Mahatma Education Society's

Pillai HOC College of Arts, Science and Commerce, Rasayani

(NAAC Accredited & ISO 9001:2015 Certified)

2.6.1 (QLM)

PROGRAMME OUTCOMES - COURSE OUTCOMES

Principal
Mahatma Education Society's
Pillai's HOC College of Arts
Science and Commerce
HOC Educational Campus,
Rasayani, Tal. Khalapur,
Dist. Raigad. PIN - 410 207

Mahatma Education Society's

Pillai HOC College of Arts , Science & Commerce ,Rasayani

(Accredited by NAAC)

(ISO 1990:2015 Certified)

Program: Bachelor of Information Technology

Pillai HOCL Educational Campus, Rasayani Taluka - Khalapur Dist. Raigad -410207 Maharashtra ,India

Department of B. Sc. I. T.- Bachelor of Information Technology

PROGRAMME OUTCOME (PO)

1.To acquire knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry, Mathematics, Computer Science, Information Technology etc.

2.To acquire the skills in handling scientific instruments, planning and performing in laboratory experiments, the skills of observations and drawing logical inferences from the scientific experiments.

3. To understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevancies in the day-to-day life.

4. To analyse the given scientific data critically and systematically and the ability to draw the objective conclusions.

5. To be able to think creatively (divergently and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems.

6. To realize how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments.

7. To develop scientific outlook not only with respect to science subjects but also in all aspects related to life.

8. To realize that knowledge of subjects in other faculties such as humanities, performing arts, social sciences etc. can have greatly and effectively influence which inspires in evolving new scientific theories and inventions.

9. To imbibe ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.

10. To develop various communication skills such as reading, listening, speaking, etc., which we will help in expressing ideas and views clearly and effectively.

11. To realize that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.

COURSE OUTCOMES (CO)

F.Y. B.Sc. I.T - Semester I

COURSE -Programming Principles with C

CO 1. Learn the basic principles of programming.
CO 2. Develop of logic using algorithm and flowchart.
CO 3. Acquire the information about data types.
CO 4. Understanding of input and output functions.
CO 5. Enhance advanced concepts using program.

COURSE -Digital Logic and Applications

CO 1. Apply number conversion techniques in real digital systems
CO 2. Solve Boolean algebra expressions
CO 3. Derive and design logic circuits by applying minimization in SOP and POS forms
CO 4. Design and develop Combinational and Sequential circuits
CO 5. Understand and develop digital applications

COURSE - Fundamentals of Database Management Systems

CO 1. Define and describe the fundamental elements of relational database management system.
CO 2. To relate the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.
CO 3. Design ER-models to represent simple database application scenarios.
CO 4. Transform the ER-model to relational tables, populate relational database and formulate SQL queries on data.
CO 5. Improve the database design by normalization.
CO 6. Understand basic database storage structures and access techniques: file and page organizations, indexing methods and hashing.

COURSE - Computational Logic and Discrete Structures

CO 1. Use logical notation and Perform logical proof
CO 2. Apply recursive functions and solve recurrence relations
CO 3. Use graphs and trees and apply basic and advanced principles of counting
CO 4. Define sets and Relations
CO 5. Calculate discrete probabilities

COURSE -Technical Communication Skills

CO 1. Analyze, synthesize and utilize the process and strategies from delivery to solving communication problem.
CO 2. Learn the communication methodologies at workplace and learning about importance of team collaboration.
CO 3. Learn about different technical communication such as presentations and interviews.
CO 4. Understand and apply the art of written communication in writing reports, proposals.

CO 5. Ground rules of ethical communication and MIS.
CO 6. Understand the functions of graphs, maps, charts.

F.Y. B.Sc. I.T- Semester II

COURSE - Object Oriented Programming with C++

CO 1. Understand the concept of OOPs, feature of C++ language.
CO 2. Understand and apply various types of Datatypes, Operators, Conversions while designing the program.
CO 3. Understand and apply the concepts of Classes &Objects, friend function, constructors & destructors in program design.
CO 4. Design & implement various forms of inheritance, String class, calling base class constructors.
CO 5. Apply & Analyze operator overloading, runtime polymorphism, Generic Programming.
CO 6. Analyze and explore various Stream classes, I/O operations and exception handling.

COURSE - Fundamentals of Micro Processor and Microcontrollers

CO 1. Understand the basic concepts of Micro Computer Systems
CO 2. Understand the architecture and hardware aspects of 8085
CO 3. Write assembly language programs in 8085
CO 4. Design elementary aspects of Micro Controller based systems
CO 5. Interfacing peripherals using Micro Controller

COURSE - Web Applications Development

CO 1. Analyze working of Internet.
CO 2.Gain an insight into designing web pages.
CO 3.Use different ways of styling web pages using CSS.
CO 4.Implement basic and complex functionalities of JavaScript in a web page.
CO 5. Employ PHP Scripts to execute dynamic tasks in a web page.
CO 6. Perform various database tasks using PHP.

COURSE - Numerical Methods

CO 1. Understand numerical techniques to find the roots of non-linear equations and solution of system of linear equations.
CO 2. Understand the difference operators and the use of interpolation.
CO 3. Understand numerical differentiation and integration and numerical solutions of ordinary and partial differential equations.

COURSE -Green IT

CO 1.Understand the concept of Green IT and problems related to it.
CO 2.Know different standards for Green IT.
CO 3.Understand the how power usage can be minimized in Technology.
CO 4.Learn about how the way of work is changing.
CO 5.Understand the concept of recycling.
CO 6.Know how information system can stay Green Information system.

S.Y. B.Sc. I.T- Semester III

COURSE -Python Programming

CO 1. Students should be able to understand the concepts of programming before actually starting to write programs.
CO 2. Students should be able to develop logic for Problem Solving.
CO 3. Students should be made familiar about the basic constructs of programming such as data, operations, conditions, loops, functions etc.
CO 4. Students should be able to apply the problem solving skills using syntactically simple language.
CO 5. Students should be able to use different & various platforms to test & develop real life applications.

COURSE - Data Structures

CO 1. Students should learn about Data structures, its types and significance in computing.
CO 2. Students should able to implement data structure with programming language.
CO 3. Students should able to able to solve tree and graph data structure theories.
CO 4. Understand role of Data structure in real time applications.
CO 5. Able to compute algorithms used in Data structure.

COURSE - Computer Networks

CO 1. Have a good understanding of the OSI Reference Model and in particular have a good knowledge of Layers 1 -3.
CO 2. Conversion of Analog to Digital transmissions.
CO 3.Understands types of cables, protocols and media.
CO 4. Describe the functions of each layer in OSI and TCP/IP model.
CO 5. Classify the routing protocols and analyze how to assign the IP addresses for the given network.

COURSE - Database Management Systems

CO 1. Master concepts of stored procedure and triggers and its use.
CO 2. Learn about using PL/SQL for data management
CO 3. Understand concepts and implementations of transaction management and crash recover
CO 4. Understand concepts about concurrency control.

COURSE -Applied Mathematics

CO 1 Students understand and apply the concept of Matrices and Complex numbers .
CO 2 Students understand and apply the concepts of Differential Equations.
CO 3 Students understand the concept of Laplace Transform and Inverse Laplace Transform.
CO 4 Students understand the basic concept of Multiple Integral.
CO 5 Students understand the basic concept of Beta and Gamma Function.

SYIT - Semester IV

COURSE Core Java

CO 1. Knowledge of input, its processing and getting suitable output.
CO 2. Object oriented programming concepts using Java.
CO 3. Understand the use of Advanced Features like Multi-Threading, File Handling, Server-Client Model and Collection Framework.
CO 4. Understand, design, implement and evaluate classes and applets.
CO 5. Knowledge and implementation of AWT package.

COURSE - Introduction to Embedded Systems

CO 1.Understand basic concepts in the embedded computing systems area.
CO 2.Determine the optimal composition and characteristics of an embedded system.
CO 3.Design and program an embedded system at the basic level.
CO 4.Understand basic concepts of microcontroller.
CO 5.Develop hardware-software complex with the use of the National Instruments products.

COURSE - Computer Oriented Statistical Techniques

CO 1: Understand the concepts of central of measure tendencies and measure of dispersion.
CO 2: Understand the concepts of Probability theory.
CO 3: Understand the sampling, estimation and decision theories.
CO 4: Understand the statistical tests like Chi Square, Z-Test.
CO 5: Understand the concept of correlation and regression.

COURSE - Software Engineering

CO 1. Acquire strong fundamental knowledge in science, mathematics, fundamentals of computer science, software engineering and multidisciplinary engineering to begin in practice as a software engineer.
CO 2. Design applicable solutions in one or more application domains using software engineering approaches that integrate ethical, social, legal and economic concerns.
CO 3. Deliver quality software products by possessing the leadership skills as an individual or contributing to the team development and demonstrating effective and modern working strategies by applying both communication and negotiation management skill.
CO 4. Apply new software models, techniques and technologies to bring out innovative and novelistic solutions for the growth of the society in all aspects and evolving into their continuous professional development.
CO 5. Discuss data models, object models, context models and behavioural models

COURSE -Computer Graphics and Animation

CO 1. Have a basic understanding of the core concepts of computer graphics.
CO 2. Apply graphics programming techniques to design, and create computer graphics scenes.
CO 3.Identify and explain the core concepts of computer graphics.
CO 4. Recognize how a visual image can be an effective means of communication
CO 5. Acquire and develop the skills needed to creatively solve visual communication problems."

T.Y. B.Sc. I.T- Semester V

COURSE -Software Project Management

CO 1. Manage the scope, cost, timing, and quality of the project, at all times focused on project success as defined by project stakeholders.
CO 2. Align the project to the organization's strategic plans and business justification throughout its lifecycle.
CO 3. Identify project goals, constraints, deliverables, performance criteria, control needs, and resource requirements in consultation with stakeholders.
CO 4. Implement project management knowledge, processes, lifecycle and the embodied concepts, tools and techniques in order to achieve project success.
CO 5. Adapt projects in response to issues that arise internally and externally.

COURSE –Next Generation Technologies

CO 1. To know information related to Big Data and MongoDB
CO 2. To understand the MongoDB architecture, data model and process of using MongoDB shell
CO 3. To learn in detail about MongoDb storage engine, use cases, practices and limitations.
CO 4. To study Jquery, SSD and in memory Databases
CO 5. To obtain data about JSON and its function

COURSE – Internet Of Things

CO 1. After the completion of the course, the students will be able design some IOT based prototypes.
CO 2. Identify the requirements for the real world problems
CO 3. Enhance software & hardware skills.
CO 4. Able to understands the basic concepts of programming, hardware & emulator for Raspberry Pi or Arduino.
CO 5. Able to Understand PCB Boards, Prototyping, & Design Phase of Embedded Devices.

COURSE -Artificial Intelligence

CO 1.Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations.
CO 2. Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.
CO 3.Demonstrate awareness and a fundamental understanding of various applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models.
CO 4.Demonstrate proficiency developing applications in an 'AI language', expert system shell, or data mining tool.
CO 5. Demonstrate an ability to share in discussions of AI, its current scope and limitations, and societal implications

COURSE -Advanced Web Programming

CO 1. Students able to understand client-side concepts and compare and contrast client-side versus server-side scripting.
CO 2. Students able to write well-structured, easily maintained JavaScript code following accepted good practice.
CO 3. Students able to understand the use of event handlers to handle user-triggered events.
CO 4. Students able to understand necessary skills for designing and developing web applications.
CO 5. Students able to develop a fully functioning website and deploy on a web server.

T.Y. B.Sc. I.T- Semester VI

COURSE - Software Quality Assurance

CO 1. Critically evaluate alternative standards, models and techniques aimed at achieving quality assurance in a variety of software development environments;
CO 2. Propose and defend innovative solutions to software quality assurance and measurement problems in the context of various software development environments;

CO 3. Critically evaluate leading edge approaches in software development and attendant quality assurance methodologies, presenting the research using Harvard referencing.
CO 4. Understand test strategies, software engineering processes, methods, activities and work items are monitored and comply against the defined standards

COURSE 2.2 -Business Intelligence

CO 1.Understand what is meant by the term "business intelligence".
CO 2. Understand what is expected from a business analyst in the context of BI and how business analysis for BI differs from traditional business analysis.
CO 3. Understand where business analysis fits into the project life cycle.
CO 4. Manage data and deal with data quality related issues.
CO 5. Apply basic business analysis techniques.

COURSE -Principles of Geographic Information Systems

CO 1 To learn computer based problem solving, the development of GI science, its impact on the geographic discipline.
CO 2. To know how to represent geographical data via Data Models
CO 3. To learn about spatial Analysis and Geographic Decision Making
CO 4. Exploring the role of Remote Sensing in monitoring at the global scale
CO 5. To learn Data Capture Technologies and Data Quality.

COURSE -Security in computing

CO 1. To be able explain the concepts of confidentiality, availability and integrity (CIA) in context of Information Assurance.
CO 2. To articulate the threats to confidentiality, availability and integrity (CIA).
CO 3. To be able to analyse a given architecture, discern vulnerabilities and recommend physical, logical or administrative controls to mitigate the threat.
CO 4. To Comprehend and execute risk management processes, risk treatment methods, and key risk and performance indicators.
CO 5. To be able explain the concepts of Data integrity, Authentication, Digital Signatures.

COURSE -Cyber law

CO 1. Students identify and analyse statutory, regulatory, constitutional, and organizational laws that affect the information technology professional.
CO 2. Students locate and apply case law and common law to current legal dilemmas in the technology field.

CO 3. Students apply diverse viewpoints to ethical dilemmas in the information technology field and recommend appropriate actions.
CO 4. Students distinguish enforceable contracts from non-enforceable contracts.
CO 5. Adhere to cyber law rules and regulation in handling security issues

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Program: Bachelor of Computer Science

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Programme- B.Sc.C.S - Bachelor of Computer Science

PROGRAM OUTCOME (PO) :

1. Foundation of Computer System: Ability to understand the principles and working of computer systems. Students can assess the hardware and software aspects of computer systems.
2. Foundations of Software development: Ability to understand the structure and development methodologies of software systems. Possess professional skills and knowledge of software design process. Familiarity and practical competence with a broad range of programming language and open source platforms.
3. Foundation of mathematical concepts: Ability to apply mathematical methodologies to solve computation task, model real world problem using appropriate data structure and suitable algorithm.
4. Applications of Computing and Research Ability: Ability to use knowledge in various domains to identify research gaps and hence to provide solution to new ideas and innovation
5. To acquire the knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry, Mathematics, Computer Science, Information Technology etc.
6. To acquire the skills in handling scientific instruments, planning and performing in laboratory experiments, the skills of observations and drawing logical inferences from the scientific experiments.
7. To understand the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevancies in the day-to-day life.
8. To analyse the given scientific data critically and systematically and the ability to draw the objective conclusions.
9. To be able to think creatively (divergently and convergent) to propose novel ideas in explaining facts and figures or providing new solution to the problems.
10. To realize how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for the sustainable developments.
11. To develop scientific outlook not only with respect to science subjects but also in all aspects related to life.

F.Y. B.Sc. C.S- Semester I

COURSE - Introduction to Programming with Python

CO 1. Are Students able to design and program Python applications?
CO 2. Are Students able to explore the innards of Python Programming and understand components of Python Program?
CO 3. Are Students able to define the structure and components of a Python program?
CO 4. Are Students able to learn how to write loops and decision statements in Python?
CO 5. Are Students able to learn about inbuilt input/output operations and compound data types in Python?

COURSE - Digital Systems & Architecture

CO 1. To learn about how computer systems work and underlying principles
CO 2.To understand the basics of instruction set architecture for reduced and complex instruction sets.
CO 3. To understand the basics of processor structure and operation

COURSE -Linux Opearting System

CO 1. Upon completion of this course, students should have a good working knowledge of Linux, from both a graphical and command line perspective, allowing them to easily use any Linux distribution.
CO 2. This course shall help student to learn advanced subjects in computer science practically.
CO 3. Student shall be able to progress as a Developer or Linux System Administrator using the acquired skill set.

COURSE - Open Source Technologies

CO 1: Understand the difference between open-source software and commercial software.
CO 2: Understand the policies, licensing procedures and ethics of FOSS.
CO 3: Awareness with Open-Source Technologies.

COURSE - Discrete Mathematics

CO 1. Students should be able to understand the mathematical structures (functions ,relations,graphs) and use them to model real life situations.
CO 2. Students should be able to solve problems using recurrence relations and recursion to analyze algorithms and programs such as finding Fibonacci numbers, Tower of Hanoi problems.
CO 3. Students solve puzzles on Permutation and Combination and Counting Principle
CO 4. Students understood basic knowledge about models of automata theory and the corresponding formal languages.

CO 5. Students should be able to understand the of graphs and trees

COURSE - Descriptive Statistics

CO 01: To understand the data type and Data presentation.
CO 02: To understand the measures of central tendency.
CO 03: To understand the concept of Correlation.
CO 04: To understand the concept of Regression.

COURSE - Soft Skills

CO 1. To know about various aspects of soft skills and learn ways to develop personality.
CO 2. To understand the importance in a personal and professional environment.
CO 3. To provide insight into much needed technical and non technical qualities in career planning
CO 4. to learn about leadership, team building, decision making and stress management.

F.Y. B.Sc. C.S- Semester II COURSE

COURSE - Design & Analysis of Algorithms

CO 1. Students able to understand the objectives of data structure ?
CO 2. Students able to understand the principles of algorithms ?
CO 3. Students able to give ideas of the basic data structures ?
CO 4. Students able to familiarize the students with problem-solving strategies like searching, sorting, selection, recursion ?
CO 5. Students able to teach students the important algorithm design paradigms and how they can be used to solve various real world problems.?

COURSE - Programming with Python– II

CO 01. The student should be able to implement OOP concepts in Python including Inheritance and Polymorphism.
CO 02. The student should be able to work with files and perform operations on it using Python.
CO 03. The student should be able to implement regular expression and concept of threads for developing efficient programs.
CO 04. The student should be able to implement exception handling in Python applications for error handling.
CO 05. The student should have Knowledge of working with databases, designing GUI in Python and implementing networking in Python.

COURSE - Introduction to OOPs using C++

CO 1.Understand the importance of OOP approach over procedural language.
CO 2.Understand the basics of OOP

CO 3.Understand the concept of Constructors and Destructors.
CO 4.Understand how to model classes and relationships using UML.
CO 5. Understand the concepts of OOPS like encapsulation, inheritance and polymorphism.
CO 6.Handle basic file operations.

COURSE - Database Systems

CO 1. To make students aware fundamentals of database system.
CO 2. To give idea how ERD components helpful in database design and implementation.
CO 3. To experience the students working with database usingMySQL.
CO 4. To familiarize the student with normalization, database protection and different DCL Statements.
CO 5. To make students aware about importance of protecting data from unauthorized users.
CO 6. To make students aware of granting and revoking rights of data manipulation.

COURSE - Calculus

CO 1. Understanding of Mathematical concepts like limit, continuity, derivative and its applications.
CO 2. Understanding of Mathematical concepts of integration and its applications and mathematical modelling with Differential Equations.
CO 3. Understanding of Mathematical concepts partial derivative and its applications.

COURSE - Statistical Methods and Testing of Hypothesis

CO 01: Enable learners to know concepts of probability of random variables.
CO 02 : Enable study of probability concept required for Hypothesis testing
CO 03 : To familiarize students with the basics of Statistics and non-parametric tests.

COURSE - E-Commerce & Digital Marketing

CO 1. To understand increasing significance of E-Commerce and its applications in Business and Various Sectors
CO 2. To provide an insight on Digital Marketing activities on various Social Media platforms and its emerging significance in Business
CO 3. To understand Latest Trends and Practices in E-Commerce and Digital Marketing, along with its Challenges and Opportunities for an Organization

S.Y. B.Sc. C.S- Semester III

COURSE - Principles of Operating Systems

CO 1.To understand basic concepts and structure of operating systems
CO 2.To Learn about process and synchronization in operating system level
CO 3.To understand CPU scheduling algorithms

CO 4.To understand Memory and File system management

COURSE - Linear Algebra

CO1.To understand Linear Algebra concepts through Computer Science applications.
CO 2.To analyze the solution set of a system of linear equations.
CO3 .To formulate, solve, apply, and interpret properties of linear systems.
CO 4.To understand the concept of linear independence of vectors over a field, and the dimension of a vector space.
CO 5.To interpret basic concepts of linear transformations, dimension, matrix representation of a linear transformation, and the change of coordinate matrix.

