology
CO - 5	Semester VA - Molecular Biology	To provide with core principles of molecular biology. It gives the student deep knowledge of biological and medicinal processes through the investigation of underlying molecular mechanisms.
CO - 6	Semester VB- r.DNA Technology	To learn the application of recombinant DNA in basic research. To learn about medicinally useful recombinant products
CO - 7	Semester VI A and B- Microbial Technology	Illustrate basic techniques in microbiology and microbial physiology.


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ANWARUL ULOOM COLLEGE

DEPARTMENT OF BIOTECHNOLOGY

M.Sc. Biotechnology 2022-2023

- Programme Outcomes (General)

PO – 1	Develops an understanding of scientific theory principles and perspectives in sciences by critical thinking.
PO – 2	Develops problem solving skills and is able to design and carry out innovative research projects.
PO – 3	Communicates effectively, comprehends knowledge, writes effective reports, designs documentation and makes effective presentations.
PO – 4	Functions effectively as an individual, as a member and leader of diverse teams in multidisciplinary settings for Holistic development.
PO – 5	Applies ethical principles and is committed to professional ethics, responsibilities in the field of research, is able to design, analyse, interpret data and find solutions for complex problems by applying the right tools. This study provides an excellent bridge between undergraduate study and Ph.D research.
PO – 6	Realizes and promotes environmental sustainability through various eco-friendly measures that encourage judicious use of resources.
PO – 7	Postgraduate studies boosts the self directed career progress and outline the career paths. It improves the ability to tackle complex and challenging assessment tasks and helps in lifelong learning to be globally competent.
PO - 8	Takes up responsibilities in production, quality testing, designing and marketing which contribute to the growth of industry and thus increases employability.



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• **Programme Objective (General)**

1	Recapitulate the previous knowledge of cell biology and to establish thorough understanding of various cell structure and function at molecular level.
2	Provide a thorough understanding of the various molecular biology concepts in study of cell biology and to study the different tools and techniques used to study the biology of cell at molecular level
3	Provide students with a deep insight about the motility of the cell with emphasis on the molecular motors, cell adhesions, molecular biology involved in the movement process involved in movement of Cilia and Flagella.
4	Teach our students to have a concrete knowledge about cell to cell communication in animals as well as plants and to study about the basis of the interaction as well as the genes involved in it.
5	Acquire in-depth knowledge of the molecular events involved in cell division which includes mitosis, meiosis, cell cycle and its regulation. Including. To provide wider and global perspective of cell cycle regulation and cancer, with an ability to discriminate, evaluate, analyse and synthesise existing and new knowledge, and integration of the same for enhancement of knowledge.

• **Programme Specific Outcome (General)**

PSO 1	Acquires and demonstrates competency in laboratory safety. Develops routine and specialized microbiological laboratory skills applicable to research, hospitals and industries
PSO 2	Applies statistical and bioinformatics tools for interpretation of biological data and gains expertise in Computational Biology.
PSO 3	Acquires knowledge of structural and enzymatic properties of microbes and fermentation engineering, to develop human / environment friendly products or processes.
PSO 4	Gets familiarized with principles and techniques of various basic and analytical instruments used in laboratories
PSO 5	Recognizes the importance of IPR and Patenting. Gain Entrepreneurial skills to initiate StartUp.
PSO 6	Gets trained in bimolecular mechanisms involved in life processes, health and diseases.
PSO 7	Gains proficiency in related disciplines such as Molecular Biology, Pharmaceutical Sciences, Nan biotechnology and Immunology.
PSO 8	Explores the life forms at cellular, molecular and nano levels. Understands amazing properties of microbial world and appreciates the beauty of microbial life forms.
PSO 9	Assesses the role of microbes in improving soil quality and agricultural output through sustainable microbiological applications.
PSO 10	Work as Health care professionals in the fields of laboratory management, hospital and community services, in development & preparation of Study material for visually challenged


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• Course Objective (M.Sc. Biotechnology)

SEMESTER - I		
1	Cell Biology and Genetics	<ul style="list-style-type: none"> Obtain basic knowledge of hierarchical structure and organization of chromosomes, insight into chromosomal anomalies and learn the science behind genemapping in eukaryotes.
		<ul style="list-style-type: none"> To comprehend the biochemical and molecular processes of cell division and cell death.
2	Biological Chemistry	<ul style="list-style-type: none"> To learn the cellular signally proccess.
		<ul style="list-style-type: none"> To understand the carbohydrates classification and metabolism.
		<ul style="list-style-type: none"> To comprehend metabolism of Lipids, Nucliec acids and Amino acids.
3	Microbiology	<ul style="list-style-type: none"> To learn about general characteristics of Bacteria: Bacterial isolation ,growth.culturing and preservation,.isolation.
		<ul style="list-style-type: none"> to learn about general characteristics of microorganisms, microscopy,sterilization,containment.
4	biostatistics, laboratory management and safety ,entrepreneurship	<ul style="list-style-type: none"> To understand the concept of applying appropriate test statistics
		<ul style="list-style-type: none"> to know the importance of entrepreneurship.
		<ul style="list-style-type: none"> To learn laboratory management and safety.

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SEMESTER - II		
1	Molecular Biology- The Genome	It is the study of cell, their structure, function, growth and chemical process. It helps in depicting genomic organization.
2	Molecular Biology- Genes to Protein	It helps in determining the function of genes and elements that regulate genes throughout the genome.
3	Immunology	It helps in studying important factors related with the treatment of many diseases. Development of auto antibodies against self antigens of various diseases
4	Microbial Techniques	To study the growth phases of micro-organisms and different types of growth media available to culture them. It helps to study about the preparation of pure culture.

Semester - III		
1.	r.DNA Technology	It helps to identify, map and sequence genes and to determine their function. It is used for different purposes like in research, medical, agriculture and industry.
2.	Bioinformatics	It helps to deal with computational management and analysis of biological information.
3.	Food Biotechnology	To study the fundamental, Physical, Chemical and Biochemical nature of foods. To study about principles of food processing.
4.	Animal Biotechnology	To study about the set of Biological tools and techniques used in animals for the development of products of commercial value.


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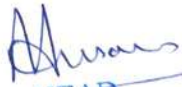
SEMESTER - IV

1.	Bioprocess Engineering	It deals with design and development of equipments and processes for the manufacture of products like agriculture, food, pharmaceuticals etc...
2.	Medical Biotechnology	To study how living cells are used for research and production of pharmaceutical and diagnostic products that can treat and prevent human diseases.
3.	Environmental Biotechnology	To study about conservation of rareness by recycling of wastes. To study about environmental problems like detection of pollutants, elimination and detection of wastes.
4.	Project Work	To demonstrate the personal skills required to produce and present an extended piece of work. The students learn to choose relevant techniques.


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• **Course OUTCOMES (M.Sc. Biotechnology)**

SEMESTER - I		
1.	Cell Biology and Genetics	<ul style="list-style-type: none"> • Comprehend the cellular architecture and processes. • Ability to apply Mendelian inheritance principles to humans, plants, animals. • Knowledge regarding the basic mechanisms underlying cell division and cell death.
2.	Biological Chemistry	<ul style="list-style-type: none"> • Understanding of how cells communicate and carry out Physiological processes. • Understanding the basics about bimolecular ,Bioenergetics and enzymology
3.	Microbiology	<ul style="list-style-type: none"> • To culture different bacteria and know how to preserve them. • Understanding the basics of Microbiology and Microbial classification.
4.	biostatistics, laboratory management and safety ,entrepreneurship .	<ul style="list-style-type: none"> • Good Laboratory Practices • How to be a successful entrepreneur • Learn to estimate appropriate descriptive measures for a date in a given study design.


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SEMESTER - II

1.	Molecular Biology- The Genome	The subject gives in depth; knowledge of biological process through the investigation of molecular mechanism.
2.	Molecular Biology- Genes to Protein	The subject helps to form a research career in Molecular Biology or related areas
3.	Immunology	Students can learn about the latest research and development being carried out in Biotechnology and related areas.
4.	Microbial Techniques	Students can use micro-organisms to produce products of economic value and to decompose municipal and industrial wastes.


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SEMESTER - III		
1.	r.DNA Technology	It enables the creation of multiple copies of genes and gene manipulation.
2.	Bioinformatics	It helps the student to understand and organize the information associated with molecules on a large scale
3.	Food Biotechnology	Students learn about preservation, processing, packaging and distribution of food. Individuals can learn about sensory properties of food.
4.	Animal Biotechnology	Students can learn about Animal cell, tissue and organ culture techniques like IVF and Embryo transfer.

SEMESTER – IV		
1.	Bioprocess Engineering	Students learn to evaluate the cultivation, enrichment and growth prevention method of microbes. They can learn to judge how microbes and enzymes could be applied in industry.
2.	Medical Biotechnology	Students can learn about genetic disease and relate them to medical experience. They learn of gene therapy.
3.	Environmental Biotechnology	Students learn to keep the environment clean, to develop environmental friendly products and improve energy sources.
4.	Project Work	Students learn to show enthusiasm and commitment to the task. They learn to show overall perspective related to chosen topic.



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DEPARTMENT BOTANY



Vision & Mission	Botany Programme Outcomes (General) (11 Points)
<p>VISION <i>With an emphasis on plants and their habitats, our mission is to provide cutting-edge Research, instruction, and outreach on the patterns and processes of life.</i></p> <p><i>In light of this, we seek to offer a solid foundation in every facet of botany and to explain a wide range of contemporary trends in the Field.</i></p> <p>MISSION <i>The main goal of education is to teach scientific information. To instil in children a scientific mindset that fosters open-mindedness, skepticism, and curiosity.</i></p> <p><i>To become familiar with the variety of life forms. To educate people about the value of talking about the environment and natural resources.</i></p> <p><i>To cultivate the capacity to practically apply learned skills to make our nation independent and self-sufficient.</i></p>	<p>PO-1: This program is based on Project-based Learning and is Research oriented. The topics in Cytogenetics are based on Recent and high-level Research. Students will learn and acquire knowledge of Recent Developments in the Field of Botany.</p> <p>PO-2: Students gain practical experience in evaluating plant morphology and anatomy, plant identification, and tools for vegetation study.</p> <p>PO-3: Utilize their knowledge to protect endemic and threatened plant species.</p> <p>PO-4: The part that plants play in the global ecosystem's ability to operate.</p> <p>PO-5: Enhances skills in Handling Scientific instruments and learns planning and executing Plant Based Research.</p> <p>PO-6: Knowledge of plant diversity and its role in preserving ecological balance</p> <p>PO-7: After graduation, students can join as scientists and even look for professional job-oriented courses.</p> <p>PO-8: Science graduates can go to serve in industries or may opt for establishing an industrial unit.</p> <p>PO-9: Recognize the need for and have the ability to engage in independent, lifelong learning and adapt to technological changes to be globally competent.</p> <p>PO-10: It helps develop a scientific temper and can be more beneficial for society as scientific developments can make a nation or society snowball.</p> <p>PO-11: By the end of the course, a student will be able to comprehend various topics in botany, including taxonomy, evolution, ecology, physiology, plant interactions with microbes and insects, morphology, anatomy, reproduction, genetics, and molecular biology of numerous living forms.</p> <p>Programme Outcomes (Specific) (2-3 Points)</p> <p>PSO-1: The students are competent at working in teams to complete projects in the life sciences.</p> <p>PSO-2: Students integrate their medicinal and economic botany skills into their daily lives.</p>

PSO-3: Learners elucidate the concepts of biodiversity, climate change, and plant pathology.

Course Outcomes (3-5 Points)

CO-1: With a focus on plants, students can recognize the main evolutionary groups of species and classify them within them. Students will be able to compare and contrast the traits that set plants, algae, and fungi apart from other types of life.

CO-2: Students will learn how to use morphology in plants' classification, identification, and nomenclature. Students gain knowledge of plant collection and preservation methods and Field plant identification.

CO-3: Students Understand the range of paleobotany, the diverse types of fossils, the significance of these to the world economy, and the geological time scale.

CO-4: Learners Learned about sex-linked inheritance, determining sex, cytoplasmic inheritance, linkage and crossing over, chromosomal aberration, polyploidy, and mutations. Recognize the muton, recon, and cistron concepts and the chemistry of the nucleus, including chromosomes.

CO-5: Students also explore the practical applications of biotechnology, with an emphasis on (a) hormone synthesis, (b) monoclonal antibodies, (c) and resolution of parentage disputes (DNA-fingerprinting), (d) Transgenic vegetation

ANWARUL ULOOM COLLEGE (AUTONOMOUS)
(Affiliated to Osmania University)
Accredited by NAAC with 'A' Grade
New Mallepally, Hyderabad – 500001, T.S, India

DEPARTMENT OF COMMERCE

Objectives & Outcomes

Academic year 2022-2023

FIRST YEAR

I-Semester

Sl. No.	Subjects	Objectives	Outcomes
1	Financial Accounting – I	1.The objective of this course is to introduce problems of financial accounting such as measuring and reporting issues related to assets and liabilities and preparing the financial statements. Students are expected to gain the ability of using accounting information as a tool in applying solutions for managerial problems, evaluating the financial performance, and interpreting the financial structure.	<ol style="list-style-type: none"> 1. Acquire conceptual knowledge of basics of accounting. 2. Identify events that needs to be recorded in the subsidiary books 3. Identify and analyze the reasons for the difference between cash book and pass book balances. 4. Recognize circumstances providing for increase exposures errors and frauds. 5. Equip with the knowledge of accounting process and preparation of final accounts of sole trader
2	Business Organization	<ol style="list-style-type: none"> 1. To Understand the concepts related to Business. 2. To equipt the knowledge about joint stock company. 3. Demonstrate the roles, skills and functions of management 4. Organise and present information to a satisfactory standard in oral presentations, essays and reports. 5. Understand the complexities associated with management 	<ol style="list-style-type: none"> 1. Identify the legal documents necessary to form a sole proprietorship, partnership, limited partnership and a limited liability. 2. To familiarize company and documents required to start a business. 3. To develop knowledge about evolution of management thoughts. 4. To understand better understanding the functions of management. 5. To give an idea about planning and organising logistics.
3	Foreign Trade	<ol style="list-style-type: none"> 1. To equip the students with introduction to Foreign trade. 2. To impart knowledge about BOT & BOP. 3. To know about Indian Trade Policy. 4. To impart knowledge about foreign trade & trade blocs 5. To know about International Economic Institutions 	<ol style="list-style-type: none"> 1. To provide knowledge about foreign trade. 2. To provide knowledge about BOT & BOP. 3. To introduce about Indian trade policy. 4. To provide knowledge about trade blocs. 5. To gain knowledge about international economic institutions.
4	Information Technology	<p>The objective is to introduce IT in a simple language to all undergraduate students, regardless of their specialization.</p> <p>It will help them to pursue specialized programs leading to technical and professional careers and certifications in</p>	<ol style="list-style-type: none"> 1. Basic concepts and terminology of information technology. 2. Basic understanding of personal computers and their operations. 3. Basic understanding of using software's 4. Basic understanding of Operating systems

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		<p>the IT industry. The focus of the subject is on introducing skills relating to IT basics, computer applications, programming, interactive medias, Internet basics etc</p>	<p>5. Basic understanding of Data Communication by using MS.DOS, MS.Excel, MS. Word and MS PowerPoint</p>
	<p>Introduction To International Business</p>	<p>An understanding of international business is essential for students in today's interdependent global world.</p> <p>2. This course will provide students with the knowledge, skills, and abilities to understand the global economic, political, cultural and social environment within which firms operate. It will examine the strategies and structures of international business and assess the special roles of an international business's various functions. It will also prepare students to formulate and execute strategies, plans, and tactics to succeed in international business ventures.</p>	<p>1. Understand the most widely used international business terms and concepts.</p> <p>2. Identify the role and impact of political, economical, social and cultural variables in international business.</p> <p>3. Analyze international business from a multi-centric perspective. avoiding ethnocentric.</p>
	<p>Marketing Management</p>	<p>1. To understand the concepts of marketing management</p> <p>2. To learn about marketing process for different types of products and services</p> <p>3. To understand the tools used by marketing managers in decision situations</p> <p>4. To Understand the marketing environment.</p>	<p>1. Students will demonstrate strong conceptual knowledge in the functional areas of marketing.</p> <p>2. Students will demonstrate effective understanding of relevant topics related to consumer, product and application of computers in marketing management.</p> <p>3. Students will display analytical skills in identification and resolutions of problems pertaining to marketing management.</p>
7.	<p>Income Tax -I</p>	<p>1. To equip the students with introduction to income tax</p> <p>2. To impart knowledge about agricultural income</p> <p>3. To know about income from salaries & house property</p> <p>4. To impart knowledge about profits and gains of business or profession.</p>	<p>1. To provide knowledge about income tax.</p> <p>2. To provide knowledge about agricultural income</p> <p>3. To introduce about Income from salary & house property.</p> <p>4. To gain knowledge about profits and gains of business or profession.</p>



ANWARUL ULOOM COLLEGE (AUTONOMOUS)

(Accredited by NAAC with 'A' Grade & An ISO 9001:2015 Certified Institution)

(Affiliated to Osmania University, Hyderabad)

Ref. No.

Date: _____

PROGRAM REPORT

Program Name : CRYPTO CURRENCY – ITS IMPACT ON INDIAN ECONOMY”

Date of activity : 27 July, 2022 Time : 10:30 Onwards

Venue : R J P Hall

Organised By : Department of Commerce

Number of Participants: Faculty 21 Students: 27

This seminar was co-hosted by The Department of Commerce and Limra Degree College, Habeeb Nager, Hyderabad, based on MOU between the colleges.

Objectives of the seminar:

1. The main objective of this seminar to introduce problems of traditional currencies.
2. The other objective being to introduce about security wallets and exchanges.
3. The objective of this seminar is to introduce about investment frame work and how to manage risk in the current scenario.

Outcomes of the program:

1. Upon Completion of this seminar students will be able to understand crypto currencies.
2. The participants will be able to invest in crypto currency for long term investments in bitcoins.
3. The audience will understand the pros and cons of crypto currency.

Program Co-ordinator

HOD

11-3-918, New Mallepally, Hyderabad – 500 001. Telangana State, INDIA.

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FIRST YEAR

II-Semester

Sl. No.	Subjects	Objectives	Outcomes
1	Financial Accounting -II	The main objective of the course is to study in depth the rules for compiling the financial information reflected in the financial statements, so that they may become a useful tool for decision-making in business. In order to achieve this, students must dominate the methodological foundations of Accounting, the tools of technical accounting and elementary measurement standards.	<ol style="list-style-type: none"> 1. Appreciate the need for negotiable instruments and procedure of accounting for bills honored and dishonored. 2. Understand the concept of Consignment and learn the accounting treatment of the various aspects of consignment. 3. Distinguish Joint Venture and Partnership and to learn the methods of maintaining records under Joint Venture 4. Distinguish between Single Entry and Double Entry. 5. Understand the meaning and features of Non-Profit Organizations.
2	Business Laws	<ol style="list-style-type: none"> 1. To equip the students with introduction to Indian contract act. 2. To impart knowledge about sale of goods act and consumer protection act 3. To know about providing guidance on intellectual property rights 4. To enhance students determination in management of companies and meetings 5. To develop knowledge about winding up. 	<ol style="list-style-type: none"> 1. To provide knowledge about Indian contract act. 2. To provide knowledge about sale of goods act and consumer protection act. 3. To introduce about intellectual property rights 4. To provide knowledge about management of companies and meetings. 5. To gain knowledge about winding up of companies
3	Banking And Financial Services	<ol style="list-style-type: none"> 1. To equip the students with introduction to banking. 2. To enable the students about Banker And Customer Relationship 3. To provide knowledge about Negotiable Instruments: 4. To equip the students with Introduction To Financial Services 5. To gain knowledge about financial services. 	<ol style="list-style-type: none"> 1. To provide knowledge the students about the concepts of banking. 2. To know about banker and customer relationship. 3. Acquire the knowledge about negotiable instruments 4. Acquaint the students about Financial Services.

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4	Programmi ng with C	This course is designed to provide complete knowledge of 'C' Language. Students will be able to learn and develop logics which will help them to create programs, applications in C	Student will learn 1. To create Flow chart basic structure of C program, Algorithms and basic programming skills 2. Control structures for looping in the programs. 3. Define functions and different types of functions 4. Developing programs using Arrays 5. Ability to develop programs using Pointers 6. Understand the difference between the top-down and bottom-up approach 7. Describe the object-oriented programming approach in connection with C++ 8. Illustrate the process of data file manipulations using C++
5.	Export Marketing	<ol style="list-style-type: none"> 1. To understand the basic concepts and features of Export Marketing. 2. To learn about the Marketing Environment Organization and policies are formulated for export. 3. To learn new product planning and pricing 4. To understand the different sources of Export Finance. 	<ol style="list-style-type: none"> 1. The display the ability to apply the fundamentals of marketing for Export Business and solve problems of Export Marketing. 2. To analyze the barriers and select the particular market for export business 3. To explore and select the best available distribution channel abroad.
6	Fundament als of Advertising	<ol style="list-style-type: none"> 1. Understand what advertising is and its role in advertising and brand promotion and the direct marketing 2. Understand the structure of the advertising industry. 3. Be able to identify, analyze, and understand the advertising environment. 4. Be able to prepare the advertising message and fully integrate the creative process. 	<ol style="list-style-type: none"> 1. To understand and analyze the economic effects and social effects advertising. 2. Understand the importance of placing the message in conventional and "new" media. 3. Be able to identify, understand, and apply integrated brand promotion. 4. To understand the effects of Ethics in advertising.
7	Income Tax-II	<ol style="list-style-type: none"> 1. To equip the students with introduction to capital gains. 2. To impart knowledge about income from other sources. 3. To know about clubbing and aggregation of income. 4. To impart knowledge about assessment of individuals & assessment procedures. 	<ol style="list-style-type: none"> 1. To provide knowledge about capital gains. 2. To provide knowledge about income from other sources 3. To introduce about clubbing and aggregation of income. 4. To gain knowledge about assessment of individuals & assessment procedures.
8.		The student will be able to understand terms related to database design. Understanding the objectives of database development process. Define the	<ol style="list-style-type: none"> 1. Describe DBMS architecture, physical and logical database designs, database modeling, relational, hierarchical and network models. 2. Identify basic database storage

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	Relational Database Management System	relational model and relational database management system	structures and access techniques such as file organizations, indexing methods including B-tree, and hashing. 3. Learn and apply Structured query language (SQL) for database definition and database manipulation. d) Demonstrate an understanding of normalization theory and apply such knowledge to the normalization of a database. 4. Write sub queries and understand their purpose 5. Understand Data selection and operators used in queries and restrict data retrieval and control the display order
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SECOND YEAR- III Semester

Sl. No.	Subjects	Objectives	Outcomes
1.	Advanced Accounting	<ol style="list-style-type: none"> 1.To acquire accounting knowledge of partnership firms 2.To acquire accounting knowledge of Dissolution and Insolvency of Partnership firms 3.To acquire the knowledge of issue of shares and debentures 4.To acquire the accounting knowledge of company final accounts 5.To know the accounting knowledge of Goodwill and shares 	<ol style="list-style-type: none"> 1. The students are well equipped with partnership Accounts 2.The students are aware of issue of Shares Debentures 3.The students are well equipped with company final accounts 4.The students able to know valuation of Goodwill and Shares
2.	Business Statistics	<ol style="list-style-type: none"> 1.Student is able to describe methods of collection of data 2.Analyze Statistical Data Graphically using frequency distribution and cumulative frequency distribution. 3.Analyze statistical data using measures of central tendency 4.Understanding Concept of Symmetrical distribution 5.Understand the Concept of Correlation and the difference between positive and negative correlation 	<ol style="list-style-type: none"> 1. Students will able to do classification and tabulation of data. 2. Able to construct graphical presentation by using different techniques 3. Calculate and Interpret measures of central tendency(mean, median, mode) for set of data 4. Students will able to calculate and describe skewness and Kurtosis as measures of non symmetry and diverging from normality 5. Students will able to calculate correlation coefficient using different formulas to describe how two variables correlate with one another.
3	Financial Institution And Markets	<ol style="list-style-type: none"> 1. To enrich student's understanding of the fundamental concepts and working of Indian financial system. 2. To equip students with the knowledge of financial institutions. 3. To acquire the knowledge of money market. 4. To know about the debt Market, Government Securities, Bonds etc. 5. To acquire the knowledge about equity market. 	<ol style="list-style-type: none"> 1. To apply an economics perspective to the study of financial assets and institutions 2. Students will able to do to about Indian money market and debt market. 3. To acquire an understanding of various concepts related to equity market.
4.	Relational Database Management System	<ol style="list-style-type: none"> 1. Understand the Basic Concepts and Applications of Database System 2. Understand the Normalization 	<ol style="list-style-type: none"> 1.Demonstrate the Basic Elements of a Relational Database Management System 2.Extend Normalization for the

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		<p>Roles</p> <ol style="list-style-type: none"> 3. Master the Basics of SQL and Constraint Queries using SQL 4. Understand Relational Database Security and Recovery Issues 5. Familiar with Database Structures and Access Techniques 	<p>Development of Application Software.</p> <ol style="list-style-type: none"> 3. Design Entity Relationship and Convert Entity Relationship Diagrams into RDBMS and Formulate SQL Queries 4. Demonstrate the Understanding of blocking protocols 5. Students are able to Demonstrate Different Structures of Databases
5	International Business Procedures & Documentation	<ol style="list-style-type: none"> 1. To acquaint the students with the trade practices, procedures and documentation of International Trade. 2. To acquaint the students with International trade terms and Export payment terms 3. To know about sources and scheme of trade finance 4. To know about credit risk management 5. To know about central excise clearance 	<ol style="list-style-type: none"> 1. The students are well equipped with FEMA 2. The students are well equipped with sources and schemes of Trade finance 3. The students are aware with credit risk management and EIA
6	Media Management	<ol style="list-style-type: none"> 1. To know about the Importance of media management and cover new aspects of communication and media 2. To develop new insights in media research of mass media and Audit Bureau of Circulation 3. To understand different forms of media mix and media strategy. 4. To develop skills in media budgeting, buying & scheduling 5. To understand that how developments in international marketing in creating effective communication 	<ol style="list-style-type: none"> 1. The students were able to learn importance of media management, aspects of communication and media and its research. 2. The students were able to learn about media mix and its strategy . 3. The students were able to develop skills in media budgeting, buying & scheduling 4. The students were able to understand that how developments in international marketing in creating effective communication international marketing 5. Explain relationship and differences between marketing research and marketing information systems. 6. After completing the syllabus the students are confident about their employment opportunities to work at prestigious companies like JP MORGAN, AMAZON, APPLE. and much more.

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7	ASSESSMENT OF OTHER ENTITIES	<ol style="list-style-type: none"> 1. To explain Students to understand a concept of assessment of HUF 2. To prepare students to know about partnership firms and assessment u/s 184 and 185 <p>To provide knowledge to student how to treat a partnership firm as association of persons and how to assess them</p> <ol style="list-style-type: none"> 4. To provide knowledge to students regarding assessment of companies 5. To give information and knowledge to students how to assess co operative societies and trust 	<ol style="list-style-type: none"> 1. Student is able to compute HUF Tax liabilities 2. Students are able to understand how to compute partnership firms income u/s 184 & 185 3. Student know how to apply various provision while assessing a partnership firm as association of persons 4. Students are able to assess different types of companies 5. Students are able to assess co operative societies and trust.
8	PROGRAMMING WITH C	<ol style="list-style-type: none"> 1. Understand the concept of the programming, types of languages, structure of a c programme, variables and data types 2. Understand the concept of a loop – that is, a series of statements which is written once but executed repeatedly- and how to use it in a programming language 3. Be able to use an array to store multiple pieces of homogeneous data, and use a structure to store multiple pieces of heterogeneous data 4. Write and use functions, and understand how function calls are carried out, including passing parameters 5. Program effectively with pointers, arrays, structures, and dynamically allocated 	<ol style="list-style-type: none"> 1. Ability to define variables and data types and execute a c programme. 2. Ability to define loops in the programme. 3. Ability to work with arrays of complex objects. 4. Ability to write programmes using functions. 5. Ability to define and manage data structures based on problem subject domain.

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SECOND YEAR- FOURTH SEMESTER

Sl. No.	Subjects	Objectives	Outcomes
1.	Income Tax	<ol style="list-style-type: none"> 1.To know and understand the concept of Income Tax 2.To know about salary income and tax levy it 3.To provide knowledge of income from use properties 4.To provide knowledge to students regarding income earned from business and profession and tax provision pertaining to it 5. To know information and knowledge on capital gains and other sources of income of an individual 	<ol style="list-style-type: none"> 1. The Students are able to understand the incidence of taxes. 2. The Students are able to work out computation of tax under the head of salaries 3. The Students are able to know how to apply various provision while computing income from salaries. 4. Students are able to calculate income from business and profession and tax liabilities 5. Students are able to work out problems by computing capital gains and other sources of income and tax liabilities
2	Business Statistics-I	<ol style="list-style-type: none"> 1. Student is able to understand a simple linear regression and multiple linear regression 2. To define the index number and explain its used and methods 3. Student will equip with various forecasting techniques and knowledge on modern statistical methods for analyzing time series data 4. Studying the theoretical foundation of probability theory 5. Able to solve problems related to discrete and continues probability distribution. 	<ol style="list-style-type: none"> 1. Student is able to compute regression coefficient and fit a regression line to a set of data. 2. Students are able to construct index numbers 3. Student know how to apply various forecasting methods which includes obtaining the relevant data and carrying out the necessary computation 4. Students are able to calculate probabilities by applying probability loss and theoretical results. 5. Students can apply selected probability distribution to solve problems
3	Corporate Accounting	<ol style="list-style-type: none"> 1. To know and understand the concept of liquidation and solve problems 2. To know about amalgamation procedure and solve the problems 3. To know how companies reconstruct themselves and acquire other businesses, to solve the problems 4. To know regarding Banking business and maintaining the books of accounts 5. To know the information and knowledge to students how insurance business runs in India and maintain books of accounts 	<ol style="list-style-type: none"> 1. Students are able to understand the company's liquidation and solve problems of this unit. 2. Students are able to solve problems on amalgamation of this unit 3. Students know how to apply various provision while solving problems on these topics 4. Students are able to calculate profits of banking companies and maintain books of Accounts. 5. Students are able to learn the maintenance of insurance company's accounts
4	Web Technologies	<ol style="list-style-type: none"> 1. Introduction to basics of HTML. 2. Learn the language of the CSS and CSS grid layout. 3. Develop basic programming skills using 	<ol style="list-style-type: none"> 1 To learn technologies that makes the web pages and publishing them. 2. Make the web pages more

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		<p>Java script.</p> <ol style="list-style-type: none"> 4. To incorporate event handlers in a web page. 5. To understand the XML basics 	<p>dynamic and interactive using CSS</p> <ol style="list-style-type: none"> 3. Client side scripting likeHTML, JavaScript and server side scripting 4. The students can create dynamic web pages. 5. The students learn about XML basics and program the server side.
5	Marketing Research	<ol style="list-style-type: none"> 1.To know the marketing and its importance through research dynamics in Indian scenario. 2.To know. the research problem and purpose. be well balanced and the multiple interpretations, so that. researchshould be clear and focused. 3.To know the importance of collecting accurate information, define the type of information sought and understand the sources of gathering it 4.To know The Market Research Application (MRA) is an intuitive point-and-click interface that provides statistical and graphical techniques for market research data analysis. 5. To know how to identify emerging markets, why they're attractive to investors, and what to watch for. 	<ol style="list-style-type: none"> 1. Define the basic concepts related to marketing research and contemporary marketing research 2.Explain relationship and differences between marketing research and marketing information systems. 3. Interpret development of marketing research and process. 4. Evaluate the corporate public relations and tools and apply a research in the marketing area. 5. Code the data, Analyze the data and arrange a marketing research report.
6	Customs Procedure and Practice	<ol style="list-style-type: none"> 1. To explain Students about customs act and its important terms 2. To provide information to students of different types of duties and its procedure 3. To provide knowledge to student about goods and procedure of duty drawback 4. To provide knowledge to students regarding different customs officers penalties and exemption on different goods 5. To give information and knowledge to students about export policy and its promotion 	<ol style="list-style-type: none"> 1.Student is able to understand regarding customs act 2.Students are able to understand how the customs duty imposed 3.Student know regarding term goods and procedure of duty 4.Students gets knowledge of different customs officers their duties and how they imposes penalties and what are exempted goods 5.Students are able to know about Indian export policy and export promotion

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7	Object Oriented Programming with C++	<ol style="list-style-type: none"> 1. Understanding oops concepts. Structure vs Object oriented programming 2. Understand the concept of Constructors and Destructors 3. Understand the concept of overloading of functions derived classes and Reusability of functions 4. Define the concepts of Polymorphism virtual functions 5. Understand the concepts of exceptions in C++, lists and queues 	<ol style="list-style-type: none"> 1. Students are able to write c++ programmes using variables and data types 2. Students are able to write programmes using constructors and Destructors 3. Understanding the concepts of inheritance using this concepts including single and multiple inheritance in object oriented programmes. 4. Using virtual functions and file pointers able to write the C++ programmes 5. Demonstrate the programmes using exceptions, data structures ,list and queues
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THIRD YEAR- FIFTH SEMESTER

Sl. No.	Subjects	Objectives	Outcomes
1	Cost Accounting	<ol style="list-style-type: none"> 1. To enable students to explain the objectives and scope of Cost Accounting 2. To enable students to evaluate the material procurement procedure, inventory control techniques and inventory accounting 3. To enable students to evaluate the direct and Indirect labour Cost, Methods of Payment and Methods of Allocation 4. To enable students to evaluate unit and job costing 5. To enable students to explain contract and process costing. 	<ol style="list-style-type: none"> 1. Students would explain the objectives and scope of Cost Accounting . 2. To develop about direct and indirect material cost/ 3. To develop knowledge about labour and overheads. 4. Keep them aware about unit and job costing. 5. Keep them aware about contract and process costing.
2	COMPUTERIZED ACCOUNTING	<ol style="list-style-type: none"> 1. To introduce students basic knowledge of erp 2. To keep knowledge about inventory masters in erp. 3. To know about recording day-to-day transactions in erp 4. To keep knowledge about accounts receivable and payable management in erp 5. To enable the students about mis reports in erp 	<ol style="list-style-type: none"> 1. To provide knowledge about the basics of ERP 2. To provide knowledge about maintaining stock keeping units 3. To provide knowledge recording day-to-day transactions in ERP. 4. Enable the students to gain an idea of accounts receivable and payable management IN ERP. 5. Keep them aware about MIS reports.
3	Auditing	<ol style="list-style-type: none"> 1. Understand meaning, types of audit, and difference between auditing and book keeping. 2. Understand qualification, Duties, Rights, and different types of auditors 3 Know the meaning of internal control, internal check and audit. 4. Identify different types of vouchers 5. It helps management in detecting and preventing errors and frauds 	<ol style="list-style-type: none"> 1: Understand the environment and types relating to the auditing function 2: To ensure that all books of accounts are done in a fair manner 3: Identify the steps needed to prepare for an audit 4: To define the auditor's role and the terms of engagement which is usually in the form of a letter which is duly signed by the client 5: An auditor audits the accounts of a company, the findings are usually put out in a report or compiled in a systematic manner.
4	MANAGEMENT INFORMATION SYSTEMS	<p>Applying sound managerial concepts and principles in the development and operations of information system. Effectively apply system analysis information system design and project management concept. To provide information for decision making on Planning, Initiating, Organizing in the process. It facilitates the decision making process by furnishing information in the proper time frame.</p>	<p>Student will understand the organization structure and decision making process of the organization.</p> <p>Ability to analyze a complex computing problem and to apply principles to identify the solutions.</p> <ol style="list-style-type: none"> 2. Student will have an ability to design, implement and evaluate a computing based solution to meet a given set of requirement. 3. Student will have an ability to use tools and techniques for identification, evaluation and implementation of MIS in the Organization, using ERP System

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			<p>(Enterprise Resource Planning)</p> <p>4. Student will understand the need of the org. and finding solutions to complex problems in the org. Ability to use decision support system (DSS), business intelligence process management in the org.</p> <p>5. Student will learn the usage of web and social media and ability to find weakness in planning and design of business org.</p>
5	FUNDAMENTALS OF E-COMMERCE	To impart knowledge about the relevance of E-Commerce in current competitive environment. To make the students aware about the common legal, ethical and tax issues involved in e-commerce. To develop understanding of the working of online shopping and e-payment. To enable the students how to use various tools to build a dynamic website.	<p>1: Understand the E-Commerce and E- business infrastructure and trends</p> <p>2: Analyze different types of portal technologies and deployment methodologies commonly used in the industry.</p> <p>3: Analyze the effectiveness of network computing and cloud computing policies in a multi-location organization.</p> <p>4: Analyze real business cases regarding their e-business strategies and transformation processes and choices.</p> <p>5: Integrate theoretical frameworks with business strategies.</p>
6	Logistics Management	<p>1.To give knowledge and understand the importance of Water transport in logistics management.</p> <p>2.To provide the awareness of air transport and its role in logistics</p> <p>3.The provide knowledge and application of Insurance, marine and cargo insurance</p> <p>4.To know functions of warehousing.</p>	<p>1. To describe the increasing significance of logistics and its impact on both costs and service in business and commerce.</p> <p>2. To understand functions of shipping and different types of containers and ships.</p> <p>3. To understand role of Air Transport and its problem and prospects</p> <p>4. To understand the basics of risks and how to file a claim</p> <p>5. To able to design warehouse and its location strategies.</p>
7	International Advertising	<p>1. Knowledge of advertising and its classification and functions and its impact on marketing.</p> <p>2. Effects of advertising of advertising on sales promotion</p> <p>3. Role of advertising in planning .</p> <p>4. Impact of advertising on profit</p> <p>5. advertising regulating bodies in India as per Our ethics</p>	<p>1: Comprehending the its meaning, importance and nature and complexities of International advertising, International Communication model, Major international advertising decisions and influencing factors; Determination of target audience in international markets; Determining advertising budget.</p> <p>2: Determining international advertising message and copy - Headline, body copy, logo, illustration and layout; Creative styles and advertising appeals; International Media planning -</p>

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			<p>Types of media, media selection and scheduling Advertising through Internet.</p> <p>3: Developing an understanding about In-house arrangements; Using advertising agencies – selection, compensation and appraisal of advertising agency; Evaluating Advertising Effectiveness - Before and after advertising tests and techniques.</p> <p>4: Enabling the students to have a handle on Complexities and issues; Ethical issues in international advertising; Integrated international marketing communications.</p>
8	TAX PLANNING & MANAGEMENT	<ol style="list-style-type: none"> 1. To impart knowledge about tax planning, tax management, tax evasion, tax avoidance. 2. To provide the knowledge about tax planning with reference to setting up of new business. 3. To impart the knowledge about tax planning with reference to specific management decisions. 4. To know about tax planning in respect of non residents. 5. To develop partial knowledge about planning with reference to all five heads of income for individuals. 	<ol style="list-style-type: none"> 1. To provide knowledge about tax planning, tax management, tax evasion, tax avoidance. 2. Gain the knowledge of tax planning with reference to setting up of new business & specific management decisions. 3. To learn about tax planning in respect of non-residents. 4. To give knowledge about planning with reference to all five heads of incomes.

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THIRD YEAR – SIXTH SEMESTER

Sl. No.	Subjects	Objectives	Outcomes
1.	Cost Control and Management	<p>To introduce the students about management accounting and marginal costing</p> <p>2. To aware the students about budgetary control and standard costing.</p> <p>3.To provide knowledge about techniques of financial statement analysis</p> <p>4. To enable the students about funds flow analysis</p> <p>5. To enable the students about cash flow analysis</p>	<p>To provide knowledge about management accounting and marginal costing.</p> <p>2. Gain the knowledge of budgetary control and standard costing.</p> <p>3. To evaluate techniques of financial statement analysis.</p> <p>4. To learn about funds flow analysis.</p> <p>5. To give knowledge about cash flow analysis.</p>
2	THEORY AND PRACTICE OF GST	<p>1. To equip the students with introduction to GST</p> <p>2.To impart knowledge about enabling GST and intrastate supply, sales of goods.</p> <p>3.To know about GST advancedment and return filing.</p> <p>4. To enhance students determination of supply of services and defining tax rates</p> <p>5. To develop practical knowledge about recording advance entries and migration to ERP.</p>	<p>1. To provide knowledge about goods service tax</p> <p>2. To provide knowledge about getting started with GST.</p> <p>3.To introduce recording advanced entries, GST adjustments and return file</p> <p>4. To provide knowledge about determination of supply of services.</p> <p>5. To understand recording advanced entries and migration to ERP.</p>
3	Accounting Standards	<p>1. To equip the students with introducing to Accounting standards.</p> <p>2. To impart knowledge about enabling standards relation to financial reporting disclosure.</p> <p>3. To know about providing guidance on financial statement items.</p> <p>4. To enhance students determination of standards relating to business acquisitions.</p> <p>5. To develop knowledge about financial reporting.</p>	<p>1. To provide the knowledge about Accounting standards.</p> <p>2. Gain the knowledge of standards relating to financial reporting & disclosure, standards providing guidance on financial statement items & standards relating to business acquisitions and consolidations</p> <p>3. To learn about financial reporting.</p>
4	Multimedia Systems	<p>Using different types of media, which can be processed and presented by computers. Multimedia can be used in various application areas in business environment. Evaluate the appropriate multimedia systems and develop effective multimedia applications</p>	<p>1. Learning of implementation of digital interfaces</p> <p>2. Learning of video presentation and digitalization transmission</p> <p>3. Learning of Data storage concepts and devices</p> <p>4. Learning of multimedia communications and synchronization of data</p> <p>5. Learning of multimedia application and integrating with other systems.</p>
5	MANAGEMENT	Applying sound managerial concepts and	Students will understand the

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	<p>INFORMATION SYSTEMS</p>	<p>principles in the development and operations of information system. Effectively apply system analysis information system design and project management concept. To provide information for decision making on Planning, Initiating, Organizing in the process. It facilitates the decision making process by furnishing information in the proper time frame</p>	<p>organization structure and decision making process of the organization.</p> <p>Ability to analyze a complex computing problem and to apply principles to identify the solutions.</p> <p>2. Students will have an ability to design, implement and evaluate a computing based solution to meet a given set of requirement.</p> <p>3. Students will have an ability to use tools and techniques for identification, evaluation and implementation of MIS in the Organization, using ERP System (Enterprise Resource Planning)</p> <p>4. Students will understand the need of the org. and finding solutions to complex problems in the org. Ability to use decision support system (DSS), business intelligence process management in the organization.</p> <p>5. Students will learn the usage of web and social media and ability to find weakness in planning and design of business organization.</p>
6	<p>Cross-Cultural Consumer & Industrial Buyer Behaviour</p>	<p>1. To Equip the students with introduction to consumer behavior.</p> <p>2. To impart knowledge about internal & external determinants of buying behavior.</p> <p>3. To know about providing guidance on consumer and industrial buying behavior.</p> <p>4. To develop knowledge about innovation, diffusion and consumer adoption process.</p>	<p>1. To develop basic understanding related to the concept of "Consumer Behavior" and "consumer buying behavior"</p> <p>2. To understand how the needs of consumer are formed, how they are motivated to buy goods, how consumer perceives the marketing initiatives of marketers, how attitudes and beliefs are formed and how they influence consumer buying behavior.</p> <p>3. To understand the various social actors responsible in developing consumer tastes and preferences; how family, friends, neighborhood, acquaintances influences consumer buying behavior.</p> <p>4. To understand the consumer behaviour across various cultures and identifying the marketers strategies for each of the different culture consumers.</p> <p>5. To study the issues related to consumer research i.e. how the primary and secondary research is conducted in order to understand the consumers psychology; to study the innovation adoption.</p>

Dr. M. A.

7	Brand Management	<ol style="list-style-type: none"> 1. Analyze the fundamental principles involved in managing products and their brands; 2. Explain the critical importance of branding for superior business performance; 3. Apply branding principles by conducting an in-depth brand management project using a real-world company as an example. 	<ul style="list-style-type: none"> . To expose the students to the concepts, principles, techniques and application of contemporary branding. 2. To provide the students with insights into the design and implementation of branding strategies 3. To help the students to build, measure and manage brand-equity
8	International Tax and Regulation	<ol style="list-style-type: none"> 1. To give knowledge on the computation of Incomes and submission Income tax Return 2. The student will get thorough knowledge on the tax practice prevailing in Heads of Incomes. 3. The students will learn about application of statutory regulations 4. To know about how to create and defend and principled and ethical argument. 	<ol style="list-style-type: none"> 1. To understand the objectives of tax treaties. 2. To understand and apply method for application of tax treaties to present, orally as well as in writing, complicated problems and arguments for objective-oriented solutions. 3. To understand the relationship between tax treaties and (strictly) internal laws. 4. To a knowledge of the methods for interpretation of tax treaties.



Chairperson

**BOS
HEAD**

Department of Commerce
(COMPUTER APPLICATIONS)
ANWARUL-ULOOM COLLEGE
(AUTONOMOUS)
New Mallepally, Hyderabad-T.8, India.

ANWAR UL ULOOM DEGREE COLLEGE
DEPARTEMNT OFCOMPUTER SCIENCE
B.Sc. (MECS and MPCS)
Academic Year 2022-23

COURSE OBJECTIVES:

- | |
|--|
| 1. To develop competencies and skills needed for becoming an effective Computer Programmer. |
| 2. To familiarize the students with various approaches, methods and techniques of |
| 3. Information Technology. |
| 4. Exploring different approaches in computer programming and problem solving skills. |
| 5. To enable students to manage Software Projects from its Conceptual Stage to the final product creation. |
| 6. To train students in logical thinking and problem solving skills so as to solve real world problems. |
| 7. To develop expertise in Database Management and Digital Content management techniques. |

COURSE OUTCOMES:

- | |
|--|
| 1. Understand basic concepts of Computer Systems its hardware and software |
| 2. Learn various programming languages such as C, C++, Java, Python, HTML, PHP, XML etc. |
| 3. Awareness of Computer Viruses and Hackers |
| 4. Learn and understand Cyber Security |
| 5. understand and used computer networks and internet |


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COMPUTER SCIENCE
ANWARUL ULOOM COLLEGE



B.Sc. (MECS & MPCS)

SEMESTER: FIRST

SUBJECT: PROGRAMMING IN C

Course Objective:-

1. Learn fundamental concepts of computer system
2. Learn various types of computer memories and its purpose
3. Learn basic concepts of programming languages (data types, constants, variables, operators, control constructs.
4. Learn arrays, functions, structures, union and file handling concepts with practically implementing these concepts in a C program.

Unit	Unit – Objective	Learning Outcomes
1	Learn fundamentals of concepts of Computer System, functions, types, generations of computer. Input, output devices. Memory and its types	Understand basic concepts of programming language such as token, identifier, data types, constants and variables
2	Learn Data types, keywords, tokens, identifiers and control structures	Analyze a given problem and develop simple programs to solve the problem
3	Learn Programming features of C such as arrays and user defined functions	Improve upon a solution to a problem. Use the 'C' language constructs in the right way to solve critical problems
4	Learn string handling functions and function calls, function recursion	Using various function develop solutions for various problems
5	To Understands and learn data files and handling data files for databases	Working with data files in developing small c projects

COURSE OUTCOMES:

Upon successful completion of the course, a student will be able to:

1. Appreciate and understand the working of a digital computer
2. Analyze a given problem and develop an algorithm to solve the problem
3. Improve upon a solution to a problem
4. Use the 'C' language constructs in the right way
5. Design, develop and test programs written in 'C'


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ANWARUL ULOOM COLLEGE**



SEMESTER: SECOND

SUBJECT: PROGRAMMING IN C++

Course Objective:-


4. Learn fundamental concepts of object oriented programming.
5. Learn various operations that can be performed on different data structures.
6. Learn to sort and search within the data structures.
5. Learn to implement and use data structures using C++ programming languages.

Unit	Unit – Objective	Learning Outcomes
1	Learn fundamentals of C++ Programming language such as tokens, keywords, identifiers, constants, variables and data types in C++	Appreciate and understand the basic concepts C++ Programming languages
2	Learn control structures, basic concepts of object oriented programming such as class, object, encapsulation, inheritance	Analyze a given problem and develop simple programs using OOP features in C++
3	Learn Programming features of C++ such as arrays and functions, inheritance and interface	Improve upon a solution to a problem. Use the 'C++' language constructs in the right way to solve critical problems
4	Learn dynamic memory allocation and exception handling features and functions in C++	Using various try, catch and throw and final develop error handling solutions for various problems
5	To Understands and learn stream classes and handling data files for databases	Working with data files in projects using stream classes and their respective objects and member functions.

COURSE OUTCOMES

Upon successful completion of the course, a student will be able to:

1. Analyze a given problem and develop C++ program to solve the problem
2. Improve upon a solution to a problem using object oriented features
3. Appreciate and understand the working of a classes and objects
4. Use the 'C++' language constructs in the right way to understand object oriented programming features and improve skills in OOP
5. Design, develop and test programs written in 'C++' using OOP


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SEMESTER: THIRD

SUBJECT: DATA STRUCTURES

COURSE OBJECTIVE:

- ❖ Learn fundamental concepts of linear and non-linear data structures.
- ❖ Learn various operations that can be performed on different data structures.
- ❖ Learn to sort and search within the data structures.
- ❖ Learn to implement and use data structures using C++ programming languages.

Unit	Unit – Objective	Learning Outcomes
1	Learn fundamental concepts of linear and non-linear data structures, Classification of data structures and operations on data structures	Appreciate and understand the working of a linear and non-linear data structures and their features
2	Learn Array, Queues and Stack data structures with their representation in the computer memory.	Analyze a given problem and develop simple programs to solve the problem using Arrays, Queue and Stack
3	Learn linked list, its types and features of single, double, priority and circular linked list.	Improve upon a solution to a problem. Use linear list variations, constructs in the right way to solve critical problems
4	Learn to understand basic concepts of Tree and Graph data structures and their representation in memory.	Using binary tree and graph traverse in the database and develop solutions for various expressions
5	To Understands and learn Searching and Sorting with in the databases using various sorting techniques.	Implement sorting techniques to organize and search database. Working with data files in projects.

COURSE OUTCOMES

Upon successful completion of the course, a student will be able to:

- ✓ To understand the concepts of various data structures and their use in the real world applications
- ✓ Analyze a given problem and develop an algorithm to solve the problem
- ✓ Improve upon a solution to a problem
- ✓ Use various data structures to implement in the software project
- ✓ Use data structures to develop and test data files and databases in a software project


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COURSE OBJECTIVE:

This subject is introduced to understand the various database technologies used in software industries, this subject gives insight into the database management system used in a variety of applications on servers, this skill empowers the students to handle the various databases manage them effectively with specialized skills, knowledge and attitude to work in Computer Industry.

Unit	Unit – Objective	Learning Outcomes
I	Students will learn: <ol style="list-style-type: none"> 1. The fundamentals of dbms and file system. 2. Database approaches and roles. 3. Advantages and disadvantages 4. Architecture of dbms. 5. Dbms languages. 6. RDBMS models and other models. 7. Views implementation 8. The relational algebra 	Students will be able <ol style="list-style-type: none"> 1. To recognize the difference between dbms and file oriented systems. 2. To identify the various roles and users of dbms. 3. To recognize the advantages and disadvantages of dbms. 4. To see inside the various architectures of the dbms. 5. To use structured query language. 6. To understand importance of data model. 7. To use views for various purposes. 8. To use of relational algebra.
II	Students will learn: <ol style="list-style-type: none"> 1. Sql data manipulation. 2. Aggregate functions. 3. Grouping functions 4. Joining table 5. Data types in sql. 6. Constraints in the dbms. 7. Data definition languages. 8. Views, view materialization, 9. Transactions, discretionary access control-granting. 10. Privileges to other users, revoking privileges from users. 11. advanced sql: 	Students will be able to <ol style="list-style-type: none"> 1. Use dml commands update, delete, insert commands. 2. Use aggregate functions 3. Use order by group by functions. 4. Use inner join, outer join equi joins full joins etc. 5. Handle the various data types. 6. Apply the constraints on the filed and on the table. 7. Use ddl command to create objects such as user, table etc. 8. Use transaction commands commit and rollback. 9. Use the view and materialization views for various purpose. 10. Grant the privileges and revoke the privileges. 11. Use the advanced sql to write exceptions, cursors, subprograms, stored procedures, functions, and packages, triggers, recursion.
III	Students will learn: <ol style="list-style-type: none"> 1. Entity-relationship modeling and enhanced entity-relationship modeling: specialization/generalization, aggregation, composition. 2. Functional-dependencies. 	students will be able <ol style="list-style-type: none"> 1. To create entity types, relationship types, attributes, keys, strong and weak entity types, attributes on relationships and able to create er diagrams using

	<p>3. Normalization how normalization supports database design.</p>	<p>specialization/generalization, aggregation,</p> <p>2. To recognize the anomalies, partial functional dependency, transitive functional dependency, multi-valued dependency, join dependency.</p> <p>3. To do Normalization on tables in 1nf,2nf, 3nf, BCNF.</p>
<p>IV</p>	<p>Students will to learn:</p> <ol style="list-style-type: none"> 1. Transaction Management. 2. Concurrency Control. 3. Deadlock & Time Stamping Methods, 4. Granularity of Data Items, 5. Database Recovery– 6. Security: Database Security– 7. Backup and Recovery.. 	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. Understand properties of transactions, database architecture, 2. Recognize the need for concurrency control, serializability and recoverability, locking methods. 3. Use deadlock, multi-version timestamp ordering, optimistic techniques. 4. Understand the granularity of data items. 5. To recognize the need for recovery, recovery facilities, Recovery techniques. 6. To recognize the security–threats, authorization, access controls, views, 7. Use the backup and recovery of databases


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ANWARUL ULOOM COLLEGE



Course Objective:-

This subject is introduced to understand the basic concepts of Java programming language and also use object-oriented methodologies in Java. Java is extensively used in the software industries; this subject gives insight into the Java programming fundamentals and applies these concepts to develop the software. This skill empowers the students to become software developers with specialized skills, knowledge, and attitude to work in the Computer Industry.