COURSE -Data Structures

CO 1.To understand data abstraction and data representation in memory
CO 2.To understand , design and use of elementary data structures such as stack, queue, linked list, tree and graph
CO 3. To understand ,How and why different data structures are used for different types of problems.

COURSE - Advanced Database Concepts

CO 1.To understand concepts and techniques for data management and learn about widely used systems for implementation and usage.
CO 2.To understand , Transaction management and crash recovery.
CO 3.To understand , concepts of programming concepts of databases.

COURSE -Java based Application Development

CO 1.To understand java based applications using OOP concepts.
CO 2.To understand developing GUI based desktop applications in java.
CO 3.To understand web based applications through servlet and jsp.
CO 4.To understand implementation of basic JSON

COURSE - Web Technologies

CO 1.To understand the concepts of Hyper Text Markup Language and Cascading Style Sheets.
CO 2.To understand JavaScript for creating dynamic websites.
CO 3. To understand various operations performed on data among web applications using XML
CO 4.To understand Server-Side Programming using PHP

COURSE -Green Technologies

CO 1.To understand Green IT Fundamentals: Business, IT, and the Environment
CO 2.To understand Green IT Strategies and Significance of Green IT Strategies
CO 3.To understand Green Enterprise Architecture and Green Information Systems

CO 4.To understand Sociocultural Aspects of Green IT and Green Compliance

S.Y. B.Sc. C.S- Semester IV

COURSE - Theory of Computation

CO 1.To understand an overview of the theoretical foundations of computer science from the perspective of formal languages
CO 2.To understand finite state machines to solve problems in computing
CO 3.To understand the hierarchy of problems arising in the computer sciences.
CO 4.To understand Regular grammars, context frees grammar.

COURSE - Computer Networks

CO 1.To Understand Basic Concepts of Networking.
CO 2.To Understand Working of Network Layer Architecture.
CO 3.To Understand Practical Implementation of Basic Routing Algorithms.
CO 4.To Understand Different Networking Protocols.

COURSE - Software Engineering

CO 1.To understand the Concepts of Software Engineering
CO 2.To understand Software Development Life Cycle
CO 3.To Understand project management and analysis principles to software project development.
CO 4.To Understand design & testing principles to software project development.

COURSE - IoT Technologies

CO 1. To Understand Concepts of SoC and IoT
CO 2.To Understand Various types of IoT platforms
CO 3.To Understand Various types of devices using different protocols with IoT
CO 4.To Understand practical applications of IoT in real life world

COURSE -Android Application Development

CO 1.To Understand Kotlin Programming Language for application development
CO 2.To Understand Creating robust mobile applications on simulators and physical devices
CO 3.To Understand, Creating intuitive, reliable mobile apps using the android services and components
CO 4.To Understand Handling data local and remote data storage
CO 5.To Understand Creating a seamless user interface that works with different mobile screens

COURSE - Advanced Application Development

CO 1.To understand all the necessary and important technologies such as MongoDB, Express.js, AngularJS, and Node.js.
CO 2.To understand modern app development using Flutter

COURSE -Research Methodology

CO 1.To understand the research methodology course is proposed to assist students in planning and carrying out research projects.
CO 2.To understand procedures and techniques of implementing research project.
CO 3.To understand research and carries through the various methodologies involved.
CO 4.To understand basic statistics required for research and finally report writing.

COURSE -Management & Entrepreneurship

CO 1.To understand the idea of management, process and its levels.
CO 2.To understand the perception of entrepreneurship, process and its types.
CO 3.To understand the concept SSI and steps to start SSI.
CO 4.To understand the selection of project, project report, project appraisal, and its feasibility.

T.Y. B.Sc. C.S- Semester V

COURSE -Artificial Intelligence

CO 1. Demonstrate fundamental understanding of the history of artificial intelligence (AI) and its foundations.
CO 2. Students should get a clear understanding of AI and different search algorithms used for solving problems.
CO 3. The learner should also get acquainted with different learning algorithms and models used in machine learning.

COURSE - Information and Network Security

CO 1. Understand the principles and practices of cryptographic techniques.

CO 2. Understand a variety of generic security threats and vulnerabilities, and identify & analyze particular security problems for a given application.
CO 3. Understand various protocols for network security to protect against the threats in a network

COURSE - Web Services

CO 1. Emphasis on SOAP based web services and associated standards such as WSDL.
CO 2. Design SOAP based / RESTful / WCF services Deal with Security and QoS issues of Web Services.
CO 3. Create, read and understand the Web Services Description Language files

COURSE - Game Programming

CO 1. Learner should study Graphics and gamming concepts with present working style of developers where everything remains on internet and they need to review it, understand it, be a part of community and learn.
CO 2. Discuss the DirectX and Direct 3D 11 pipeline.
CO 3. Demonstrate the 2D and 3D Transformation on the given sha

COURSE - Software Testing and Quality Assurance

CO 1. To Design SQA activities, SQA strategy, formal technical review.
CO 2. To Understand various software testing methods and strategies, a report for software quality control and assurance.
CO 3. variety of software metrics, and identify defects and managing those defects for improvement in quality for given software.

T.Y. B.Sc. C.S- Semester VI COURSE

COURSE-Cloud Computing

CO 01. The student should get a clear understanding of AI and different search algorithms used for solving problems.
CO 02. The learner should also get acquainted with different learning algorithms and models used in machine learning.
CO 03. The Student should be able to learn from examples, & understand various forms of learning

CO 04. The learner should be able to understand various probabilistic models.
CO 05. The student should be able to use and design various reinforcement methods from learning EM algorithms & various probabilistic models.

COURSE -Cyber Forensics

CO 1. The student will be able to plan and prepare for all stages of an investigation - detection, initial response and management interaction, investigate various media to collect evidence, report them in a way that would be acceptable in the court of law.

CO 2. Student should be able to perform investigation on test cases with investigation tools.

CO 3. Student should be able to apply IT act on test cases.

COURSE -Information Retrieval

CO 1. After completion of this course, learner should get an understanding of the field of information retrieval and its relationship to search engines.
CO 2. It will give the learner an understanding to apply information retrieval models.
CO 3. Analyze the link across web and choose a suitable link analysis algorithm

COURSE - Data Science

CO1. The students should be able to understand & comprehend the problem.
CO2. The students should be able to understand the basics visualization techniques, graphs, charts, maps etc.
CO3. The students should be able to perform data cleaning, and Data preparation using programming techniques and tools
CO4. The students should be able to define suitable solution for the Statistical Modelling and Machine Learning problems

COURSE -Ethical Hacking

CO 1. Learners will know to identify security vulnerabilities and weaknesses in the target applications.
CO 2. They will also know to test and exploit systems using various tools and understand the impact of hacking in real time machines.
CO 3. Create and Understand different protection tools

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Programme -B.S.c(Regular)- Bachelor of Science (Physics, Chemistry & Mathematics)

Programme -B.S.c(Regular)- Bachelor of Science (Physics, Chemistry & Mathematics)

PROGRAM OUTCOME (PO)

1.Acquired the knowledge with facts and figures related to various subjects in pure sciences such as Physics, Chemistry and Mathematics
2. Understood the basic concepts, fundamental principles, and the scientific theories related to various scientific phenomena and their relevance in day-to-day life.
3. Acquired the skills in handling scientific instruments, planning and performing in laboratory experiments .
4. The skills of observations and drawing logical inferences from scientific experiments.
5. Analyzed the given scientific data critically and systematically and the ability to draw the objective conclusions
6. Been able to think creatively (divergent and convergent) to propose novel ideas in explaining facts and figures or providing new solutions to the problems.
7. Realized how developments in any science subject helps in the development of other science subjects and vice-versa and how interdisciplinary approach helps in providing better solutions and new ideas for sustainable developments.
8. Developed scientific outlook not only with respect to science subjects but also in all aspects related to life
9. Imbibed ethical, moral and social values in personal and social life leading to highly cultured and civilized personality.
10. Developed various communication skills such as reading, listening, speaking, etc., which we will help in expressing ideas and views clearly and effectively
11. Realized that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.

COURSE OUTCOMES (CO)

Semester –I

COURSE 1- Classical Physics (Physics-I)

CO 1. Use Newton's Laws in calculations of the motion of the simple systems
CO 2. Analyze the various forces act on a body by free body diagram
CO 3. Understand the concepts of friction and the concepts of some properties of matter such as Elasticity and fluid mechanics
CO 4. Understand the laws which validate the thermodynamically behaviour of matter or system
CO 5. Understand the concept of lence and interference and related problems

COURSE 2 - Modern Physics(Physics-II)

CO 1. Understand nuclear properties and nuclear behaviour

CO 2. Know the various types of isotopes and their application

CO 3. Demonstrate and understand the quantum mechanical concepts.

CO 4. Demonstrate quantitative problem solving skills in all covered topics.

COURSE 3 - Chemistry-I

CO 1. Students will be able to understand the basics of chemical thermodynamics and the relationship between work, energy, heat .
CO 2. Students will be able to express and calculate concentration of solutions.
CO 3. Students will be able to classify elements in metals ,non metals, transition metals, inner transition metals .
CO 4. Students will be able to understand the concepts of shells, subshells, and electron spin .
CO 5. Students will be able to understand IUPAC nomenclature for organic compounds

COURSE 4 - Chemistry-II

CO 1. Students understand the basic laws of gases.
CO 2. Students understand basic concept of kinetics of reaction
CO 3. Understand basics of stereochemistry of organic reactions.
CO4. Students should be able to understand the terms Surface tension, Viscosity, Refractive index, Liquid crystals.
CO5. Students should know the oxides of carbon, oxides and oxyacids of sulphur and nitrogen with respect to environmental aspects.

COURSE 5 – Calculus-I

CO 1. Students understand the basic concepts of Real number system and its applications
CO 2. Students should understand the basic concepts of sequences.
CO 3. Students understand the concept of convergence and divergence of sequences
CO 4. Students understand the concept of First Order First Degree Differential Equations

COURSE 6 - Algebra-I

CO 01: Students understand the basic concepts of integers and divisibility
CO 02: Students should be able to solve problems based on integer theorems and divisors.
CO 03: Understand the concept of functions, matrices and equivalence relations.
CO 04: Students are able to calculate problems of functions.
CO 05: Students understand the basic concept of polynomials

COURSE 7 FC-I

CO 1.To understand the pluralistic nature of Indian society
CO 2.To sensitize about the gender disparity in society.
CO 3. To understand diversity as difference and disparity as inequality.
CO 4. To understand the philosophy and structure of the Constitution of India and government bodies working at different levels of government administration
CO 5. To create awareness about growing social problems in India
CO 6. To help the students to upgrade their knowledge on current challenges and issues of Indian society
CO 7. To sensitize students about social problems plaguing Indian society and to emphasize the role of educated youth to address the same

Semester –II

COURSE 1 - Mathematical Physics (Physics-I)

CO 1. Understand the basic mathematical concepts and applications of them in physical situations.
CO 2. Demonstrate quantitative problem solving skills in all the topics covered.

COURSE 2 –Electricity and Electronics(Physics-II)

CO 1. Understand the basic behaviour of charges at rest and the laws which validate them.
CO 2. Understand the fundamental concept of magnetic field and be able to correlate it with dynamics of charge particles.

COURSE 3 –Chemistry-I

CO 1. Students will able to understand gaseous laws,

CO 2. Students will be able to understand the concept of entropy, relationship between equilibrium constants.

CO 3. Students will be able to understand the concept of common ion effect, concept of qualitative analysis.

CO 4. Students will able to understand theories acids and bases,

CO 5. Students will be able to understand reactions to aliphatic hydrocarbons .

COURSE 4 –Chemistry-II

CO1: understand the concepts of Ionic Equilibria, Molecular Spectroscopy
CO2: Solid State Chemistry of various molecules.
CO3: Understand the Chemical Bond and Reactivity, Oxidation Reduction Chemistry:
CO4: Know the concept of Stereochemistry-II: Cycloalkanes and Conformational Analysis and Aromatic Hydrocarbons.
CO5. Students should understand the concept of pH and pOH

COURSE 5 – Calculus-II

CO 01: Students understand the basic concepts of Series.
CO 02: Students should be able to solve problems based on sequences and series.
CO 03: Students understand the concepts of differentiability

CO 04: Students able to solve problems based on mean value theorem, Rolle 's Theorem, Taylor's theorem etc.

COURSE 6 -Discrete Mathematics

CO 01:Solve problems using recurrence relations and recursion to analyse algorithms and programs such as finding Fibonacci numbers and Tower of Hanoi problem.
CO 02: Apply the operations of sets and use Venn diagrams to solve applied problems; solve problems using the principle of inclusion-exclusion.
CO 03: Solve counting problems by applying elementary counting techniques using the product and sum rules, permutations, combinations, the pigeon-hole principle, and binomial expansion.
CO 04: Understand permutation and recurrence relation.

COURSE 7 – FC-II

CO 1. Students understand basic knowledge on Globalisation, Privatization, Liberalisation and their impact on World Economics.
CO 2. Students get aware of various Human Rights protected under UDHR and its foundation by United Nations Organisation
CO 3. They indulge in activities like group discussions, presentations, debates, etc as a part of the teaching -learning process.
CO 4. They acquire awareness of forest preservation, importance of various species (flora & fauna) and its protection for sustainable lifestyle
CO5: They understand ecology and the importance of the environment.

Semester –III

COURSE 1 – Mechanics and Thermodynamics (Physics-I)

CO 1. Understand the concepts of mechanics & properties of matter & to apply them to problems.
CO 2. Comprehend the basic concepts of thermodynamics & its applications in physical situations.
CO 3. Learn about situations in low temperatures.
CO 4. Demonstrate tentative problem solving skills in all above areas.

COURSE 2 – Vector calculus, Analog Electronics (Physics-II)

CO 1. Understand the basic concepts of mathematical physics and their applications in physical situations.
CO 2. Understand the basic laws of electrodynamics and be able to perform calculations using them.
CO 3.Understand the basics of transistor biasing, operational amplifiers, their application
CO 4. Understand the basic concepts of oscillators and be able to perform calculations using them.
CO 5. Demonstrate quantitative problem solving skill in all the topics covered.

COURSE 3- Applied Physics -I

CO 1. Students will be exposed to contextual real life situations.
CO 2. Students will appreciate the role of Physics in interdisciplinary areas related to materials, Bio Physics, Acoustics etc.
CO 3. The learner will understand the scope of the subject in Industry & Research.
CO 4. Experiential learning opportunities will faster creative thinking & a spirit of inquiry.

COURSE 4 - Chemistry-I

CO 1. Students will understand Free Energy Functions: Helmholtz Free Energy, Gibb's Free Energy, Variation of Gibb's free energy with Pressure and Temperature.

CO 2. Students will able to understand basic concepts of electrochemistry

CO 3. Students will learn Molecular Orbital Theory

CO 4. students will able to understand basic difference between directional and non directional bonding

CO 5. Students will be able to understand the chemistry of many organic reactions.

COURSE 5 - Chemistry-II

CO 1. Types of Complex Chemical reactions: Reversible or opposing, consecutive and parallel reactions Thermal chain reactions: H. and Br. reaction.

CO 2: Thermodynamics of ideal solutions: Ideal solutions and Raoult's law, deviations from Raoult's law–non-ideal solutions

CO 3. Students are able to understand chemistry of carbonyl compounds

CO 4. Students are able to understand the chemistry of p-block elements4.

COURSE 6 - Chemistry-III

CO 1. Students are able to understand the basics of analytical chemistry in non-chemistry fields like pharmacy.

CO 2. Students should able to understand method of analysis of substance, procedure for analysis

CO 3. Students should understand errors and sources of errors in chemical analysis.

CO 4. Understand the concept of sampling.

CO5. Students should be able to identify sources of possible errors in the results obtained.

COURSE 4 -Calculus III

CO 01: Students understand the basic concepts of Riemann integration and its applications.

CO 02: Students should be able to solve problems based on Riemann sums and Riemann integrability.

CO 03: Students understand the concepts of indefinite integrals and improper integrals.

CO 04: Students understand the basic concept of Beta functions, Gamma functions and its applications

COURSE 5 - Linear Algebra I

CO 01 Students understand the concepts Homogeneous and Non-homogeneous linear equations and their solutions.

CO 02 Students should be able to solve problems based on Elementary row and column transformation of a matrix and to solve systems of linear equations.

CO 03 Students understand the concept of vector space ,subspace ,basis and dimension of a vector space

CO 04 Students understand the concept of properties of Determinant

CO 05 Students are able to solve systems of linear equations using Determinant.

COURSE 6 -Ordinary Differential Equations

CO 1. Solve basic application problems described by first order differential equations

CO 2. Relate the solution set of a consistent inhomogeneous linear system to the solution set of its associated homogeneous equation "

CO 3. Solve basic application problems described by second order linear differential equations with constant coefficients.

CO 4. Solve a non-homogeneous linear system by variation of parameters

COURSE 7 FC-III

CO 01. Student understand issues related to human rights of weaker sections, their constitutional and legal rights, redressed mechanism

CO 02. Student study case studies related to different types of disaster

CO 03. Students should be able to differentiate between Science and Technology.

CO 04. Intellectual Foundations like writing, oral communication, critical enquiry and creativity.

Semester –IV

COURSE 1 - Mechanics and Thermodynamics (Physics-I)

CO 1. Understand the concepts of mechanics & properties of matter & to apply them to problems.

CO 2. Comprehend the basic concepts of thermodynamics & its applications in physical situations.

CO 3.Learn about situations in low temperature.

CO 4. Demonstrate tentative problem solving skills in all above areas.

COURSE 2 - Vector calculus, Analog Electronics (Physics-II)

CO 1. Understand the basic concepts of mathematical physics and their applications in physical situations.

CO 2. Understand the basic laws of electrodynamics and be able to perform calculations using them.

CO 3. Understand the basics of transistor biasing, operational amplifiers, their application

CO 4. Understand the basic concepts of oscillators and be able to perform calculations using them.

CO 5. Demonstrate quantitative problem solving skills in all the topics covered.

CO 6. Understand the basics of transistor biasing, operational amplifiers, their application

COURSE 3 - Applied Physics -I

CO 1. Students will be exposed to contextual real life situations.

CO 2. Students will appreciate the role of Physics in interdisciplinary areas related to materials, Bio Physics, Acoustics etc.

CO 3. The learner will understand the scope of the subject in Industry & Research.

CO 4. Experiential learning opportunities will faster creative thinking & a spirit of inquiry.

COURSE 4 - Chemistry-I

CO 1. Students will be able to understand basic knowledge of Electrochemistry.

CO 2: Students will be able to understand the concept of vapour pressure and equations associated with it.

CO 3.Students will able to identify & classify all periodic properties of transition metals

CO 4. Students will be able to understand Application of coordination compounds.

CO 5. Students will be able to identify, formulate And Solve carboxylic acid reactions.

COURSE 5–Chemistry-II

CO 1. Understand concepts about structure of atoms ,Distribution of electrons etc.

CO 2.Able to understand reactivity of amines and heterocyclic compounds.

CO 3. Able to understand uses and environmental chemistry of oxides

COURSE 6 –Chemistry-III

CO1: Understand Basics of Chemical analysis, Separating components of given sample
CO2: To understand basic concepts like pH different experimental techniques and different ways to analyse the samples.
CO3: Understand Statistical Treatment of analytical data --II
CO4: know the various Instrumental Methods and select a method of separation of an analyte from the matrix.
CO5. To study the effect of various parameters on solvent extraction of a solute.

COURSE 4– Multivariable Calculus -I

CO 01: Students understand the basic concepts of functions and several variables.
CO 02: Students should be able to solve problems based on differentiation and its applications.
CO 03: Understand the concept of limits and continuity.
CO 04: Students able to solve problems based on mean value theorem, Cauchy's theorem etc.

COURSE 5 – Linear Algebra II

CO 01 Students understand the concept of Linear transformation, Kernel, Rank-Nullity theorem
CO 02 Students understand the concept of Linear Isomorphism, Matrix associated with linear Transformation.
CO 03 Student understand the concept of Orthogonal, Orthogonal set, Gram schmidt Orthogonalization Process
CO 04 Students understand the concept of Eigenvalues, Eigen vectors, Characteristic polynomial
CO 05 Students understand the concept of Similar matrix, Diagonalization of matrix, orthogonal diagonalisation.

COURSE 6 –Numerical Methods

CO 1. Students understand and apply the concept of Solution of Algebraic and Transcendental Equations.
CO 2. Students understand and apply the concepts of Interpolation and Curve Fitting.
CO 3. Students will be able to solve Integrals by different methods Like Trapezoidal Rule, Simpson's One/Third Rule and Three/ Eight Rule
CO 4. Students will be able to solve the Linear System of Equations.
CO 5. Student will be able to solve the Eigenvalue problems of arbitrary matrice.

COURSE 7 FC-IV

CO 1. Student should be able to understand issues related to human rights of weaker sections, their constitutional and legal rights, redressed mechanism
CO 2. Students should be able to study case studies related to different types of disaster.
CO 3. Students should be able to differentiate between science and technology.
CO 4.Student should be able to learn communication skills.

Chemistry Specialization

Semester –V

COURSE 1 - Physical Chemistry

CO 1. Students will be able to Understand the concept of electrochemistry and electrochemical cells.

CO 2. Students will able to Understand types of polymers and different applications of polymers in different area

CO 3. Students will able to understand Basic idea of quantum mechanics and nuclear magnetic spectroscopy made inquisitive about the various renewable sources of energy

COURSE 2 –Inorganic Chemistry

CO 1. Students will able to understand Concepts of Molecular Symmetry and Chemical Bonding, Molecular Orbital Theory for hetero nuclear diatomic molecules and polyatomic species.

CO 2. They will understand solid state chemistry, Structures of Solids concepts of Superconductivity

COURSE 3 - Organic Chemistry

CO 1. Students are able to understand synthesis and mechanisms of organic reactions.

CO 2. Students able to understand photochemical phenomenon occur in organic compounds.

CO 3. Students are able to understand IUPAC nomenclature of organic compounds.

CO 4. Students are able to understand the use of UV-visible and mass spectrometry in structure determination.

CO 5. Students able to understand chemistry of natural products

COURSE 4- Analytical Chemistry

CO 1. Students will able to understand Quality in Analytical Chemistry ,sampling and can do Chemical Calculations .

CO 2. Know the classical methods of analysis like complexometric titration ,redox titrations .

CO 3. To study various Optical methods of analysis like Atomic Spectroscopy: Flame Emission spectroscopy(FES) and Atomic Absorption Spectroscopy(AAS), Molecular Fluorescence and Phosphorescence Spectroscopy.

CO 4. Students will able to understand methods of separation technique like Solvent Extraction, High Performance Liquid chromatography (HPLC), High Performance Thin Layer Chromatography (HPTLC)

CO5. Understand the methods like Turbidimetry and Nephelometry.

COURSE 5 - Applied Component (Drugs and Dyes)

CO 1. They will come to know the Health and Environmental Hazards of Synthetic Dyes and their Remediation Processes.

CO 2. Effluent Treatment Strategies, Non-textile uses of dyes, Dyes used in food and cosmetics,

CO 3. Students will study different types and applications of Paper and leather dyes, Miscellaneous dyes, pigments.

Semester –VI

COURSE 1–Physical Chemistry

CO1.Understand the concept of electrochemistry and electrochemical cells.

CO 2. Understand types of polymers and different applications of polymers in different area.

CO3.Basic idea of quantum mechanics and nuclear magnetic spectroscopy made inquisitive about the various renewable sources of energy.

COURSE 2– Inorganic Chemistry

CO 1. They will understand the chemistry of inner transition elements, Theories of the metal-ligand bond (I), Molecular orbital Theory for coordination compounds.

CO 2. They will understand the concepts of Organometallic Compounds of main group metal. Some selected topics like Metallurgy, Chemistry of Group 18, and Introduction to Bioinorganic Chemistry.

COURSE 3– Organic Chemistry

CO 1. Students will understand structure of the organic compound from spectral data

CO 2. They will be able to understand various organic reactions from reagents and catalysts

CO 3. Structures and uses Polymers and Nucleic acids

COURSE 4 – Analytical Chemistry

CO 1. Classical methods of analysis like polarography, Qualitative aspects of Polarography: Half wave potential E1/2, Factors affecting E1/2

CO 2. Introduction and need for validation of a method, Validation Parameters: Specificity, Selectivity, Precision, Linearity, Accuracy and Robustness

CO 3. Thermal methods and analytical method validation, also study of food and cosmetics analysis.

CO4. To Study various Methods of separation like, Gas Chromatography, Ion Exchange Chromatography and its application

CO5. To study Analytical Method of Validation in Analytical Chemistry.

COURSE 5 – Applied Component (Drugs and Dyes)

CO 1. They will come to know the Health and Environmental Hazards of Synthetic Dyes and their Remediation Processes.

CO 2. Effluent Treatment Strategies, Non-textile uses of dyes, Dyes used in food and cosmetics,

CO 3. Students will study different types and applications of Paper and leather dyes, Miscellaneous dyes, pigments.

Physics Specialization

Semester –V

COURSE 1 – Mathematical, Thermal and Statistical Physics

CO 1. To learn some mathematical techniques required to understand the physical phenomena at the undergraduate level and get exposure to important ideas of statistical mechanics.

CO 2. To be able to solve simple problems in probability, understand the concept of independent events and work with standard continuous distributions.

CO 3. Will have an idea of the functions of complex variables; solve nonhomogeneous differential equations and partial differential equations using simple methods.

COURSE 2– Solid state Physics

CO 1. Understand the basics of crystallography, Electrical properties of metals, Band Theory of solids, demarcation among the types of materials, Semiconductor Physics and Superconductivity.

CO 2. Understand the basic concepts of Fermi probability distribution function, Density of states, conduction in semiconductors and BCS theory of superconductivity.

CO 3. Demonstrate quantitative problem solving skills in all the topics covered.

COURSE 3– Atomic and Molecular Physics

CO 1. Able to realise the application of quantum mechanics in atomic physics

CO 2. Understand the .the importance of electron spin, symmetric and antisymmetric wave functions and vector atom model
CO 3. Effect of magnetic field on atoms and its application
CO 4. Learn Molecular physics and its applications.
CO 5. This course will be useful to get an insight into spectroscopy.

COURSE 4 – Electrodynamics

CO 1. Understand the laws of electrodynamics and be able to perform calculations using them.
CO 2. Understand Maxwell's electrodynamics and its relation to relativity
CO 3. Understand how optical laws can be derived from electromagnetic principles.
CO 4. Develop quantitative problem solving skills.

COURSE 5– Applied component (Electronics Instruments)

CO 1. Understand the difference between a transducer and a sensor.
CO 2. Understand the construction, working and uses of different types of transducers.
CO 3. Understand the concept of signal conditioning, devices used and theiroperations.
CO 4. Get acquainted with the measuring instruments used in laboratory.
CO 5. Get the insight of the modern medical instruments in principle, which are used in day to day life.

Semester –VI

COURSE 1 –Classical Mechanics

CO 1. It introduces the students to different aspects of classical mechanics
CO 2. They would understand the kinds of motions that can occur under a central potential and their applications to planetary orbits
CO 3. Appreciate the effect of moving coordinate system, rectilinear as well as rotating. The students are expected to learn the concepts needed for the important formalism of Lagrange's equations and derive the equations using D'Alembert's principle.
CO 4. The introduction to simple concepts from fluid mechanics and understanding of the dynamics of rigid bodies is also expected.

COURSE 2 – Electronics

CO 1. Understand the basics of semiconductor devices and their applications.
CO 2. Understand the basic concepts of an operational amplifier: its prototype and applications as instrumentation amplifier, active filters, comparators and waveform generation.
CO 3. Understand the basic concepts of timing pulse generation and regulated power supplies
CO 4. Understand the basic electronic circuits for universal logic building blocks and basic concepts of digital communication.
CO 5. Develop quantitative problem solving skills in all the topics covered.

COURSE 3 – Nuclear Physics

CO 1. The fundamental principles and concepts governing classical nuclear and particle physics
CO 2. Will have knowledge of their applications interactions of ionizing radiation with matter
CO 3. Understand the key techniques for particle accelerators the physical processes involved in nuclear power generation.

CO 4. Knowledge on elementary particles will help students to understand the fundamental constituents of matter and lay the foundation for the understanding of unsolved questions about dark matter, antimatter and other research oriented topics.

COURSE 4 – Special Theory of Relativity

CO 1. Understand the significance of Michelson Morley experiment and failure of the existing theories to explain the null result
CO 2. Understand the importance of postulates of special relativity, Lorentz transformation equations and how it changed the way we look at space and time, Absolutism and relativity, Common sense versus Einstein concept of Space and time.
CO 3. Understand the transformation equations for: Space and time, velocity, frequency, mass, momentum, force, Energy, Charge and current density, electric and magnetic fields.
CO 4. Solve problems based on length contraction, time dilation, velocity addition, Doppler effect, mass energy relation and resolve paradoxes in relativity like twin paradox etc.

COURSE 5 – Applied component (Electronics Instruments)

CO 1. Analyze/design and implement combinational logic circuits.
CO 2. Develop assembly language programing skills and real time applications of microprocessors.
CO 3. Illustrate how to interface the I/O peripheral (PPI) with 8085 microprocessor
CO 4. Understand architecture, silent features, instruction set, programming and interfacing of 8051 microcontroller.
CO 5. Develop the programming skills in programming Language C++.
CO 6. Train their practical knowledge through lab experiments.
CO 7. Get practical training to interface different programmable peripherals and I/O devices to microprocessor and microcontroller

Mathematics Specialization

SEMESTER-V

Course I: Multivariable Calculus-II

CO 01: Understand the multivariable functions and generalization of integration over a general region.
CO 02: Understand the parametrization of surfaces.
CO 03: Evaluation of Line Integral, Surface and Multiple integrals.
CO 04:Understanding the application of Green's, Gauss and Stokes theorem.
CO 05: Application of Integration in Real Life.

Course II: Group Theory

CO 01:Students will have a working knowledge edge of important mathematical concepts in abstract algebra such as group ,sub group ,order of group etc
CO 02: Students understand the concept of group homomorphism and isomorphism
CO 03: Students understand the concept of Normal subgroup,Direct Product and Caley;s Theorem.
CO 04: Students understand the concept of cyclic groups and cyclic subgroup'

Course III: Topology of Metric Spaces

CO 01 Students understand the concept of Metric Spaces.

CO 02 Students understand and apply the concepts of Open Sets, Closed set and their properties.
CO 03 Students understand the concept of Sequence and its properties.
CO 04 Students understand the basic concept of Complete Metric Spaces and its properties.

CO 05 Students understand the concept of Compact Sets.

Course IV: Partial Differential Equations

CO1 Students will able to understand the various analytical methods for solving first order partial differential equations.
CO2 Students will able to understand the classification of first order partial differential equations.
CO3 Students will able to grasp the linear and non-linear partial differential equations.
CO4 Students will able to understand the concept of Initial value problem

Course V:Computer Programming and System Analysis-I

CO 01 Introduction to JAVA Applets and Graphics programming.
CO 02 Introduction to AWT package.
CO 03 Introduction to PYTHON 3.x.
CO 04 Introduction to Strings, Lists, Tuple and Dictionary.

SEMESTER-VI

Course I: Complex Analysis

CO 01 Understanding of Complex numbers, Complex functions and sequences and series of complex numbers.
CO 02 Introduction to Analytical functions.
CO 03 Behaviour of Analytical functions in different domain
CO 04 Evolution of contour integrals under different conditions.
CO 05 Application of Chauchy-Goursat, chauchy theorems.

Course II: Ring Theory

CO 01: Understand the concept of ring and elementary properties of rings.
CO 02: Introduction to unit rings and its properties.
CO 03: Introduction to Ideals and special rings.
CO 04: Introduction to factorization of irreducible polynomials.

Course III: Topology of Metric Spaces and Real Analysis

CO 01: Introduction to functions defined on various metric spaces.
CO 02: Properties and behaviour of functions over compact and complete metric spaces.
CO 03: Understanding of Connected and Compact Spaces.
CO 04: Introduction to Sequences and Series of real valued functions.
CO 05: Understanding the behaviour and properties of Sequences and series of functions.

Course IV: Integral Transforms

CO1	Students will be able to understand the concept of The Laplace Transform.
CO2	Students will be able to understand the concept of the Fourier Transform.
CO3	Students will be able to understand the concept of integral transforms and their corresponding inversion techniques.
CO4	Students will be able to understand the various applications of integral transforms.

Course V: Computer Programming and System Analysis-II

CO 1. Able to create an applet and give different graphics, fonts and colors to applets.
CO 2. Able to understand the basics of python programming.
CO 3. Able to use strings, lists and tuples to design functions in python.
CO 4. Able to do math using python programming.
CO 5. Able to use simply to solve mathematical equations.

Mahatma Education Society's

Pillai HOC College of Arts , Science & Commerce ,Rasayani

(Accredited by NAAC)
ISO 9001: 2015 Certified
Program: Bachelor of Computer Science
Pillai HOCL Educational Campus, Rasayani
Taluka -Khalapur Dist. Raigad -410207
Maharashtra ,India

Programme- Bachelor of Data Science (BSc.DS)

PROGRAMME OUTCOMES (PO's)

1. To demonstrate proficiency with statistical analysis of data.
2. To demonstrate skill in data management.
3. To apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively.
4. To explore, sort and analyze mega data from various sources in order to take advantage of them and reach conclusions to optimize business processes.
5. To strengthen analytical and problem-solving skills by developing real –time applications.

6. To gain practical experience in programming tools for data sciences, database systems, machine learning, and big data tools.
7. To integrate fields within computer science, optimization, and statistics to create adept and well-rounded data scientists.
8. To provide strong core training so that graduates can adapt easily to the changes and new demands from the industry.

COURSE OUTCOMES

Semester: 1

Course: Descriptive Statistics

CO 01 To understand the use and importance of statistical data by tabulating and implementing sampling methods.
CO 02 Able to compute level of measures and apply as well as interpret data into graphs.
CO 03 Apply measure of central tendency to minimize the sum of squared deviation.
CO 04 Able to understand the basic assumption behind regression analysis and determine the model's significance as well as able to apply various techniques for the modeling.
CO 05 To understand the concept of time series.

Course: Introduction to Programming

CO 01 • Learn Programming fundamentals using Python
CO 02 • Understand the concepts and usage data types, variables and other basic elements
CO 03 • Learn about using operators and control statements in Python
CO 04 • Learn about using arrays and strings in Python.
CO 05 • Learn about using Python architecture for Python.
CO 06 • Introduce data Science Tools and plot data using appropriate Python visualization libraries

Course: Web Technology

CO 01 Understand the meaning of the basic terminologies of web technology and explore, use the HTML5 concepts. Understand the basic requirements of web design.
CO 02 Understand and use the Page layout, Navigation, Tables, Forms and Media features of HTML5.
CO 03 Understand and use Cascading Style sheets for beautifying the web pages.
CO 04 Understand and use the Java Script for validation of user forms in web pages.

CO 05 Understand and use the technique of transmitting data between a server and web application using JSON.

Course: Business Communication and Information Ethics

CO 01 Communicate effectively in non-verbal way, draft and write effective business letters.
CO 02 Effectively carryout communication activities of business by following email etiquettes, drafting memos
CO 03 Write elegant business reports and prepare a user instruction manual.
CO 04 Apply the information ethics in all walks of life.
CO 05 Become a good communicator in life.

Course: Precalculus

CO 01 Apply the knowledge of numbers, graphs and functions in real life.
CO 02 Apply trigonometry in modeling real life problems.
CO 03 Use analytic trigonometry and inverse circular functions to solve a variety of problems.
CO 04 Apply complex numbers theory to different domains, use vectors and matrices to solve real life problems.
CO 05 Identify different types of conics from equations, understand sequences and series.

Semester II

Course : Probability and Distributions

CO 01Analyse statistical data graphically using frequency distributions and cumulative frequency distributions
CO 02 Use the basic probability rules, including additive and multiplicative laws, using the terms, independent and mutually exclusive events.
CO 03 Translate real-world problems into probability models.
CO 04 Derive the probability density function of transformation of random variables.
CO 05 Calculate probabilities and derive the marginal and conditional distributions of bivariate random variables.

Course : Database Management

CO 01Students should be able to evaluate business information problems and find the requirements of a problem in terms of data.
CO 02 Students should be able to draw database design in logical structure and can identify the entities which exist in a system.
CO 03 Students should be able to construct normalised database and functional dependencies between attributes and relational algebra queries.
CO 04 Students should be able to design the database schema with the use of appropriate data types for storage of data in the database.
CO 05 Students should be able to create, manipulate, query and back up the databases with features of SQL.

Course : R Programming

CO 01To use R Studio and explore the features for R programming.
CO 02 To use R functions and graphics within R programming for solving problems.
CO 03 To work with advanced graphics of R, import and use the data and represent the data into tables.
CO 04 To apply formatting on tables, use Pipelines in application and use strings, factors in the R programme.
CO 05 To manipulate Data Frames and make use of Dates in R application.

Course : Environmental Science

CO 01 Ability to recognise explain important of environment and its resources
CO 02 Knowledge about insights of ecology and biodiversity
CO 03 Recognise the cause and effects of environmental pollution and other social issues
CO 04 Knowledge about population and its impact on environment
CO 05 Insight into environment management and sustainable development..

Course : Calculus

CO 01 Quickly and easily find the derivative of a function.
CO 02 Perform integration of functions with ease.
CO 03Apply the knowledge of derivatives and integration to different domains and obtain the results.
CO 04 Apply the knowledge of multiple integrals and polar coordinates to solve real life problems with ease.
CO 05 Use partial derivatives and differential equations to solve a variety of problems.

Semester III

Course : Research Methods and Ethics

CO 1: Learner understands the reasons for doing research, the applications of research, characteristics and requirements of the research process, types of research and Research paradigms.
CO 2:Learner is applying major approaches to information gathering, the relationship between attitudinal and measurement scales Methods for exploring attitudes in research.
CO 3:Learner is able to analyze data in qualitative and quantitative studies, application of IT in data analysis.
CO 4: Learner is able to write a research report and use Information Technology in Research
CO 5:Learners practicing ethical codes and practices of conducting research.

Course : Data Structures and Algorithms using Python

CO 1: Learner is capable of choosing appropriate data structure in Python for specified problems and algorithms.
CO 2: Learner is able to implement Linked list and Stack data structure in various domains.
CO 3: Learner is able to implement Tree and Queue data structures and use their operation.

CO 4: Learner has ability to apply Hashing techniques, Symbol Table and Graph Algorithms appropriately.
CO 5: Learner has skills to handle sorting, searching and pattern matching on various data structures.

Course : Economics

CO1: Learner understands the basic economic decisions that underline the economic process: What and how to produce goods and services and how they are distributed.
CO2:Learner is able to apply the concepts of scarcity, choice and opportunity cost to analyse the workings of a market economy.
CO3: Learners able to demonstrate a firm knowledge of the interrelationships among consumers, government, business and the rest of the world in the U.S. macroeconomy.
CO4: Learner is able to identify the process of how the nation‘s output of goods and services is measured through the national income and product accounts; clearly comprehend the income and expenditure approaches to measuring national output and national income.
CO5: Learner is capable of clearly illustrating the specific roles and functions of monetary and fiscal policy in the economy and explaining how these are applied to the process of shaping economic policy and stabilising the economy, specifically regarding controlling inflation, promoting full employment and facilitating economic growth.

Course : Data Warehousing and Mining

CO1:Learner is able to demonstrate knowledge of business intelligence, data warehouse with clear understanding of architectural types and will be able to establish the relationship between architectural building blocks.
CO2:Learner is able to elaborate changing dimensions with respect to current trends & using aggregate tables.
CO3: Learner is able to handle the processes of data preprocessing, data transformation and data reduction.