Unit	Unit – Objective	Learning Outcomes
1	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Java Essentials, Features, creation and Execution of Programs, 2. Data Types, Type Conversion, Casting, Conditional Statements, Loops, Branching Mechanism, 3. Classes, Objects, Class Declaration, Creating Objects, Method Declaration and Invocation, Method Overloading, 4. Constructors and its types. 5. Methods-static Keyword, this Keyword. 6. One-Dimensional Arrays, Two-Dimensional Arrays, Command-Line Arguments, Inner Class. 7. Inheritance abstract classes and interface and its applications 	<p>Students will be able</p> <ol style="list-style-type: none"> 1. To run Java programs and understand JVM, Features 2. To differentiate between Data Types, Type Conversion, Casting, Conditional Statements, Loops, Branching Mechanism. 3. Classes, Objects, Class Declaration, Creating Objects, Method Declaration and Invocation, Method Overloading. 4. To use Parameterized Constructors, Constructor Overloading, Cleaning-up unused Objects, Class Variables 5. To use Methods-static Keyword, this Keyword, 6. Solve the problems on One-Dimensional Arrays, Two-Dimensional Arrays, Command-Line Arguments, Inner Class. 7. Use Inheritance Types of Inheritance, extends Keyword, Abstract classes, Interfaces, Abstract Classes Verses Interfaces.
2	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Packages, Wrapper Classes, String Class. 2. Exception handling. 3. Multithreading and its implementation. 4. Input/Output using java.io and Package. File handling mechanism. 5. Stream Class and its uses. 	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. Create and Use Packages, Wrapper Classes, and String Class 2. handle various types of Exceptions. 3. to create Threads using Thread Class or using Runnable Interface, and use Thread Priority and Synchronize them. 4. to use java.io Package and File Class. 5. To use File Input Stream Class, File Output Stream Class, Scanner Class, Buffered Input Stream Class, Buffered Output Stream Class, Random Access File Class.
	<p>Students will try to learn:</p> <p>1. Applets and its uses.</p> <ol style="list-style-type: none"> 1. Event Handling: Introduction, Types of Events, Example. 	<p>Students will be able</p> <ol style="list-style-type: none"> 1. To use Applets class in the programs and use the Common

3	<ol style="list-style-type: none"> 2. AWT and swing components. 3. Database Handling Using JDBC and Developing a JDBS Application. 	<p>Methods Used in Displaying the Output</p> <ol style="list-style-type: none"> 2. To understand Types of Events and use in the programs. 3. To use AWT Components like Containers, Button, Label, Checkbox, Radio Buttons, Container Class, Layouts. And Swing component, Differentiate between Swing and AWT. 4. To use JDBC classes to Database Handling also understand how to use JDBC Drivers. And able to Develop a JDBS Application.
4	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Packages ,Wrapper Classes, String Class. 2. Exception handling. 3. Multithreading and its implementation. 4. Input/Output using java.io and Package.File handling mechanism. 5. Stream Class and its uses. 	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. to create Threads suing Thread Class or using Runnable Interface, and use Thread Priority and Synchronize them. 2. to use java.io Package and File Class. 3. to use FileInputStream Class, FileOutputStream Class, Scanner Class, BufferedInputStream lass, BufferedOutputStream Class, RandomAccessFile Class.




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SEMESTER: SIXTH

SUBJECT: WEB TECHNOLOGIES


Course Objective:-

This subject is introduced to understand the various technologies used in web development, this subject gives insight into the web technologies used in client server programming in computer industries, this skill empowers the students to handle the various web development technologies and markup languages effectively, with specialized skills, knowledge and attitude students can work in Computer Industry.

Unit	Unit – Objective	Learning Outcomes
I	Students will try to learn: 1. Structuring Documents for the Web: 2. Links and Navigation tags: 3. Images, Audio, and Video tags 4. List and Table tags	Students will be able 1. To do Basic Text Formatting and Editing Text, Core Elements and Attributes, Attribute Groups. 2. To create Links with the <a> Element, Advanced E- mail Links. And navigation. 3. To Add Images Using the Element, Use Images as Links Image , Add Flash, Video and Audio to your web 4. To create various types of List Hyperlinking list elements, and able to create table and Nested Tables,
II	Students will try to learn: 1. Frames creation in html 2. Forms creation in html 3. Cascading Style Sheets and its types	Students will be able 1. To create use Frames using Frameset, <frame> Element, Creating Links Between Frames, , Nested Framesets, <iframe>. 2. To create Forms and Form Controls, also Sending Form Data to the Server 3. To create various CSS and Rules, Properties and also Positioning and Layout with CSS.
III	Students will try to learn: 1. Web Technologies used to Develop application for Mobile Devices. 2. JavaScript code and uses. Working with JavaScript:	Students will be able 1. To understand the web application for Mobile Devices such as Design Issues: Typography, Navigation, Tables, Forms. 2. To create and use JavaScript feature for web development.
IV	Students will try to learn: 1. PHP Language Basics 2. Protocols used in web development 3. Latest Web Development Trends	Students will be able 1. To understand and use PHP script for web development. 2. To understand the various protocols used in web development such as TCP/IP, HTTP, S-HTTP, SMTP, Wireless Protocols, IMAP. 3. To understand Latest Web Development Trends such as AI or Bots, Progressive Web App, Mobile-Friendly Website, Motion UI, Web Development Frameworks. Etc.


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3	<ol style="list-style-type: none"> 2. AWT and swing components. 3. Database Handling Using JDBC and Developing a JDBS Application. 	<p>Methods Used in Displaying the Output</p> <ol style="list-style-type: none"> 2. To understand Types of Events and use in the programs. 3. To use AWT Components like Containers, Button, Label, Checkbox, Radio Buttons, Container Class, Layouts. And Swing component, Differentiate between Swing and AWT. 4. To use JDBC classes to Database Handling also understand how to use JDBC Drivers. And able to Develop a JDBS Application.
4	<p>Students will try to learn:</p> <ol style="list-style-type: none"> 1. Packages ,Wrapper Classes, String Class. 2. Exception handling. 3. Multithreading and its implementation. 4. Input/Output using java.io and Package.File handling mechanism. 5. Stream Class and its uses. 	<p>Students will be able to</p> <ol style="list-style-type: none"> 1. to create Threads suing Thread Class or using Runnable Interface, and use Thread Priority and Synchronize them. 2. to use java.io Package and File Class. 3. to use FileInputStream Class, FileOutputStream Class,Scanner Class, BufferedInputStream lass,BufferedOutputStream Class, RandomAccessFile Class.


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ANWARUL ULOOM COLLEGE



ANWARUL ULOOM COLLEGE (AUTON)

(Accredited by NAAC with 'A' Grade & An ISO 9001:2015 Certified Institution)

(Affiliated to Osmania University, Hyderabad)

Ref. No.

Date: _____

(2022-23)

Department Name:-B.Sc (COMPUTER SCIENCE & ENGINEERING)

Program Objective B.Sc.(Computer Science and Engineering) prepare Graduates to:

1. Work effectively as successful Computer professionals in diverse career paths including supportive and leadership roles on multidisciplinary teams or be active in higher studies,
2. Communicate effectively, analyze, recognize and incorporate societal needs and constraints in their professional endeavors, and practice their profession with high regard to ethical responsibilities,
3. Engage in life-long learning and to remain current in their profession to foster personal and organizational growth.

Program Outcomes B.Sc.(Computer Science and Engineering)

PO1 - Engineering knowledge: Apply the knowledge of Computer Science, mathematics, and electronics and an engineering specialization to the solution of complex engineering problems.

PO2 - Problem analysis: Identify, analyze, formulate complex computer Science and engineering problems reaching substantiated conclusions using first principles of mathematics and Computer Science.

PO3 - Design/development of solutions: Design solutions for complex Computer Science engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and considerations.

PO4 - Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6 - Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO7 - Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO8 - Project management: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO9 - Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.


HEAD
Dept. of Computer Science & Engg
A.U, College Mallepally, Hyd-1. A.P.

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ANWARUL ULOOM COLLEGE (AUTON

(Accredited by NAAC with 'A' Grade & An ISO 9001:2015 Certified Institution)

(Affiliated to Osmania University, Hyderabad)

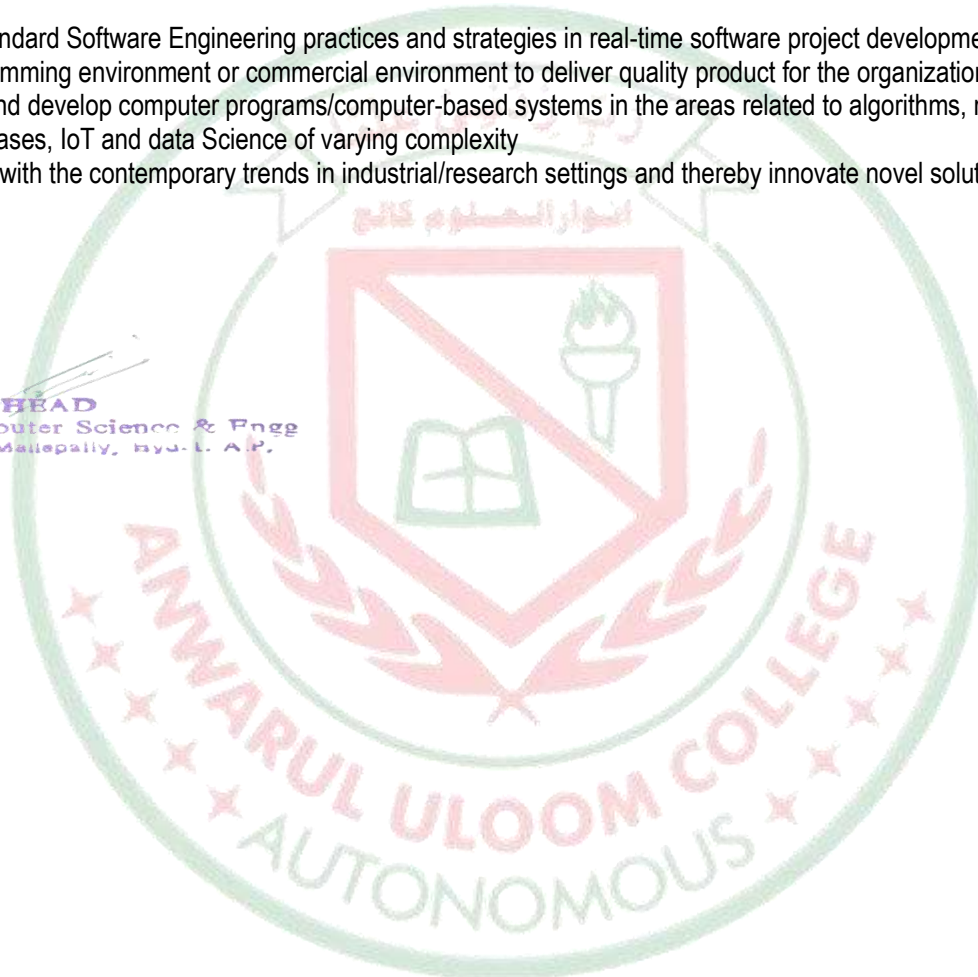
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Date: _____

Program Specific Outcomes : On completion of the B.Sc. (CSE) degree the graduates will be able to

- POS -1.** To find the successful careers in Software or Information Technology field or will be able to successfully pursue advanced degrees.
- POS -2.** Apply standard Software Engineering practices and strategies in real-time software project development using open-source programming environment or commercial environment to deliver quality product for the organization success
- POS -3.** Design and develop computer programs/computer-based systems in the areas related to algorithms, networking, web design, databases, IoT and data Science of varying complexity
- POS -4.** Acquaint with the contemporary trends in industrial/research settings and thereby innovate novel solutions to existing problems

HEAD
Dept. of Computer Science & Engg
A.U. College Mallepally, Hyd.-L. A.P.



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Mathematics – I

The objective of this course is to introduce:

1. Qualitative problems based on vector analysis and matrix analysis such as linear independence and dependence of vectors, rank etc.
2. Concepts of limit theory, nth order differential equations and their applications to our daily life
3. Problems of differentiation of functions of two variables and the maximization and minimization of functions of several variables.
4. Applications of double and triple integration in finding the area and volume
5. Applications of Gauss, Stoke's and Green's theorem

Course outcomes: At the end of course students will be able:

- CO-1. To solve qualitative problems based on vector & matrix analysis such as linear independence & dependence of vectors, rank etc.
- CO-2. To understand the concepts of limit theory and nth order differential equations and their applications to our daily life
- CO-3. To solve the problems of differentiation of functions of 2 variables and the maximization & minimization of functions of several variables.
- CO-4. To know the applications of double and triple integration in finding the area and volume
- CO-5. To Know about qualitative applications of Gauss, Stoke's and Green's theorem

Electrical Circuits & Machines (E C M)

Course objectives: The objective of this course is:

1. To introduces the basic concepts of network and circuit analysis which is the foundation of the Electrical Engineering discipline.
2. To introduces the basic analysis of circuits, network analysis, 1-phase ac circuits, and magnetic circuits.
3. To introduces knowledge of mathematics, science, & engineering to the analysis & design of electrical circuits.
4. To introduces circuit theorems to simplify and solve complex DC and AC electric networks.

Course outcomes: At the end of course students will be able:

- CO-1. Able to realize the working principles of electrical circuits and measuring instruments
- CO-2. Able to analyze linear electric circuits to determine DC response.
- CO-3. Able to analyze linear electric circuits to determine AC response.
- CO-4. Able to identify the type of electrical machine used for that particular application.
- CO-5. To apply knowledge of mathematics, science, & engineering to the analysis and design of electrical circuits.

ECM Lab

Course objectives: The objective of this course is:

1. Expose to the characteristic of control of a D C shunt motor
2. Introduce Load test on a D C Shunt Generator
3. Introduce Fields Test . Hopkinson Test
4. Introduce Swinburne's Test
5. Expose to MAT lab Software.

Course outcomes: At the end of course students will be able:

1. Able to understand Speed control of a D C shunt motor
2. Able to understand Load test on a D C Shunt Generator
3. Able to understand Fields Test and Hopkinson Test
4. Able to understand swinburne's Test
5. Able to understand use of MAT lab.

Int. to Information Technology (IIT)

Course objectives: The objective of this course is:

1. To introduce the fundamental of computer software, hardware and data processing.
2. To introduce various operating system.
3. To acquire knowledge of MS-Word.
4. To familiarize MS-Excel.
5. To introduce various operators of Ms-Access, MS Power Point

Course outcomes: At the end of course students will be able:

- CO-1. To understand the computer components, hardware and software concepts of data processing
- CO-2. To understand the different OS, DOS, UNIX, OS Commands, windows explorer, Accessories.
- CO-3. To understand features and use of MS-Word,
- CO-4. To understand features and use of MS-EXCEL,
- CO-5. To understand features and use of M S – PowerPoint – MS Access & Types of Networks.


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I I T-Lab

Course objectives: The objective of this course is:

1. To design a visiting card, creating letter head, Bio data using Ms –Word.
2. To make a power point presentation.
3. To create a Database using Ms-Access.
4. To understand various operators of Ms-Access.
5. To create an electronic spreadsheet using Ms-Excel.

Course outcomes: At the end of course students will be able:

- CO -1. to create letter head, visiting card using Ms-word.
- CO -2. to create presentation on Current Affairs, College profile, books details.
- CO -3. to create Database using M S Access, the relationship between tables and creating report.
- CO -4. to create MS-EXCEL Spread Sheet, formatting, apply formula on spread sheet.
- CO -5. To Create column Chart, 3 D – Column and Bar Chart for representing in Ms-Excel .

Programming in C

Course objectives: The objective of this course is:

1. To introduce the fundamental concepts of c language , program, tools ,flowcharts ,algorithms
2. To introduce various looping and decision making statement , io statements, arrays .
3. To introduce the functions and its types, structure and union.
4. To familiarize various Storage classes, dynamic memory mgmt.
5. To introduce the concepts of pointers and files.

Course outcomes: At the end of course students will be able:

- CO -1. Understand the fundamental concepts of c language, program, tools flowcharts, algorithms
- CO -2. able to Use various looping and decision making statement , io statements, arrays .
- CO -3. Able to Use the functions and its types , structure and union
- CO -4. Able to Select Storage classes, dynamic memory mgmt.
- CO -5. able to understand the concepts of pointers and files

Programming in C Lab

Course objectives: The objective of this course is:

1. To write programs for solving real world problems using c.
2. To introduce use of various decision making statements.
3. To write programs using arrays .
4. To write programs using structures
5. To write real world applications using c

Course outcomes: At the end of course students will be able:

- CO -1. To write programs for solving real world problems using c language
- CO -2. To write program using decision statements.
- CO -3. To write programs for sorting and searching and matrix operations using array.
- CO -4. To use structures in real time applications.
- CO -5. To use c language in real world applications.


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Mathematics – II

Course objectives: The objective of this course is to introduce:

1. Basics of matrices, complex numbers, and differential calculus.
2. The concepts of The Bisection false position, the Iteration & Newton – Raphson method
3. Taylor's series, Picord's methodn, Euler's method,Rung – Kutta methods
4. Eigen values & vectors,Cayley – Hamilton theorem,Inverse and powers of a matrix by Cayley
5. The problems fourier series ,even & odd functions, period continuation Half range Fourier Sine & Cosine expansions.

Course outcomes: At the end of course students will be able:

- CO -1.To recall and remember basics of matrices, complex numbers, and differential calculus.
- CO -2. to understand the Bisection false position, the Iteration Newton – Raphson method
- CO -3.To apply solution by Taylor's series, Picord's, Euler's method,Rung – Kutta methods
- CO -4. To analyze Eigen values & vectors,Cayley – Hamilton theorem,Inverse & powers of a matrix.
- CO -5. To solve and evaluate the problems Fourier series ,even & odd functions, period continuation Half range Fourier Sine and Cosine expansions.

Physics

Course objectives: The objective of this course is to introduce :

1. Different types of matter depending on nature chemical bonds and their properties
2. Concept of wave function, physical significance and its applications to quantum mechanical problems.
3. Concepts of semiconductor physics
4. The idea of superconductivity and importance in advancement of technologies
5. Principle, properties and applications of Lasers and optical fibres

Course outcomes: At the end of course students will be able:

- CO -1: Analyze the crystal structures by applying crystallographic parameters.
- CO -2: Learn and to apply concepts learnt in Quantum mechanics to one dimensional problems
- CO -3: Write down the concepts related to solid state physics and material science.
- CO -4: Understand application of Lasers in Medicine, Industry etc.,
- CO -5: Understand applications of optical fibres in Medicine and Sensors.

Electronic Devices & Circuits

Course objectives: The objective of this course is:

1. Outline the operation of PN junction diode and its characteristics.
2. Illustrate the operation of Bipolar Junction Transistor and its characteristics.
3. Demonstrate the operation of JFET and MOSFET and their characteristics.
4. Introduce extend the operation of semiconductor devices.
5. Introduce the feedback amplifier Concept, classification, characteristics ,feedback effect.

Course outcomes: At the end of course students will be able:

- CO -1. To describe the behaviour and purpose of various diodes.
- CO -2. To Understand and analyze bipolar junction transistor (BJT).
- CO -3. To demonstrate the switching & amplification of the semiconductor devices (FET).
- CO -4. To understand Extend the operation of semiconductor devices.
- CO -5. Able to understand the feedback amplifier Concept, classification, characteristics and effects.



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Electronic Devices & Circuits Lab

Course objectives: The objective of this course is:

1. To be exposed to the characteristics of basic electronic devices
2. To be exposed to the characteristics of Transistor
3. To be exposed to the characteristics various types of Diodes
4. To be exposed to the various types of rectifiers.
5. To be exposed to the characteristics FET and BJT

Course outcomes: At the end of course students will be able:

- CO -1. To understand the characteristics of basic electronic devices.
- CO -2. To understand the Characteristics of P-N diode, zener diode.
- CO -3. To understand the various types of rectifiers & amplifiers.
- CO -4. To understand the Characteristics of Transistor.
- CO -5. To understand FET and BJT uses

UNIX Programming

Course objectives: The objective of this course is:

1. To introduce UNIX file system, Utilities, vi editor, file, process & disk handling commands
2. To introduces problem solving using shell scripts, born shells, commands, pipes, scripts & variables etc.
3. To familiarize the students to Low level file access and system calls.
4. To equip the students with Unix io, formatted commands.
5. To equip the students file and directory handling commands.

Course outcomes: At the end of course students will be able:

- CO -1. To understand the UNIX file system, Utilities commands for vi, file, process & disk handling commands .
- CO -2. To solve the problems using shell scripts, born shells, various commands, pipes, scripts & variables etc.
- CO -3. To know the Low level file access and system calls.
- CO -4. To use Unix io commands, formatted io commands and directory handling commands.
- CO -5. To use file and directory handling commands

UNIX Programming Lab

Course objectives: The objective of this course is:

1. To write programs for solving real world problems using shell scripts.
2. To Familiar with vi editor commands.
3. To introduce Unix shell commands.
4. To write programs using system calls .
5. To introduce grep and other pattern matching commands

Course outcomes: At the end of course students will be able:

- CO -1. To write programs for solving real world problems using shell scripts.
- CO -2. To work with vi editor commands.
- CO -3. To use Unix shell commands.
- CO -4. To write programs using system calls.
- CO -5. To use pattern matching commands.


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Mathematics – III

Course objectives: The objective of this course is to introduce:

1. Gamma function and beta function and their Recurrence relations, complex integration
2. Finite and Infinite Fourier Transforms and applications.
3. Concept of analytic function, C-R equations and its uses.
4. Cauchy's theorem and its uses in complex integration. Taylor's and Laurent's series in complex form.
5. Learn about Cauchy Residues theorem and contour integrations.

Course outcomes: At the end of course students will be able:

- CO -1. To solve Gamma function and beta function and their Recurrence relations, complex integration
- CO -2. To gain knowledge of Finite and Infinite Fourier Transforms and applications.
- CO -3. Familiarize with the concept of analytic function, C-R equations and its uses.
- CO -4. To use about Cauchy's theorem & its uses in complex integration. Taylor's & Laurent's series in complex form.
- CO -5. To know about Cauchy Residues theorem and contour integrations

Digital Logic Design

Course objectives: The objective of this course is:

1. To Identify and use Number Systems.
2. To learn about Basic Gates and Universal Gate.
3. To learn about Full and Half Adder using Gates.
4. To learn about Sequential Logic Circuits.
5. To learn about Register and Counters.

Course outcomes: At the end of course students will be able:

- CO -1. To recognize different types of number system related to computers.
- CO -2. To use Logic Gates and Universal Gates.
- CO -3. To construct half and full adder using gates.
- CO -4. To design and analyze Sequential Logic Circuits
- CO -5. To Gain Knowledge about Registers, Multiplexer and counters

Digital Logic Design Lab

Course objectives: The objective of this course is:

1. To become familiar with basic logic gates and their functions.
2. To implement a Half and Full adder circuit.
3. To implement Registers, Multiplexer and counters
4. To implement use of mux, demux .
5. To learn Encoder and Decoder by implementing a counter using 7 segment display & keypad.

Course outcomes: At the end of course students will be able:

- CO -1. To use Logic Gates and Universal Gates
- CO -2. To design Full and Half Adder and Subtract or Using various Gates.
- CO -3. To design Shift Registers and Counters.
- CO -4. 4 To get pulse generator for Output Broadband Connector and frequency.
- CO -5. To design Binary Static Switches.


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Operating System

Course objectives: The objective of this course is:

1. Provide an introduction to operating system concepts (processes, threads, scheduling,)
2. To introduce Inter process communication.
3. To introduce synchronization, deadlocks.
4. To introduce memory management techniques.
5. To introduce file and directory structure and protection

Course outcomes: At the end of course students will be able:

- CO -1. To gain the knowledge of process thread and scheduling.
- CO -2. To understand the concepts of inter process communication.
- CO -3. To gain the knowledge of the deadlocks and it's handling.
- CO -4. To understand the various memory management techniques
- CO -5. To gain practical knowledge of file and directory structure and protection.

Operating System Lab

Course objectives: The objective of this course is:

1. To use dos and unix os commands.
2. To write program for CPU scheduling algorithms.
3. To write program for bankers algorithm for deadlock avoidance.
4. To write program for memory management.
5. To write program for FIFO page replacement algorithm.

Course outcomes: At the end of course students will be able:

- CO -1. To use dos and unix os commands.
- CO -2. To write program using CPU scheduling algorithms.
- CO -3. To write program using bankers algorithm for deadlock avoidance.
- CO -4. To write program using memory management.
- CO -5. To write program using FIFO page replacement algorithm

OOP Through C++

Course objectives: The objective of this course is:

1. Introduces Object Oriented Programming concepts using the C++ language
2. Introduces the principles of data abstraction, inheritance and polymorphism;
3. Introduces the functions and arrays
4. Introduces the principles of virtual functions and polymorphism
5. Introduces exception handling

Course outcomes: At the end of course students will be able:

- CO -1. To understand the OOP concepts.
- CO -2. To develop programs with reusability
- CO -3. To develop programs with array, functions and polymorphism.
- CO -4. To handle exceptions in programming
- CO -5. To develop applications for a range of problems using OOP programming techniques

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OOP Through C++

Course objectives: The objective of this course is:

1. To introduce Object Oriented Programming concepts using the C++ language
2. To introduce the principles of data abstraction, inheritance and polymorphism;
3. To introduce the functions and arrays
4. To introduce exception handling & virtual functions
5. To introduce various applications using OOP concepts.

Course outcomes: At the end of course students will be able:

- CO -1. To analyze and solve the programs in C++ programs .
- CO -2. To develop programs with reusability in C ++
- CO -3. To Develop programs with array , functions and polymorphism.
- CO -4. To Develop programs to handle exceptions in programming
- CO -5. To Develop applications for a range of problems using OOP techniques.

M – Commerce

Course objectives: The objective of this course is introduce :

1. what are the benefits of M-commerce.
2. what problems are going to face by M-commerce.
3. How M-commerce can be grown.
4. the banking services of the consumers.
5. Business-to-consumer transactions conducted from a mobile devices.

Course outcomes: At the end of course students will be able:

- POS -1. To understand what are the benefits of M-commerce.
- POS -2. To know the problems are faced by M-commerce.
- POS -3. To understand how M-commerce can be grown.
- POS -4. To understand the banking services of the consumers.
- POS -5. To understand Business-to-consumer transactions conducted from mobile devices.

Probability & Statistics

Course objectives: The objective of this course is:

1. To introduce of probability Also measures of central tendency
2. To introduce binomial, Poisson and normal distributions and their applications in different engineering, science and social science fields etc.
3. To introduce sampling distribution and point and interval estimation using z and t.
4. To introduce Statistical model with different statistical techniques like chi square distribution.
5. To introduce the problems with correlation and regression analysis

Course outcomes: At the end of course students will be able:

- CO -1. To understand the problems of probability and measures of central tendency
- CO -2. To know about binomial, Poisson, normal distributions and their applications in different engg., science & social science fields etc.
- CO -3. To know about sampling distribution and point and interval estimation using z and t
- CO -4. To solve the statistical model with different statistical techniques like chi square distribution.
- CO -5. To understand the problems and solve them with correlation and regression analysis

Micro Processor 8086 and Interfacing

Course objectives: The objective of this course is:

1. Introduce the architecture of 8086 microprocessors.
2. Introduce microprocessors and microcontrollers
3. Introduce programs for microprocessor and microcontrollers
4. Introduce 8051 microcontroller concepts, architecture and programming
5. Introduce Peripherals of Micro Computer System.

Course outcomes: At the end of course students will be able:

- CO -1. To know about architecture of 8086 microprocessors.
- CO -2. To understand the basics of microprocessors and microcontrollers arch. & its functionalities.
- CO -3. To understanding machine language programming & interfacing techniques.

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CO -4. To design and develop microcontroller based real time applications using ALP.

CO -5. Understand the concepts of ARM processor

Micro Processor 8086 & Interfacing LAB

Course objectives: The objective of this course is:

1. To learn about Assemble Language Programming (ALP).
2. To write ALP for Arithmetic operation on 16 Bit Unsigned numbers
3. To write ALP for Sorting of an Array of Number
4. To write ALP for finding the median from the list of numbers and length of given String
5. To write ALP for displaying the Character on Led and Number on 7-Segment Display.

Course outcomes: At the end of course students will be able:

- CO -1. Able to write ALP programs using Microsoft Macro Assembler 8.0 (MASM) tool.
- CO -2. Able to write ALP for addition ,subtraction, Multiplication and Division unsigned 16 bits nos.
- CO -3. Able to write ALP for arrays and for Rotating of Stepper Motor
- CO -4. Able to write ALP for median from list, length of string and Reversing of a given string..
- CO -5. Able to write ALP for displaying the Character on Led and Number on 7-Segment Display.

Data Structure

Course objectives: The objective of this course is:

1. Exploring data structures such as stacks and queues.
2. Introduces various types of linked lists.
3. Introduces a variety of data structures such as tree, graphs
4. Introduces sorting algorithms
5. Introduces searching algorithms

Course outcomes: At the end of course students will be able:

- CO -1. To select the data structures (stack, queue etc) that model the problems in real world.
- CO -2. To use the linked list to model the information in a problem.
- CO -3. To know the use of tree and graph in applications.
- CO -4. To Implement sorting algorithms(bubble sort quick sort etc.)
- CO -5. To Implement searching algorithms(linear, binary search) and assess efficiency trade-offs among different algorithms.

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Data Structure LAB

Course objectives: The objective of this course is:

1. To introduces searching and sorting algorithms
2. To introduces linked list and its operations
3. To provides an understanding and programs on stacks and queues.
4. To introduces programs on graphs.
5. To introduces programs on trees.

Course outcomes: At the end of course students will be able:

- CO -1. To understand and implement searching and sorting algorithms
- CO -2. To understand and implement linked list and its operations
- CO -3. To develop programs for computing and real-life applications using stacks, queues.
- CO -4. To write programs using graphs and assess efficiency trade-offs among different algorithms.
- CO -5. To write programs using trees and assess efficiency trade-offs among different algorithms.

Programming in Java

Course objectives: The objective of this course is:

- 1.To introduce the object oriented programming concepts.
- 2.To introduce java programming in solving problems.
- 3.To introduce the principles of inheritance and polymorphism
- 4.To introduce the implementation of packages and interfaces
- 5.To introduce the concepts of exception handling and multithreading.

Course outcomes: At the end of course students will be able:

- CO -1. To solve real world problems using OOP techniques
- CO -2. To solve problems using java collection framework and I/o classes.
- CO -3. To develop multithreaded applications with synchronization.
- CO -4. To develop applications using packages and interface
- CO -5. To design programs using exception handling and multithreading.

JAVA Programming LAB

Course objectives: The objective of this course is:

1. To introduce java compiler and eclipse platform.
2. To write programs for solving real world problems using java collection frame work.
3. To write multithreaded programs.
4. To write programs to handle the exceptions.
5. To write programs to using packages.

Course outcomes: At the end of course students will be:

- CO -1. Familiar with java compiler and eclipse platform.
- CO -2. Able to write programs for solving real world problems using java collection frame work.
- CO -3. Able to write multithreaded programs.
- CO -4. Able to handle the exceptions in java programs.
- CO -5. Able to write programs using packages.

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Skill Enhancement Compulsory Course – II

Course objectives: The objective of this course is:

1. Be successful professionals in the field with solid fundamental knowledge of software engineering
2. Utilize and exhibit strong communication and interpersonal skills, as well as professional and ethical principles when functioning as members and leaders of multi-disciplinary teams
3. Apply their foundations in software engineering to adapt to readily changing environments using the appropriate theory, principles and processes.
4. To provide an idea of using various process models in the software industry according to given circumstances.
5. To gain the knowledge of how Analysis, Design, Implementation, Testing and Maintenance processes are conducted in a software project.

Course outcomes: At the end of course students will be:

- CO-1. Able to work in one or more significant application domains
- CO-2. Able to work as an individual and as part of a multidisciplinary team to develop and deliver quality software
- CO-3. Demonstrate an understanding of and apply current theories, models, and techniques that provide a basis for the software lifecycle
- CO-4. Demonstrate an ability to use the techniques and tools necessary for engineering practice.
- CO-5. able to decomposing the given problem into Analysis, Design, Implementation, Testing and Maintenance phases.

Computer Networks

Course objectives: The objective of this course is:

1. To equip the students with overview & concepts of fundamentals of computer networks.
2. To familiarize the students with the standard models for the layered approach to communication between machines in a network.
3. To introduce various layers, functions of each layers.
4. To introduce the routing algorithms.
5. To introduce varies protocols in application layers.

Course outcomes: At the end of course students will be able:

- CO-1. To know of the basic computer network technology.
- CO-2. To gain the knowledge of the functions of each layer in the OSI and TCP/IP reference model.
- CO-3. To gain the knowledge in network design and implementation.
- CO-4. To obtain the skills of sub-netting and routing mechanisms.
- CO-5. Familiarity with the essential protocols of computer networks in application layer.

Compiler Construction

Course objectives: The objective of this course is to:

1. Provide an understanding of the fundamental principles in compiler design and it phases.
2. Introduce finite state machine and the scanning process in compiler.
3. Introduce top down and bottom up parsing
4. Introduce the various optimization methods.
5. Learn the process of translating a modern high-level language to executable code required for compiler construction.

Course outcomes: At the end of course students will be able to:

- CO-1. Understand fundamentals of compiler and identify the relationships among different phases of the compiler.
- CO-2. Understand the application of finite state machines and scanning.
- CO-3. Understand the top down and bottom up parsing methods.
- CO-4. Understand the various tools for optimization.
- CO-5. Use modern tools and technologies for designing new compiler.


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ANWARUL ULOOM COLLEGE (AUTON)

(Accredited by NAAC with 'A' Grade & An ISO 9001:2015 Certified Institution)

(Affiliated to Osmania University, Hyderabad)

Ref. No. _____

Date: _____

Object Oriented Analysis And Design

Course objectives: The objective of this course is:

1. introduce Objects and Classes of the software system.
2. introduce construct object model using object types, attributes, structures and associations.
3. introduce Object-Oriented Methodologies ,Analyze Functional and Dynamic Modelling.
4. introduce interaction diagrams
5. introduce Use case Diagrams , Activity Diagrams .

Course outcomes: At the end of course students will be :

- CO -1. Able to analyze the problem and apply to real world problems.
- CO -2. Able to construct object-oriented system , modelling objects, relationships and interactions.
- CO -3. Able to discuss software design in an object-oriented manner.
- CO -4. Able to draw Interaction diagrams
- CO -5. Able to draw and analyse Use case Diagrams, Activity Diagrams.

OOAD-LAB

Course objectives: The objective of this course is to introduce:

1. The Object-based view of Systems
2. Software specifications, analysis and design in solving complex problems.
3. The analysis and design the use case driven requirements for a particular system.
4. The model the event driven state of object and transform them into implementation specific layouts.
5. the subsystems, various components and collaborate them interchangeably.

Course outcomes: At the end of course students will be able:

- CO -1. Understand the object-based models for Systems.
- CO -2. Analyze and handle complex software design.
- CO -3. Analyze and design the use cases.
- CO -4. Understand abstract object-based views for generic software systems.
- CO -5. Deliver robust software components

Modern Data Base Management System

Course objectives: The objective of this course is to introduce:

1. The basic concepts and the applications of database systems.
2. Data models, database design, relational model, relational algebra,
3. The basics of SQL and construct queries using SQL
4. The normalization techniques.
5. The storage structures & access, distributed database systems.

Course outcomes: At the end of course students will be able:

- CO -1. To Gain knowledge of fundamentals of DBMS and its uses,
- CO -2. To design logical database using data models.
- CO -3. To design Physical database and master in SQL commands
- CO -4. To apply the normal forms
- CO -5. To familiarity with database storage structures and access techniques



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MDBMS LAB

Course objectives: The objective of this course is to:

1. Introduce the basics of SQL Queries.
2. Introduce DDL , DML commands
3. Introduce Construction of queries using SQL
4. Introduce Database design and ER data model,.
5. Introduce PL sql programs.

Course outcomes: At the end of course students will be able:

- CO -1. To write the basics of SQL Queries.
- CO -2. To use DDL , DML commands
- CO -3. Construct of queries using SQL
- CO -4. Design database and ER data model,.
- CO -5. To write PL sql programs.

Skill Excellence Compulsory Course -III

The objective of this course is to:

1. Provide an understanding PHP development environment.
2. Introduce the various php programming constructs decision making ,loops etc.
3. Introduce the arrays & strings concepts in php.
4. Provide syntax used with MySQL and methods for retrieve and manipulate data from one or more tables
5. learn real time application using php and mysql.

At the end of course students will be able to:

- CO -1. 1. Work with PHP development environment.
- CO -2. 2. Use various php programming constructs decision making ,loops etc.
- CO -3. 3. Introduce the arrays & strings concepts in php.
- CO -4. 4. Use MySQL and methods for retrieve and manipulate data from one or more tables
- CO -5. 5. Develop real time application using php and mysql

Internet of Things

Course objectives: The objective of this course is to:

1. Provide an understanding what IoT is and how it works today
2. Introduce the factors that contributed to the emergence of IoT
3. Introduce Internet and communication technologies for IOT.
4. Provide Prototyping and programming for IoT
5. Introduce Cloud computing and Data analytics.

Course outcomes: At the end of course students will be able to:

- CO -1. Understand what IoT is and how it works today.
- CO -2. Understand the factors that contributed to the emergence of IoT
- CO -3. Understand the Internet and communication technologies for IOT.
- CO -4. Understand prototyping and programming for IoT
- CO -5. Understand the Cloud computing and Data analytics.



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Date: _____

Web Programming

Course objectives: The objective of this course is:

- 1.To introduce HTML & DHTML language for client –side scripting
- 2.To introduce Cascading style sheets and layers
- 3.To introduce with Java scripts and it's objects
- 4.To introduce Server-side programming with ASP
- 5.To introduce the XML.

Course outcomes: At the end of course students will be able:

- CO -1. 1.Gain knowledge of client-side scripting, validation of forms.
- CO -2. 2.Understand the use of css and layers
- CO -3. 3.Understand Java scripts and it's objects
- CO -4. 4.Understand server-side scripting with ASP.
- CO -5. 5.Understand what is XML and how to parse and use XMLData

Web Programming LAB

Course objectives: The objective of this course is:

1. To write programs using html.
2. To write programs for solving real world problems using java Scripts.
3. To write programs using html,css and java scrips.
4. To write programs to handle various data validation.
5. To impart hands on experience on real time websites.

Course outcomes: At the end of course students will be:

- CO -1. Able to write html programs.
- CO -2. Able to solve real world problems using java scripts.
- CO -3. Able to write programs for solving real using java scripts.
- CO -4. Able to write handle the data validation.
- CO -5. Able to design web sites.

Introduction to Data science & Python Programming

Course objectives: The objective of this course is:

1. To introduce the concept of data science and its fundamentals.
2. To introduce various machine learning algorithms.
3. To acquire programming skills in core Python.
4. To familiarize data types in python.
5. To understand various operators and control statements and Arrays

Course outcomes: At the end of course students will be able:

- CO -1. 1. To understand data science phases of data science process and its role.
- CO -2. 2. To understand various algorithms in machine learning.
- CO -3. 3. To understand python programming and data types.
- CO -4. To understand Operators in Python, input and output statements, Control Statements.
- CO -5. 5. To understand the concept of arrays in python.


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Date: _____

Python Programming LAB

The objective of this course is to introduce:

1. Use of operators, Arrays in python.
2. Application of dictionaries in python
3. Uses of Strings and characters.
4. Use of lists, tuples, and dictionaries in Python programs.
5. Creation of module in python.

At the end of course students will be able:

- CO-1. To write program using Operators, Arrays in Python
- CO-2. To write program using dictionaries in python.
- CO-3. To write program using Strings and Characters
- CO-4. To write program using lists, tuples, and dictionaries in Python programs.
- CO-5. To write applications using function in python.

SCILAB

The objective of this course is to:

1. Provide an understanding Scilab environment and setup.
2. Introduce the menus ,commands and operations on vectors.
3. Introduce Scalars & Vectors.
4. Introduce Programming in scilab
5. Introduce string functions, 2d and 3d plotting.

At the end of course students will be able to:

- CO-1. Install and familiarize the scilab environment.
- CO-2. Understand the menus, commands and operations on vectors.
- CO-3. Understand the various operations on Scalars & Vectors.
- CO-4. Familiarize the programming in scilab
- CO-5. Process the string and plot 2d and 3d graph.

LEADERSHIP AND MANAGEMENT SKILLS: COURSE CODE: S7460

COURSE OBJECTIVES :

1. To develop critical thinking, managerial abilities and organization skills in students
2. To equip the students to take effective decisions by coordinating the teams
3. To enhance the capabilities of being team members and manage networks

COURSE OUTCOMES:

1. Student will understand and use the process of effective decision making
2. Develop self-awareness and self-management skills
3. Demonstrate effective interpersonal competence

COURSE: B) UNIVERSAL HUMAN VALUES

COURSE OBJECTIVES:

1. To help students understand the importance of values in individual, social, career, and national life.

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2. To motivate students to learn from lives of great and successful people who followed and practiced human values and achieved self-actualization.
3. To convey the message of Universal Human Values and encourage students to practice the Universal Human Values for a developing a better society.

COURSE OUTCOMES:

1. Student will understand and appreciate human values
2. Student will be able to do self- exploration, Self-evaluation and achieve selfdevelopment.
3. Apply professional ethics in their future profession & contribute for making a value-based society.

Paper(A) : NoSQL Data Bases

Objective: The main objective of this course is to cover core concepts of NoSQL databases, along with an example database for each of the key-value, document, column family, and graph databases

Outcomes: At the end of the course the student will be able to • Understand the need for NoSQL databases and their characteristics • Understand the concepts of NoSQL databases • Implement the concepts of NoSQL databases using four example databases: Redis for key-value databases, MongoDB for document databases, Cassandra for columnfamily databases, and Neo4J for graph databases.


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ESTD-1919

2022-2023

Class:- 1st Year (1st Sem)

Name: Mrs. Rehana Banu

LESSON	OBJECTIVES	OUTCOMES
महा दर्शन		
1. उत्साह	प्रसूत निबंध में लेखक ने मानव मन में उत्पन्न 'उत्साह' का महक भाव की व्याख्या की है।	छात्रों को निबंध, संवाद, सारांश, पत्र इत्यादि लिखने की कला कुशलता उत्पन्न करने का प्रयास करना।
2. चरित्र संगठन	लेखक के अनुसार मनुष्य अपने चरित्र के कारण समाज में विशेष स्थान रखता है।	छात्रों में भाषा के अधिक से अधिक अध्ययन की प्रेरणा उत्पन्न करना।
3. बाजार दर्शन	बाजार दर्शन से आदकों को होनेवाले शोषण पर इस में व्यंग्य किया गया है।	छात्रों में अपने विचारों को मौखिक एवं लिखित रूप में अभिव्यक्त करने की शक्ति का विकास करना।
4. भाषा	लेखक ने भारतीय समाज में विभाषा की जो दयनीय स्थिति का संक्षेप चित्रण किया गया है।	छात्रों में शब्दों और विचारों के बीच संबंधों को समझने की समझ उत्पन्न करना।
5. भारत में संस्कृति संगम	भारतीय संस्कृति की समन्वयता मकलम और विशिष्टता का इसमें परिचय प्राप्त होता है।	छात्रों में शुद्ध भाषा के भावों को अभिव्यक्त करने की क्षमता का विकास करना।
6. शब्द का स्वरूप	लेखक ने शब्द के अर्थों के माध्यम से ही शब्द के स्वरूप का विचार किया है।	छात्रों को शीघ्र ही और विचारण के साथ शब्द समझ लेने से कक्षा में प्रयोग करना।
कथा सिंगु		
1. यदुनि	दरिद्र के शोषण की अमानवीय व्यवस्था और दलितों की नस्लीय या जातीय का सजीव चित्रण किया गया है।	छात्रों को कहानियों में टिप्पणियों का विकास करना।
2. छोटा जादूगर	छोटा जादूगर के इन मानवीय गुणों का उद्घाटन कर आश्चर्यचरित और दारिद्र्य बोध का संदेश देना ही कहानी का उद्देश्य है।	छात्रों में भाषा-विद्या के प्रति सम्मान भाव जगाना।
3. सच का यौत	इस कहानी के द्वारा यह संदेश दिया गया है कि जीवन में मार्ग एवं सच को मार्ग का अनुसरण करना चाहिये।	छात्रों में शुद्ध एवं शिष्ट भाषा जीखाने तथा इन की सामान्य जानकारी प्राप्त करने की प्रवृत्ति का विकास करना।
4. प्रायश्चित	प्रायश्चित कहानी में पारिवारिक रुढ़ियों पर व्यंग्य किया गया है।	छात्रों में कहानी की समझ और भाषा का विकास करना।
5. परदा	इस कहानी से महावर्गीय लोगों के निर्यातमान और उससे जुड़ी विमर्श दयनीय स्थिति की जानकारी हो जाती है।	छात्रों में कहानी में विहित भावों, विचारों, नैतिक मूल्यों को ग्रहण करने की क्षमता विकसित करना।
6. चीक की टावरा	चीक की टावरा महावर्गीय जीवन में आ रहे पीढ़ियों के अंतराल ही कहानी है। पाश्चात्य सभ्यता और संस्कृति का प्रभाव हमारे देश में किस हद तक है उसका सजीव चित्रण इसमें किया गया है।	छात्रों को एक दूसरे से बातचीत के लिए प्रेरित करना।

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2022-2023

Subject:- Hindi



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Class:- 1st Year (2nd semester)

Name Mrs Rehana Banu

LESSON	OBJECTIVES	OUTCOMES
गद्य दर्शन		
1. घरसी का स्वर्ण	प्रस्तुत पाठ में लेखक ने भारत की 'घरसी का स्वर्ण' का सुंदर वर्णन किया है।	छात्रों द्वारा उच्चारित एवं लिखित भाषा में परिमार्जन करना।
2. ताई	इसमें बताया गया है कि ममत्व से प्रेम उत्पन्न होता है और प्रेम से ममत्व।	छात्रों में स्वभावशीलता का विकास करना।
3. अंडे के बिलके	लेखक ने बदलते हुए पारिवारिक और सामाजिक परिवेश में नारी को प्रति बदलते मूल्यों को उन्होंने अपनी 'आँसी रेखांकित किया है।	छात्रों में शुद्ध भाषा के भावों का अभिव्यक्त करने की क्षमता का विकास करना।
4. राजनीति का बंटवारा	प्रस्तुत पाठ 'राजनीति का बंटवारा' में परसई ने तत्कालीन समाज में व्याप्त राजनीति का वर्णन किया है।	छात्रों में भाषा एवं उसके साहित्य को प्रति आदरपूर्ण भाव का निर्माण करना।
5. स्वामी विवेकानंद	प्रस्तुत पाठ में विवेकानंद के जीवन का बड़ा ही प्रभावशाली वर्णन किया है।	छात्रों में एकतावादी को विकसित करना।
6. परिवारण और हम	प्रस्तुत पाठ में यह बताने का प्रयास किया है कि पिछले कई दशकों से प्रदूषण की समस्या का समाधान क्या है।	छात्रों में पठन कला को निपुणता का विकास करना।
कथा / किंवदंती		
1. डिप्टी का नेवटरी	इस कहानी में पिता के पुत्र को प्रति स्नेहापूर्ण दृष्टि की झलक दर्शाई होती है।	छात्रों में माता-पिता को प्रति सम्मान भाव जगृत करना।
2. गदल	गदल गुजरात की एक अत्यंत स्वाभिमान, स्वतन्त्री तथा साहसी स्त्री की कहानी है।	छात्रों ने कहानी में निहित भाव, विचारों, नैतिक मूल्यों का ग्रहण करने की क्षमता का विकास करना।
3. रूसू या से रूसू	इस कहानी में मृत्यु के अवसर पर मनुष्य की सार्थक प्रवृत्ति पर वर्णन किया गया है।	छात्रों में कल्पना और रचयन शक्ति का विकास करना।
4. वापसी	इसमें मध्यमवर्गीय बदलते पारिवारिक संबंधों की दार्शनिक झलक प्रस्तुत की गई है।	छात्रों में भाषा के अधिक से अधिक अध्ययन की प्रेरणा उत्पन्न करना।
5. सेवा	इस कहानी में ममता कलिया ने समाज को तात्पर्य कर देने वाली कटु सत्य को बारी में बताया है।	छात्रों में नागरिक समाज को प्रति रुचि उत्पन्न करना।
6. शिलिया	इस कहानी में डॉ. शुशिला टाकमारे ने 'शिलिया' नामक मुख्य पात्र को माध्यम से नारी का आत्मसम्मान को लिए दिया गया संघर्ष दर्शाया है।	छात्रों को हिंदी पाठ्य पुस्तकों के माध्यम से मानव उपलब्धि का ज्ञान करना।

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ESTD 1988



W Code

Class:- 2nd Year (3rd Sem)

Name: Mrs. Mallika

LESSON काल्पनिक कवि	OBJECTIVES	OUTCOMES
1. कबीर के दोहे	कबीर की रचनाओं में मृत्यु के प्रति अति भावना व्यक्तियां प्राप्ति पाँति और हुआ हुआ के प्रति विशेषी भावना स्पष्ट होते हैं।	छन्दों के दोहों का सही उदाहरण के साथ उदाहरण में पठन करना।
2. तुलसीदास के दोहे	प्रस्तुत दोहों में तुलसीदास ने मानव जीवन के लिए नीतिपरक, शक्तिपरक ज्ञान परत मूल्यों का महत्व प्रतिपादित किया है।	छन्दों में दोहों को समझकर उदाहरण दोहों के प्रयोग उदाहरण का रचना।
3. अनुभवों से	प्रस्तुत रचना में देश के भविष्य के निर्माण में हम लौने का और देश के प्रति कर्जता होकर अपना योगदान देने का आदेश कवि ने किया।	छन्दों में भाषा एवं उसके शक्तिता के प्रति आदा पूर्ण मूल्य का निर्माण करना।
4. फूल और कटि	प्रस्तुत 'फूल' और 'कटि' कविता में फूल और कटि के द्वारा अपने और पुरे लोगों को और संकेत करते हुए जन्मसूत्र रखने का संकेत दिया गया है।	छन्दों को कवि एवं उनके पदों के बारे में जानकारी देना।
5. भारत	प्रस्तुत रचना में प्रसिद्ध शंभुदास दुर्वर्तों को सुख भरा की आधुनिक मायाओं को काव्यारमक रूप देने हुए 'भारत' की संज्ञा के आविर्भाव का महत्व उक्त वर्णन किया है।	छन्दों से अपने अनुभवों एवं कल्पनाओं को सुझावगत रूप से लिखने का प्रयास करना।
6. जीवन का अविनाश	प्रस्तुत रचना में एक ही व्यक्ति को अपने जीवन की सार्थकता और उसके द्वारा समाज में अपना अधिकार प्राप्त करने का संकेत देती है।	छन्दों को काव्य पाठ करने की प्रेरणा देना।
7. मेरा बना बचपन	प्रस्तुत रचना में सुभाष चण्डी चौकल ने बचपन को जीवन का स्वर्णिमकाल कहा है उन्होंने अपने बचपन की यादों के बढाने पाठक को अपने बचपन की मधुर यादों को रचना करने का विषय दिया है।	छन्दों में कल्पना और रचना शक्ति का विकास करना।
द्वितीय साहित्य का इतिहास	आदिमकालीन साहित्य के इतिहास के साथ साथ हीन राजनीतिक, सामाजिक, धार्मिक तथा सांस्कृतिक स्थितियों को जानना आवश्यक है।	छन्दों में द्वितीय साहित्य के विकास के आधिकार की मूल शक्तिपरता एवं उनकी रचनाओं से परिचित करना।
○ आदिमकाल - परिस्थितियों एवं प्रवृत्तियों	भक्ति काल में समाजिक- धार्मिक सुधारों की धारा द्वारा समाज विभिन्न तरह से भागवान की भक्ति का प्रयास- साध किया गया है।	छन्दों में साहित्य के अध्ययन के प्रति रुचि का विकास करना।
○ शक्तिपरक - परिस्थितियों एवं प्रवृत्तियों	निबंध को लिखने के लिए उस विषय के बारे में पूर्ण जानकारी लेनी चाहिए।	छन्दों को निबंध, संवाद, नायक, वगैरह लिखने की प्रेरणा प्रदान करना उपलब्ध करने प्रेरणा करना।
○ निबंध	विदेशी भाषा में अति व्यक्त विचारों को दूसरी भाषा में समान प्रस्तुत करना अनुवाद है।	छन्दों में अनुवाद कार्य को प्रभा देना तथा इसके प्रति संकल अनुवादक तैयार करना।
○ अनुवाद		

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1970-1979



A Grade

Class - 3rd Year (5th Sem)