CO4: Learner has knowledge of using various Data Mining techniques for classification and clustering.
CO5: Learner is able to align the Data Mining techniques for analysing the datasets using tools like Weka, R or Python

Course : Linear Algebra and Discrete Mathematics

CO 1: Learner is able to perform common matrix operations such as addition, scalar multiplication, multiplication, and transposition.
CO 2: Learner is able to describe how the determinant of a product of matrices relates to the determinant of the individual matrices.
CO 3: Learners can find eigenvalues and eigenvectors for matrices.
CO 4: Learner is able to test for positive definiteness for matrices.
CO 5:Learner expresses clear understanding of the concept of a solution to a game' and also the limitations on the applicability of the theory.

Semester IV

Course : Testing of Hypothesis

CO 1: Learner is developing null and alternative hypotheses to test for a given situation.
CO 2:Learner is able to differentiate one- and two-tailed hypothesis tests.
CO 3: Learner is able to do sampling a normal distribution and random sampling.
CO 4: Learner is using statistical models and their associations in performing hypothesis testing.
CO 5: Learner is writing the reports and interpreting the data using the various programming languages and packages.

Course : Big Data

CO 1: Learner understands the key issues in big data management and its associated applications in intelligent business and scientific computing.
CO 2: Lerner is acquiring fundamental techniques and algorithms like Hadoop, Map Reduce and NO SQL in big data analytics.
CO 3: Learner is able to interpret business models and scientific computing paradigms, and apply software tools for big data analytics.
CO 4: Learner understands adequate perspectives of big data analytics in various applications like recommender systems, social media applications etc.
CO 5: Learner understands how to develop Successful Data Analytics Solution

Course : Fundamentals of Accounting

CO 1: Learner understands the laws governing the business, typical business administration schemes, and the ethics of accountancy, statistics, and accounting theory.
CO 2: Learner understands the record keeping of financial transactions and further implementations in relevant areas
CO 3: Learners will understand Merchandising Operations
CO 4: Learners will understand Accounting for Receivables
CO 5: Learners will understand Current Liabilities and Payroll Accounting

Course : Artificial Intelligence

CO 1: Learner understands building blocks of AI.
CO 2:Learner is analysing a problem and solving it by implementing suitable techniques.
CO 3:Learner is applying logic based techniques to solve examples.
CO 4:Learner is able to implement Bayesian approaches.
CO 5: Learner is using machine learning concepts for solving problems

Course : Numerical Methods

CO 1: Learner implementing Numerical Methods To solve the problems.
CO 2:Learner is computing the numerical results using raw data.
CO 3: Learner will learn numerical difference and integration .
CO 4: Learner will learn Numerical Solution of Initial-Value
CO 5: Learner will learn Matrix Eigenvalue

Mahatma Education Society's

Pillai HOC College of Arts , Science & Commerce ,Rasayani

(Accredited by NAAC)
ISO 9001: 2015 Certified
Program: Bachelor of Computer Science
Pillai HOCL Educational Campus, Rasayani
Taluka -Khalapur Dist. Raigad -410207
Maharashtra ,India

Programme- Bachelor of Hospitality Science (BSc.HS)

Program Outcome (PO's)
A student graduating from BSc Hospitality Studies Program will demonstrate:
PO1: Performs operational activities effectively and efficiently to the standards expected in the operation required in the tourism industry/hospitality sectors.
PO2: Able to apply basic operations knowledge in the operation of the hotels, restaurants, travel, government and non-government agencies in accordance with the competency standards.
PO3: Analyses situation, identifies problems, formulates solutions and implements corrective and/or mitigating measures and action management into foodservice and lodging operations.

PO4. Demonstrate the ability to develop, examine, question, explain and explore perspectives or alternatives to problems in hospitality operations.
PO5: Demonstrate the ability to use professional written and oral communication skills and technology to successfully communicate.
PO6: Demonstrate awareness, understanding and skills necessary to live and work in a diverse world.
PO7: Practice professional ethics, provide leadership, demonstrate personal and global responsibility, and work effectively as a team member.

COURSE OUTCOME
SEMESTER-I

COURSE : FOOD PRODUCTION & PATISSERIE

CO 01 To inculcate the right attitude and the required basic knowledge and technical skills in the art of culinary and the food production department.
CO 02 To introduce the various equipment and utensils used in the kitchen.
CO 03 To provide an overview of the culinary history
CO 04 To emphasize on the aim's objectives of cooking, commodities used in food
CO 05 To learn in detail about different ingredients used in the kitchen and Familiarise about the spices, herbs and all different tastes.

COURSE : COMMUNICATION SKILLS

CO 01 Developing and adapting speaking and achieving listening skills and strategies.
CO 02 Generating, planning and drafting ideas
CO 03 Improving vocabulary for precision and impact
CO 04 Using grammar (French & English) accurately and appropriately.
CO 05 Structuring, organising and presenting texts in a variety of formats.
CO 06 To be able to understand and speak basic French

COURSE : FOOD AND BEVERAGE SERVICE

CO 01 Identify the role of the Food & Beverage Service department and explain its organization structure and importance.
CO 02 Explain how moments of truth affect guests, staff members, and managers and describe the value of guests and staff members to a food service operation.

CO 03 Describe the duties and responsibilities of beverage service staff members, and summarize techniques and procedures for responsible selling and serving cocktails, beer and wine.
CO 04 Identifies the operational and auxiliary areas as well as equipment used in the Food & Beverage department.
CO 05 Understand the various service methods and procedures followed in the department

COURSE : FOOD SAFETY & NUTRITION

CO 01 To learn about the importance of hygiene & sanitation in the catering industry
CO 02 To get acquainted with the food standards.
CO 03 To learn about ways to minimize food poisoning and infections.
CO 04 To understand function, sources & deficiency of nutrients.
CO 05 To gain basic knowledge of nutrition
CO 06 To gain knowledge about maintenance of good health.
CO 07 To understand the changes brought about in food nutrients during processing

COURSE : FRONT OFFICE

CO 01 Introduce the students to the Hotel & Tourism Industry
CO 02 Understand the appropriate organization structures and duties in the Front Office and related departments
CO 03 Develop, prepare guest relations and evaluate practical aspect with guests
CO 04 Understand the role of public relations with the hotel industry.
CO 05 Develop skills required as an efficient and effective receptionist in any hotel (large or Small) and to handle situations and types of guests in the job.
CO 06 Understanding the functioning of the Telecommunication department.

COURSE : HOUSE KEEPING

CO 01 The student will be able to identify the role of the housekeeping department .
CO 02 The student will explain its organization structure and importance.
CO 03 The student will be able to list the basic cleaning equipment, cleaning agents and explain their use.

CO 04 Will be able to perform basic cleaning procedures of various surfaces.

Course – Information Technology

Objective - To equip students with theory inputs with respect to understanding the basics of computers and necessary skills to operate the generic applications and standard OS

CO 01 To understand the basis of computer fundamentals.
CO 02 To understand the basic concepts of hardware.
CO 03 To understand the concept of networking and network security.
CO 04 To understand the basic concepts of internet, VPN, ISP, Bandwidth and search engines.

SEMESTER: II

COURSE: FOOD PRODUCTION & PATISSERIE II

CO 01 To develop a keen interest in food production.
CO 02 To enable students to experiment, innovate and progressively produce a variety of preparation / dishes
CO 03 To gain confidence to adapt to the technical skills and the art of preparing different menus, Indian as well as Continental.
CO 04 Students should be confident enough in their skills which would boost their morale to take up the challenge of Quantity cooking.
CO 05 To inculcate the right attitude and the required basic knowledge and technical skills in the art of culinary and the food production department.

COURSE: COMMUNICATION SKILLS (English & French)

CO 01 Understanding the concept of communication.
CO 02 To know the different types of organizational communication.
CO 03 To know how to put recipes i correct order, and translate into English.
CO 04 To be able to converse in French .
CO 05 To be able to make an effective presentation using visual aids.

COURSE: FOOD AND BEVERAGE SERVICE

CO 01 The different types of Menus and principles of menu planning.

CO 02 Sequence and course in the French classical menu also identify general accompaniments.
CO 03 Types, storage and service of Tobacco and Non-alcoholic beverages.
CO 04 Simple control system followed in a restaurant.

COURSE: FRONT OFFICE

CO 01 The student should be able to understand the concept and functioning of room reservations, Reception and Guest services.
CO 02 Introduce the students to the Hotel & Tourism Industry
CO 03 Develop, prepare guest relations and evaluate practical aspects with guests.
CO 04 To handle guest related services such as guest mail, guest messages, handling of keys, safe deposit lockers, guest room change etc.
CO 05 Develop skills required as an efficient and effective receptionist in any hotel (large or Small) and to handle situations and types of guests in the job.

COURSE: HOUSE KEEPING

CO 01 The student will be able to list and explain the various operational areas, procedures and formats of the housekeeping department.
CO 02 The student will be able to enlist and implement Standard Operating Procedures (SOP's) for routine cleaning procedures of various guest areas.
CO 03 The student will be able to identify the role of the housekeeping department.
CO 04 Will be able to perform basic cleaning procedures of different cleaning areas such as public area, departure room, vacant room.

COURSE: PRINCIPLES OF HOTEL ACCOUNTANCY

CO 01 Apply generally accepted accounting principles to hospitality situations, define the terms debit and credit, explain the basis of the double-entry accounting system and identify the normal balances of commonly used accounts.
CO 02 Illustrate how to journalize and post accounting entries and prepare trial balance for accounts.
CO 03 Describe the major classes of accounting adjustments and use them to classify adjustments.

CO 04 Explain the purposes of the uniform system of accounts and identify those systems that are relevant to the hospitality industry.
CO 05 Explain the purpose of performing bank reconciliation and prepare bank reconciliation.
CO 06 Describe the terms associated with receivables and payables, outline ways to avoid bad debt losses, and explain methods used to account for bad debt expenses.
CO 07 Identify broad guidelines for controlling inventories and explain the role of inventory in the calculation of profit.
CO 08 Use critical/analytical thinking skills to prepare and interpret the balance sheet, the income statement, the statement of owner's equity, the statement of retained earnings, the statement of cash flows, and ratios analysis and interpret and discuss the purposes of each.
CO 09 Recognize and evaluate ethical considerations in hospitality financial accounting affecting the hospitality industry.

COURSE: PRINCIPLES OF MANAGEMENT

CO 01 Programme activities and lecture to learn about emerging Indian Corporate World and Global Phenomenon with stress upon the hospitality industry.
CO 02 To train the student as future managers and make them understand the working of an organisation.
CO 03 Teaching through PowerPoint presentations, case studies, activities, brainstorming sessions, SWOT/PEST analysis etc.
CO 04 Trying to bridge the gap between management studies and the real corporate world through real time stories from newspapers, journals and business magazines, books.
CO 05 Encouraging students to read more so as to refine their analytical power and sharpen business sense and become more aware of the business environment.
CO 06 Opportunity to participate in business discussions, article/book reviews and presentations

CO for Semester III

Food Production & Patisserie

CO!:To get trained on various aspects of regional Indian cuisine- Quantity Food Production (QFP)
CO2:To introduce the various equipments and utensils used in the kitchen.

CO3:To gain confidence to adopt to the technical skills and the art of preparing different Indian menus.

Food and Beverage Service

CO1:Describe the duties and responsibilities of beverage service, staff members and summarize techniques and procedures for responsibly selling and serving cocktails, beer and wine
CO2:Understanding the production process of Beer, Wine and Spirits.
CO3:Making cocktails with use of ingredients such as liqueurs and bitters.

Front Office

CO1:The student is expected to process knowledge and skills with respect to handling Group Reservations, Assigning Rooms, Check-in, Cashiering and Security Systems.
CO2:Develop skills required as an efficient and effective receptionist in any hotel and to handle situations and types of guests.
CO3:Understand the role of public relations with the hotel industry.

House Keeping

CO1:The student will be able to explain various operational procedures and formats pertaining to linen, uniforms and laundry.
CO2:The student will be able to create formats and design layouts of linen room, uniform room and laundry.
CO3:The student will be able to create Flower Arrangements for various occasions and location.
CO4:The student will be able to plan and implement décor for special occasions.

Management Information Systems

CO1:To equip the student with the required knowledge to understand the theory and practical aspects of the functioning of the system department of a hotel with focus on skills development in handling Property Management Systems software.

SEMESTER: IV

Course Outcome

Internship

CO1:Student Gain valuable work experience and knowledge of the industry how it works
CO2:Get opportunity to explore a career path.
CO3:Students also Develop and refine skills and practical knowledge
CO4:They also get the opportunity to Network with professionals in the field.
CO5: Gain confidence
CO6:Access to a variety of tasks and departments.
CO7:Secure good references and recommendations

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Programme- BCOM- Bachelor of Commerce

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PROGRAM OUTCOME (PO)

1. It enables learners to get theoretical and practical exposure in the commerce sector which includes Accounts, Commerce, Marketing, Management, Economics, and Environment and Taxation.
2. It promotes students to become professionals / managers / entrepreneurs / accountants and consultants in various allied fields.
3. This programme enables the students to be updated with general understanding of human interaction with the environment, logical and analytical abilities, quantitative techniques and life skills.
4. The students are acquainted with the basics of judicial, legal, political, cultural, social, ethical and administrative structural set up of India.
5. It aims to produce graduates who will come up with innovative solutions to problems, apply research skills to business challenges and communicate effectively.
6. The commerce and accounts focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce, industry and entrepreneurship.

COURSE OUTCOME (CO)

SEMESTER - I

Course – Accounting and Financial Management – I

CO 01 To understand various accounting standards issued by ICAI
CO 02 To understand capital and revenue: expenditure and receipts and Preparation of Final accounts of Manufacturing Concerns
CO 03 It enables understanding and preparation of departmental accounts
CO 04 The learners will understand accounting for hire purchase.

Course – Business Economics - 1

CO 01 Do you Understand the concept of Business Economics
CO 02 Do you able to difference between Demand and Supply
CO 03 Can you understand the Meaning of Households and Firm
CO 04 Will you be able to differentiate between different types of market
CO 05 Do you Understand the Economics Variables.

Course – Commerce I

CO 01 The learners understand the concept of business
CO 02 It familiarizes the learners with the business environment.y
CO 03 It enables the learners to acquire knowledge about project planning and Statutory Requirements in Promoting Business Unit.
CO 04 The learners are acquainted with entrepreneurship.

Course - Environmental Studies I

CO 01 To successfully create an environmental awareness among Commerce students and highlight functional links between environment, economy and society.
CO 02 To provides an overview on the concept and components of the environment, ecology and ecosystem
CO 03 To create awareness about natural resources with a focus on the sustainable development by conservation of natural resources
CO 04 To emphasize on issues of population growth, and its environmental impact, and the urbanization with special emphasis on Smart City Mission of India
CO 05 To convey an understanding of thematic world mapping from an environmental point of view..

Course – Foundation Course I

CO 01 It creates an understanding of the multi-lingual, multi religious, multicultural nature & political nature of Indian society
CO 02 It creates awareness about the concept of disparity with Indian context.
CO 03 Students are able to understand the features and structure of the Indian Constitution.
CO 04 It enables the students to know about significant aspects of political processes.

Course – Mathematical and Statistical Techniques I

CO 01 : Understand how financial markets work, to analyse securities, and to make intelligent investment decisions based on available evidence and analysis.
CO 02 : Able to the counting Principle such as Arrangement and Selection of objects.
CO 03: Understand the concept of Measures of Central Tendencies and Measures of Dispersion.
CO 04: Calculate probabilities by applying probability laws and theoretical results and study about Probability distribution of a discrete random variable.
CO 05: Have greater insight into decision-making processes.

Course – Communication skills

CO 01 Identify the differences between extensive and intensive listening and reading.
CO 02 Distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.
CO 03 Demonstrate verbal and non-verbal communication ability through presentations. .
CO 04 Analyze and apply strategies for maintaining positive relationships within a group. .
CO 05 Draft effective business correspondence with brevity and clarity.
CO 06 Stimulates critical thinking by designing and developing clean and lucid writing skills.

SEMESTER – II

Course – Accounting and Financial Management – I

CO 01 Describe accounting for joint ventures with a separate set of books and no separate set of books.
CO 02 Application of various basis for allocation of departmental expenses and incomes.
CO 03 Evaluate stock valuation methods with regards to goods send at cost price and at invoice price in consignment account ..
CO 04 Perform accounting entries with regards to accounting of Not for profit organisation.
CO 05 Describe accounting for dependent branch and independent branch
CO 06 Apply determine debtor and stock and debtor method and prepare accounts in the books of head office and branch.

Course – Commerce II

CO 01 It creates awareness among the learners regarding the broad framework of different types of Services
CO 02 The learners develop skills relating to retail marketing of services
CO 03 The learners are acquainted with the recent trends in the services sector. ..
CO 04 Students are able to update themselves with respect to E-commerce.

Course – Business Economics-II

CO 1 Able to know the different forms of the market.
CO 2 Know the Different Structure of Markets.s.
CO 3 Understand the different pricing strategy..

CO 4 To take decisions regarding the business.
CO 5 To know the capital budgeting.

Course - Environmental Studies II

CO 01 To highlight solid wastes and its management, an individual's role in Solid Waste Management.
CO 02 To understand the impact of agriculture, industry, and tourism on the environment and focus on sustainable agriculture and sustainable industrial practices
CO 03 To create an insight into various environmental issues at various levels and environmental movements towards making the environment sustainable**...**
CO 04 To create the role of Concept, Components, and Applications of technology in environmental management.
CO 05 To convey an understanding of thematic Mumbai and Konkan region mapping from an environmental point of view.

Course – Mathematical and Statistical Techniques II

CO 01 Students will be able to understand the concept of functions and its derivatives.
CO 02 Students will be able to solve problems based on Simple interest and compound interest
CO 03 Students will understand the concept of time series and index numbers.
CO 04 Students will be able to analyze times series and evaluate index numbers.
CO 05 Students will be able to understand the concept of probability and distributions.

Course – Foundation Course II

CO 01 It creates awareness about the basic understanding of the issues related to economic changes and its impact on different fields
CO 02 It makes learners to understand different evolution of Human Rights
CO 03 The learners are acquainted with the ecology , environment and its interconnectedness.
CO 04 It familiarizes the students with understanding stress and conflict along with various measures to manage it in contemporary society.

Course – Business communication

CO 01 Equips the students to learn the principles of effective communication so that they can communicate with confidence in the corporate world.
CO 02 Imparts the techniques of group discussion, the guidelines of preparing for the interview along with the knowledge of drafting different formats of letters like inquiry, sales, marketing, claim, adjustments, appointment and termination.

SEMESTER – III

Course –Accountancy and Financial Management III

CO 01 To provide the knowledge to the students with regards to Partnership Final Accounts
CO 02 Students get aware about conceptual knowledge of Amalgamation of firms.
CO 03 Learners learn about Conversion of partnership firm into a company
CO 04 Students learn about Piecemeal Distribution of cash.

Course – Financial Accounting and Auditing- Introduction to Management Accounting

CO 01 Students are familiarized with the functions in Management.
CO 02 Students get awareness about conceptual knowledge and evolution of Management through this course
CO 03 Students are able to understand the application of practice tools and methods in management accounting.
CO 04 Students are able to recognize commonly used financial statements, their components and how information from business transactions flows into these statements. .

Course – Advertising I

CO 01 It highlights the role of advertising for the success of brands and its importance
CO 02 It aims to orient learners towards the practical aspects and techniques of advertising.
CO 03 It provides knowledge about the current trends in advertising..
CO 04 It acquaints students with various tools of IMC and careers in advertising. .

Course – Commerce III

CO 01 On successful completion of this subject the learners are exposed to the knowledge and evolution of management
CO 02 It familiarizes the learners with the functions in Management.
CO 03 It enables the learners to acquire knowledge about various techniques, functions and steps to be implemented for effective managerial functioning.

CO 04 The learners learn about organization and organising as an important function of management.

Course – Business Economics III

CO 01 On successful completion of this subject would give students an insight into the concepts of macroeconomics.
CO 02 Students are able to understand the functioning of Macroeconomics
CO 03 Students are able to differentiate between Micro and Macro Economics
CO 04 Students understand various theories.
CO 05 Students are oriented towards the practical aspects and theory of Economics.

Course – Business Law I

CO 01 It provides a conceptual study about the framework of Indian Business Laws.
CO 02 It orients students about the legal aspects of business
CO 03 It familiarizes the students with case studies in Business Law.
CO 04 It enables us to be aware of provisions of contract act, special contracts and sale of goods act.

Course – Foundation Course III

CO 01. To develop a basic understanding about issues related to human rights of weaker sections, ecology, and Science & Technology
CO 02. Give an overview and significant skills required to address competition in career choices
CO 03. Appreciate the importance of developing a scientific temper towards technology and its use in everyday life.

SEMESTER – IV

Course – Accountancy and Financial Management IV

CO 01 The students should be able to understand the concept of a Company, preparation of Company Accounts and its accounting effect.
CO 02 The students should be able to understand the concept of Redemption of Preference Shares and the procedure and steps involved in Redemption of Preference Shares

CO 03 The students should be able to understand the concept of Redemption of Debentures and the procedure and steps involved in Redemption of Debentures.
CO 04 The students should be able to understand the need, procedure, accounting effects and treatment for Profit Prior to Incorporation of a Company.

Course – Financial Accounting and Auditing VI – Auditing

CO 01 On the successful completion of the course, students will be able to understand the fundamental nature of auditing and its implications on society.
CO 02 Students will be able to understand the methods, tools and procedures through which audit is carried out.
CO 03 Students will be able to understand the techniques of auditing and the concepts of internal checks, internal control and test checks
CO 04 Students will be able to understand the techniques of vouching and verification..

Course – Commerce IV (Management: Production & Finance)

CO 01 It acquaint the learners with the basic concepts of Production Management and Inventory Management.
CO 02 It enables us to understand the concept of quality management and quality management tools.
CO 03 It provides basic knowledge about Indian Financial Systems.
CO 04 It updates the learners with the recent trends in Finance.

Course – Business Economics- IV

CO 01 Students understand the role of government.
CO 02 Students understand the How Revenue is generated.
CO 03 Differentiate between public revenue and public Debt
CO 04 Students know different sources of revenue.
CO 05 Students know fiscal policy

Course – Advertising II

CO 01 It acquaints the learners with the various media.

CO 02 It highlights the significance of advertising campaigns for the success of brands.
CO 03 Differentiate between public revenue and public Debt
CO 04 It orients learners towards the practical aspects of execution styles and evaluation techniques of advertising..

Course – Business Law II

CO 01 Students understand various provisions under Companies Act 2013
CO 02 Students become aware of provisions under Indian Partnership Act 1932
CO 03 It creates awareness among the students about rights of consumers and various other provisions of Consumer protection Act 1986 and Competition Act 2002.
CO 04 It enables the students to acquire knowledge about Intellectual property rights in India relating to patents, copyrights and trademarks. ..

Course – Foundation Course IV

CO 01. To develop a basic understanding about issues related to human rights of weaker sections, ecology, and Science & Technology
CO 02. Give an overview and significant skills required to address competition in career choices
CO 03. Appreciate the importance of developing a scientific temper towards technology and its use in everyday life**..**

SEMESTER – V

Course –Financial Accounting and Auditing IX

CO 01 The students will be capable of understanding and preparation of final accounts of companies and the relevant and the relevant accounting standards.
CO 02 Students are able to understand the concept of internal reconstruction and pass Journal Entries for the same.
CO 03 Students are able to understand the compliance of conditions including sources, maximum limits and debt equity ratio
CO 04 The students will be able to understand the accounting for transactions of purchase and sale of investments with ex and cum interest prices and finding cost of investment sold and carrying cost as per weighted average method

CO 05 Students are able to understand the concept , objective , principal & implication of Business Ethics and its Accounting

Course – Financial Accounting and Auditing –VIII - Cost Accounting

CO 01 Students will understand cost classification of cost, cost centre, cost per unit and preparation of actual and estimated cost sheet
CO 02 Students will learn preparation of Process Account, Contract Account and Reconciliation Statement of Financial Account and Cost Account
CO 03 On successful completion of the course, students will be well versed in the fundamentals of cost accounting such as types of cost and material, labour and overheads
CO 04 Students will be able to understand the difference between the financial accounting records and cost accounting records and treatment for the accounting transactions.

Course – Business Economics V

CO 01 On successful completion of this subject the students would be able to understand the Economic overview of India
CO 02 Students understand basic agricultural reform in India
CO 03 Students are able to understand new Economic policy.
CO 04 Students understand the new developed sector during the new reform sector.
CO 05 Students understand the concept of banking and financial market

Course – Direct and Indirect taxation I

CO 01 After successful completion of the course, students are able to create an understanding of the basic concept of Direct Tax and basic definition of Direct Tax and assesses.
CO 02 It familiarizes with heads of income with its components
CO 03 Students are able to develop insight of the basics of Income Tax Act with special reference to computation of total income.
CO 04 Students are able to understand the process and techniques of assessment of tax liability..

Course – Export Marketing I

CO 01 On successful completion of this subject the learners are able to acquire knowledge about basic concepts and global framework for export marketing.
CO 02 Students are able to understand the global framework for export marketing.
CO 03 Students are acquainted with Foreign Trade Policy.

CO 04 Students are able to know basic financial incentives and updates with current trends in export marketing

Course – Commerce V - Marketing

CO 01 Students are able to understand concepts like Marketing, marketing research, CRM and MIS
CO 02 Students are able to understand the marketing management aspect with reference to the decision making process in sales management and supply chain management.
CO 03 It enables to create awareness of key marketing dimensions..
CO 04 Students are able to update students about marketing challenges faced by marketing managers in the 21st century.

SEMESTER – VI

Course – Financial Accounting & Auditing IX - Financial Accounting

CO 01 Aware of the accounting treatment in relation to amalgamation, absorption and external reconstruction and the relevant accounting standards.
CO 02 Gain knowledge about underwriting of shares and debentures.
CO 03 Understand the concept of liquidation of companies and are you able to make the Final Accounts of Liquidator.
CO 04 To understand what journal entry needs & Ledger Account needs to be passed and made when a company enters into a foreign transaction.
CO 05 To able to understand and make financial statement of a Limited Liability Partnership

Course – Cost Accounting

CO 01 Students will understand cost classification of cost, cost centre, cost per unit and preparation of actual and estimated cost sheet.
CO 02 Students will learn preparation of Process Account, Contract Account and Reconciliation Statement of Financial Account and Cost Account.
CO 03 On successful completion of the course, students will be well versed in the fundamentals of cost accounting such as types of cost and material, labour and overheads.
CO 04 Students will be able to understand the difference between the financial accounting records and cost accounting records and treatment for the accounting transactions.

Course – Commerce VI – Human Resource Management

CO 01 Students are able to understand the concept of Human resource Management.

CO 02 It acquaints the students with Human resource Development
CO 03 Students realize the significance of human relation at the workplace.
CO 04 Students are able to comprehend various Trends in Human Resource Management

Course –Business Economics-VI

CO 01 Understand the International Economics .
CO 02 Understand the different theories in International Economics.
CO 03 Understand what is international Trade.
CO 04 Know the different commercial policy used in doing the trade.
CO 05 Understand the concept balance of payment.

Course – Direct and Indirect Taxation II - Goods and Service Tax Act

CO 01 Students are able to understand the basic concepts, definitions and terms related to Goods and Service tax (GST). .
CO 02 Students comprehend the concept of forward charge mechanism, reverse charge mechanism, composite supply, mixed supply and various exemptions under the new Goods and Service tax regime.
CO 03 Students realize the concept of supply along with the rules related to time, place and value of supply.
CO 04 Students are able to compute the Goods and Service Tax (GST) payable by a supplier after considering the eligible input tax credit.
CO 05. Students acquire knowledge related to the persons liable for registration and the persons not required to obtain registration under the GST law.

Course – Export Marketing II

CO 01 Students are able to understand product planning and pricing in exports..
CO 02 It acquaints the students with export distribution channels and promotion techniques.
CO 03 Students acquire knowledge about the basics of export finance.
CO 04 Students are able to comprehend export procedure and documentation.

Mahatma Education Society's

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Program: B.Com. Accounting & Finance (B.A.F.)

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Taluka -Khalapur Dist. Raigad -410207
Maharashtra ,India

Programme - B.Com(A&F)- Bachelor of Accounting & Finance (B.A.F.)

Programme - B.Com(A&F)- Bachelor of Accounting & Finance (B.A.F.)

PROGRAM OUTCOME (PO)

1. This programme is designed for the students to specialize in the field of accounting & finance.
2. This course emphasizes on managing accountancy and the financial part of business.
3. It promotes students to become professionals / managers / entrepreneurs / accountants.
4. It aims to produce graduates who will produce innovative solutions to problems, apply research skills to business challenges and communicate effectively.
5. It also gives exposure to working in the industry during the Summer Internship Programs which is a compulsory component of the program.
6. It would help students gain a thorough grounding in the fundamentals of Commerce and Finance.
7. The commerce and finance focused curriculum offers a number of specializations and practical exposures which would equip the student to face the modern-day challenges in commerce and business.

COURSE OUTCOME (CO)

SEMESTER – I

Course – Financial Accounting - I

CO 01 To understand various accounting standards issued by ICAI.
CO 02 To understand capital and revenue: expenditure and receipts and Preparation of Final accounts of Manufacturing Concerns.
CO 03 It enables understanding and preparation of departmental accounts
CO 04 The learners will understand accounting for hire purchase.

Course – Financial Management I

CO 01 Understand the concept of financial management.
CO 02 Understand different concepts of valuation.
CO 03 Calculate various leverages on their own.
CO 04 Easily identify various sources of finance.
CO 05 Calculate cost of capital of the various firms.

Course – Cost Accounting

CO 01 Understand the concepts of costing and accounting procedures.
CO 02 Study practical adjustments in production with elements of cost.
CO 03 Study practical approach towards cost structure of labours.
CO 04 Understanding formulas for calculation of cost of labours.
CO 05 Study practical approach towards overheads in production.
CO 06 Study per overhead cost and apportion of elements used in production**.**

Course – Foundation Course I

CO 01 To make students capable of understanding and studying the vibrant Indian culture - classify the general characteristic of Indians
CO 02 To impart the students a thorough knowledge on social stratification based on caste, culture, religion, gender
CO 03 To understand the general characteristics on Indian constitution and local self-government and its implication on every Indian citizen
CO 04 To offer diverse learning opportunities to develop analytical and soft skills

Course – Commerce I

CO 01. Classify the business objectives and describe the steps to formulate the business objectives.
CO 02. Analyse and apply the business ethics principles in business
CO 03 . Examine the business environment and its constituents impacting the business decisions.
CO 04 . Identify the growth strategies of MNC and TNC.
CO 05 . Describe the concept of entrepreneurship and its importance and to evaluate its theories.
CO 06. Identify the major activities of E-Commerce and its Pros and Cons.

Course – Economics I

CO 01 . Describe the scope of business economics.
CO 02 . Explain demand analysis in the context of business decision making.
CO 03 . Examine aspects of supply and production behaviour in different time periods.
CO 04 . Analyse the various types of cost and its relevance in business decision making.
CO 05 . Evaluate pricing and output decisions under various market structures.

CO 06 . Create a thought process to analyse different pricing methods used in business decision making

Course – Communication skills

CO 01 . Identify the differences between extensive and intensive listening and reading.
CO 02 . Distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.
CO 03 . Demonstrate verbal and non-verbal communication ability through presentations.
CO 04 Analyze and apply strategies for maintaining positive relationships within a group.
CO 05 Draft effective business correspondence with brevity and clarity.
CO 06 Stimulate critical thinking by designing.

SEMESTER – II

Course – Financial Accounting – II

CO 01 . Identify differences between Single Entry System and Double Entry System of Accounting
CO 02 . Explain Consignment transactions and show them in Consignment Account, Consignor Account and Consignee Account
CO 03 . Apply Debtors method and Stock & Debtors method on dependent branches for accounting
CO 04 . Classify foreign branches as dependent and independent foreign branches and breakdown items of incomes, expenses, assets and liabilities for application of foreign exchange rates.
CO 05 . Determine foreign exchange difference in Converted Trial Balance of foreign branch.
CO 06 . Develop case studies on conversion of Single Entry System into Double Entry System of Accounting.

Course – Business Mathematics

CO 01 To clarify the concept ratio ,proportion , percentage and variation between two or more quantities
CO 02 To explore profit and loss from an economic perspective.

CO 03 To clarify to find Simple interest , Compound interest and Annuity of given Principal amount**.**
CO 04 To provide students with a basic understanding of various investment alternatives and how to value those investments.

Course – Foundation Course II

CO 01 To clarify the concept of globalization, liberalization and privatization and its impact on world Economy
CO 02 To create awareness on basic principles of human rights through the constitutional changes and to protect the same
CO 03 To impart fundamental idea on conservation of environment and control environmental degradation
CO 04 Understand the impact of stress and conflict and methods to manage as well as overcome them

Course – Innovative Financial Services

CO 01 To acquaint students with the knowledge of Traditional Financial services
CO 02 It enables learners to understand issue management and securitization
CO 03 To understand financial services & its mechanism, consumer finance and credit rating.

Course – Audit

CO 01 . Describe the concept, nature & scope of Auditing.
CO 02 . Illustrate the techniques of vouching & verification with suitable examples.
CO 03 . Apply the techniques of test check & audit sampling in auditing
CO 04 . Examine the need and importance of IT in Auditing.
CO 05 . Justify Audit Planning, procedures and Documentation.
CO 06 . Create an overall audit strategy, identify and formulate the audit tests and evidence required to meet the objectives of audit assignments.

Course – Business Law

CO 01 . Recall Various Rules that govern the working of any contract.
CO 02 . Explain special Contracts, their Nature and governing Rules
CO 03 . Determine various Rules that Govern Contract of Sale including Price, Possession, Conditions, Warranties and Unpaid seller
CO 04 . Examine Nature and various Types of Negotiable Instruments and what are the Legal rules governing Contracts of Negotiable Instruments

CO 05 . Agree Various Offences and penalties Related to NIs and Miscellaneous provisions of Negotiable Instruments
CO 06 . Adapt Various Terminologies which are used in relation to Electronic Devices and Information Technology and Offences and Penalties

Course – Commerce II

CO 01 . Identify the concepts of marketing and the importance of marketing research for marketers.
CO 02 . Describe the product life cycle and identify the reasons for failure of product in the market.
CO 03 . Examine the Retail format and the factors responsible for growth of retail in India.
CO 04 . Identify the emerging trends in Retailing.
CO 05. Examine customer retention approaches used in retail and the factors influencing the store location.
CO 06 . Develop the marketing mix of various products essential for business.

SEMESTER – III

Course – Financial Accounting – III

CO 01 To prepare final accounts of Partnership firms in regard to Admission, Death & Retirement of Partners..
CO 02 To understand calculation of Excess Capital and Distribution of cash with regard to piecemeal.
CO 03 To learn the difference between Amalgamation & conversion of a company and its accounting.
CO 04 To understand what journal entry needs & Ledger Account needs to be passed and made when a company enters into a foreign transaction..
CO 05 To be able to solve practical as well as theoretical problems of accounts.

Course – Cost Accounting

CO 01 It helps to understand the basics of cost accounting like a cost sheet.
CO 02 It enables understanding of reconciliation of cost sheet with financial accounts.
CO 03 It helps learners to create accounts based on contract costing and process costing..

Course – Foundation Course - Contemporary Issues- III

CO 01. Students understand issues related to human rights of weaker sections, their constitutional and legal rights, and redressed mechanisms.
CO 02. Student study case studies related to different types of disaster.
CO 03. Students should be able to differentiate between Science and Technology**.**
CO 04. Intellectual Foundations like writing, oral communication, critical enquiry and creativity..

Course – Business Law - III

CO 01 . Define Basic Terminologies, Nature and Characteristics of Company form of Business.
CO 02 . Explain Nature of form of Business in Greater Detail.s
CO 03 . Illustrate Incorporation and Composition of Company Form of Business.
CO 04 . Analyze Functioning of Company form of Business.
CO 05 . Assess Lacunas/Gaping holes in Existing Provisions in Law.
CO 06 . Plan and Formulate Improvements in Existing provisions.

Course – Information technology in Accountancy

CO 01 Learn different parts of hardware and different types of software
CO 02 Learn and execute different commands of Ms word, Ms Excel and Ms PowerPoint
CO 03 Learn Downloading information, creating e-mail ID and sending, receiving emails.
CO 04 Learn legal issues of the internet, importance of electronic data interchange and e-commerce

Course – Business Economics - II

CO 01 Understand the concept of Macroeconomics and various circular flows of income.
CO 02 Understand various concepts in money, prices and inflation.
CO 03 Aware of public finance in depth.
CO 04 Understand various sources of public revenue and expenditure.
CO 05 An appreciation of the ethical issues in economics competition.

Course – Auditing – II

CO 01 To vouch income and expenses while auditing
CO 02 To Verify different assets and liabilities while doing audit

CO 03 Understand different Assurance Standards issued by ICA.
CO 04 Know about qualification , disqualification , appointment and removal of auditor.

Semester IV

Course – Financial Accounting -IV

CO 01 To understand the vertical format of Profit & Loss and Balance sheet
CO 02 To understand the concept of redemption of shares & debentures and be able to pass journal entries for the same.
CO 03 To calculate profit / loss prior and post incorporation
CO 04 To convert trial balance into foreign currency and make its final statement in foreign currency**.**

Course – Management Accounting

CO 01 Understand the concept of management accounting.
CO 02 Analyses and interprets financial statements.
CO 03 Calculate various ratios from the financial statements.
CO 04 Do cash flow analysis.
CO 05 Manage working capital requirement estimations of the firm.

Course – Business Law - III

CO 01 . Define Basic Terminologies, Nature and Characteristics of Company form of Business.
CO 02 . Explain Nature of form of Business in Greater Details.
CO 03 . Illustrate Incorporation and Composition of Company Form of Business.
CO 04 . Analyze Functioning of Company form of Business.
CO 05 . Assess Lacunas/Gaping holes in Existing Provisions in Law.
CO 06 . Plan and Formulate Improvements in Existing provisions.

Course – Research Methodology

CO 01 Learners are expected to demonstrate an understanding of research methodologies.
CO 02 Identifies the overall process of designing a research study from its inception to the report stage.

CO 03 Imbibe data collection, analysis, and interpretation and presentation skills at par with globally accepted standards.
CO 04 It provides a solid foundation for development of rational problem solving skills and analytical thinking that can last throughout their education and subsequent professional careers

Course - Foundation Course

CO 01 A better understanding of India's rise as an economic power.
CO 02 Developed awareness of India's strengths and capabilities on domestic and international front..
CO 03 Relevance of the wisdom of culture, political values and foreign policy for improved relations.

Course – Information Technology

C**O 01**To understand the life cycle of BPM, use of information technology in accountancy and the challenges in automation
CO 02 To understand the development and design of computerized accounting software.
C**O 03** To understand the concept of MIS report in computer environment
CO 04 To understand how information technology plays a vital role in auditing

Course –Auditing III

CO 01 On the successful completion of the course, students will be able to understand the reporting requirement under Companies Act**,** 2013, and types of audit reports
CO 02 Students will be able to understand the method of audit under the Computerized Information System Environment.
CO 03 Students will be able to understand the code of ethics with special reference to The Chartered Accountant Act and required provisions..
CO 04 Students will be able to understand the concepts and purpose of investigation**,** due diligence, and its types.

Semester V

Course – Financial Accounting V

CO 01 Aware of the accounting treatment in relation to amalgamation, absorption and external reconstruction and the relevant accounting standards.
CO 02 Gain knowledge about underwriting of shares and debentures.

CO 03 To understand the compliance of conditions including sources, maximum limits and debt equity ratio
CO 04 To understand the concept of internal reconstruction and pass Journal Entries for the same..
CO 05 Understand the concept of liquidation of companies and are you able to make the Final Accounts of Liquidator.

Course – Cost Accounting III

CO 01 To be aware of different methods of maintenance of accounts in cost accounting such as integrated and non-integrated systems of accounting..
CO 02 To get knowledge of various concepts of Uniform Costing.
CO 03 To understand the concept of Operating Costing (Transportation, Hotel & Hospital and its application.
CO 04 Understand the difference between Activity Based Accounting & Traditional Method of calculation of overheads.