Name: Mohi Fatima

LESSON	OBJECTIVES	OUTCOMES
<p>यूनिट- 1 हिंदी भाषा के विविध रूप</p> <p>1. सजसाया</p> <p>2. सद्भाषा</p> <p>3. संघर्ष भाषा</p> <p>4. प्राचीनमूलक हिंदी</p> <p>5. विप में हिंदी का महत्व</p>	<p>सजसाया कीर्ति का उद्भव है वि सामान्यतः सरकारी कार्यालय में अधिकारिक हिंदी का प्रयोग हो</p> <p>सद्भाषा जिसी श्री सद् की एववा सुदृढ़ बनने में उपयोगी होती है संघर्ष भाषा का मुख्य उद्देश एक दूसरे को मध्य प्रकृति बना कर प्रेषित करना होता है</p> <p>प्राचीन भाषाओं के मध्य संघर्ष हेतु का कार्य करना ।</p> <p>हिंदी को विप भाषा के रूप में प्रस्तुत करना है।</p>	<p>छात्रों में हिंदी भाषा के प्रति सही भाव प्रकट करना ।</p> <p>छात्रों को हिंदी में कर्ता रूप करने योग्य करना ।</p> <p>छात्रों में भाषा एवं उच्च साहित्य के प्रति सकार पूर्ण भाव विकसित करना</p> <p>छात्रों को कार्यालयों में प्रयुक्त होने वाली हिंदी भाषा का महत्व प्रकट करना ।</p> <p>छात्रों में भाषा के अतिरिक्त अधिक प्रत्यय की प्रकृति प्रकट करना ।</p>
<p>यूनिट- 2 हिंदी साहित्य की विविध विधाओं का परिचय</p> <p>1. कविता</p> <p>2. कथा</p> <p>3. उपन्यास</p> <p>4. नाटक</p> <p>5. एकवचि</p> <p>6. निबंध</p> <p>7. आत्मकथा</p> <p>8. संस्मरण</p> <p>9. प्रेक्षा-विषय</p> <p>10. व्यंग्य</p>	<p>कविता कवय की वस्तु तथा अनुभूति की अभिव्यक्ति है।</p> <p>कथा कहानी का महत्व साधक - उद्योग की विभिन्न समस्याओं और संवेदनाओं को व्यक्त करना है ।</p> <p>उपन्यास कहानी की, जीवन के अनुभवों को व्यक्त करने का कार्य उपन्यास करते हैं।</p> <p>नाटक में जीवन की अनुभूति को प्रकट करने में उपयुक्त है। इसके अलावा प्राचीन काल से ही कविता लिखा जाता है ।</p> <p>एकवचि में एक ही शब्द, एक ही शब्द, मूल भाव, एक ही रूप, जीवन का एक ही भाव, कार्य, उद्देश्य होता है।</p> <p>निबंध को लिखने के लिए आ विषय को बारे में पूर्ण जानकारी होनी चाहिए।</p> <p>आत्मकथा का उद्देश्य लेखक द्वारा स्वयं का जीवन विवरण करना, जीवन परिचय करना तथा उसके साथ -साथ जीवन की समृद्धि को प्रकटित करना होता है ।</p> <p>संस्मरण लेखक व्यक्तिगत अनुभव को साधारणता के साथ इस रूप में प्रस्तुत करता है कि उसका विषय अद्वितीय हो जाता है।</p> <p>प्रेक्षा-विषय में साहित्यकार अपनी रचना का अनुभूति का प्रकट कर लेखक को प्रकट करता है, जिस व्यक्ति, वस्तु या स्थान का वर्णन करता है।</p> <p>व्यंग्य का उद्देश्य मनोरंजन करना । अर्थात् प्रिय प्रस्तुत करना है ।</p>	<p>छात्रों की प्राचीन कविता को छात्रों को प्रकट करने में सक्षम बनाना</p> <p>छात्रों को कथा में कि होता है, निर्यात, जीवन, मूल्य, को समझ करने की क्षमता विकसित करना</p> <p>छात्रों को अपने अनुभवों को व्यक्त करने में सक्षम बनाना</p> <p>नाटक छात्रों को एक ही शब्द, कार्य, उद्देश्य को प्रकट करने में सक्षम बनाना</p> <p>छात्रों को एकवचि की प्रकृति को छात्रों को प्रकट करने में सक्षम बनाना</p> <p>छात्रों में निबंध लिखने की क्षमता विकसित करना का प्रकट करना</p> <p>छात्रों में व्याकरण संबंधी विषयों का पूर्ण ज्ञान करना ।</p> <p>छात्रों में एकवचि को प्रकट करना</p> <p>छात्रों में साहित्य के प्रति सही विकसित करना ।</p> <p>छात्रों में सुदृढ़ लेखक, कथा, कविता को प्रकट करने में सक्षम बनाना</p>
<p>यूनिट- 3 जनसंचार के माध्यम जनसंचार का अर्थ, परिभाषाएं एवं स्वरूप, जनसंचार की प्रमुख विशेषताएं</p>	<p>लेखक को जनसंचार माध्यम - वाहक प्रकृति हो, कविता हो या प्रेक्षा-विषय - सभी का उद्देश्य है सुनने वालों को उनके जीवन में लेखक का संदेश प्रकट करना</p>	<p>जनसंचार के माध्यम प्रकट करना</p>

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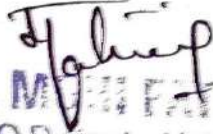


'A' Grade

Class:- 3rd Year(6th Semester)

Name :- Mrs. Mohi Fatima

Lesson	OBJECTIVES	OUTCOMES
unit- 1. अनुवाद	किसी भाषा में कहे या लिखी गई बात का दूसरी भाषा में सार्थक परिवर्तन अनुवाद है।	छात्रों में अनुवाद कार्य को बढ़ावा देना तथा इसके जरिए सफल अनुवादक तैयार करना।
unit - 2. पत्रकारिता	पत्रकारिता का उद्देश्य किसी भी व्यवस्था के गुण - दोषों को व्यापक आधार पर प्रचारित करना है। जिसमें समाचारों का एकत्रीकरण, लिखना, जानकारी संचित करके पढ़वाना, संपादित करना और सत्यक प्रस्तुतीकरण आदि सम्मिलित हैं।	जनसंचार के साधनों के अनुकूल बनाने हेतु हिंदी को विकसित करना।
ur it -3. हिंदी साहित्य के विविध आगम	स्त्रीवाद का लक्ष्य आत्म संतोष या आनंद देना नहीं बल्कि उसका लक्ष्य है न्याय पाना।	छात्रों ने भाषा और साहित्य के संबंध को जानना।
1. हिंदी में स्त्रीवादी साहित्य	दलित साहित्य का मूल उद्देश्य नये मानवीय एवं समतामूलक समाज का निर्माण करना है।	छात्रों में भाषा एवं उसके साहित्य के प्रति आदर पूर्ण भाव का निर्माण करना।
2. हिंदी में दलित साहित्य	आदिवासी साहित्य आदिवासी समुदाय की अस्मिता, संस्कृति, तथा संघर्ष को लिए नवीन चेतना जगृत करता है।	छात्रों में साहित्य अध्ययन के प्रति रुचि उत्पन्न करना।
3. हिंदी में आदिवासी साहित्य	अल्पसंख्यक- वर्ग की आंतरिक वास्तविकता एवं अंतर्विरोध को प्रामाणिकता से अभिव्यक्त किया है।	छात्रों में अपने विचारों को मौखिक एवं लिखित रूप में अभिव्यक्त करने को रुचि का विकास करना।
4. हिंदी में अल्पसंख्यक साहित्य		


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ANWARUL ULOOM COLLEGE (AUTONOMOUS)
(Affiliated to Osmania University)
Accredited with 'A' Grade by NAAC
New Mallepally, Hyderabad- 500001, T.S., India.
DEPARTMENT OF MATHEMATICS



Vision & Mission

B.Sc Program Outcomes (General)
(11 Points)

VISION

- Imparting quality mathematics education and inculcating the spirit of research through innovative teaching and research methodologies.
- To achieve high standards of excellence in generating and propagating knowledge of Mathematics. The department is committed to providing an education that combines rigorous academics with the joy of discovery.
- To provide an environment where students can learn, become competent users of mathematics, and understand the use of mathematics in other disciplines.

MISSION

- To equip our students with the conceptual understanding, computational skills, and persistent disposition required to use quantitative reasoning and analysis effectively in their personal and professional lives.
- To provide stimulating mathematical experiences that will bolster their future careers, whether that be the application of mathematics in practical contexts or contributions to the mathematical profession through teaching, and active participation in professional organizations.

- PO-1: Apply the knowledge of mathematics, science, and electronic hardware to provide solutions for all kinds of problems in the respective domain.
- PO-2: Identify and analyze the complex and real-world problems based on the knowledge.
- PO-3: Design an innovative interface method to bring the complete solutions using statistical methods and visualize the results for decision making.
- PO-4: Develop the ability to design experiments and investigate complex problems based on the knowledge acquired by various research methods to come up with valid conclusions.
- PO-5: Apply the modern tools and technologies to formulate, design, implement and demonstrate a self designed solution.
- PO-6: Apply scientific knowledge and provide innovative ideas to shape our society.
- PO-7: Identify and develop solutions to environmental related problems and to enhance.
- PO-8: Understand the societal and ethical responsibilities of professionals.
- PO-9: Understand the societal and ethical responsibilities of professionals.
- PO-10: Communicate effectively with a wide range of audience using a range of modalities including written, oral, and graphical presentations.
- PO-11: Acquire skill-based knowledge and ability for lifelong learning.

Program Outcomes (Specific)

- PSO-1: Work alongside engineering, medical, ICT professionals and scientists to assist them in scientific problem solving.
- PSO-2: Act as administrators in public, private and government organizations or business administrator or entrepreneur with further training and education.
- PSO-3: Pursue masters and doctoral research degrees to work in colleges, universities as professors or as scientists in research establishments.

Course Outcomes LINEAR ALGEBRA

- CO-1: Introduction to vector space and subspace
- CO-2: Use computational techniques and algebraic skills essential for the study of systems of Linear equations, matrix algebra, vector spaces, eigenvalues and eigenvectors, Orthogonality and Diagonalization.
- CO-3: Apply modern tools and technologies to formulate, design, implement and demonstrate the best solution.

Head
Head
Department of Mathematics
Anwarul Uloom College
New Mallepally, Hyderabad.



Anwarul Uloom College

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DEPARTMENT OF MATHEMATICS

CRITERION-II

(2022 – 2023)

PROGRAM OUTCOMES, PROGRAM SPECIFIC OUTCOMES AND COURSE OUTCOMES

DEPARTMENT NAME: MATHEMATICS

LECTURER NAME: AYESHA TARANUM

PROGRAM OBJECTIVES: B Sc I YEAR 1st SEMESTER 2022– 2023.

PREPARE STUDENTS FOR PURSUING RESEARCH OR CAREERS IN INDUSTRY IN MATHEMATICAL SCIENCE.

SUBJECTNAME: DIFFERENTIAL AND INTEGRAL CALCULUS

COURSE OBJECTIVE: UNDERSTAND THE GENESIS OF DIFFERENTIAL AND INTEGRAL CALCULUS

PROGRAM	PROGRAM OBJECTIVES	PROGRAM SPECIFIC OBJECTIVES
BSC MATHEMATICS	PO1: PROMOTION OF SELF STUDY PO2: PROMOTION OF THINKING PO3:CONFIDENCE PO4:CREATIVITY PO5:UNDERSTANDING CONCEPTS PO7DEVELOPMENT OF WRITING ,LISTENTING AND TEACHING SKILLS POB: GROUP DISCUSSION(SKILL OF TEAM WORK,INTERPERSONAL SKILL) PO9:SOCIAL VALUES,UNITY IN DIVERSITY	PSO1TO ENABLE THE STUDENT TO CULTIVATE A MATHEMATICAL WAY OF THINKING I,E. MAKING CONJECTURES ,VERYFYING THEM WITH FURTHER OBSERVATIONS ,GENERALIZING THEM ,TRYING TO FIND PROOFS AND MAKING OBSERVATIONS. PSO2: TO ENABLE THE STUDENTS TO QUANTIFY THEIR EXPERIENCES IN OTHER SUBJECTS THEY STUDY, PSO3:TO ENABLE THE STUDENTS TO LEARN THE BASIC STRUCTURES OF MATHEMATICS THROUGH UNIFYING CONCEPTS AND TO MOTIVATE THESE STRUCTURES THROUGH APPLICTIONS . PSO4 TO PROVIDE HIGH QUALITY MATHEMATICAL FOR THEMSELVES. PSO5:TO PROVIDE HIGH QUALITY MATHEMATICAL EDUCATION AT ALL LEVELS THAT WILL BE VITAL FOR SCIENTIFIC AND TECHNOLOGICAL DEVELOPMESTS.

B Sc I YEAR SEMESTER -I PAPER I

COURSE TITAL:DIFFERENTIAL CALCULUS

[Signature]
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COURSE LEARNING OUTCOMES: CALCULUS :THIS COURSE WILL ENABLE THE STUDENTS TO:

- 1)Assimilate the notions of limit of a sequence and convergence of series of real numbers.
- 2)Calculate the limit and examine the continuity of a function at a point.
- 3)Understand the consequences of various mean value theorems for differentiable functions.
- 4)Sketch curve in Cartesian and polar coordinates systems
- 5)Apply derivatives test in optimization problems appearing in social sciences ,physical science life science and a host of other disciplines.

INTEGRAL CALCULUS; the main purpose for course is to introduce

- 1)The concepts of definite and indefinite integrals
- 2)methods of integration .
- 3)Some applications of integral calculus .
- 4)Polar coordinates

B Sc I YEAR SEMESTER II PAPER II COURSE TITLE:DIFFERENTIAL EQUATIONS

ON SUCCESSFUL COMPLETION OF THE COURSE ,STUDENTS WILL BE ABLE TO

Completion of this program will also enable the learners to join teaching profession in primary and secondary schools beside Admission to Post Graduate in Mathematics and Computer Science.

4. This programme will also help students to enhance their employability for government jobs, jobs in banking, insurance and investment sectors, data analyst jobs and job in various other public and private enterprises.

B.Sc I-YEAR SEMESTER-I PAPER-II Code..... Course TitleDifferential equations 5T

Course Learning Outcomes: Calculus: This course will enable the students to:

- i) Assimilate the notions of limit of a sequence and convergence of a series of real numbers,
- ii) Calculate the limit and examine the continuity of a function at a point.
- iii) Understand the consequences of various mean value theorems for differentiable functions.
- iv) Sketch curves in Cartesian and polar coordinate systems.
- v) Apply derivative tests in optimization problems appearing in social sciences, physical sciences, life sciences and a host of other disciplines

INTEGRAL CALCULUS: The main purpose for this course is to introduce:

1. The concepts of definite and indefinite integrals
2. methods of integration
3. Some applications of integral calculus.
4. Polar coordinates.

On successful completion of the course, Students will be able to:

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B.Sc I-YEAR SEMESTER-II PAPER-II Code..... Course Title Differential Equations 5T

On successful completion of the course, Students will be able to:

1. The main aim of the course is to introduce the students to the technique of solving various problems of engineering and science
2. Distinguish between linear, nonlinear, partial and ordinary differential equations.
3. Solve basic application problems described by second order linear differential equations with constant coefficients.
4. Find power series solutions about ordinary points and singular points.
5. Find the transforms of derivatives and integrals.
6. Obtain an approximate set of solution function values to a second order boundary value problem using a finite difference equation.
7. Solve a homogeneous linear system by the eigenvalue method.
8. Obtain an approximate set of solution function values to a second order boundary value problem using a finite difference equation.

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B.Sc II-YEAR SEMESTER-III PAPER-III Code Course Title Real Analysis 5T

After completing the course students are expected to be able to:

1. Describe the basic difference between the rational and real numbers.
2. Give the definition of concepts related to metric spaces such as continuity, compactness, convergent etc.
3. Give the essence of the proof of bolzanoweistrass theorem the contraction theorem as well as existence of convergent sub sequence using equicontinuity.
4. Evaluate the limits of wide class of real sequences.
5. Determine whether or not real series are convergent by comparison with standard series or using the ratio test. Understand and perform simple proofs.
6. Students will be able to demonstrate basic knowledge of key topics in classical real analysis.
7. The course previous the basic for further studies with in function analysis, topology & function Theory.

B.Sc II-YEAR SEMESTER-IV PAPER-III Code Course Title ALGEBRA 5T

After completing the course students are expected to be able to:

- On completion of this unit successful students will be able to:
- Demonstrate when a binary algebraic structure forms a group.
- Construct Caley tables.
- Determine possible subgroups of a group.
- Identify normal subgroups of a group.
- Examine symmetric and permutation groups.
- Explain group and subgroup orders using Lagrange's theorem.
- Identify cyclic subgroups and their generators.
- Identify factor group. Implement group axioms.
- Group Homomorphism and isomorphism
- Rings and sub rings, integral domains
- Ideals and Factor Rings , Prime and Maximal Ideals, Ring Homomorphism and properties

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B.Sc III-YEAR SEMESTER V Course title code...LINEAR ALGEBRA code... (5T each)

1. Understand the combination of two important aspects of modern mathematics via Linear Algebra and Vector Calculus.
2. Linear Algebra emphasizes the concept of vector spaces and linear transformations which are essential in simplifying various scientific problems.
3. It aims at inculcating problem solving skills within students to enable them compute large linear systems.
4. The practical applications of "Linear Algebra" are in demography, archaeology, electrical engineering, fractal geometry and traffic analysis.
5. Vector calculus motivates the study of vector differentiation and integration in two and three dimensional spaces.
6. It is widely accepted as a prerequisite in various fields of science and engineering, It offers important tools for understanding functions (both real & complex) non-Euclidean geometry and topology.
7. These tools are employed successfully in different branches of engineering and physics (such as electromagnetic fields, fluid flow and gravitational fields).

B.Sc III-YEAR SEMESTER-VI Numerical Analysis Paper VI subject Code:

Learning Objective 1. The course will also develop an understanding of the elements of error analysis for numerical methods and certain proofs.

2. The main objective of this course is to provide students with an introduction to the field of numerical analysis.
3. Derive appropriate numerical methods to solve interpolation based problems.
4. Derive appropriate numerical methods to solve probability based problems.
5. Prove results for various numerical root finding methods.

Learning Outcomes: After the completion of the course, Students will be able to

1. Understand the theoretical and practical aspects of the use of numerical analysis.
2. Proficient in implementing numerical methods for a variety of multidisciplinary applications
3. Establish the limitations, advantages, and disadvantages of numerical analysis.
4. Derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.
5. Understand of common numerical analysis and how they are used to obtain approximate solutions to otherwise intractable mathematical problems.

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YEAR 2022-2023

DEPARTMENT NAME : MATHEMATICS (M.SC. APPLIED MATHS)

PROGRAM OBJECTIVE:

Prepare students for pursuing research or careers in industry, mathematical sciences and allied field.

SUBJECT NAME: ABSTRACT ALGEBRA

SEMESTER – I

PAPER – I

COURSE OBJECTIVE:

Concept of group action and theorems about group actions

UNIT	UNIT –OBJECTIVE	LEARNING OUTCOMES
I	ALGEBRAIC EXTENSION OF FIELD	GOLOIS THEORY ALLOWS THE STUDENT TO DEAL WITH EFFECTIVE COMPUTATION IN ALGEBRAIC EXTENSION OF FIELD
II	NORMAL AND SEPARABLE EXTENSION	STUDENT ARE EXPECTED TO BE PROFICIENT IN SOLVING BASIC ORDINARY AND PARTIAL DIFFERENTIAL EQUATION
III	GALOIS THEORY	FACILITY WITH FIELDS AND THEIR EXTENSIONS INCLUDING EXPERTISE IN EXPLICIT CALCULATIONS WITH AND CONSTRUCTIONS OF EXAMPLES
IV	APPLICATION OF GALOIS THEORY TO CLASSICAL PROBLEM	THE MAIN OBJECTIVES OF THIS APPLICATION IS TO DEVELOP NOTIONS OF GALOIS THEORY AND THEIR AOOPLICATIONS TO CLASSICAL PROBLEMS

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SUBJECT NAME: MATHEMATICAL ANALYSIS

SEMESTER-I

PAPER -II

COURSE OBJECTIVE:

Understand and ability to handle convergence of series and sequence of function.

*Ability to differentiate function in R_n .

UNIT	UNIT-OBJECTIVE	LEARNING OUTCOMES.
1	Metric, compact sets, perfect sets-connected sets.	Basic definition of metric space, nonlinear space and inner product space.
2	Limits, continuous, discontinues mono tone functions.	Series and sequence of Continuous function.
3	Rie mann- steiltjes integral (R.S.I), Rectifiable curves.	Definition of R.S.I and existence of integral and its properties.
4	Sequence and series of function approximation of continuous function.	Equi continuous families and stone-weierstrass theorem.

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DEPARTMENT NAME : MATHEMATICS(2022-2023)

SUBJECT NAME : ORDINARY AND PARTIAL DIFFERENTIAL EQUATION

SEMESTER -I

PAPER-III

COURSE OBJECTIVE:

Understand the genesis of ordinary and partial differential equation

unit	TOPICS	Learning outcomes
I	Existence and Uniqueness of solution, Picard's theorem, Linear PDE	Know Picard's method of successive approximation of solutions of first order differential equation and learn to get exact solution
II	P.D.E of order two with variable coefficients, classification, Solution of one dimensional heat, wave equation and Laplace equation	Learn various techniques of getting exact solutions of solvable first order differential equation and linear differential equation of higher order
III	Power series of O.D.E, Legendre Polynomial	Power series method for higher order linear equations especially in cases when there is no method available
IV	Bessel's functions, Hermite Polynomials	Formulate mathematical models in the form of O.D.E to suggest possible solutions

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SUBJECT NAME : MECHANICS

SEMESTER -I

PAPER-IV

COURSE OBJECTIVE: :

Understanding of the fundamental axioms in mathematics and capability of developing ideas based on them.

unit	Topics	Learning outcomes
I	Equilibrium in a uniform Gravitational field.	Determine the centre of gravity of materialistic systems Discuss the Equilibrium of a uniform cable hanging-under its own weight.
II	Rotation of a rigid body about a fixed axis, moment of inertia.	Familiarize with subject matter which has been the single Centre to which were drawn Mathematicians, physicists, Astronomers and Engineers together.
III	Rotational Kinetic energy. Rigid body.	Deals with the Kinetics and Kinetics of the rectilinear Rigid body and planar motion of a particle including the Constrained of particles.
IV	Lagrange's Equation and Their applications. Generalized Momentum.	Understand necessary conditions for the equilibrium of Particle acted upon by various force and learn the principle of vertical work for a system of coplanar Forces acting on a particle.

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SUBJECT NAME: INTEGRAL TRANSFORMS

SEMESTER -I

PAPER-V

PROGRAM OBJECTIVES:

Prepare student for pursuing research or careers in industry in mathematical sciences and allied fields

COURSE OBJECTIVE:

To make strong foundation of the integral transforms and their inverses and to create zeal of working with higher mathematics.

unit	TOPICS	Learning outcomes
I	Laplace Transforms, Application to ordinary and partial differential equation, Inverse transformation.	Apply Laplace Transforms and its inverse to solve initial value and other related problems
II	Fourier Transforms ,Inverse Fourier Transforms , Application to Ordinary and partial differential equation	Use Fourier transform and its inverse in partial application
III	Hankel Transform, Application in BVP	Understand different components involved in Hankel Transform and its application.
IV	Mellin Transforms, Convolution theorem	Learn Mellin Transforms and various components on it.

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MATHS 2022 -23 SEMESTER II ALL PAPERS

SUBJECT NAME : GALOIS THEORY

SEMESTER –II

PAPER – I

COURSE OBJECTIVE:

Concept of group action and theorems about group actions

UNIT	UNIT –OBJECTIVE	LEARNING OUTCOMES
I	ALGEBRAIC EXTENSION OF FIELD	GOLOIS THEORY ALLOWS THE STUDENT TO DEAL WITH EFFECTIVE COMPUTATION IN ALGEBRAIC EXTENSION OF FIELD
II	NORMAL AND SEPARABLE EXTENSION	STUDENT ARE EXPECTED TO BE PROFICIENT IN SOLVING BASIC ORDINARY AND PARTIAL DIFFERENTIAL EQUATION
III	GALOIS THEORY	FACILITY WITH FIELDS AND THEIR EXTENSIONS INCLUDING EXPERTISE IN EXPLICIT CALCULATIONS WITH AND CONSTRUCTIONS OF EXAMPLES
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SUBJECT NAME: LEBESGUE MEASURE AND INTEGRATION

SEMISTER-II

PAPER-II

COURSE OBJECTIVE:

Ability to handle ordinary differential equation and solve them under appropriate assumption.

UNIT	UNIT-OBJECTIVE	LEARNING OUTCOMES.
2	Riemann integral, integral of a non-negative function.	The notion of convergence in $c[0,1]$ and related theorems.
3	Convergence in measure, function of bounded variation.	Apply implicit and inverse function theorem.
4	Differentiation of an integral convergence and completeness.	Apply minkowski and Holders in equalities.

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SUBJECT NAME: COMPLEX ANALYSIS
SEMESTER –II

PAPER-III

COURSE OBJECTIVE:

This course will enable the students to visualize complex numbers as points and stereo graphic projection complex plane on the Riemann sphere

unit	TOPICS	Learning outcomes
I	Cauchy-Riemann equation – Complex exponents , Exponential function and trigonometric ,hyperbolic ,logarithmic function	Understand the significance of Differentiability and analyticity of complex function leading to Cauchy-Riemann equations
II	Definite integrals of functions , Contour integrals , Cauchy Integral formula ,Liouville's theorem , Fundamental theorem of Algebra	Learn the role of Cauchy integral formula in evaluation of contour integrals .Apply Liouville's theorem in Fundamental theorem of Algebra
III	Convergence of series , Taylor's series , Laurent's series , Singular points ,Zeroes of Analytic function , Cauchy Gourshat theorem	Learn Taylor and Laurent series expansion of analytic function , classify the nature of singularity ,poles and residues and application of Cauchy – Residue theorem
IV	Evaluation of Improper Integrals , Rouche's theorem , Augment principle, Jordan's Lemma , Definite integrals involving sine's and cosines	Learn various method to find contour integrals

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SUBJECT NAME : FLUID MECHANICS

SEMESTER –II

PAPER-IV

COURSE OBJECTIVE :

Understand the reduction of force system in three dimensions to a resultant force acting at a base point and a reluctant couple, which is independent of the choice of base of reduction.

unit	objective	Learning outcomes
I	The equation of continuity.	Learn about a null point and a null line (vector and Cartesian form) and a null plane with respect to a system of force acting on a Rigid body together with the idea of central axis.
II	Motion in two dimension, Velocity potential stream function.	Know the inertia constants for a rigid body and the equation of momental Ellipsoid together with the idea of principle and principle moments of inertia and to derive Euler's equation of Motion of a rigid body moving about a point which is kept
III	Milne Thompson circle Theorem. Euler's equation Bernoulli's equation.	Study the kinetics and kinetics of fluid motion to understand The equation of continuity in Cartesian cylinder polar and Bernoulli's equation. spherical polar coordinates which are used to derive Euler's and Bernoulli's equation
IV	Elliptic coordinate Motion of an Elliptic Cylinder.	Deal with two dimensional fluid motion using the complex Potential and also to understand the concept of sources sinks Doublets and the image systems of these with regard to along a circle.

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SUBJECT NAME: THEORY OF ORDINARY DIFFERENTIAL EQUATION

SEMESTER -II

PAPER-V

COURSE OBJECTIVE:

Distinguish between linear, non linear, partial and ordinary differential equation. Recognize and solve the problems of different types.

unit	TOPICS	Learning outcomes
I	Linear differential equation of higher order- Variation of parameters –Equation with constant coefficient - Wronskion	Use the existence theorem to determine uniqueness of solution Use the wronskion to determine if a set of functions is linearly independent
II	Successive approximation –Picard's theorem – Existence of solution in the large – Continuation and dependence – Fixed point method	Understand the successive approximations using Picard's theorem
III	Analysis and methods of non-linear differential equation –Bihari's inequality and its application	Solve non linear differential equation and also understand the Bihari's inequality
IV	Oscillation theory for linear differential equation of second order – Abel's formula- The sturm separation theorem and Comparison theorem- Bocher and Osgod theorem	Obtain solution to second order differential equation

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SUBJECT NAME: VISCOUS FLOW

SEMESTER –III

PAPER-I

COURSE OBJECTIVE:

To learn fundamentals of flow from an advanced point of view with emphasis on the mechanical treatment of viscosity effects in laminar flows of a Newtonian fluids'

unit	Topics	Learning outcomes
I	Kelvin's proof- Helmholtz Vorticity theorem-Rectilinear vortices	Understand the properties of vortices and different types of vortices
II	Viscosity, stress components of a in a real fluid - Relation between Cartesian components of stress – Navier Stoke's equation	Learn different components of fluid
III	Plane poiseuille flow –Couette flow- Hagen poiseuille flow – Steady motion in tubes of different uniform cross section	Understand different types of flow under different conditions
IV	Dimensional Analysis – Buckingham -II theorem – Boundary layer theory – Von karman integral relation	Learn the integral equation and dimensional analysis and their practical application

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SUBJECT NAME: FINITE DIFFERENCE METHODS

SEMESTER : III

PAPER:II

COURSE OBJECTIVE :

Calculate the limit and Examine the continuity of a function of a point

unit	Topics	Learning outcomes
I	Domain of Dependence of Hyperbolic Equation.	Understand the Genesis off Hyperbolic Equation.
II	Difference methods for Parabolic Partial differential Equation.	To Convert to ODE into Algebraic form obtain. Algebraic equation.
III	Difference Methods for hyperbolic. Partial differential equation.	The resulting Algebraic Equation or finite difference Equation
IV	Numerical Methods for Elliptic Partial differential equation	Understand the propositional logic and basic theorem like compactness Theorem and numerical methods For Elliptic Partial differential Equation

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SUBJECT NAME: LINEAR ALGEBRA

SEMISTER- III

PAPER-III



COURSE OBJECTIVE:

*Ability to go abstract from concrete notion of solution space to vector spaces.