Course – Indirect Tax(GST)

CO 01 To make students aware of the difference between direct tax and indirect tax.
CO 02 To make students understand constitutional provisions of tax laws.
CO 03 To understand the concept of supply.
CO 04 To make students learn procedural aspects for Registration under GST...
CO 05 To learn the importance of Invoice under GST regime.

Course – Financial Management

CO 01. Students will understand the scope of Financial Management, Role of Financial Manager, concept profit maximisation, wealth maximisation.
CO 02. Students will also get the knowledge on Receivable Management for evaluation of credit, Capital Structure theories, Dividend Decision, Dividend Models
CO 03. Students will learn Mutual Fund, its various concepts, Net Annual Value, Bond valuation.

Course – Financial Accounting VI

CO 01 To prepare the financial statement of a Banking Company.
CO 02 To understand the working of NBFCs
CO 03 To prepare the financial statement of a Limited Liability Partnership.

CO 04 To understand the working of an Insurance Company.

Course – Management II

CO 01 Able to gain knowledge about basic concepts related to Management Applications
CO 02 Able to analyze the concept of Human Resource Management in a company
CO 03 Able to analyze the concept of Production & Financial Management in a company
CO 04 Able to gain varied knowledge, skills and attitude regarding business managerial skills.

Semester VI

Course – Financial Accounting -VII

CO 01 To prepare the financial statement of a Cooperative Society
CO 02 To prepare the financial statement of Electricity company
CO 03 The students will be able to understand the accounting for transactions of purchase and sale of investments with ex and cum interest prices and finding cost of investment sold and carrying cost as per weighted average method.
CO 04 To understand the concept and calculation of mutual funds
CO 05 To find similarities and differences between IFRS And Ind AS.

Course – COST ACCOUNTING - IV

CO 01 . Identify the cost accounting techniques used in decision making.
CO 02 . Explain the various operating decisions like level of sales to generate no profit no loss, desired profit etc.
CO 03 . Apply standard costing systems in planning and control.
CO 04 . Outline the cost and sales variances for product cost elements.
CO 05 . Evaluate the targets set by the management through preparation of different types of budget.
CO 06 . Create practical application of marginal costing, standard costing and budgets in decision making.

Course – Financial Management

CO 01 Describe the dimensions of performance and risk relevant to financial firms. understand the concept of business valuation , mergers and acquisition etc.

CO 02 Calculate contemporary measures of financial measures of performance and risk. understand the practical aspect of lease accounting , hire purchase system and its accounting treatment. understand how to calculate the amount of working capital.
CO 03 Describe contemporary managerial risk. Evaluate the economic environment and the impact of governmental economic policies on consumers and financial institutions.
CO 04 Describe the impact that financial innovation, advances in technology, and changes in regulations has had on the structure of the financial firms/industry

Course – Indirect tax

CO 01 This helps the learners to understand the system of GST, its documentation, how to calculate GST, collection process of GST, registration of GST
CO 02 To study filing of returns, payment of taxes, refunds & accounts, audits and assessment as well
CO 03 This will also make students understand foreign trade policy.

Course – Management Control System.

CO 01 To gain knowledge about basic concepts related to Management Applications
CO 02 To analyze the concept of Human Resource Management in a company
CO 03 To analyze the concept of Production & Financial Management in a company
CO 04 To gain varied knowledge, skills and attitude regarding business managerial skills.

Course - Project Work

CO 01 To inculcate the element of research analysis and scientific temperament among learners.
CO 02 To Create awareness among learners regarding methodology of formulation and preparation of the project work.

Mahatma Education Society's

Pillai HOC College of Arts, Science & Commerce ,Rasayani

(Accredited by NAAC)
(ISO 9001 : 2015 Certified)
Program: Bachelor of Management Studies
Pillai HOCL Educational Campus, Rasayani
Taluka -Khalapur Dist. Raigad -410207
Maharashtra ,India

Programme- BMS - Bachelor of Management Studies

Programme- BMS - Bachelor of Management Studies

PROGRAM OUTCOME (PO)

1. To enable the student to be well versed in national as well as international marketing trends, understand how to economize the use of resources of the firm. It also becomes capable of formulating and implementing the major goals and initiatives taken by the organization's top management on behalf of the owners based on the consideration of resources and environment in which the organization operates.
2. They are adequately trained to become entrepreneurs in different fields by making short term and long term planning in connection with various aspects of business and implementing them accordingly as a successful entrepreneur.
3. They acquire excellent communication skills, soft skills to deal with the day today matters of business with a sound background of Mathematics and Statistics tools for analysing and attain perfection in using information technology in business for attaining the objectives. It also enables them to become a responsible citizen with ethical/ moral values and good behaviour.
4. The learners become capable to understand and take in the environmental issues, Disposal of waste etc. Effective environment Management is one of the specific outcomes of this programme.
5. This programme enables the learners to practice portfolio management in the form of investment avenues, transaction in securities like Bonds and debentures etc. and get up to date knowledge of Direct Tax in accordance with the Tax policy of the Government, programme makes the graduates to take correct decisions regarding investment strategies, analysing different investment proposals and selection of a right investment proposal.
6. The learners are trained to understand the methods/techniques of recruitment and selection of employees so as to maximise employees productivity.
7. The learners acquire knowledge and get awareness on advertising and integrated marketing tools and elements ,trends in service sector marketing, how branding and segmentation is done, learners also gain knowledge on practical application on E-commerce development.

COURSE OUTCOMES

Semester I

Course – Introduction to Financial Accounts

CO 01: To introduce the basic theory, concepts and practice of financial accounting
CO 02: To enable students to understand information contained in the published financial statements of companies and other organizations.
CO 03: To understand basic subsidiary books and bank reconciliation statements**.**

Course –Business Communication

CO 01 To develop awareness of the complexity of the communication process.
CO 02. To develop effective listening skills in students so as to enable them to comprehend instructions and become a critical listener.
CO 03. To develop effective oral skills so as to enable students to speak confidently interpersonally as well as in large groups

CO 04. To develop effective writing skills
CO 05. To demonstrate effective use of communication technology.

Course – Business Statistics

CO 01 Students understand the concept of Introduction of Statistics and able to present Data.
CO 02 Students understand and apply the concepts of Measures of Dispersion, Co-relation and Regression**.**
CO 03 Students understand the concept of Time Series and Index Number.
CO 04 Students understand the basic concept of Probability and Decision Theory.

Course – Foundation Course I

CO 01 To make students capable of understanding and studying the vibrant Indian culture - classify the general characteristic of Indians.
CO 02 To impart the students a thorough knowledge on social stratification based on caste, culture, religion, gender.
CO 03 To understand the general characteristics of the Indian constitution and local self-government and its implication on every Indian citizen.
CO 04 To offer diverse learning opportunities to develop analytical and soft skills.

Course – Commercial Law

CO 01 Integration of deep knowledge of Commercial Law.
CO 02 Development of skills, knowledge, ability, understanding and attitude of students towards Commercial Law.
C**O 03** Commercial Law shall make students aware about the important legislations governing Business and Commerce in India.

Course – Foundation of Human Skill

CO 01 To get knowledge about: Human beings, their personalities, environment, organizational power, politics, change and how to deal with them.
CO 02 To get knowledge about Generating the team and team building as well as team work.
CO 03 To get knowledge about Leadership qualities and motivating factors.

Course – Business Economics I

CO 01 Apply the concept of opportunity cost
CO 02 Employ marginal analysis for decision making
CO 03 Analyze operations of markets under varying competitive conditions
CO 04 Analyze causes and consequences of unemployment, inflation and economic growth.

Semester II

Course – Business Environment

CO 01 Familiarize with the nature of the business environment and its components.
CO 02 The students will be able to demonstrate and develop a conceptual framework of the business environment and generate interest in international business.

Course – Business Mathematics

CO 01 Students understand the concept of Elementary Financial Mathematics.
CO 02 Students understand and apply the concepts of Matrices and Determinants
CO 03 Students understand and apply the concept of Derivatives and its application in daily life.
CO 04 Students understand the basic concept of Numerical Analysis.

Course – Foundation Course II

CO 01 To clarify the concept of globalization, liberalization and privatization and its impact on world Economy
CO 02 To create awareness on basic principles of human rights through the constitutional changes and to protect the same
CO 03 To impart fundamental idea on conservation of environment and control environmental degradation
CO 04 Understand the impact of stress and conflict and methods to manage as well as overcome them.

Course - Principles of Marketing.

CO 01. To acquire knowledge about marketing, concept of marketing and orientation of firms.
CO 02. To learn Marketing Environment, Research and Consumer Behaviour.
CO 03. To understand marketing mix, branding, pricing, physical distribution.
CO 04. To understand segmentation, Targeting and Positioning and Trends In Marketing.

Course – Industrial Law

CO 01 Be aware of the present state of Industrial relations in India.
CO 02 Be acquainted with the concepts, principles and issues connected with trade unions
CO 03 Understand the various processes and procedures of handling Employee Relations

Course – Business Communication

CO 01 To be familiar with the complete course outline/Course Objectives/Learning Outcomes/ Evaluation Pattern & Assignments
CO 02 To participate in an online learning environment successfully by developing the implication-based understanding of Paraphrasing, deciphering instructions, interpreting guidelines, discussion boards & Referencing Styles.
CO 03 To demonstrate his/her ability to write error free while making an optimum use of correct Business Vocabulary & Grammar.

Course – Principles of Management

CO 01 Understand the concepts related to Business.
CO 02 Demonstrate the roles, skills and functions of management.
CO 03 Analyze effective application of PPM knowledge to diagnose and solve organizational problems and develop optimal managerial decisions

Semester III

Core Subjects

Course - Accounting for Managerial Decisions.

CO 01. To acquaint management learners with basic accounting fundamentals
CO 02. To develop financial analysis skills among learners.
CO 03. The course aims at explaining the core concepts of business finance and its importance in managing a business.

Course - Environmental Management

CO 01 To provide fundamental knowledge about the environment and its components.

CO 02 To develop knowledge base for demographic and environmental factors and challenges affecting business globally
CO 03 To make the students aware of environmental problems related to business and commerce
CO 04 To understand the relevance and significance of sustainable environment
CO 05 To inculcate Environmental ethics and values and develop eco-friendly habits amongst the students

Course – Strategic Management (CORE)

CO 01 The objective of this course is to learn the management policies and strategies at every Level to develop conceptual skills in this area as well as their application in the corporate world..
CO 02 The focus is to critically examine the management of the entire enterprise from the Top Management viewpoints.
CO 03 This course deals with corporate level Policy & Strategy formulation areas.This course aims to develop conceptual skills in this area as well as their application in the corporate world.

Course - Business Planning & Entrepreneurial Management

CO 01 Students will be able to define, identify and/or apply the principles of entrepreneurial and family business
CO 02 Students will be able to define, identify and/or apply the principles of viability of businesses, new business proposals, and opportunities within existing businesses.
CO 03 Students will be able to define, identify and/or apply the principles of entrepreneurial management and growth through strategic plans, consulting projects and/or implementing their own businesses

Course - Information Technology in Business Management-I

CO 01 Design, document and develop robust, extensible and highly maintainable data-intensive applications using cutting edge technologies tailored to the specific needs of any business scenario.
CO 02 Explain and apply the core aspects of information technology principles and tools, and manage their implementation in a business context

Course - Foundation Course-IV

CO 01 Students should be able to identify, analyze, interpret and describe the critical ideas, values, and themes that appear in literary and cultural texts and understand the way these ideas, values, and themes inform and impact culture and society, both now and in the past.
C**O 02** Students should be able to write analytically in a variety of formats, including essays, research papers, reflective writing, and critical reviews of secondary sources.

Specialization - HR

Course – Recruitment and Selection (HR Elective)

CO 01 The objective is to familiarize the students with concepts and principles,procedure of Recruitment and Selection in an organization.
CO 02 To give an in-depth insight into various aspects of Human Resourcemanagement and make them acquainted with practical aspects of the subject.

Semester - III

Course – Motivation & Leadership (Human Resource Electives)

CO 01 The learners gain knowledge about the concept of motivation and study motivation theories
CO 02 It enables the students to differentiate between eastern and western work culture.
CO 03 It enables the learners to understand leadership theories and illustrative study of effective leadership.
CO 04 The learners are acquainted with practical approaches to Motivation and Leadership and its application in the Indian context.

Specialization – MARKETING

Course - Advertising

CO 01. To understand and examine the growing importance of advertising .
CO 02. To understand the construction of an effective advertisement.
CO 03. To understand the role of advertising in contemporary scenarios.
CO 04. To understand the future and career in advertising.

Course - Consumer Behaviour

CO 01. The basic objective of this course is to develop an understanding about the consumer decision making process and its applications in marketing function of firms
CO 02. This course is meant to equip undergraduate students with basic knowledge about issues and dimensions of Consumer Behaviour
CO 03. Students are expected to develop the skill of understanding and analysing consumer information and using it to create consumer- oriented marketing strategies

Specialization - Finance

Course – Introduction to Cost Accounting

CO 01 Be able to identify the dynamics of human behavior and the basic factors that influence the consumers' decision process.
CO 02 Be able to demonstrate how concepts may be applied to marketing strategy

Course – Basics of Financial Services

CO 01 To acquaint students with the knowledge of Traditional Financial services
CO 02 It enables learners to understand issue management and securitization
CO 03 To understand financial services & its mechanism, consumer finance and credit rating.

Semester - IV

Core Subjects

Course – Production and Total Quality Management (CORE)

CO 01 To acquaint learners with the basic management decisions with respect to production and quality management
CO 02 To make the learners understand the designing aspect of production systems.
CO 03 To enable the learners to apply what they have learnt theoretically.

Course – Information Technology in business management

CO 01 To understand managerial decision-making and to develop perceptive of major functional area of MIS.
CO 02 To provide conceptual study of ERP, SCM, CRM, Key issues in implementation and trends in enterprise applications.
CO 03 To learn and understand relationship between database management and data warehouse approaches , the requirements and applications of data warehouse..

CO 04 To learn outsourcing concepts. BPO/KPO industries, their structures , Cloud Computing.

COURSE NAME - FOUNDATION COURSE –IV ETHICS & GOVERNANCE

CO1: Focus on teams, execute tasks assigned and perform on timelines set.
CO2: Familiarise the importance and application of Ethics in modern business practices.
CO3: Illustrate case studies, learners will develop a moral and ethical perspective of looking at business problems.
CO4: Understand emerging trends and growing importance of good Governance and CSR by organizations.

COURSE NAME - BUSINESS RESEARCH METHODS

CO1: Apply a range of Quantitative and Qualitative Research Techniques to Business and Management Problems and issues.
CO2: Understand and apply research approaches, techniques and strategies in the appropriate manner for managerial decision making.
CO3: Explain and develop research methods and strategies in Research projects for enhanced Career Options.
CO4: Examine diverse learning opportunities to develop analytical and soft skills through Research.

COURSE NAME - BUSINESS ECONOMICS-II

CO1: Demonstrate through application of Micro-economics, the interaction of individuals and organizations in markets.
CO2: Analyse the role of public policy in shaping those applications in Organisation markets.
CO3: Understand application of macroeconomics the functioning of market economies at regional, national, and global levels..
CO4: Examine the role of public policy in shaping those global levels.

Course – Change Management (HR)

CO1: Understanding organizational change facilitators using the knowledge and techniques of behavioural science.
CO2: Identify the challenges of ever-changing markets and to develop new ways to deal with them
CO3: Develop oneself and change according to the need of changing circumstances.
CO4: Examine the changing norms, laws and implement them as per the need of ever-changing policies and strategies of Corporates.
CO5: Explain different techniques about how to overcome resistance to change.
CO6: Provides detailed information about effective implementation of change, change agents and effective change programs

Course – Training & development in Human Resource Management (Human Resource Electives)

CO 01 The learners gain practical knowledge about the training needs and the employee's role in this changing scenario.
CO 02 It enables the students to understand that all organizations need to pay adequate attention to equip their employees.
CO 03 The students realize that successful managerial performance depends on the individual's ability to observe, interpret the issues and modify his approach and behaviour.
CO 04 The learners are oriented to meet the specific needs of the organizations in training and development activities.

Specialization – Marketing

Course - Integrated Marketing Communication

CO 01 It will enable the students to understand the various ways of marketing a service or product.
CO 02 It will enable the students to understand trends in IMC.
CO 03 It will enable the students to understand the careers in advertising

Course - Rural Marketing

CO 01 Students will develop the understanding of the Indian rural economy
CO 02 Understand the concepts and techniques of marketing management and their application in rural marketing
CO 03 Apply adaptations to the rural marketing mix (4 A's) to meet the needs of rural consumers.
CO 04. Understand the concept and methodology for conducting the research in the rural market.

Specialization – Finance

Course - Strategic Cost Management

CO 01 Students will gain knowledge relating to legal, accounting and practical implementation of corporate restructuring.
CO 02. Students are made aware of complex facets of the corporate restructuring process.

Course –Auditing IV

CO 01 On the successful completion of the course, students will be able to understand the fundamental nature of auditing and its implications on society.
CO 02 Students will be able to understand the methods, tools and procedures through which audit is carried out
CO 03 Students will be able to understand the techniques of auditing and the concepts of internal checks, internal control and test checks.
CO 04 Students will be able to understand the techniques of vouching and verification.

Semester V

Core Subjects

COURSE NAME - LOGISTICS AND SUPPLY CHAIN MANAGEMENT

CO1: Focus on the concepts applied in Logistics and Supply Chain Management. .
CO2: Illustrate concepts like inbound and outbound Logistics, offshore and inshore logistics.
CO3: Develop skills for planning, designing the operational facilities of supply chain with the analytical and critical point of view..
CO4: Understand how logistics play an important role in redefining the value chain globally.

COURSE NAME - CORPORATE COMMUNICATION & PUBLIC RELATIONS

CO1: Understand the concepts of Corporate Communication and Public Relations.
CO2: Familiarise various aspects of corporate communication and its correspondence.
CO3: Explain various aspects and theories of Public Relations.
CO4: Demonstrate various Mass Media laws and use of technology and correspondence in day-to-today activities of an organization.

Specialization – HR

Course – Performance Management and Career Planning (HR)

CO 01 To understand the concept of performance management in organizations.
CO 02 To review performance appraisal systems.
CO 03 To understand the significance of career planning and practices

Course – Strategic HRM & HR Policy (HR)

CO 01 To understand human resource management from a strategic perspective.
CO 02 To link the HRM functions to corporate strategies in order to understand HR as a strategic resource.
CO 03 To understand the relationship between strategic human resource management and organizational performance.
CO 04 To apply the theories and concepts relevant to strategic human resource management in contemporary organizations.
CO 05 To understand the purpose and process of developing Human Resource Policies

COURSE NAME - FINANCE FOR HR PROFESSIONALS AND COMPENSATION MANAGEMENT:

CO1: Understanding HR professionals within financial concepts to enable them to make Prudent HR decisions.
CO2: Evaluating the various compensation plans available for Human Resources.
CO3: Illustrate the issues related to compensation management and the legal framework of a country.
CO4: Familiarise the role of various bodies involved in Compensation Management.
CO5: Examine the various dimensions of Compensation Management used by the companies to attract, retain, motivate and to reward employee performance

COURSE - Stress Management

CO 01 To understand the nature and causes of stress in organizations.
CO 02 To familiarize the learners with the stress prevention mechanism.
CO 03 To understand the strategies that help cope with stress..
CO 04 To be able to apply stress management principles in order to achieve high levels of performance.
CO 05 To enable learners to adopt effective strategies, plans and techniques to deal with stress.

Specialization – Marketing

Course - Customer Relationship Management

CO 1. Understand the basic concepts of Customer relationship management.
CO 02. Understand marketing aspects of Customer relationship management.
CO 03. Learn basics of analytical Customer relationship management.
CO 04. Understand basics of operational Customer relationship management.

COURSE - Service Marketing

CO 01 To understand distinctive features of services and key elements in services marketing.
CO 02 To provide insight into ways to improve service quality and productivity.
CO 03 To understand marketing of different services in Indian context.

COURSE E-Commerce and Digital Marketing

CO 01 To understand the increasing significance of E-Commerce and its applications in Business and Various Sectors.
CO 02 To provide an insight on Digital Marketing activities on various Social Media platforms and its emerging significance in Business.
CO 03 To understand Latest Trends and Practices in E-Commerce and Digital Marketing, along with its Challenges and Opportunities for an Organisation.