UNIT	UNIT-OBJECTIVE	LEARNING OUTCOMES.
1	Characteristics value, annihilating polynomials.	Solving system of linear equations.
2	Direct sum decomposition, the primary decomposition theorem.	Qualitative analysis of system of linear equations.
3	Cyclic decomposition the Jordan forms.	Handling of system of L.E's.
4	Bilinear forms, skew-symmetric bilinear forms.	Vector spaces, linear independence and foundations of abstract algebraic thinking.

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SUBJECT NAME: INTEGRAL EQUATION & CALCULUS OF VARIATION

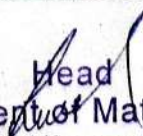
SEMISTER-IV

PAPER-I

COURSE OBJECTIVE:

Ability to solve and apply various numerical methods in real life problems.

UNIT	UNIT-OBJECTIVE	LEARNING OUTCOMES.
1	Euler integrals, Abel's problem.	Assimilate the notions of limits of a sequence and series.
2	Fredholm integral equation, green's Function.	Calculate the limit and examine the equations.
3	Euler's equation, euler poison equation.	Understand the consequences of various mean value theorem for differentiable functions.
4	Language' sequeation, hamilton's equations.	Sketch curves in Cartesian and polar co-ordinate systems.


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SUBJECT NAME: FINITE ELEMENT METHODS

SEMESTER -IV

PAPER-II

PROGRAM OBJECTIVES:

Prepare student for pursuing research or careers in industry in mathematical sciences and allied fields

COURSE OBJECTIVE:

Understand the general steps of finite element methods

Unit	TOPICS	Learning outcomes
I	Weighted residual methods- Least Square method-Partition method-Galerkin method- Collocation method-Moment method-Ritz method	Understand the basic finite element methods
II	Finite element – Line segment elements- Triangular elements-Rectangular elements with examples	Learn the different polynomial involved in each segment
III	F.E.M –Ritz F.E.M-Least square f.e.m –Galerkin f.e.m ,B.V.P	Be able to drive equations in finite element method
IV	Eigen value problems Error analysis, Approximation errors –Convergence and accuracy of solution with examples	Understand the different factors that effect the convergence of solution

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SUBJECT NAME : FUNCTIONAL ANALYSIS.

SEMESTER- IV


PAPER- III

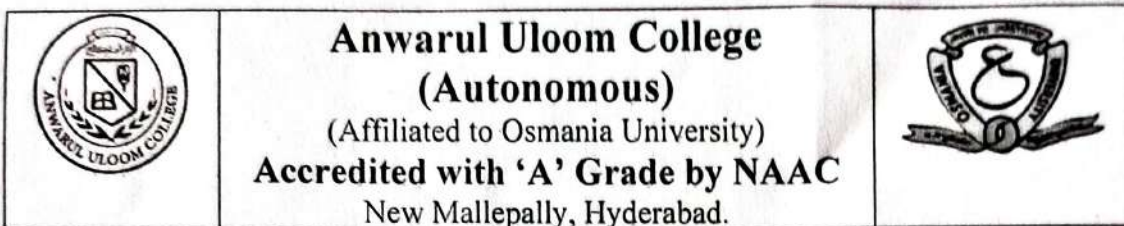
COURSE OBJECTIVE:

*Concept of normal linear space and inner product spaces.

*Analyzing the structure of the spectrum of the spectrum of certain operations.

UNIT	UNIT – OBJECTIVE	LEARNING OUTCOMES.
I	Normed spaces, banach, bounded and continuous linear operators.	Comparing the difference between banach and Hilbert spaces.
II	Linear functional, properties of inner product space, orthogonal compliment and direct sums.	Working with a complete orthogonal set, schauder basis in a Hilbert space.
III	Hilbert space Hilbert – adjoint operation self-adjoint , unitary and normal operators.	Concept of compact, self-adjoint and normal operators.
IV	Hahn- banach theorem, open mapping theorem, closed linear operators, closed graph theorem.	Investigating the best approximation of a given vector by vector in a given subspace.

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SUBJECT NAME : MAGNETO HYDRO DYNAMICS

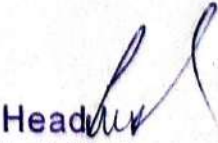
SEMESTER : IV

PAPER : IV

COURSE OBJECTIVE :

This course which enables the students to visualize complex numbers as points and stereo graphic projection complex plane on the Riemann sphere

UNIT	UNIT OBJECTIVE	LEARNING OUTCOMES
I	A brief reminder of the laws. electrodynamics governing. Equations of electro hydro dynamics	Understand the properties vortices Of And different types of dynamics
II	Transport equation for imposed. field (B) an important Kinetic equation.	Learn different components of fields Magnetic
III	Advection and diffusion of. Kevin's theorem, Helmholtz. Law and helicity.	Understand different types of laws and Vorticity Understand different conditions
IV	Kinematics. Of MHD analogy to Vorticity, diffusion of a magnetic field. Advection in ideal conductors.	Be able to derive equation in magneto Hydro dynamics.


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SUBJECT NAME : ADVANCE OPERATION RESEARCH

SEMESTER : IV

PAPER:V

COURSE OBJECTIVE :

understand the genesis of Advance Operation Research

UNIT	UNIT OBJECTIVE	LEARNING OUTCOMES
I	characteristics of game theory . (Min – Max) criterion and optimal. Strategy saddle point slution of games with saddle point.	Understand different fields And extensions
II	inventory problems: analytical. Structure of inventory problem, ABC analysis. EOQ problem with and with Shortage.	Facility in working with the Fields
III	Non-linear programming unconstrained Maxima And Minima constrained problem of Maxima and Minima	Apply implicit and inverse problem of function theorem
IV	Quadratic programming –kuhn. Tucker conditions – Non – negative. Constraints, General Quadratic. programming problem	Understanding the Successive approximations Richard Method

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Department: Nutrition and Dietetics

Programme: B.Sc. Nutrition and dietetics

Programme Objective (General)
1 Students are able to grab a chance for entrance in various competitive exams at state/national levels
2 They can hold on opportunity for post graduate level related to their specialization at graduation level
3 They can even opt for diplomas, vocational courses related to medical field
4 Perform food management functions in business, health-care, community and institutional areas.
5 They can even opt for internship at hospitals level, enter as nutritionist at factories after internship
(Programme Outcomes) (General)
PO- 1 The students can get accepted in post graduation programs and can enroll for various entrance exams
PO – 2 after completion of graduation program students will gain a chance to work in hospitals at interns
PO- 3 they attain the skills to work in various field like food factories, health care at community and institutional levels, work in food service industry
PO- 4 the students will gain insight about the role of nutrition in overcoming various health diseases and disorders, their treatment, prevention and cure.
PO -5 The course will help students grasp different aspects and fulfill requirement needed in aiding future career choices
(Programme Specific Outcomes) Eg. B. Com. PSO: The student can understand the basic concepts of various subjects viz. BOM, FA, B. Economics, etc. and its application in real life situations.
PSO-1 SEM I: Introduction to Foods and nutrition: To familiarise the students with the various food groups, the nutritive values an effective processing on the nutritive values of the food. PRACTICAL: The students learn about the standardisation, preparation an you didn't value calculations of recipes based on the food groups an combinations, methods of preservation of fruits and vegetables, determination of the quality of the egg and detection of the adulterants.
PSO -2 SEM II: Nutritional biochemistry and human Physiology: To understand the sources of macro and micro nutrients. To become proficient for specialization in nutrition To develop competence to carry out investigations in nutrition. To understand the Physiology of the human body PRACTICAL: The students learn about the various qualitative and quantitative analysis techniques for nutrients like carbohydrates, fat, ascorbic acid, proteins and amino acids, estimation of haemoglobin, blood glucose.
PSO -3 SEM III: Introduction to food technology: To impart a systematic knowledge of basic and applied aspects of food processing and technology.

<p>PRACTICAL: The students will understand the various methods of cooking they learn about different techniques of estimation of gluten content gelatinization of starches, I din values of oils, malting and popping value of the millets and different stages of sugar cookery.</p>
<p>PSO -4 SEM IV: Food science: To impart a systematic knowledge of basic and applied aspects of food processing and technology. Knowledge of potential use of various by products of food industry. PRACTICAL: They learn different cookery preparations of different food groups</p>
<p>PSO -5SEM V(A): Diet therapy-I: To understand the importance of diet in health and disease condition. To modify the diet as per the disease condition To enlighten on the dietary modification PRACTICAL: The students are unable to understand the planning preparation and calculation of the various therapeutic diets and we need to modify the diets according to the needs of the patient.</p>
<p>PSO -5 SEM V(B):Public health/ community nutrition and health education: To understand the Nutritional problems of community. To provide students with an understanding of the scope of the public health issue with regard to communicable disease and non-communicable diseases in India. PRACTICAL: The students will understand the various nutrition assessment techniques two analyse the present health status of the community.</p>
<p>PSO -6 SEM VI(A): Diet THERAPY-II: To understand the importance of diet in health and disease condition. To modify the diet as per the disease condition To enlighten on the dietary modification</p>
<p>PSO -6 SEM VI(B): Food preservation/ maternal and child nutrition: To familiarize students with the nutritional needs of the pregnant, lactating mother, infancy and nutritional policies and statistics. To enable students to gain knowledge on preservation techniques and Food contamination. PRACTICAL: The students prepare Different reservations of fruits and vegetables and conduct a market survey. The students prepare charts, models and posters for Imparting nutritional education and counsel the mothers of infants unimportance of breast feeding and conduct a diet survey for 24 hour dietary recall of infant zero to 12 months and assessing the nutritional status of the mothers using diet survey and anthropometry.</p>
<p>Course Objective (Subjects Objectives subject wise): Eg. Financial Accounting/ Cell Biology/ Physical Chemistry</p>
<p>1 Introduction to Foods and nutrition: To familiarise the students with the various food groups, the nutritive values and effective processing on the nutritive values of the food. PRACTICAL:</p>

<p>The students learn about the standardisation, preparation and you didn't value calculations of recipes based on the food groups and combinations, methods of preservation of fruits and vegetables, determination of the quality of the egg and detection of the adulterants.</p>
<p>2 Nutritional biochemistry and human Physiology: To understand the sources of macro and micro nutrients. To become proficient for specialization in nutrition To develop competence to carry out investigations in nutrition. To understand the Physiology of the human body PRACTICAL: The students learn about the various qualitative and quantitative analysis techniques for nutrients like carbohydrates, fat, ascorbic acid, proteins and amino acids, estimation of haemoglobin, blood glucose.</p>
<p>3 Introduction to food technology: To impart a systematic knowledge of basic and applied aspects of food processing and technology. PRACTICAL: The students learn about the various methods of cooking, they learn the technique for estimation of gluten content in wheat, they learn about the gelatinization of different starches, they gain an understanding about the different stages of sugar cookery.</p>
<p>4 Food science: To impart a systematic knowledge of basic and applied aspects of food processing and technology. Knowledge of potential use of various by products of food industry. PRACTICAL: They learn about the different cooking methods for cereals pulses millets legumes and different stages of sugar cookery.</p>
<p>5 Diet therapy- I: To understand the importance of diet in health and disease condition. To modify the diet as per the disease condition To enlighten on the dietary modification. PRACTICAL: 1 The students are unable to understand the planning preparation and calculation of the various therapeutic diets and we need to modify the diets according to the needs of the patient.</p>
<p>6 Public health/ community nutrition: To understand the Nutritional problems of community. To provide students with an understanding of the scope of the public health issue with regard to communicable disease and non-communicable diseases in India. PRACTICAL: These students will understand the various nutrition assessment techniques to analyse the present health status of the community.</p>
<p>7 Diet Therapy- II: To understand the importance of diet in health and disease condition. To modify the diet as per the disease condition To enlighten on the dietary modification PRACTICAL: It helps in planning and preparation of the diets for various conditions and the need for the modification in the diet according to the needs of the patient and the condition that he is suffering with.</p>
<p>8 Food preservation / Maternal and child nutrition: To familiarize students with the basics of food microbiology.</p>

To enable students to gain knowledge on preservation techniques and Food contamination.

PRACTICAL:

These students examine the various micro organisms under the to microscope And they learn the radius staining techniques and the preparation of this common culture media, they identify the different adult trends that are present in various food commodities.

Course Outcomes (Subject Outcomes subject wise) Each unit one outcome

- CO -1 SEM I: Introduction to Foods and nutrition:
- The students learn in detail about the definition of food, nutrition common nutrients, food groups based on their functions, origin and nutritive value they learn about the different food groups like cereals and millets, sugars and Jaggery, what are the compositions and nutritive values and nutritive losses during processing.
- The students learn in detail about decomposition, nutritive value off pulses and legumes common nuts and oilseeds, fats and oils and they learn about the rancidity of oils what what are the different types of rancidity and how to prevent rancidity.
- The students learn in detail about the classification, composition, nutritive value off vegetables and fruits, enzymatic Browning and its prevention. They learn about the principles a food preservation and the methods.
- The students learn in detail about decomposition, nutritive value off milk, eggs and meat and the food adulteration
- **PRACTICAL:**
- The students learn in detail about the standardisation come up repression and nutritive value calculations of recipes based on the food groups and the combinations they learn about the methods of preparation fruits and vegetables reservations all fruits and vegetable reservations an detection Of adulterants present in milk, butter, ghee.

CO-2 SEM-II: Nutritional Biochemistry and human Physiology:

- The students will understand the definition, composition, Classification, metabolism involved, the dietary sources and the recommended dietary allowances, the digestion, absorption, the deficiency and the abundance of the carbohydrates, proteins and the lipids present in the body of the human.
- The students will understand the different vitamins, minerals their types, sources, functions, RDA, and their deficiencies, water functions, distribution, sources and water and electrolytes balance and enzymes in detail.
- **PRACTICAL:**
- The students learn the various qualitative and quantitative estimation techniques for analysis of various nutrients present in the food commodities and in blood

CO-3 SEM-III: Introduction to Food technology:

- This course is enabling the students to gain an insight about the importance, principles and objectives of food technology.
- They will understand the composition, nutritive value and processing techniques of cereals, millets and sugars.
- They will understand the composition, nutritive value and processing techniques of pluses legumes and nuts and oil seeds.

- They will understand the composition, nutritive value and processing techniques of fats and oils and about spices and condiments and what is the importance of beverages.
- PRACTICAL:
- The students will learn about the various methods of cooking they learn how to estimate the amount of gluten that is present in the wheat sample they learn about the different gelatinization rates of various touches and different stages of sugar cookery they learn about the various techniques of enhancing the nutritive value of millets, pulses and legumes.

CO-4 SEM- IV: Food science

- They will understand the composition, nutritive value and processing techniques of vegetables and fruits.
- They will understand the composition, nutritive value and processing techniques of milk and milk products.
- They will understand the composition, nutritive value and processing techniques of poultry, meat and fish.
- They will understand the emerging new technologies in the food industry like production of designer foods. Organic foods, GMF and about extrusion technology.
- PRACTICAL:
- The students will learn about the various preservation techniques to preserve fruits and vegetables they learn how to tenderize me they learn the determination technique of BH in milk and milk products, determination of butter content in milk and determination of quality of egg.

CO-5 SEM V(A): Diet therapy I:

- The students understood the role of dietitian in Hospital and the therapeutic dietary modifications of food and special feeding methods.
- They learnt about the dietary modifications in gastrointestinal, liver and gall bladder diseases.
- They understood the role of nutrition in malnutrition, febrile conditions and genetic disorders.
- They learnt about the role of nutrition in the cardiovascular diseases, diabetes and renal diseases.
- PRACTICAL:
- The students will understand how to prepare calculate and plan a diet for various therapeutic conditions Anne how to modify a normal diet according to the needs of the patient.

CO-6 SEM V(B): Public health/ community nutrition:

- the students learn about communication its definition types processes and barriers and health education what are the aims of this types of approaches and principles of health education, they learn about the different practices about health education, school health services and schedule for immunization of school children and school Health Administration.
- They learned about anthropometry, they diet service and the types and different clinical assessment and biochemical assessment methods to understand the present health status of the community.

- The Students gained an insight about the Prevalence of malnutrition in India what are the factors contributing to malnutrition, protein energy nutrition Vitamin A deficiency common nutritional anaemia, Iron deficiency disorders and endemic fluorosis.
- The students learnt in detail about the different, types of communicable diseases their causes, symptoms, treatment and control measures.
- PRACTICAL:
- The students will learn the various assessment techniques to identify the nutritional status of the community by applying methods like anthropometry, diet survey, biochemical method.

CO-6 SEM VI(A): Diet therapy-II:

- The students understood the role of dietitian in Hospital and the therapeutic dietary modifications of food and special feeding methods.
- They learnt about the dietary modifications in gastrointestinal, liver and gall bladder diseases.
- They understood the role of nutrition in malnutrition, febrile conditions and genetic disorders.
- They learnt about the role of nutrition in the cardiovascular diseases, diabetes and renal diseases.
- PRACTICAL:
- Students understood the planning, calculation and the preparation of the diets for various therapeutic conditions and how to fulfil the needs of the patient by modifying the diet according to the needs and requirements.

CO-6 SEM VI(B): Food preservation/ maternal and child care:

- The students learn about the food spoilage and the nutrition losses during storage and food borne illnesses and the control of food borne illnesses
- The methods of food preservation and the principles of food preservation I discussed in detail.
- They learn about the Commercial methods of food preservation and preservation by high temperature, low temperature, dehydration, high concentration of salt, food irradiation and chemicals
- They learned about the nutritional leavening provisions in existing food laws and recent developments in food labelling from India and food laws and regulations and standards followed in India.
- the students learn about the nutritional needs during the pregnancy common disorders of the pregnancy and the relationship between the maternal diet and the birth outcome.
- the students learn about the nutritional needs of a nursing mother and the infants and the detriments of the birth weight and the consequences of the low birth weight and the need of the breastfeeding and the support and counselling.
- the need for the proper feeding practices and the nutritional concerns in the infants and young children and the guidelines for their feeding and complementary feeding.
- The students learn in detail about the child health and mortality, neonatal, infant and child mortality and the link between mortality and malnutrition and the overview of maternal and child nutrition policies and programmes.

- **PRACTICAL:**
- The students learn how to use microscope and visualize the microorganisms underneath the microscope and prepare the simple staining and gram staining slide and learnt the various culture media preparation techniques, and understood the procedure to do a simple test to identify the various adult trends that might be present in the different food commodities.

Department: Nutrition and Dietetics

Programme: M.Sc. Nutrition and dietetics

Programme Objective (General)
1 They can even opt for diplomas, vocational courses related to medical field.
2 Perform food management functions in business, healthcare, in community and institutional areas
3 They can opt for further academic education and can become researchers, enroll in doctorate programs
4 They can opt for working as a dietitian at the hospital or as a nutritionist at the community level.
5 They can explore the field of healthcare by becoming registered dietitian, enter into the field of teaching, scientific research and other professions.
(Programme Outcomes) (General)
PO- 1 At the end of the course these students will be qualified as the post graduate students in nutrition and dietetics.
PO – 2 The course will enable the students to get jobs at reputed organisations with a major scope in different aspects of the profession of healthcare.
PO- 3 These students can offer the further studies by enrolling themselves into the doctorate programmes.
PO- 4 The students can start working in the hospitals as dietitian I can also work as a nutritionist at the community level they can associate with the various organisations health and help in the improvement of the health status of the community.
PO -5 They can start their own business, enter into the field of food service management, work into the food factories and then also enter into the various government programmes and jobs for improving the health status of the nation.
(Programme Specific Outcomes) Eg. B. Com. PSO: The student can understand the basic concepts of various subjects viz. BOM, FA, B. Economics, etc. and its application in real life situations.
<p>PSO-1 SEM I: PAPER-I: Human nutrition: It has the students to understand the role of adequate nutrition in different stages of life cycle. It enables the students to know the nutritional requirements and the meeting management of the athletes.</p> <p>PRACTICAL: To familiarise the students with the raw and cooked quantities of the food and to the plan diet for various age groups.</p> <p>PAPER-II: Nutritional biochemistry – I:</p>

This will enable the students to understand the role of nutrients in the body.
It also helps these students to understand the classification, functions and the metabolism of nutrients like carbohydrates, amino acids, proteins and nucleic acids

PRACTICAL:

This will help the students to get acquainted with the principles, techniques and applications of various methods of food analysis.

PAPER-III: Human Physiology:

this will enable the students to understand the functions of various systems in the body.

It helps in getting the students acquainted with the abnormalities of the endocrine system

PRACTICAL:

The course will help the students to get acquainted with the principles common techniques and application of different methods of analysis for various components in blood. full

PAPER-IV: Principles of dietetics:

This will help in imparting in depth knowledge regarding the prevalence, aetiology, diagnosis common diet and lifestyle management in different diseases.

It helps the students to gain knowledge on the methods of assessment of nutritional status among the individuals and the interaction of their drugs and nutrients

PRACTICAL:

This will help in familiarising the students with newer concepts in the dietary management of various diseases and disorders

PSO -2 SEM II: PAPER-I: principles of food:

It provides understanding of composition of various foodstuffs to the students.

It helps in familiarising these students with the changes occurring in the foodstuff as a result of the processing an cooking.

PRACTICAL:

The students gets familiarised with the changes that are occurring in the various foodstuffs as the result of processing an cooking

PAPER-II: nutritional biochemistry – I I:

it enables the students to understand the role of the different nutrients in the body.

It helps in understanding the classification, functions and the metabolism of dilip it's, vitamins and the minerals.

PRACTICAL:

It helps the students to get familiarised with the changes occurring in their various foodstuffs as a result of the processing an cooking.

PAPER-III:research methodology:

It helps the students to understand the importance of the research design.

do impart in depth knowledge on collection compilation an analysis of the data.

PRACTICAL:

This will help these students for understanding newer concepts in their research.

It also enables the students to analyse the data for the project work with the satistical techniques.

The application of the status tickle methods related to the community nutrition and the sensory evaluation techniques.

PAPER-IV: died in disease:

this will help in imparting in depth knowledge regarding prevalence, aetiology, diagnosis, diet and lifestyle management in acute and chronic diseases.

It helps students to gain knowledge to recommend and provide appropriate nutritional care for prevention and or treatment of various diseases.

PRACTICAL:

This will help the students to get familiarised with the newer concepts in the dietary management of various diseases and disorders.

PSO -3 SEM III: PAPER-I: Community nutrition:

it helps the students to understand the causes slash detriments and consequences of nutritional problems in the community.

It helps to familiarise the students with various approaches to nutrition and health interventions, programmes and policies.

PRACTICAL:

It helps to give an insight into the various locust ingredients available in the market and to develop a low cost nutritious recipes for the vulnerable segments of the community. It helps the students to develop teaching aids for imparting the nutrition and health education

PAPER-II: food microbiology

it helps to familiarise the students with the basics of food microbiology.

it enables the students to gain knowledge on preservation techniques and food contamination

PRACTICAL:

It helps the students to familiarise with the sterilisation techniques, inoculation techniques.

It helps in developing a skill in preparation of the various media preparations and solutions

PAPER-III: food service management:

it helps the students to gain knowledge on requirement an management of various food service establishments.

it helps the students to know the different types of the food cost involved and the methods to control them.

PRACTICAL:

It helps the students to gain knowledge on quantity food production.

it helps the students to learn about the various different menus and we need to standardise the recipe for the recipe conversion and to develop a HA CCP plan for Indian recipes.

PAPER- IV: Food hygiene and sanitation

it helps the students to make an understanding about the environmental sanitation and the link between environmental sanitation and health.

it is to make students understand the importance of the personal hygiene and the environmental sanitation

it helps the students to understand an assist and practise controlling factors in the environment that can potentially affect public health.

PRACTICAL:

it helps to understand the principle of food hygiene and sanitation necessary for the food handlers add both household and the food service establishment's levels.

PSO -4 SEM IV: PAPER-I: Advanced nutrition:

It helps to familiarise the students with the recent advances in the nutrition field

It helps to impart the knowledge on the bioavailability of the various nutrients.

PAPER-II:Paediatric nutrition:

It helps to understand the growth common development an nutritional requirements of the children.

it helps the students to gain an insight knowledge an inborn errors of metabolism man the paediatric critical care

PAPER-III: Nutraceuticals and functional foods:

It helps to familiarise students with the recent advances in the nutraceuticals.

It helps to impart knowledge on the health benefits of the nutraceuticals and functional foods

PAPER-IV: Diet and psychology counselling skills:

It helps to familiarise these students with diet counselling skills an to acquaint them with basic principles of psychology.

PRACTICAL:

PAPER-I: Hospital internship in nutrition and dietetics :

Internship is a phase of training wearing a graduate is expected to conduct actual practises of diet management and healthcare and acquire skills under supervision of a practising dietitian so that he or she may become capable of functioning independently.

PAPER-II: Internship- case studies presentation:

the students add expected to submit a bound copy of the word processed, printed internship report to the programming in charge for necessary action after the internship these students shall give a presentation on their internship.

PAPER-III: Project work – collection of data:

it is to continue the project work initiated and to submit dissertation at the end of the semester the students will be guided and supervised by the member of the teaching faculty.

PAPER-IV: Project work- report writing and presentation of the project seminar:

The presentation of the work in front of the faculty of the department has to be done Andy practical performance in the laboratory, interpretation of the result obtained calmer regularity and any other criteria relevant to these studies are concerned.

Course Objective (Subjects Objectives subject wise): Eg. Financial Accounting/ Cell Biology/ Physical Chemistry

ISEM I: PAPER-I: Human nutrition:

It has the students to understand the role of adequate nutrition in different stages of life cycle.

It enables the students to know the nutritional requirements and the meeting management of the athletes.

PRACTICAL:

To familiarise the students with the raw and cooked quantities of the food and to the plan diet for various age groups.

PAPER-II: Nutritional biochemistry – I:

This will enable the students to understand the role of nutrients in the body.

It also helps these students to understand the classification, functions and the metabolism of nutrients like carbohydrates, amino acids, proteins and nucleic acids

PRACTICAL:

This will help the students to get acquainted with the principles, techniques and applications of various methods of food analysis.

PAPER-III: Human Physiology:

this will enable the students to understand the functions of various systems in the body.