COURSE - Sales and Distribution Management

CO 01 To develop understanding of the sales & distribution processes in Organizations.
CO 02 To get familiarized with concepts, approaches and the practical aspects of the key decision making variables in sales management and distribution channel management.

Specialization – Finance

COURSE Investment Analysis and Portfolio Management

CO 01 To acquaint the learners with various concepts of finance..
CO 02 To understand the terms which are often confronted while reading newspapers, magazines etc for better correlation with the practical world.
CO 03 To understand various models and techniques of security and portfolio analysis

COURSE Risk Management

CO 01 Demonstrate knowledge of the range of financial and financial related risks facing organisations.
CO 02 Organize, model, and quantify the exposures and risks faced by the firm or enterprise.

CO 03 Understand the approach to risk management through risk identification, risk measurement and risk management (or mitigation).

COURSE - Direct Taxes

CO 01 To understand the provisions of determining residential status of individuals.
CO 02 To study various heads of income.
CO 03 Understand the approach to risk management through risk identification, risk measurement and risk management (or mitigation).
CO 04 To compute taxable income of Individuals

COURSE - WEALTH MANAGEMENT

CO1: Understand the performance of alternative investment portfolios in Wealth Management.
CO2: Focus on effective implementation of portfolio management strategies within the context of alternative investment requirements and risk criteria.
CO3: Identify effectiveness of performance evaluation techniques of Wealth Management.
CO4: Develop the various approaches of managing Personal Finance by planning their finance such as retirement planning.

Semester VI

COURSE OPERATION RESEARCH:

CO1: Understand operations research methodologies used in an organization.
CO2: Illustrate the concepts to solve various problems practically.
CO3: : Enhance the proficient in case analysis and interpretation of Operations carried in Business

Course - Project Work

CO 01 To inculcate the element of research analysis and scientific temperament among learners.
CO 02 To Create awareness among learners regarding methodology of formulation and preparation of the project work.

Specialization – HR

Course - HRM in Global Perspective Management

CO 01 To introduce the students to the study and practice of IHRM.
CO 02 To understand the concepts, theoretical framework and issues of HRM in Global Perspective
CO 03 To get insights of the concepts of Expatriates and Repatriates

CO 04 To find out the impact of cross culture on Human Resource Management
CO 05 To provide information about Global Workforce Management.
CO 06 To study International HRM Trends and Challenges.

Course – Human Resource Accounting & Auditing

CO 01 To understand the value of human resource in organizations
CO 02 To understand the importance of Human Resource Accounting at National and International level
CO 03 To familiarize with the Human Resource Accounting Practices in India
CO 04 To familiarize the learners with the process and approaches of Human Resources Accounting and Audit
CO 05 To understand the significance of Human Resource Auditing as a Tool of Human Resource Valuation

COURSE NAME - ORGANISATIONAL DEVELOPMENT

CO1: Understand the concept of Organisational Development and its Relevance in an organisation.
CO2: Identify the Issues and Challenges of Organisational Development while undergoing Changes of businesses
CO3: Illustrate ongoing phases of Organisational Development Programmes in Corporates

COURSE NAME - HRM IN SERVICE SECTOR MANAGEMENT

CO1: Examine the concept and growing importance of HRM in the service sector.
CO2: Evaluate how to manage effectively human resources in service sector business.
CO3: Understand the significance of the human element in creating customer satisfaction through service quality.
CO4: Identify the Issues and Challenges of Human Resource in various service industries

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Specialization – Marketing

Course - Media Planning and Management.

CO 01. To understand Media Planning, Strategy and Management with reference to current business scenario.
CO 02. To know the basic characteristics of all media to ensure most effective use of advertising budget.
CO 03. To provide an insight on Media Planning, Budgeting, Scheduling and Evaluating the Different Media Buys.

Course – Brand Management

CO 01 Demonstrate knowledge of the nature and processes of branding and brand management.
CO 02 Evaluate the scope of brand management activity across the overall organisational context and analyse how it relates to other business areas..
CO 03 Appraise the key issues in managing a brand portfolio and making strategic brand decisions

Course – Retail Management

CO 01 Students will understand about retail management operations .
CO 02 Students will understand the ways that retailers use to interact with their customers .
CO 03 Students will understand about the emerging trends in retail management.

Course - International Marketing

CO 01 Students will gain knowledge about the International business environment and marketing techniques.
CO 02 It inculcates knowledge about the relevance of international marketing in today's globalized market.

Course - Media Planning and Management

CO 01 Students will have an overview of the media planning and buying industry.
CO 02 Provides knowledge of business strategies used while promoting a brand.
CO 03 Students will develop an insight of various media measurement techniques.

Course – Project Management

CO 01 Learners familiarize with the fundamental aspects of various issues associated with Project Management.
CO 02 It gives a comprehensive overview of Project Management as a separate area of Management
CO 03 Learners understand the awareness of the role , functions and functioning of Project Management.

Course – International Finance

CO 01 Working of foreign exchange market and money market operations
CO 02. Products available in financial market at national & international level
CO 03 Concept of international tax environment and project appraisal.

Course – Indirect Tax

CO 01 To explain the various terms related to Goods and Service tax(GST).

CO 02 To would discuss the time, place and value of Supply
CO 03 To compute the amount of CGST, SGST and IGST payable after considering the eligible input tax credit
CO 04 To analyse whether a person is required to obtain registration under GST law
CO 05 To discuss the contents and format for various documents like tax invoice, bill of supply, debit note, credit note etc.

Course - INNOVATIVE FINANCIAL SERVICES

CO1: Illustrate the fundamental aspects of various issues associated with various Financial Services
CO2: Evaluate the comprehensive overview of emerging financial services in the light of globalization
CO3: Enhance awareness of the role, functions and functioning of financial services

Mahatma Education Society's

Pillai HOC College of Arts , Science & Commerce ,Rasayani

(Accredited by NAAC)
(ISO 9001 : 2015 Certified)
Program: Bachelor of Arts
Pillai HOCL Educational Campus, Rasayani
Taluka -Khalapur Dist. Raigad -410207
Maharashtra ,India

Programme- BA- Bachelor of Arts

PROGRAM OUTCOME (PO)

Programme: B.A.

Programme Outcome BA

PO 1: The learners are expected to understand how cultural, historical, linguistic and environmental forces shape the world and recognize the role of the individual within communities to effect changes.

PO 2: Students must be able to analyse critically and reflect on complex problems incorporating multiple perspectives.

PO 3: Students are expected to think critically and write creatively on various domains.

PO 4: Students must be able to extract and convey information accurately in a variety of formats and demonstrate social interaction.

PO 5: Students are expected to indulge in scholarly inquiry to identify and investigate questions of theoretical or applied nature.

PO 6: The programme enables the learners to demonstrate detailed knowledge in one more discipline and integrate knowledge and perspectives.

PO 7: Students are expected to develop personal integrity and professional behaviour in scholarly endeavours.

PO 8: Students must be able to appreciate literary text and analyse the social, economic and political factors behind the production and reception of the texts.

PO 9: Students must develop literariness which they can showcase in creative outputs.

PO 10: The programme enables the students to demonstrate effective reading and writing skills.

COURSE OUTCOMES

Semester: I

Class: FYBA

Course : Communication Skills in English

CO 1: Students must be able to improve their communication skills
CO 2: Students will be able to write effectively
CO 3: Students must get acquainted with academic and professional writing skills
CO 4: Students will be able to comprehend English grammar and syntax

Course: Introduction to Literature- I

CO 1: Students must be able to comprehend and appreciate literature
CO 2: Students must get familiarized with types of novels and short stories
CO 3: Students will be able to write clearly, coherently and effectively about various genres of literature
CO 4:Students should develop the ability to recognize the culture and context of the work of literature
CO 5: Students must develop sensitivity to nature and fellow human beings

Course: Microeconomics

CO 1:To develop interest in the basic aspects of Economics.
CO 2:To expose the students to the basic principles of Micro Economic theory.
CO 3: To develop analytical thinking with the help of statistical tools and application of Micro Economic concepts in real life situations.
CO 4:To enhance the knowledge of the aspects of production, cost and revenue analysis and theories of distribution.
CO 5:To understand the consumer behavior

Course: History

CO I. To understand the growth of Political Awakening with regards to the Revolt of 1857, Contributions of Political Association and the foundation of Indian National Congress
CO2. To understand the rising Nationalism in India through special reference to Moderates, Extremists and Revolutionary Nationalists

CO3. To appreciate the Gandhian Movements in the light of the Non Cooperation, Civil Disobedience and Quit India
CO4. To appreciate India's march towards Independence and Partition with special references to India Act of 1935, the Cripps Mission, the Cabinet Mission Plan and the Mountbatten Plan.

Course: Foundation Course

CO 1. To acquaint the learners with socially relevant topics and discussion.
CO 2. To help them understand the basic concepts of disparity, diversity and other political processes
CO3. To sensitize them with growing social problems in India

Course: Hindi

CO 1. To enhance language proficiency in Hindi by providing adequate exposure to the works of prominent authors
CO 2. To strengthen the skills of debate, letter writing and discussions
CO 3. To increase the range of Hindi vocabulary

Semester: II
Class: FYBA

Course : Communication Skills in English

CO 1: Students must be able to improve their communication skills
CO 2: Students will be able to write effectively
CO 3: Students must get acquainted with academic and professional writing skills
CO 4: Students will be able to comprehend English grammar and syntax
CO 5: Students must be able to generate curiosity towards creative writing

Course: Introduction to Literature- II

CO 1: Students must be able to comprehend and appreciate literature
CO 2: Students must get familiarized with types poems and drama
CO 3: Students will be able to write clearly, coherently and effectively about various genres of literature especially poetry and drama

CO 4:Students should develop the ability to recognize the culture and context of the work of literature
CO 5: Students must develop sensitivity to nature and fellow human beings

Course: Microeconomics-II

CO 1:To develop interest in the basic aspects of Microeconomics Policies
CO 2:To expose the students to the basic principles of Micro Economic theory.
CO 3: To develop analytical thinking with the help of statistical tools and application of Micro Economic concepts in real life situations.

Course: History

CO I. To comprehend various Socio-Religious Reform Movements in India
CO2. To make the learners aware of the Education, Press and Transport mode in India
CO3. To make the learners aware of the impact of British rule
CO4. To make the learners aware of various social groups

Course: Foundation Course

CO 1. To acquaint the learners with the concepts of liberalization, privatization and globalization
CO 2. To help them understand the basic concepts of ecology, environment and stress management
CO3. To sensitize them with contemporary societal challenge

Course: Hindi

CO 1. To enhance the skills of expression of thought through dialogue writing and essay writing
CO2. To increase the range of phrases, phrasal verbs and proverbs
CO3. To develop organic and cohesive writing skills

Semester-III
Class: SYBA

Course: Foundation Course -II

CO 1:To develop a basic understanding about issues related to human rights to weaker sections, ecology and science and technology.
CO2: To develop soft skills for effective interpersonal communication
CO3: To create awareness about environmental concerns
CO 4: To gain basic knowledge on communication skills
CO 5: To provide a deep understanding of how one should manage oneself as an individual and as a human being.

Course: Business Communication

CO 1:• To develop awareness of the complexity of the communication process.
CO 2• To develop listening skills and become a critical listener
CO 3• To develop effective oral skills
CO 4 • To develop effective writing skills
CO 5• To develop ability to communicate effectively with the help of electronic media

Course: English Paper II

CO 1: To develop interest and passion for drama and theatre.
CO 2: To be familiarized with the salient elements and characteristics of drama
CO 3: To be able to identify the different forms and types of drama
CO 4: To be capable to identify the various trends and characteristics of significant dramatic movements through the representative dramas
CO 5: To be equipped with the tools and techniques to critically appreciate drama
CO 6: To imbibe human values reflected in the selected plays
CO 7: To justify that drama is reflection / representation of life.
CO 8: To develop analytical skills and critical thinking through close reading of the representative dramas

Course: English Paper III

CO 1: Students should develop the ability to identify different genres and forms of poetry.
CO 2: Students must be able to identify poetic technique, style and rhetorical devices used in poetry

CO 3: Students will be able to critically appreciate poems by separating component part and investigating the relationship of the parts to the whole
CO 4: Students will develop the ability to demonstrate understanding of a wide range of poems from different historical periods, written in a wide range of forms, styles and subject matter.
CO 5:To identify the major poets of world literature and define the importance of their works.
CO 6: Students must be able to enhance their cultural sensitivity through reading of representative poems from diverse cultural contexts.

Course: Macroeconomics-I

CO 1:To acquaint students with knowledge of Macro Economics concepts and theories.
CO 2:To enable students to have understanding of Economy as whole
CO 3:To develop the analyzing capability in applying theories to real life situations.

Course: Public Finance

CO 1:To acquaint students with knowledge of Macro Economics concepts and theories.
CO 2:To familiarize students with Public Finance problems and changing policies
CO 3:To develop the analyzing capability in applying Policy to real life situations.

Course: History II

CO 1: Students will be able to comprehend the transition of Europe from medieval to modern times and its impact on the rest of the world.
CO 2: To acquaint the students with the growth of various political movements that shaped the modern world.
CO 3: To highlight the rise and growth of nationalism as a movement in different parts of the world
CO 4: To equip the students with an ability to understand and assess the contribution of world personalities during the period under study.

Course: History III

CO 1: To enable students to understand the Applied Social Sciences like Archaeology, Numismatics, Epigraphy etc. to hone their abilities to appreciate the true nature of History ie. Sources.

CO 2: To acquaint the students with the importance of the Indus Valley Civilization as the first Urban Civilization in India
CO 3: To highlight the rise and growth of the Vedic Age along with its Polity, Economy, Socio-religious life, and education system
CO 4: To acquaint students with the knowledge of the rise of Janapadas, Jainism and Buddhism

Semester-IV
Class: SYBA

Course: Foundation Course -II

CO 1: To develop a basic understanding about issues related to human rights to weaker sections, ecology and science and technology
CO 2: To gain an overview of significant skills required to address competitions in career choices
CO 3: To develop a basic understanding about issues related to consumer rights and other contemporary topics
CO 4: To understand various approaches to Ecology
CO 5: To expose them to the world of competitive Examinations (UPSC. SSC and Banking Sector)

Course: Business Communication

CO 1:• To develop awareness of the complexity of the communication process.
CO 2• To develop listening skills and become a critical listener
CO 3• To develop effective oral skills
CO 4 • To develop effective writing skills
CO 5• To develop ability to communicate effectively with the help of electronic media

Course: English Paper II

CO 1: To develop interest and passion for drama (and theatre).
CO 2: To be familiarized with the salient elements and characteristics of drama.
CO 3: To be able to identify the different forms and types of drama.
CO 4: To be capable to identify the various trends and characteristics of significant dramatic movements through the representative dramas
CO 5: To be equipped with the tools and techniques to critically appreciate drama
CO 6: To imbibe human values reflected in the selected plays.

CO 7: To justify that drama is reflection / representation of life.
CO 8: To develop analytical skills and critical thinking through close reading of the representative dramas

Course: English Paper III

CO 1: Students should develop the ability to identify different genres and forms of poetry
CO 2: Students must be able to identify poetic technique, style and rhetorical devices used in poetry
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CO 4: Students will develop the ability to demonstrate understanding of a wide range of poems from different historical periods, written in a wide range of forms, styles and subject matter.
CO 5:To identify the major poets of world literature and define the importance of their works.
CO 6: Students must be able to enhance their cultural sensitivity through reading of representative poems from diverse cultural contexts.

Course: Macroeconomics-II

CO 1:To acquaint students with knowledge of Macro Economics concepts and theories.
CO 2:To enable students to have understanding of Economy as whole
CO 3:To develop the analyzing capability in applying theories to real life situations.

Course: **Indian Economy**

CO 1:To enable students to analyze the functioning of the Indian Economy with respect to Social infrastructure,Sustainable Development and Foreign Investment.
CO 2:To help students to study the National Agricultural Policy and other features of the agricultural sector
CO 3:To make the students aware about the various reforms in the Industrial and Service sector.
CO 4:To orient the students with recent trends, issues and challenges in the Banking sector and Financial markets.
CO 5:To know the different policy for rural development

Course: History II

CO1. To comprehend the forces that led industrialized imperialistic Europe to conflict and cause the Great War.
CO2. To trace the rise of dictatorship Europe and understand its consequences
CO3. To locate important leaders in Asia and in the Middle East and study their programs
CO 4. To discuss the events and course of the Second World War and describe its consequences
CO 5. To critique the landmark developments of the 20thc with a view to understand the present

Course: History III

CO1. To acquaint the students with the emergence of the dynasties like Mauryan, Shunga and Satavahanas and their Administrative structure.
CO 2. To enable the students to understand the Rise of Imperial Guptas and their Administrative structure
CO3. To enable students to understand the situation in India during the Post Gupta period with reference to Harshavardhana, Rajputs and Arab Invasion of Sind
CO4. To inspire students to appreciate the rich political history of South India which includes the rule of Pallavas, Chalukyas, Rashtrakutas and Cholas.

Semester-V
TYBA - English Specialization

Course: Elizabethan to Jacobean Literature

CO 1: Students must be able to comprehend the evolution of literary genres like drama and poetry from the Elizabethan Age to the Jacobean Age
CO:2 Students must develop an ability to appreciate different forms drama and poetry
CO 3: Students will be able to understand how literature is embedded in socio- political context
CO 4: Students must familiarize with the major writers and important literary texts
CO 5: Students will be able to analyze and interpret literary texts in specific socio- political and cultural contexts.

Course: Literary Theory- I

CO 1: To introduce the basic tenets of literary criticism and critical terms
CO 2: Students must aware of the nature and functions of literary criticism

CO 3: Students must be able to understand the evolution of literary criticism and theory
CO 4: To introduce the fundamental concepts of practical criticism and techniques of close reading
CO 5: To develop critical thinking, critical analysis and creative writing skills

Course: Grammar and Art of Writing

CO 1: Students will develop and demonstrate knowledge, understanding and competence in grammar and writing
CO 2: Students must be able to understand the basics of Phonetics, Morphology and Word Formation.
CO 3:Students must be able to gain adequate knowledge of the rules of grammar, grammatical analysis and sentence transformation.
CO 4: Students must be able to develop their skills in paragraph writing in various domains.
CO 5: Students are expected to apply the rules of grammar in constructing sentences and paragraphs.

Course: 19th Century English Literature

CO 1: To view literary works in their dynamic interface with the background
CO 2: To understand the literature of the 19th century as a complex outcome of artistic, intellectual and socio-political cross-currents
CO 3: To appreciate poetry as mirroring private personality, protest and subsequently, public concerns
CO 4: To view the development of the Victorian Novel as informed by Victorian morality as well as by larger democratic processes
CO 5: To contextualize the impulses behind the significant emergence of women writing in the 19th century

Course: 20th Century British Literature

CO 1: Students are expected to comprehend the trends and movements in 20th Century British Literature
CO 2: Students must be able to appreciate the plays and poetry written in 20th Century British Literature
CO 3: Students must be able to analyse a literary text being a reflective and imaginative thinker

CO 4:Students must be able to demonstrate competence in comprehending valuable correlations between the socio-cultural, economical and historical contexts of the texts.
CO 5:Students are expected appreciate novels and short stories

Course: Drama and Theatre

CO 1: Analyze the social and artistic movements that have shaped theatre and drama.
CO 2: Apply discipline-specific skills to the creation of drama.
CO 3: Analyze the difference between the concepts of drama and theatre.
CO 4: Demonstrate knowledge of the history of drama and theatre as a literature and performing art.

TYBA - Economics Specialization

Course: Economics of Development

CO 1: To develop the analyzing capability in applying theories to real life situations.
CO 2: .To understand the several parameters of development of the nation.
CO 3:.Students will get benefit of conceptual approach of growth models which are applied for the actual development of the nation
CO 4:Students can be aware about the process of national development and requirements for it.

Course: Environmental Economics

CO 1:Students will be able to understand the concept of environmental degradation
CO 2:Students will be able to understand the concept of green GDP, green consumer and green business
CO 3:Students will be able to understand the Smart Cities Mission.
CO 4:Students will be able understand the different sustainable goals
CO 5:Students will be able to understand the Pradhan Mantri Ujjwala Yojana

Course: History of Economics

CO 1:To provide information about the biography and contribution of various economic thinkers.
CO 2:To know transitions occurred in the development of Economic Science.
CO 3:Students will get information about the genesis of Economics and its modern scenario.