It helps in getting the students acquainted with the abnormalities of the endocrine system

PRACTICAL:

The course will help the students to get acquainted with the principles common techniques and application of different methods of analysis for various components in blood. full

PAPER-IV: Principles of dietetics:

This will help in imparting in depth knowledge regarding the prevalence, aetiology, diagnosis common diet and lifestyle management in different diseases.

It helps the students to gain knowledge on the methods of assessment of nutritional status among the individuals and the interaction of their drugs and nutrients

PRACTICAL:

This will help in familiarising the students with newer concepts in the dietary management of various diseases and disorders

2SEM II PAPER-I: principles of food:

It provides understanding of composition of various foodstuffs to the students.

It helps in familiarising these students with the changes occurring in the foodstuff as a result of the processing an cooking.

PRACTICAL:

The students gets familiarised with the changes that are occurring in the various foodstuffs as the result of processing an cooking

PAPER-II: nutritional biochemistry – I I:

it enables the students to understand the role of the different nutrients in the body.

It helps in understanding the classification, functions and the metabolism of dilip it's, vitamins and the minerals.

PRACTICAL:

It helps the students to get familiarised with the changes occurring in their various foodstuffs as a result of the processing an cooking.

PAPER-III:research methodology:

It helps the students to understand the importance of the research design.

do impart in depth knowledge on collection compilation an analysis of the data.

PRACTICAL:

This will help these students for understanding newer concepts in their research.

It also enables the students to analyse the data for the project work with the satistical techniques.

The application of the status tickle methods related to the community nutrition and the sensory evaluation techniques.

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this will help in imparting in depth knowledge regarding prevalence, aetiology, diagnosis, diet and lifestyle management in acute and chronic diseases.

It helps students to gain knowledge to recommend an provide appropriate nutritional care for prevention and or treatment of various diseases.

PRACTICAL:

This will help the students to get familiarised with the newer concepts in the dietary management of various diseases and disorders

3 SEM III: PAPER-I: Community nutrition:

it helps the students to understand the causes slash detriments and consequences of nutritional problems in the community.

It helps to familiarise the students with various approaches to nutrition and health interventions, programmes and policies.

PRACTICAL:

It helps to give an insight into the various locust ingredients available in the market and to develop a low cost nutritious recipes for the vulnerable segments of the community. It helps the students to develop teaching aids for imparting the nutrition and health education

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it enables the students to gain knowledge on preservation techniques and food contamination

PRACTICAL:

It helps the students to familiarise with the sterilisation techniques, inoculation techniques.

It helps in developing a skill in preparation of the various media preparations and solutions

PAPER-III: food service management:

it helps the students to gain knowledge on requirement an management of various food service establishments.

it helps the students to know the different types of the food cost involved and the methods to control them.

PRACTICAL:

It helps the students to gain knowledge on quantity food production.

it helps the students to learn about the various different menus and we need to standardise the recipe for the recipe conversion and to develop a HA CCP plan for Indian recipes.

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it helps the students to make an understanding about the environmental sanitation and the link between environmental sanitation and health.

it is to make students understand the importance of the personal hygiene and the environmental sanitation

it helps the students to understand an assist and practise controlling factors in the environment that can potentially affect public health.

PRACTICAL:

it helps to understand the principle of food hygiene and sanitation necessary for the food handlers add both household and the food service establishment's levels

4SEM IV: PAPER-I: Advanced nutrition:

It helps to familiarise the students with the recent advances in the nutrition field

It helps to impart the knowledge on the bioavailability of the various nutrients.

PAPER-II:Paediatric nutrition:

It helps to understand the growth common development an nutritional requirements of the children.

it helps the students to gain an insight knowledge an inborn errors of metabolism man the paediatric critical care

PAPER-III: Nutraceuticals and functional foods:

It helps to familiarise students with the recent advances in the nutraceuticals.

It helps to impart knowledge on the health benefits of the nutraceuticals and functional foods

PAPER-IV: Diet and psychology counselling skills:

It helps to familiarise these students with diet counselling skills an to acquaint them with basic principles of psychology.

PRACTICAL:

PAPER-I: Hospital internship in nutrition and dietetics :

Internship is a phase of training where a graduate is expected to conduct actual practices of diet management and healthcare and acquire skills under supervision of a practising dietitian so that he or she may become capable of functioning independently.

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the students are expected to submit a bound copy of the word processed, printed internship report to the programming in charge for necessary action after the internship these students shall give a presentation on their internship.

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it is to continue the project work initiated and to submit dissertation at the end of the semester the students will be guided and supervised by the member of the teaching faculty.

PAPER-IV: Project work- report writing and presentation of the project seminar:

The presentation of the work in front of the faculty of the department has to be done and practical performance in the laboratory, interpretation of the result obtained, calmer regularity and any other criteria relevant to these studies are concerned.

Course Outcomes (Subject Outcomes subject wise)

CO -1 SEM-I:

PAPER-I: Human nutrition:

The students learnt about the principles of nutrition what are the steps required in meal planning and the nutritional requirements of adult man and adult woman.

The students learned in detail about the nutritional support during pregnancy and lactation. Also the need of nutrition during infancy and the importance of Weaning.

The students understood the need of supplementations of proper nutrition for preschoolers, schoolgoing children and adolescence.

The students understood in detail about the nutritional requirements of old age and athletes.

PRACTICAL: The students got acquainted with the way to cook quantities of different food commodities and how to prepare, plan, calculate the nutritive value for various life stages.

PAPER-II: nutritional biochemistry – I:

The students understood the classification, sources, function and requirements, digestion and absorption of the carbohydrate and the metabolism and the inborn errors of the carbohydrate metabolism.

The students understood the classification and the functions and the sources of the amino acids and proteins and types, components and structure of nucleic acids.

The students learned in detail about the amino acid metabolism, balance, imbalance and toxicity of amino acids and inborn errors of amino acid metabolism.

The students learnt in detail about the synthesis of pure essential amino acids and their degradation, protein synthesis.

PRACTICAL:

the students got acquainted with the principles, techniques and application of various qualitative and quantitative analysis of various nutrients like proteins carbohydrates, fatty acids, amino acids.

PAPER-III: Human Physiology:

the students learnt about the structure and functions of the gastrointestinal tract and the excretory system in detail.

The students got well acquainted with the structure and functions and the mechanism of the respiratory system and the abnormalities associated with the respiratory system and the mechanics a man the classification structure and function of the parts of the nervous system. The students were able to gain knowledge about the structure and function of the circulatory system and decomposition of the blood and blood coagulation.

The students were able to learn in detail about the endocrine glands, the formation and the secretion of the hormones and the various different glance and their functions and deficiency's off their hormones

PRACTICAL:

These students got acquainted with the different principles, techniques all methods of analysis for various components of blood

PAPER-IV: Principles of dietetics:

the students understood the role and responsibilities of dietitian, the interpersonal relationship with the patient and they need of nutritional counselling and nutritional assessment, you modifications of the normal diet and the need for the modification of the diet.

These students understood what is enteral nutrition, parental nutrition and the need of the nutritional support before and after the operative conditions and the need of the nutritional support in the person suffering with burns.

The students understood the provision of the proper nutrition in energy imbalances and gastrointestinal disorders.

The students gained a inside about the need of the nutrition in febrile conditions, the emphasis on the drug and nutrient interaction.

PRACTICAL:

The students understood the preparation, planning and calculation of the nutritive values for various diseases and disorders.

CO-2 SEM-II:

PAPER-I: Principles of food:

the students learn about the different cereals and pulses what are the compositions off cereals and pulses and what are the different processing an cooking techniques used.

The students will understand in detail the composition and the nutritive value of milk,egg, meat, poultry and fish.

The students understood in detail about facts an oil Anne sugars what are the different types of sugars what are the stages of sugar cookery and the factors affecting crystallisation.

These students understood the various plant pigments what are the factors affecting plant pigments on cooking, what is sensory evaluation and the types of evaluation techniques.

Xhamster

PRACTICAL:

These students learn in detail what is gelatinization an factors affecting gelatinization, how to estimate the amount of alkaline phosphate present in the milk and prepared mayonnaise, understand the various stages of sugar cookery and conduct the sensory evaluation

PAPER-II: Nutritional biochemistry-II:

The students understood the classification, sources, function, digestion and absorption of the lipid's and the metabolism involved in it.

The students understood the imbalances of the lipid's and the fat soluble vitamins in detail.

The students understood the functions, distribution, requirements, disturbance in fluid balance and the role of salutes, what are the different water soluble vitamins their physiological action, transport, utilisation, storage, sources, functions and deficiencies.

The students understood about the various different minerals and trace elements what are their Physiology, sources, functions and deficiencies.

PRACTICAL:

The students learn in detail the quantitative estimations of various vitamins and minerals.

PAPER-III: Research methodology:

the students understood what is the definition of the research what is the characteristic of research, field area of the good research merits and demerits of the research, they learn definition, parts, steps in writing thesis.

The students learned in detail about the sampling design and the types of sampling.

The students learnt about the various methods of data collection and compilation and what are the different types of the data and the criteria for evaluation of instruments they learn about the graphical representation of the data and also the tabulation of the data.

The students learn various different statistical methods like mean, median, common mode, analysis of variance, T test, F Test, contingency tables and chi square test.

PRACTICAL:

The students gained knowledge on how to analyse the techniques to collect and compile the data and apply the statistical techniques to tabulate the data, and interpret the data.

PAPER-IV: Diet in disease:

the students learned about the dietary management of hepatic disorders.

The students understand the dietary management of renal disorders.

The students learned in detail about the role of nutrition in balancing the hormonal disturbances.

The students understood in detail about the role of nutrition in the disorders of circulatory system, disorders of musculoskeletal system, cancer and AIDS.

PRACTICAL:

The students will understand the newer concepts in the dietary management of various diseases and disorders affecting the humans.

CO-3 SEM III:

PAPER-I:Community nutrition:

the students understand the need of anthropometric measurements and the various different diet services their uses and limitations .

The students learn the importance of the nutrition and health education and what are the tools and techniques of health education and Health Administration at the various levels.

the students learn and understand the nutrition and the health interventions at the national level and the programmes that are organised by the government to prevent various deficiencies and to come back the malnutrition in the nation.

the students will understand in detail what are the vital statistics, the occupational Hazards and the need of the protection of the health and nutritional status of the workers and the management during calamities and emergencies.

PRACTICAL:

The students are expected to develop a local nutritious recipe which is standardised and calculate the cost and the nutritive value of the recipe. The students learn to prepare a diet

survey and collect the data and compile it also the students are expected to develop various audio visual aids.

PAPER-II: Food microbiology:

These students learn in detail about the scope of the microbiology and the importance of the microbiology in different areas and what are the different types of the microorganisms and what are the factors affecting their growth.

The students learn what is food preservation what are the principles of the food preservation and the methods of the food preservation in detail.

The students understand the classification of the food by ease of this spoilage, what are the causes of this spoilage in different types of the foods, what are the sources of the contamination, this spoilage in different food groups.

The students learn in detail the definition of the fermentation what is the history of the fermented foods, the benefits of the fermentation and what are the different types of the fermentation, they different foods that are fermented .

PRACTICAL: The students get familiar with the different sterilisation techniques and the methods of media preparation and solutions. They learn about the different inoculation techniques and prepare bacterial staining.

PAPER-III: food service management:

The students learn about the management of the food service establishment, what are the functions of the management, the principles involved in the management and the types of the food service establishments.

the students learn about the organisation of these spaces and the equipments in the food service establishment.

The students understand in detail the characteristics of the food what are their sensory qualities and the nutritional qualities, Food purchasing is important and what are the different types of food purchasing sources, they learn about the importance of the menu planning and the types of the menu plans.

The students understand how to formulate and standardise the different recipes and learn the steps involved in the formulation and standardisation of the recipes, they learn the importance of the food product labelling and their regulations.

PRACTICAL:

the students prepare different menus for quantity food production and standardise the recipes for the recipe conversion factor and determine the nutritive values the develop HACCP plan for an Indian recipe.

PAPER-IV: Food hygiene and sanitation:

The students understand the definition of hygiene, food hygiene and the need of the sanitation and what are the basic aspects of the personal hygiene.

the students understand the classification of the pest and the ways to control the household pest by the utilisation of pesticides and insecticides and they understand the need for personal hygiene.

the students learn about the uses of the water what are the sources of the water and the contamination of the water what are the hazards of the water pollution and the purification of the water at both large scale and small scale.

the students learn about the environmental pollution and the prevention of the different environmental pollutions.

PRACTICAL:

The students understand the principles of the food hygiene and sanitation by preparing an inventory list to check the personal hygiene of the food handlers their hand hygiene and wash hand technique, how do they take care of the skin hair, hand, feet, nails and the mouth and by running an estimation of hardness of water and microbial contamination of the water

CO-4 SEM IV: PAPER-I: advanced nutrition:

the students get familiar to the current trends in the field of the nutrition they learn about the designer foods, genetically modified foods and novel proteins.

The students learn about the bio availability of the nutrients in performing the various bodily functions.

These students learn about the nutrition which is associated with the immunity and the gene expression and principles of gene expression.

The students understand the importance of the food packaging and labelling of the food what are the different types of the packaging material, the packages with the special features and the principles and codex guidelines and the labelling provisions in the existing food loss

PAPER-II: Paediatric nutrition:

the students learn about the normal growth pattern in the children and the nutritional assessment methods for understanding the health status of the children and the nutritional support in the critically ill children and the dietary management of PEM.

These students learn in detail about the dietary management in the gastrointestinal track, liver and kidney diseases.

the students learn in detail about the role of the nutrition in the management of diabetes, cardiovascular diseases and aids in the paediatrics.

The students learn about the dietary management in the special conditions like in allergies and intolerances and inborn errors and nutrition for children with special needs which include ketogenic diet for epilepsy neutropenic diet for marrow transplants and autism

PAPER-III: Nutraceuticals and functional foods:

The students learn about the definition, history common market trends and sources, classification of the nutraceuticals how and why do chemicals can be considered as nutraceuticals and what are the significances and relevance of nutraceuticals in the management of the diseases and disorders.

the students learn about the evolution and definition of the functional foods what the legal status is a functional foods in different countries and the types of the foods which can be categorised as the functional foods.

The students learn about the probiotics and prebiotics what are the health benefits and what are the recent advances in both pre and probiotics.

the students learn about the definition common mode of action and classification of the nutraceuticals and the classification, mechanism of action of the antioxidants

PAPER-IV: Diet and psychology counselling skills :

the students learn the meaning significances, processes, types of diet counselling, what is the goal of the counselling and its sequence they understand the material needed for the counselling and what role does a counsellor play in effective counselling

the students learn about the diet counselling at the hospital and the community level how to organize health camps and patient feedback at both hospital and community level they learn to deliver an effective counselling for various health conditions.

The students learn the definition, the nature and scope of psychology they learn about the nature and the goals of the counselling, the principles of the counselling, the characteristics of a good counsellor and this special areas of counselling.

The students learn about the different approaches of counselling and what are the different stages of skills required to deliver an effective counselling session

PRACTICAL:

PAPER-I: Hospital internship in nutrition and dietetics:

the students get an opportunity to complete an internship in a multi speciality hospital which enables them to get trained to manage a diet prescription independently for clinically common disease conditions encountered at a higher level they can use parental feeds and nasal tube feedings, they can manage the medical commerce surgical, obstructive, new needle and paediatric specialties and monitor the National Health programmes and schemes, they develop a leadership quality to function effectively as the leader of the dietetics department organise to deliver health and family welfare services in existing social economic, political and cultural environment. By the end of the hospital internship they will be able to perform and complete their work independently.

PAPER-II: Internship- case study presentation

the students get an opportunity to display a presentation and give a verbal under internship and they have to submit a bound copy of the word processed, printed internship report to the programme in charge for necessary action after their internship

PAPER-III: project work- collection of the data:

The students get an opportunity to be guided and supervised by the teaching faculty and perform an independent research work which can be a survey or a laboratory oriented research and you students are required to submit the research copy at the end of the semester in the form of a thesis.

PAPER-IV: Project work- report writing and presentation of the project seminar:

These students work is analysed at the time of the presentation of the work in front of the faculty of the department at these two times during this project work by discussing in detail the project and state-of-the-art of the presentation and the discussion of the material and the methods and the protocol that is being followed to perform the study and the presentation of the obtained results which will enable the students to work in a very professional manner and to present their work systematically at their viva.

Department: Nutrition and dietetics

Programme: PG diploma in Clinical nutrition and dietetics

Programme Objective (General)
1 Students are able to grab a chance for entrance in various competitive exams at state/ national levels
2 They can hold on opportunity for post graduate level related to their specialization at graduation level
3 They can even opt for diplomas, vocational courses related to medical field
4 Perform food management functions in business, health-care, community and institutional areas.

5 They can even opt for internship at hospitals level, enter as nutritionist at factories after internship
(Programme Outcomes) (General)
PO- 1 The students can get accepted in post graduation programs and can enroll for various entrance exams
PO – 2 after completion of graduation program students will gain a chance to work in hospitals at interns
PO- 3 they attain the skills to work in various field like food factories, health care at community and institutional levels, work in food service industry
PO- 4 the students will gain insight about the role of nutrition in overcoming various health diseases and disorders, their treatment, prevention and cure.
PO -5 The course will help students grasp different aspects and fulfill requirement needed in aiding future career choices
(Programme Specific Outcomes)
<p>PSO-1 SEM I:</p> <p>To become proficient for specialization in nutrition</p> <p>To understand the importance of adequate nutrition in stages of life cycle.</p> <p>To know the nutritional requirements and meal management of athletes</p> <p>To understand the importance of diet in health and disease condition.</p> <p>To modify the diaspora the disease condition.</p> <p>To enlighten on the dietary modification needed according to the condition of the patient.</p> <p>Different systems of the body and their functions with special reference to the digestion absorption and transport of nutrients and elimination of waste products.</p> <p>Importance of hormonal and nervous regulations of the body Function.</p>
<p>PSO -2 SEM II:</p> <p>To familiarize these students with tight counselling skills and acquaint them with basic principles of psychology.</p> <p>This course will enable the students to develop excelente communication skills to disseminate knowledge.</p> <p>To develop entrepreneurship skills.</p> <p>To enable the students to understand the importance of research design.</p> <p>To impart in depth knowledge on collection compilation analysis of the data.</p>
Course Objective (Subjects Objectives subject wise): Eg. Financial Accounting/ Cell Biology/ Physical Chemistry
<p>I SEM I: THEORY:</p> <p>PAPER-I: Clinical Nutrition</p> <p>To become proficient for specialization in nutrition</p> <p>To understand the importance of adequate nutrition in stages of life cycle.</p> <p>To know the nutritional requirements and meal management of athletes</p> <p>PAPER-II: Therapeutic nutrition: To understand the importance of diet in health and disease condition.</p> <p>To modify the diaspora the disease condition.</p> <p>To enlighten on the diary modification needed according to the condition of the patient.</p>

PAPER-III: Human Physiology:

Different systems of the body and their functions with special reference to the digestion absorption and transport of nutrients and elimination of waste products. Importance of hormonal and nervous regulations of the body Function.

PRACTICAL:

PAPER-I: Therapeutic nutrition:

this course will help in familiarizing these children's with newer concepts and item management of various diseases and disorder.

PAPER-II: Clinical Nutrition:

This course helps students in analyzing the various biochemical parameters involved in the denotion of the health status of the people.

2 SEM II: PAPERI: Patient counselling and computer applications:

To familiarize these students with tight counselling skills and acquaint them with basic principles of psychology.

PAPER II: Food production, costing and hospital management:

This course will enable the students to develop excelente communication skills to disseminate knowledge.

To develop entrepreneurship skills.

PAPERIII: Research methodology:

To enable the students to understand the importance of research design.

To impart in depth knowledge on collection compilation analysis of the data.

Course Outcomes:

CO -1 SEM I: PAPER-I: The students will understand the principles of food and nutrition, the steps and principles involved in planning a meal, RDA of different age groups, the nutritional requirements in infancy, preschooler, a school going child and adolescent age group.

The students will understand the nutrition required through the life cycle, the nutritional requirements of an adult man adult woman, a pregnant woman, a lactating mother and geriatrics .

The students learnt in DT the anthropometry measurements, biochemical assessing methods and clinical assessing methods, dietary procedures and Roland responsibilities of a dietician in healthcare, the modifications of the normal diet and what are the different types of hospital diets.

The students understood the nutrition support in critical care both in and in form of enter nutrition, parental nutrition an they learnt about the nutritional support needed pre and post operative conditions as well as in burns condition.

PAPER-II: Therapeutic nutrition:

These students understand the importance of therapeutic diets in febrile conditions and gastrointestinal disorders.

the students understand the role of nutrition in management of kidney diseases and liver diseases.

the students learn about the role and the support of nutrition indie diseases of pancreas like in case of diabetes mellitus, diseases of adernal cortex and diseases of thyroid gland that is dietary management in hypothyroidism an hyperthyroidism.

The students gain insight about the role of diet in degenerative diseases and chronic disorders like hypertension, hypotension, cardiovascular diseases, musculoskeletal system disorder, cancer and aids.

PAPER-III: Human Physiology:

the students learn in detail about the human digestive system, excretory system and body fluids.

the students learn in detail the functioning of the circulatory system the mechanism involved Hindi circulatory system and compositions off blood, Demi structure functions an mechanism of the respiratory system.

The students understood the structure, functioning and mechanism involved in the nervous system and the immunity types and immunodeficiency disorders.

The students understand the anatomy functions physiological problems involved in the reproductive system and the structure and function of the different endocrine glands present in the human body.

PAPER-I:

PAPER-II: Clinical Nutrition:

the students understand the various laboratory techniques involved in the estimations off various biochemical parameters lake estimation of blood glucose, estimation of blood urea on the also learn about the anthropometric measurements and the clinical assessments of these subjects.

CO-2 SEM II: PAPER-I: Patient counselling and computer applications:

The students learn the basics of the diet counselling that is the meaning significance, the processes commodity types and the goals of the counselling and the role of the communication process in the counselling, the role of the counsellor and counselee.

The students understand the role of counselling in the hospital, in the community add organisation of the health camps and patient feedbacks at both hospital level an community level. They learn how to council obese people people suffering with diabetes, CVD, mother and child healthcare, adolescence, they learn about Andy home visits.

The students learn about the computer applications like MS office: the components of MS office and the important features of MS word, MS excel and MS PowerPoint.

The students learn about the computer network and Internet, they learn about the important features and essential requirements of the Internet they learn about how to send an receive emails, what are the steps in browsing, downloading files coma SPSS.

PAPER-III: Food production, costing and hospital management:

these students understand the foundation ingredients like carbohydrates, fats, proteins, minerals, seasoning agents, flavouring agents, thickening agents, fats and oils, sweetening, raising agents. They learn the principles of cooking food with special applications to various food groups and learn the standardization of recipes and portion control.

The students learn about the principles of management and functions of the management Anne tools of the management.

The students learn about the organization of the space and the equipment's involved in the food service management they learn about the different types of the menus and the importance of the menu planning.

the students understand the importance of the food purchasing, receiving and the food storage and general guidelines involved in storing perishable and non perishable foods and financial management and cost control.

PRACTICALS:

PAPER-I: Hospital internship in nutrition and dietetics:

the students get an opportunity to complete an internship in a multi speciality hospital which enables them to get trained to manage a diet prescription independently for clinically common disease conditions encountered at a higher level they can use parental feeds and nasal tube feedings, they can manage the medical surgical, obstructive, new needle and paediatric specialties and monitor the National Health programmes and schemes, they develop a leadership quality to function effectively as the leader of the dietetics department organise to deliver health and family welfare services in existing social economic, political and cultural environment. By the end of the hospital internship they will be able to perform and complete their work independently.

PAPER-II: Internship- case study presentation

the students get an opportunity to display a presentation and give a verbal report under internship and they have to submit a bound copy of the word processed, printed internship report to the programme in charge for necessary action after their internship

PAPER-III: project work- collection of the data:

The students get an opportunity to be guided and supervised by the teaching faculty and perform an independent research work which can be a survey or a laboratory oriented research and you students are required to submit the research copy at the end of the semester in the form of a thesis.

PAPER-IV: Project work- report writing and presentation of the project seminar:

These students work is analysed at the time of the presentation of the work in front of the faculty of the department at these two times during this project work by discussing in detail the project and state-of-the-art of the presentation and the discussion of the material and the methods and the protocol that is being followed to perform the study and the presentation of the obtained results which will enable the students to work in a very professional manner and to present their work systematically at their viva.



ANWARUL ULOOM COLLEGE (AUTONOMOUS)



(Affiliated to Osmania University)

PHYSICS DEPARTMENT

Under Graduate - B.Sc. (M.P.C ** M.P.E ** M.P.Cs.)

Program Educational Objectives - Outcomes (2022 - 2023)

Programme Objective: B.Sc.

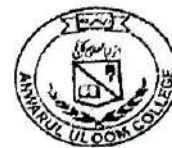
1. Read, understand and interpret physical information – verbal, mathematical and graphical.
2. Impart skills required to gather information from resources and use them.
3. To give need based education in science of the highest quality at the undergraduate level.
4. Perform experiments and interpret the results of observation, including making an assessment of experimental uncertainties.
5. Provide an intellectually stimulating environment to develop skills and enthusiasms of students to the best of their potential.

Programme Outcomes: B.Sc.

- PO-1. This course forms the basis of science and comprises of the subjects like Mathematics, Physics, Electronics, Chemistry, Biology and Zoology.
- PO-2. It helps to develop scientific temper and thus can prove to be more beneficial for the society as the scientific developments can make a nation or society to grow at a rapid pace
- PO-3. After the completion of this course students have the option to go for higher studies i.e. M.Sc. and then do some research for the welfare of mankind
- PO-4. After higher studies students can join as scientist and can even look for professional job oriented courses.
- PO-5. This course also offers opportunities for serving in Indian Army, Indian Navy, Indian Air Force as officers.
- PO-6. Students after this course have the the option to join Indian Civil Services as IAS, IFS etc..
- PO-7. Science graduates can go to serve in industries or may opt for establishing their own industrial unit.
- PO-8. Apart from the research jobs, students can also work or get jobs in Marketing, Business & Other technical fields
- PO-9. Science graduates also recruited in the bank sector to work as customer service executives. Students can also find employment in government sectors.
- PO-10. Often, in some reputed universities or colleges in India and abroad the students are recruited directly by big MNC's after their completion of the course.

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What is Physics ?

Physics is the study of matter and energy.

Physics has many subcategories:

Mechanics- the study of motion.

Dynamics- the study of causes of motion.

Thermodynamics- heat behaviors. Waves, Sound, Light, Optics.

Programme Specific Outcomes: B.Sc. (M.P.C ** M.P.E ** M.P.Cs.) - Physics

PSO-1. Provide students with a broad understanding and appreciation of the physical principles and laws governing the universe.

PSO-2. Prepare students for success in their chosen careers by emphasizing critical thinking and scientific reasoning through an inquiry-based curriculum.

PSO-3. Develop quantitative, analytical and problem-solving skills in majors and non-majors to ensure that students emerging from the coursework/program are equipped with the set of competencies required in the STEM (Science, Technology, Engineering and Mathematics) workplace.

PSO-4. Students will demonstrate proficiency in analyzing and solving problems in physics and related STEM field.

PSO-5. After the completion of this course students have the option to go for higher studies i.e. M. Sc and then do some research for the welfare of mankind.

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Chauhan

Head, Department of Physics
ANWAR-UL-ULOOM COLLEGE
Mallepally, Hyderabad-500 001.



B.Sc. I year - Semester I
Paper - I
Code No. 6118
Subject - Mechanics

Course Objective: Mechanics

1. This course would empower the student to acquire engineering skills and practical knowledge, which help the student in their everyday life.
2. Learn basics of the kinematics and dynamics linear and rotational motion.
3. Develop skills to understand and solve the equations of Newtonian Gravity and central force problem.
4. This syllabus will cater the basic requirements for their higher studies.
5. This course will provide a theoretical basis for doing experiments in related areas.

Course Outcomes: Mechanics

- CO-1. Evaluate line, surface and volume integrals.
- CO-2. Learned conservation laws of energy and linear and angular momentum and apply them to solve problems.
- CO-3. Equation of continuity- Euler Equation.
- CO-4. Apply Kepler's law to describe the motion of planets and satellite in circular orbit, through the study of law of Gravitation.
- CO-5. Fundamental ideas of special theory of relativity such as length contraction and time dilation and mass-energy invariance.

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Khalid Hussain

Head, Department of Physics
ANWARUL ULOOM COLLEGE
Malepally, Hyderabad-500 001.

B.Sc. I year - Semester II
Paper - II
Code No. 6218
Thermal Physics



Course Objective: Thermal Physics

1. This basic course in thermodynamics will enable the student to understand various thermo dynamical concepts, principles.
2. This course is to develop a working knowledge of statistical mechanic and to use this knowledge to explore various applications related to topics in material science and the physics of condensed matter.
3. To understand the applications of the laws of thermodynamics.
4. Measurement of Planck's constant using black body radiation.
5. To determine Stefan's Constant.

Course Outcomes: Thermal Physics

- CO-1. Define postulates of kinetic theory of gases
- CO-2. Differentiate the terms heat and temperature and measure temperature using thermometer and convert one scale of temperature to another scale.
- CO-3. Define different thermal processes and understand laws of thermodynamics and identify its outcomes.
- CO-4. Realize the importance of Thermo dynamical functions and applications of Maxwell's relations.
- CO-5. Differentiate between principles and methods to produce low temperature, liquefy air, helium and hydrogen
- CO-6. Familiarize in depth about statistical distribution and have basic Ideas about Maxwell-Boltzman, Bose-Einstein and Fermi Dirac Statistics and their applications.

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Khaleel Ahmad
Head, Department of Physics
ANWARUL-ULOOM COLLEGE
Mallepally, Hyderabad-500 001.

ANWARUL ULOOM COLLEGE, DEPARTMENT OF PHYSICS

B.Sc. II year - Semester III
Paper - III
Code No. 6318
Electromagnetic Theory



Course Objective: Electromagnetic Theory

1. This course will help in understanding basic concepts of electricity and magnetism and their applications.
2. A course in electricity and electrostatics is thus an essential component of physics programme at graduate level.
3. This course is expected to provide a sound foundation in electricity and electrostatics.
4. Study in depth about Polarization, bound charges and boundary condition.
5. Solve complex problems involving linear electrical networks employing the symmetry concepts together with various network theorems.

Course Outcomes: Electromagnetic Theory

- CO-1. Have gained elaborated knowledge about electrostatics and laws governing the charge distribution.
- CO-2. To understand the relevance of different magnetization and the boundary condition of magnetic field.
- CO-3. To realize the importance of application of Biot Savarts Law and Amperes law.
- CO-4. Be able to solve a variety of problems related to Faraday's law of induction and Maxwell's equations. Student is expected to explain term displacement current as well.
- CO-5. Understand the relevance of displacement current in the context of electromagnetic wave propagation.
- CO-6. Study in depth the transient current response of CR, LC, CR and LCR circuits, which is essential in designing as well as understanding the working of electronic circuits.

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Head, Department of Physics
ANWARUL ULOOM COLLEGE
Mailepaty, Hyderabad-500 001.

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B.Sc. II year - Semester IV
Paper - IV
Code No. 6418
Waves and Optics




Course Objective: Wave and Optics

1. This course aims to provide necessary foundation in waves and optics which prepare the students for an intensive study of advanced topics at a later stage.
2. To acquire skills allowing the student to identify and apply formulas of optics and wave physics using course literature.
3. To illustrate the wave characteristic of light.
4. Fresnel diffraction and Fraunhofer diffraction, Plane diffraction grating, Resolving power of grating.
5. Brewster's law, Nicol prism, Double refraction, Polaroid, optical activity, Laurent's Half shade Polarimeter.
6. Describe and discuss technical applications of simple optical instruments.

Course Outcomes: Wave and Optics

- CO-1. Use the principles of wave motion and superposition to explain the physics of polarisation, interference and diffraction.
- CO-2. Explain certain phenomena related to wave nature of light.
- CO-3. Calculate wavelength difference and fringe width from the interference pattern.
- CO-4. Understand the properties of light like reflection, refraction, interference, diffraction etc..
- CO-5. Explain diffraction pattern and calculate dispersive power of the grating.
- CO-6. Analyze different types of polarized light.


Head, Department of Physics
ANWAR-UL-ULOOM COLLEGE
Mailepally, Hyderabad-500 001.

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B.Sc. III year - Semester V
Paper - V
Code No. 6518 A
Modern Physics - Elective I



Course Objective: Modern Physics

1. Define the major 20th century developments in Physics.
2. Comprehension of the current basis of broad knowledge in Modern physics.
3. To understand the difference between Atomic and Molecular spectroscopies.
4. Understand the intuitive ideas of the Quantum physics.
5. To understand dual nature of matter.
6. Derive Schrodinger time dependent and time independent wave equations.

Course Outcomes: Modern Physics

- CO-1. Compare and contrast Modern Physics with Classical Physics.
- CO-2. Describe the atomic spectra of one and two valance electron atoms.
- CO-3. Explain rotational, vibrational, electronic and Raman spectra of molecules.
- CO-4. Understand historical basis of quantum mechanics.
- CO-5. Explain how quantum mechanical concepts answer some of unanswered questions of Classical mechanics such as photoelectric effect, Compton scattering etc.
- CO-6. Understand the theory of quantum measurements, wave packets and uncertainty principle.
- CO-7. Understand the central concepts of quantum mechanics: wave functions, momentum and energy operator, the Schrodinger equation, time dependent and time independent cases, probability density and the normalization techniques.

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Jhaleqair
Head, Department of Physics
ANWAR-UL-ULOOM COLLEGE
Mailepaty, Hyderabad-500.001.

ANWARUL ULOOM COLLEGE, DEPARTMENT OF PHYSICS

B.Sc. III year - Semester VI
Paper - VI
Code No. 6618 A
Electronics - Elective I



Course Objective: Electronics

1. The students would gain the knowledge of Basic Electronics circuits, network theorems and measuring instruments.
2. They would know about common solid state devices, Semiconductor diodes and transistors
3. This course comprises of basics understanding of power amplifiers, feedback amplifiers, operational amplifiers and optoelectronic devices.
4. The course includes the study of number systems, Boolean algebra, logic gates, combinational circuits, sequential circuits, memory devices and IC technology.
5. The topics also include the Rectifiers, Filters and their applications, number systems and logic gates which are foundation blocks of digital electronics.

Course Outcomes: Electronics

- CO-1. This course helps the students to gain basic ideas of the construction and working of electronic devices and circuits and to understand the fundamentals of communication systems.
- CO-2. The in depth understanding of electronics at post graduate level opens scope for the students to work in private and public sector enterprises.
- CO-3. The digital electronics has wide applications in computing, process control, signal processing, communication systems, digital instruments etc.
- CO-4. The course is of much practical purpose for the students to learn basics of digital electronics.
- CO-5. This course is helpful for the students seeking job opportunities in government, corporate and private sectors. It is also helpful for the students to find opportunities research & development (R & D).

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Chaleppur
Head, Department of Physics
ANWARUL-ULOOM COLLEGE
Malepally, Hyderabad-500 001.

ANWARUL ULOOM COLLEGE, DEPARTMENT OF PHYSICS

ANWARUL ULOOM COLLEGE (AUTONOMOUS)

(Affiliated to Osmania University)

Accredited by NAAC with 'A' Grade

New Mallepally, Hyderabad – 500001, T.S, India.

ZOOLOGY PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES.

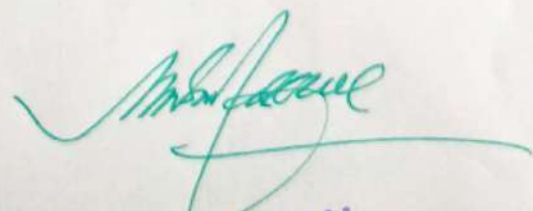
2022-2023

Program outcomes:

1. PO1: Understand various physiological processes at molecular level of animals from different phyla.
2. PO2: Information and skill of advanced biological techniques for experimental purpose.
3. PO3: Apply the knowledge and understanding of Zoology to one's own and social life.
4. PO4: Gain knowledge of protection of vulnerable and endangered species.

Programme Specific Outcomes:

1. PSO1: The students gained the knowledge to use modern sophisticated equipments and tools.
2. PSO2: Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied zoology.
3. PSO3: To analyse the mechanisms involved in life processes up to the molecular level.
4. PSO4: Acquire knowledge on the various aspects of life sciences, cell biology, genetics, taxonomy, physiology, applied zoology, general embryology and public health.


PRINCIPAL
Anwarul Uloom College (Autonomous)
New Mallepally, Hyderabad-01.

ZOOLOGY COURSE OUTCOMES FOR THE ACADEMIC YEAR 2022-2023

SEMESTER - I

TITLE: ANIMAL DIVERSITY - INVERTEBRATES

On completion of the courses students will be able

CO1- To classify Phylum Porifera with taxonomic Keys

CO2- To describe the Phylum Coelenterata and its Polymorphism

CO3- To identify the given Mollusca with respect to economic importance

CO4- To describe general characters of Nematelminthes and their parasitic

Adaptation

CO5- To explain classification of protozoa and diseases caused by them

CO6- To explain general characters of Arthropoda and metamorphosis in

insects.

SEMESTER - II

TITLE: ECOLOGY, ZOOGEOGRAPHY AND ANIMAL BEHAVIOR

On completion of the courses students will be able:

CO1- To Describe Environmental Pollution and its control measures

CO2- To understand methods of wildlife and conservation and endangered species

CO3- To describe Innate and Acquired types of behavior

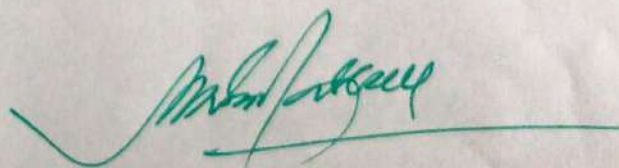
CO4- To identify Zoogeographical regions with their climatic and faunal Peculiarities.

SEMESTER - III

TITLE: ANIMAL PHYSIOLOGY

On completion of the courses students will be able:

CO1- To describe the types of Digestion



PRINCIPAL

Anwarul Uloom College (Autonomous)
New Malleshpally, Hyderabad-01.

CO2-To explain the process of carbohydrates, protein, lipid digestion

CO3-To describe the structure of mammalian lungs

CO4-To describe the mammalian heart and its functioning

CO5-How are the animals classified on the basis of excretion of nitrogenous waste products

CO6-To describe Sliding Filament theory of muscle contraction.

SEMESTER - IV

TITLE: CELL BIOLOGY, GENETICS AND EVOLUTION

CO1- Illustrate that Cell being the fundamental structural unit defines the function of all living things.

CO2- Obtain knowledge of the structures and functions of basic components of prokaryotic and eukaryotic cells, especially macromolecules, membranes, and organelles.

CO3- Understand the cellular components underlying cell division.

CO4- Compare and contrast the events of cell cycle and its regulation.

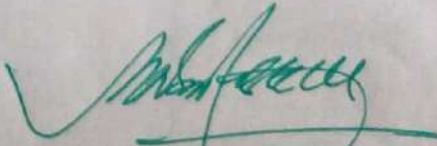
CO5- Explain the communications of cells with other cells and to the environment

CO6- A thorough and in-depth understanding of the chemical basis of heredity

CO7- The skills required to plan, carry out, and evaluate the outcomes of genetic experiments in animal model systems.

CO8- Develop the necessary communication skills in the discipline required for Oral presentations of research results, and poster presentations at conferences etc.

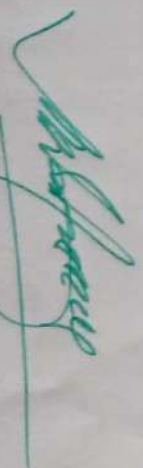
CO9- Gain knowledge about the relationship of the evolution of various species and the environment they live in.


PRINCIPAL
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SEMESTER - V

BIOCHEMISTRY AND ENDOCRINOLOGY

- CO1- Understand in detail about amino acid structures, types of amino acids, classifications, structure of proteins and types of proteins.
- CO2- Learn the molecular structures of 20 amino acids, differentiating essential and non-essential amino acids, biologically important modified amino acids and their functions.
- CO3- Recognize the structural levels of organization of proteins, 3D structure of proteins, its functions, denaturation (hemoglobin, myoglobin etc.).
- CO4- Learn how amino acids and proteins are metabolized, emphasizing the role of few intermediates of their metabolism, monitoring the deficiency and abundance disorders of amino acid metabolisms and the role of enzymes in the regulation of the pathways
- CO5- Describe/recognize lipid and porphyrin structures, lipoproteins and functions of porphyrins (heme, chlorophyll etc.).
- CO6- Structures of the various endocrine glands, their development, their histology and their blood supply.
- CO7- The classification of the hormones, their basic structure, their mechanism of action and their synthetic pathways.
- CO8- The regulation of hormone synthesis and secretion.
- CO9- The physiological role of hormones in achieving homeostasis, including their interaction with the other chemical messenger systems of the body.
- CO10- Pathogenesis, morphological changes and the complications associated with the disruption of endocrine function.
- CO11- The use of hormones and their derivatives in the diagnosis and treatment of the various endocrine disorders.



PRINCIPAL

Anwarul Uloom College (Autonomous)
Kattappally, Hyderabad-500001.

SEMESTER - VI

TITLE: IMMUNOLOGY AND BIOTECHNOLOGY

CO1- This course gives an overview on the immune system including organs, cells and receptors

CO2- The students learns about molecular basis of antigen recognition, hypersensitivity reaction, antigen-antibody reactions

TCO3- The course develops in the student an appreciation for principles of immunology and its applications in treating human diseases

CO4- The course will introduce major groups of microorganisms tools in biotechnology and their most important environmental applications.

CO5- On completion of course, students will be able to understand the use of basic microbiological, molecular and analytical methods, which are extensively used in environmental biotechnology.



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Department of Telugu 2022 – 23.Departmental

Programme Objectives and Outcomes.

(పాఠ్యాంశాల ఉద్దేశ్యాలు మరియు సాధించినవి)

Degree 2nd year (డీగ్రీ మొదటి సంవత్సరం)

Programme Objectives

(పాఠ్యాంశాల ఆధారంగా ఉద్దేశ్యాలు)

1. ప్రాచీన సాహిత్యంలో భాగంగా నారద గానమాత్సర్యం , వాగ్దాన భంగం , నరసింహ శతకం అనే పాఠ్యాంశాల ఆధారంగా నటి సాహిత్య విలువలు తెలుసుకుంటారు .

2. ఆధునిక కవిత్వంలో నరుడనేను, నరుడనేను, ఆర్తగీతం, దేవరకొండదుర్గం, రైతుప్రశస్తి, గురుదక్షిణ, గుడిసెలు కాలిపోతున్న పాఠ్యాంశాల ఆధారంగా ఆధునిక కవిత పోకడలను మరియు కవుల గురించి తెలుసుకుంటారు.

3. వచన విగభంలో అర్ధరాత్రి అరుణోదయం, సి.పి.బ్రౌన్ సాహిత్య సేవ మన గ్రామ నామాలు, నివురు తొలగిన నిప్పు, కొండమల్లెలు , ఇది ఒకే కళ పేర్లు గుర్తుంచుకోవడం అనే పాఠ్యాంశాల ఆధారంగా కథానిక ప్రక్రియను వ్యాస ప్రక్రియ గురించి తెలుసుకుంటారు.

4. భాషా భాగాలలో ఛందస్సు, అలంకారాలు భాగంగా విద్యార్థులు పద్య లక్షణాలు, పద్య అలంకారాల ఉద్దేశంగా ఉన్నది.

Out comes. (సాధించిన ఫలితాలు)

1. పింగళి సూరన, అసూరి మరిగంటి వెంకట నరసింహచార్యులు, ధర్మపురి శేషప్ప, కాళోజి , దేవరకొండ బాలగంగాధర్ తిలక్, డా|| ముకురాల రామారెడ్డి, దాశరథి రంగాచార్య, పోల్కంపల్లి శాంతాదేవి, ఇల్లందుల సరస్వతీదేవి, వానమామలై జగన్నాథాచార్యులు, అంటటి లక్ష్మీనరసింహరాజు, డా|| బోయిభీమన్న మొదలైన కవుల కవితా శైలులను మరియు నాటి భాష నిర్మాణాన్ని తెలుసుకుంటారు.

2.ఆధునిక కవిత్వంలో కాళోజి ప్రవేశపెట్టిన మనషి యొక్క జీవిత విశేషాలను అర్థం చేసుకుంటారు. దాశరథి రంగాచార్య రచించిన దేశంలో స్వాతంత్ర్యం వచన రోజుల అనుభూతులను అవగాహన చేసుకుంటారు. అంబటిగారి మహాభారత విలువలు గురించి తెలుసుకుంటారు.

3.వచన విభాగం చదవడం వలన వచన ప్రక్రియలైన కథానిక శిల్పనిర్మాణాన్ని గురించి, పరిణామక్రమాన్ని కథానికలో ఉండే మెళకువలను వ్యాసం రాసి విధానాన్ని తెలుసుకుంటారు. తెలంగాణకు చెందిన కవి రచయితల గురించి తెలుసుకుంటారు.

4.భాషా యొక్క నిర్మాణాన్ని తెలుసుకోవాలంటే భాషా పరిజ్ఞానము పెరగాలంటే ఏ భాషకైనా వ్యాకరణం తెలిసి ఉండాలి. పద్యాలక్షణాలు పద్యంకూర్పు, పద్యాల అలంకారాలు,పద్యం అందం,పద్యం ఏలా పాడాలి అనే విషయాలు తెలుసుకుంటారు.

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2022– 23.Departmental

Programme Objectives and Outcomes.

(పాఠ్యాంశాల ఉద్దేశ్యాలు మరియు సాధించినవి)

Degree 1st year (డిగ్రీ మొదటి సంవత్సరం)

Programme Objectives

(పాఠ్యాంశాల ఆధారంగా ఉద్దేశ్యాలు)

1. ప్రాచీన సాహిత్యంలో భాగంగా శకుంతలోపాఖ్యానము, గొడగూచి కథ, సంవర్షుడి తపస్సు, గజేంద్రమోక్షము, హనుమత్ సందేశము, సుభాషితములు అనే పాఠ్యాంశాల ఆధారంగా నాటి సాహిత్య విలువలు తెలుసుకుంటారు.
2. ఆధునిక కవిత్వంలో కాసులు రాజు కవి గంగిరెద్దు జయభేరి అంతర్నాథము ప్రపంచ పదులు అల్పిదా పాఠ్యాంశాల ఆధారంగా ఆధునిక కవిత పోకడలను మరియు కవుల గురించి తెలుసుకుంటారు.
3. వచన విభాగంలో యుగాంతము వెంకన్న మామిడిపండు మా ఊరు పోయింది ఇది ఒకే కళే పేర్లు గుర్తుంచుకోవడం అనే పాఠ్యాంశాల ఆధారంగా కథానిక ప్రక్రియను వ్యాస ప్రక్రియను గురించి తెలుసుకుంటారు.
4. రుద్రమదేవి నవల ఉపవాచకంలో చరిత్ర గురించి తెలుగు వారి సంస్కృతి గురించి తెలుసుకుంటారు.
5. భాషాభాగాలలో పర్యాయపదాలు నానార్థాలు భాగంగా సంధులు సమాసాలు తెలుగు వాక్యము గురించి అధ్యయనం చేసి భాష నిర్మాణాన్ని తెలుసుకోవడం ఇక్కడ ఉద్దేశం గా ఉన్నది.

Out comes. (సాధించిన ఫలితాలు)

1. నన్నయ పాల్కురికి సోమనాథుడు కోరవి గోపరాజు పోతన మల్ల ఏనుగు లక్ష్మణ కవి మొదలైన కవుల కవిత శైలులను మరియు నాటి భాష నిర్మాణాన్ని తెలుసుకుంటారు.
2. ఆధునిక కవిత్వంలో గురజాడ ప్రవేశపెట్టిన నూతన సాహిత్య పోకడలను అర్థం చేసుకుంటారు. జాషువా విశ్వ మానవ తత్వాన్ని గురించి అవగాహన చేసుకుంటారు. కృష్ణమాచార్యులు వారి సాహితీ ప్రస్థానం గురించి, సురవరం ప్రతాపరెడ్డి సాహిత్య సేవ గురించి, నారాయణరెడ్డి మానవత్వం గురించి తెలుసుకుంటారు.
3. వచన విభాగం చదవడం వలన వచన ప్రక్రియలైన కథానిక శిల్ప నిర్మాణాన్ని గురించి, పరిణామక్రమాన్ని కథానిక లో ఉండే మెలకువలను వ్యాసం రాసే విధానాన్ని తెలుసుకుంటారు. తెలంగాణకు చెందిన స్త్రీ రచయిత్రుల గురించి తెలుసుకుంటారు.
4. ఉపవాచకం రుద్రమదేవి చదవడం వలన తెలుగువారి పౌరుషము పాలనా సామర్థ్యం అవగతం అవుతుంది. ప్రజల కోసం ఆనాడు ముఖ్యంగా కాకతీయ ప్రభూలు చేసిన సేవలు ఆనాటి శిల్ప సంపద గురించి తెలుసుకుంటారు.
5. భాష యొక్క నిర్మాణాన్ని తెలుసుకోవాలంటే భాషా పరిజ్ఞానము పెరగాలంటే ఏ భాషకైనా వ్యాకరణం తెలిసి ఉండాలి పదాల మధ్య కలయికను కొత్త పదాల ఏర్పాటును సంధులు సమాసాలు ద్వారా తెలుసుకుంటారు. మరియు పదాలను జాతీయాలను తెలుసుకోవడం వల్ల భాషా సంపద పెరుగుతుంది

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(పాఠ్యాంశాల ఉద్దేశ్యాలు మరియు సాధించినవి)

Degree 3rd year (డీగ్రీ మొదటి సంవత్సరం)

Programme Objectives

(పాఠ్యాంశాల ఆధారంగా ఉద్దేశ్యాలు)

- 1.కవితా ప్రక్రియల ఆధారం పద్యం,పాట,వచనకవితా,లఘు కవితారూపాలు, ఉర్దూకవితారూపాలు,సాహిత్యప్రక్రియాల ఆధారంగా నాటకం, నవల,కథానిక,జీవిత చరిత్ర,ఉపన్యాసకల అనే పాఠ్యాంశాలు ఆధారంగా నాటి కవితా ప్రక్రియ గురించి,సాహిత్య ప్రక్రియ గురించి తెలుసుకుంటారు.
2. తెలుగు వ్యాసంలో,వ్యాసం, వ్యాసపరిణామం,వ్యాస రచనా పద్ధతులు,వ్యాసంలో వస్తువైవిధ్యం,వ్యాసరచనలో భాషా ప్రయోగాలు జర్నలిజంలో మౌలికశాలో వార్త, వార్త నిర్మాణం, వార్త కథనాలు,ఇంటర్వ్యూ,అనువాదం.ఆధునిక సాహిత్యంలో వ్యాసం మొలుకవ లు,జర్నలిజంలో వార్తగాల గురించి తెలుసుకుంటారు.
3. వచన సాహిత్యంలో అధ్యయన సంస్కృతి,సాహిత్య అధ్యయనం ప్రయోజనాలు,ముందుమాట,పుస్తక సమీక్షా, జానాపదం ప్రోజెక్టుపరిచయంలో,ప్రోజెక్టు,అధ్యయనం పరికల్పన,నివేదిక. ఆధారంగా విద్యార్థులు.అధ్యయనం ఏలా చేయాలి అనే అంశం గురించి తెలుసుకుంటారు

Out comes. (సాధించిన ఫలితాలు)

- 1.పద్యం అనే పదాన్ని రచించిన కవులు నన్నయ,శ్రీ శ్రీ,దాశరథి,చిలకమర్తి,నూతన తెలంగాణ కవుల రచయిత శైలులను మరియు తెలంగాణ భాషా నిర్మాణాన్ని తెలుసుకుంటారు నాటకం,నవల యొక్క విశేషాలను గురించి తెలుసుకుంటారు .
- 2.తెలుగు వ్యాసంలో వ్యాసం ఎలా రాయాలి వ్యాస నిర్మాణంలో తెలుగు భాషయొక్క గొప్పతనం,అందులో మెళుకువలు నేర్చుకుంటారు కొత్తగా ప్రవేశ పెట్టిన పాఠ్యశం జర్నలిజం లో విద్యార్థులు సమస్యపట్ల

వార్తాసందేశం ద్వారా ప్రజలకు ఎలా చేరవేలి అనే అంశాన్ని తెలుసుకుంటారు అలాగే ఇంటర్వ్యూ ద్వారా ఉన్నతవిలువలు నేర్చు కుంటారు

2. ఆధునిక కవిత్వంలో కాళోజి ప్రవేశపెట్టిన మనషి యొక్క జీవిత విశేషాలను అర్థం చేసుకుంటారు. దాశరథి రంగాచార్య రచించిన దేశంలో స్వాతంత్ర్యం వచన రోజుల అనుభూతులను అవగాహన చేసుకుంటారు. అంబటిగారి మహాభారత విలువలు గురించి తెలుసుకుంటారు.

3. వచన విభాగం చదవడం వలన వచన ప్రక్రియలైన కథానిక శిల్పనిర్మాణాన్ని గురించి, పరిణామక్రమాన్ని కథానికలో ఉండే మెళకువలను వ్యాసం రాసి విధానాన్ని తెలుసుకుంటారు. తెలంగాణకు చెందిన కవి రచయితల గురించి తెలుసుకుంటారు.

4. భాషా యొక్క నిర్మాణాన్ని తెలుసుకోవాలంటే భాషా పరిజ్ఞానము పెరగాలంటే ఏ భాషకైనా వ్యాకరణం తెలిసి ఉండాలి. పద్యాలక్షణాలు పద్యంకూర్పు, పద్యాల అలంకారాలు, పద్యం అందం, పద్యం ఏలా పాడాలి అనే విషయాలు తెలుసుకుంటారు.

5. రచనాసాహిత్యంలో విద్యార్థులు అధ్యయన సంస్కృతి పట్ల భాషా సాహిత్యంతో పాటు ఒకవిషయాన్ని క్షుణ్ణంగా ఎలా తెలుసుకోవాలి, దానిని ఎలా ప్రతిపాదించాలి మరియు నివేదిక సమర్పించాలి అనే విషయాన్నీ తెలుసుకుంటారు. దీనిద్వారా భాషలో ఔనత్యాన్ని మరియు విద్యారథులో ఆలోచించే సామర్థ్యాన్ని పెంచుకుంటారు.