CO 4:Establish correlation of Economics with other subjects.

Course: **Advanced Macroeconomics-I**

CO 1: Able to get knowledge on new market structure
CO 2:Able to understand the basic tools of economic theory
CO 3:Able to analyze the market behaviour with economic way of thinking
CO 4:Able to use the concepts of business economics in your day to day life.

Course: Indian Financial System-I

CO 1:To deliver an overview of the Financial System in India
CO 2:To explain the concepts of Money, Money Supply and Money Creation in an economy
CO 3:To impart knowledge of Financial Markets, Financial Institutions, Financial Services and Financial Instruments that formulates a financial system.
CO 4:To give an overview of Life and Non-life Insurance and different types of policies under both the insurances.

Course: Research Methodology

CO 1: understand and inculcate research in Economics
CO 2: exchange ideas and application of results of economic research
CO 3: help in formulation of problems in social science research
CO 4: understand data collection and presentation for quality research in social sciences.

TYBA - History Specialization

Course: History VII - History of the Marathas

CO 1: To study different sources of Maratha History
CO 2: To understand the importance of Marathi sources, especially the Bakhar literature and its reliability as a source of Maratha History.
CO 3: To study the importance of Persian Sources
CO 4: To study the importance of European Sources of History of Marathas

Course: History V - History of Modern Maharashtra

CO 1: To acquaint students with regional history
CO 2: To understand political and socio-economic developments during the 19th and 20th centuries
CO 3: To create understanding of the movement that led to the formation of Maharashtra.

Course: History IV: History of Medieval India (1000 C.E-1526 C.E)

CO 1: To acquaint students with the history of early Medieval India that laid the foundation of Delhi Sultanate
CO 2: To understand the Administrative Structure of Delhi Sultanate
CO 3: To study the contribution of the Vijayanagara and Bahamani Kingdoms to Medieval India
CO 4: To examine the Socio-Economic, Religion and Cultural aspects of Medieval India

Course: VI-A: Introduction to Archaeology

CO 1: To understand the basic facets of Archaeology
CO 2: To understand Prehistoric, Proto-Historic and Early Historical Periods
CO 3: To evaluate the importance of Epigraphy
CO 4: To study the importance of Numismatics as an important source of History

Course: VIII: History of Contemporary World (1945-2000 C.E)

CO 1: To understand the Cold War period
CO 2: To analyse Europe, U.S.S.R and the U.S from 1985 to 2000
CO 3: To understand various Movements for equal rights and challenging the Bipolar World from 1945-2000 C.E
CO 4: To analyze various trends that set in and its significance in the 20th Century

Course: IX A: Research Methodology and Sources of History

CO 1: To understand the definition and Scope of Research Methodology in the field of History
CO 2: To analyse the different Sources of History
CO 3: To interpret various Research Methodologies in the field of History
CO 4: To analyse various Sources for Writing Indian History

Semester-VI
TYBA - English Specialization

Course: Literary Theory- II

CO 1: To introduce the basic tenets of literary criticism and critical terms
CO 2: To familiarize students about major literary movements and critical approaches
CO 3: Students must be able to understand the evolution of literary criticism and theory
CO 4: To introduce the fundamental concepts of practical criticism and techniques of close reading
CO 5: To develop critical thinking, critical analysis and creative writing skills

Course: Literary Theory- II

CO 1: To introduce the basic tenets of literary criticism and critical terms
CO 2: To familiarize students about major literary movements and critical approaches
CO 3: Students must be able to understand the evolution of literary criticism and theory
CO 4: To introduce the fundamental concepts of practical criticism and techniques of close reading
CO 5: To develop critical thinking, critical analysis and creative writing skills

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CO 3:Analyze the difference between the concepts of drama and theatre
CO 4:Demonstrate knowledge of the history of drama and theatre as a literature and performing art.

TYBA - Economics Specialization

Course: Advanced Macroeconomics

CO 1:Able to get knowledge on new market structure
CO 2: Able to understand the basic tools of economic theory
CO 3:Able to analyze the market behaviour with economic way of thinking
CO 4:Able to use the concepts of business economics in your day to day life

Course: Environmental Economics

CO 1:Students will be able to understand the concept of environmental degradation
CO 2:Students will be able to understand the concept of green GDP, green consumer and green business
CO 3:Students will be able to understand Smart Cities Mission
CO 4:Students will be able understand the different sustainable goals
CO 5:Students will be able to understand the Pradhan Mantri Ujjwala Yojana

Course: History of Economics-II

CO 1:To provide information about the biography and contribution of various Indian economic thinkers.
CO 2:To know transitions occurred in the development of Economic Science.
CO 3:Students will get information about the genesis of Economics and its modern scenario.
CO 4:Establish correlation of Economics with other subjects.

Course: International Economics

CO 1:Students will be able to understand the Ricardo's trade theory
CO 2:Students will be able to understand the purchasing power parity theory
CO 3:Students will be able to understand the meaning and functions of foreign exchange market
CO 4:Students will be able understand WTO, ASEAN
CO 5:Students will be able to understand the different types of terms of trade

Course: Indian Financial System

CO 1:Complete knowledge of the Financial System of India.
CO 2:Clarity about the basic concepts of money, money supply and money creation.

CO 3:.Understanding of technical terms relating to Financial System like Derivatives, Stock etc
CO 4:Development of basic understanding relating to Life Insurance and General Insurance.

Course: Research Methodology

CO 1: Understand and inculcate research in Economics
CO 2: Exchange ideas and application of results of economic research
CO 3: Help in formulation of problems in social science research
CO 4: Understand data collection and presentation for quality research in social sciences.

TYBA - History Specialization

Course: History IV - History of Medieval India (1526-1707)

CO 1: To acquaint students with the history of India since the emergence of Mughal rule
CO 2: To inform the students about the Administrative structure of Mughals
CO 3: To understand the rise of Maratha power
CO4: To analyse the Socio-Economic, Religion and Culture of Mughal rule in India

Course: History V- History of Contemporary India (1947-2000 C.E)

CO 1: To understand the Nehru Era with context to the Indian Constitution, Political, social and economic development as well as the reforms in the socio-economic and Foreign Policy
CO 2: To understand various Political, Social and Economic developments from 1964-1984 C.E
CO 3: To acquaint students with various Political, Social and Economic developments from 1984-2000 C.E
CO4: To analyse the emerging trends in the field of Communalism, Separatism, Women Empowerment, Reservation, Education and Science & Technology

Course: VI-A: Introduction to Museology and Archival Science

CO 1: To make students aware of the Field of Museology
CO 2: To inform students about the role of Museums in the preservation of Heritage
CO 3: To make students understand about the importance of Archival Science in the study of History
CO 4: To acquaint the students with the Management of Archives for coming generations in the form of Conservation and Preservation of Records

Course: VII: History of the Marathas (1707-1818 C.E)

CO 1: To understand the expansion of Maratha Power
CO 2: To analyse the Consolidation of Maratha Power
CO 3: To account for the Post Panipat revival and later downfall of the Maratha Power
CO 4: To analyse and understand the Administrative and Socio-Cultural developments during Maratha period

Course: VIII- History of Asia (1945-2000 C.E)

CO 1: To analyse the transformation of China from 1945-2000 C.E
CO 2: To make students acquaint students with the Reconstruction of Japan in the post WWII period
CO 3: To study of political developments in South-East Asia in the post WWII period
CO 4: To analyse the conflicts in West Asia in the post WWII period

Course: IX A: Research Methodology and Sources of History

CO 1: To analyse Methods and Presentation in Historical Research
CO 2: To analyse New Trends in History
CO 3: To understand various Approaches to History like Subaltern, Feminist and Post Modern
CO 4: To study different shades of Indian Historiography like Imperialist, Nationalist and Marxist

Mahatma Education Society's

Pillai HOC College of Arts , Science & Commerce ,Rasayani

(Accredited by NAAC)

Program: Bachelor of Arts Mass Media Communication

Pillai HOCL Educational Campus, Rasayani

Taluka -Khalapur Dist. Raigad -410207

Maharashtra ,India

Programme: BAMMC -Bachelor of Arts Mass Media Communication

Programme: Bachelor of Arts in Mass Media and Communication(BAMMC)

PROGRAM OUTCOME (PO)

1. The program considers media industries and their relationship to culture and society, and the understanding of how communication works. The program emphasizes the development of critical thinking, professional writing skills and effective oral communication.
2. The Communication and Media Studies major prepares students for a wide variety of careers in business and industry, advertising, public relations and journalism, or advanced study
3. This program will equip the learners with professional skills essential for making a career in the Entertainment industry, Cinema, Television, OTT Platforms, social media platforms etc.
4. Students would demonstrate the ability to apply rhetorical principles in a variety of creative, cinematic, organizational, professional and journalistic venues.
5. Knowledge, skills, and values that prepare them for future careers in our interconnected society, whether in mass media or advanced study
6. Learners would develop a global awareness of political, social and corporate issues influenced by communication sensitivity and skills.
7. Learners will understand mass media as a system of interrelated forces, including historical foundations, technological advances, economic dynamics, regulatory constraints, and ethical concerns.
8. This programme will also give them an improved sense of self-confidence and self-efficacy and an awareness of their responsibilities as professionals in their field
9. Learners will be able to create and design emerging media products, including blogs, digital audio, digital video, social media, digital photography, and multimedia.
10. They will be better equipped to grasp the complex relationship between communication/media theories and a diverse set of individual, social, and professional practices.
11. Learners will understand the underlying philosophical assumptions of, and be able to apply, communication research methods to address a range of media texts and audiences, production and technological practices, and relevant social issues.
12. Learners will comprehend the foundations, process, and practices of writing for and about the media, and demonstrate proficiency in writing across platforms.
13. Learners will be able to conceptualize, design, and produce one or more works in media based on effective principles and practices of media aesthetics for a target audience.
14. Learners will acquire the knowledge and skills required to pursue a career in the specialization of their choice.

COURSE OUTCOMES (CO)

FYBAMMC_ Semester I

COURSE 1.1 – Effective Communications Skills – I

CO 1:To make the students aware of functional and operational use of language in media.
CO 2 :To equip or enhance students with structural and analytical reading, writing and thinking skills.
CO 3 : To introduce key concepts of communications.

COURSE 1.2 – Foundation Course – I

CO 1.To make students understand and appreciate India's multi-cultural ism through its linguistic, religion, caste, gender and regional diversity.
CO 2. To enable us to understand the differences seen in terms of the weaker section of the society (women, people with disabilities, socially challenged) and the need for their upliftment".
CO 3.To make them understand the caste, religion, regional and linguistic diversities within the Indian society and the need to control such differences.
CO 4. To make able to understand the Constitution of India in a nutshell and its role in strengthening the social fabric of Indian society
CO 5. To be able to understand the role of women, Indian political system and the amendments that brought Local self-government in Indian politics.

COURSE 1.3 – Visual Communication

CO 1:To understand the various tools of Visual Communication that would help students visualise and communicate better
CO 2:Understanding Visual communication and its various aspects
CO 3:To acquire basic knowledge in theories and languages of Visual Communication
CO 4:To understand the various critical perspectives of visual communication
CO 5:To learn the practical aspects of visual communication in our daily life and how to apply it effectively

COURSE 1.4 – Fundamentals of Mass Communication

CO 1:To introduce students to the history, evolution and the development of Mass Communication in the world with special reference to India
CO 2:To study the evolution of Mass Media as an important social institution.
CO 3:To understand the development of Mass Communication models.
CO 4:To develop a critical understanding of Mass Media.

CO 5:To understand the concept of New Media and Media Convergence and its implications.

COURSE 1. 5 – Current Affairs

CO 1:Students must be able to analyse the dominant news stories from global, national and science and technology, entertainment and sports sections.
CO 2:Students must be able to understand the structure, constitution, roles and functions of the UNO and its specialised .
CO 3:Students must be able to study the structure and features of the Indian Constitution and the noble ideas it envisages.
CO 4:Students must get conceptual clarity regarding the functions of various Union Ministries and departments.
CO 5:Students must get acquainted with various technological innovations pertaining to the field of Media and Technology such as AI and VR.

COURSE 1. 6 – History of Media

CO 1:Learner will be able to understand Media history through key events in the cultural history
CO 2:To enable the learner to understand the major developments in media history.
CO 3:To understand the history and role of professionals in shaping communications
CO 4:To understand the values that shaped and continues to influence Indian mass media
CO 5:Learners will develop the ability to think and analyze about the media.
CO 6:"To sharpen the reading, writing, speaking and listening skills that will help the students to understand the development of Media"

FY BAMMC - Semester II

COURSE 2. 1 – Effective Communications Skills – II

CO 1:To make the students aware of use of language in media and organization
CO 2:To equip or enhance students with structural and analytical reading, writing and thinking s
CO 3:To introduce key concepts of communications.

COURSE 2. 2 – Foundation Course – II

CO 1:To acquaint the students with an understanding of Globalization and the Indian Society

CO 2:To enable the students to understand the concept of Human Rights
CO 3:To make students aware of Ecology and its protection
CO 4:To make students aware of the evils of Stress and Conflict and how to manage the same in the Contemporary Society

COURSE 2. 3 – Introduction to Journalism

CO 1:To gain knowledge about the history of Journalism in India
CO 2:To gain an understanding about the News process and various beats in Journalism.
CO 3:To develop an understanding of newsworthiness, along with the various principles and ethics of journalism
CO 4:To equip with information about various career opportunities in the field of Journalism.
CO 5:To help students develop working knowledge of writing news with its various formats.

COURSE 2. 4 – Introduction to Advertising

CO 1:To understand the basic understanding of Advertising and its growth
CO 2:To understand the concept of Integrated Marketing Communication
CO 3:To understand the importance of creativity in advertising
CO 4:Able to understand the Trends in Advertising
CO 5:To understand the importance of Public Relations in Advertising

COURSE 2. 5 – Content Writing

CO 1:Students must understand the relevance of content writing in a dynamic marketing world.
CO 2:Students must be able to comprehend the basics of copy editing
CO 3:Students must be able to identify common errors that occur in content writing and rectify it
CO 4:Students must get acquainted with the concepts such as 'Plagiarism', 'Google Advanced Search' and Social Networking
CO 5:Students must be able to think and write creatively on various domains of content writing.

COURSE 2. 6 – Media, Gender and Culture

CO 1:To discuss the significance of culture and the media industry.
CO 2:To understand the association between the media, gender and culture in the society.
CO 3:To stress on the changing perspectives of media, gender and culture in the globalized era

SYBAMMC_ Semester III

COURSE 3. 1 – Theatre and Mass Communication-I

CO 1:Individual and team understanding on theatrical Arts
CO 2:Taking ownership of space, time, story-telling, characterization and kinesthetic
CO 3:Shaping young students' minds through expression of their perception, creating awareness of their role and place in society, their responsibilities and possibilities

COURSE 3. 2 – Corporate Communication and Public Relations

CO 1:To understand the foundation of corporate communication
CO 2:To understand the ethics and laws in corporate communication
CO 3:Students must be able to identify common errors that occur in content writing and rectify it
CO 4:To understand the emerging technology in corporate communication and public relations.
CO 5:To understand the importance of communication in corporate communication and public relations

COURSE 3. 3 – Media studies

CO 1:Students will be able to understand Media Theories
CO 2:Students will be able to understand the relationship of media with culture and society
CO 3:Students will be able to understand Media Studies in the context of global media
CO 4:Students will be able to understand the various media effects on behaviour
CO 5:Students will be able to understand media's effect on today's modern world

COURSE 3. 4 – Introduction to Photography

CO 1:To introduce to media learners the ability of image into effective communication.

CO 2:To help the learner understand that media photography is a language of visual communication and is far beyond just point and shoot fun moments. "
CO 3:To practice how a picture speaks thousand words by enlightening the learner on how.
CO 4:To develop the base of visualisation among learners in using pictures in practical projects.
CO 5:To help learner work on given theme or the subject into making a relevant picture or photo feature"

COURSE 3. 5 – Film Communication

CO 1:To inculcate liking and understanding of good cinema.
CO 2:To make students aware with a brief history of movies; the major cinema movements
CO 3:Understanding the power of visuals and sound and the ability to make use of them in effective communication
CO 4:Insight into film techniques and aesthetics

COURSE 3. 6 – Computer and Multimedia - I

CO 1:To help learners make the media industry-ready. This will help learners to be aware of the minimum requirement of the software when stepping out into the industry.
CO 2:To introduce the media software to make the learners understand what goes behind the scene and help them choose their stream.
CO 3:To prepare learners skilled enough for independency during project papers in TY semester VI.
CO 4:To help learners work on small-scale projects during the academic period.

SYBAMMC_ Semester IV

COURSE 4.1 – Theatre and Mass Communication II

CO 1:Direction and the works, developing an eye for details
CO 2:A deeper understanding of theatre and how it has evolved to create human connections
CO 3:Understanding the role theatre plays as a medium of mass communication in development of society.

COURSE 4.2 – Writing and Editing for Media

CO 1:Provide the ability to understand writing styles that fit various media platforms.

CO 2:It would help the learner acquire information-gathering skills and techniques.
CO 3:On completion of this course, students will be able to understand similarities and differences in writing for all forms of media including the internet and digital.
CO 4:The learner will gather knowledge of different news and copy formats along with appropriate style-sheets and layout.
CO 5:The learner will imbibe the importance of writing clearly, precisely, and accurately for different types of audiences
CO 6:Provide basic proficiency in proofreading and editing.

COURSE 4.3 – Media Law and Ethics

CO 1:To understand the essence of PR as a practical discipline within the organization.
CO 2:Aware of different types of stakeholders involved in private and public. organizations that use public relations strategies.
CO 3:To understand, recognize, and examine the phenomenon of media transparency and its application to the public relations profession and practice in a global world.

COURSE 4.4 – Mass Media Research

CO 1:To introduce students to debates in Research approaches and equip them with tools to carry on research
CO 2:To understand the scope and techniques of media research, their utility, and limitations
CO 3:To understand the concepts, types, and uses of research designs

COURSE 4.5 – Film Communication - II

CO 1:Awareness of cinema in different regions.
CO 2:Understand the contribution of cinema in society.
CO 3:On completion of this course, students will be able to understand similarities and differences in writing for all forms of media including the internet and digital.
CO 4:From making to the marketing of films.
CO 5:Economic aspects of the film.
CO 6:Careers in films..

COURSE 4.6 – Computer and Multimedia - II

CO 1:To help learners be media industry-ready. This will help learners to be aware of the minimum requirement of the software when stepping in the industry.

CO 2:To introduce the media soft wares to make the learner understand what goes behind the scene and help them choose their stream.
CO 3:To prepare learners skilled enough for independency during project papers in TY sem.VI.
CO 4:To help learners work on small-scale projects during the academic period.

TYBAMMC (Advertising)_ Semester V

COURSE 5.1 – Copy Writing

CO 1: To familiarize the students with the concept of copywriting as selling through writing
CO 2:To learn the process of creating original, strategic, compelling copy for various mediums
CO 3:To train students to generate, develop and express ideas effectively
CO 4:To learn the rudimentary techniques of advertising headline and body copywriting, the economy of words and thought peculiar to this type of writing, and the necessity of creative thinking in written expression.
CO 5: In an ad agency, as a copywriter, one cannot "Just be creative and express self" – here one is a 'creative professional', and have to be able to use the power of creativity for a commercial/business reason – as someone is paying you to get a problem solved, using your creativity

COURSE 5.2 – Advertising and Marketing Research

CO 1: The course is designed to inculcate analytical abilities and research skills among the student.
CO 2:To understand research methodologies – Qualitative Vs Quantitative
CO 3:To discuss the foundations of Research and audience analysis that is imperative to successful advertising.
CO 4:To understand the scope and techniques of Advertising and Marketing research and their utility

COURSE 5.3 – Globalization and International Advertising

CO 1:To introduce to media students the concept of Globalization and its impact on Global Media and International Advertising.
CO 2:To help the student understand and practice Global Communication.
CO 3:To develop media students' understanding of Global Brands.

CO 4:To introduce to media students about the concept and process of international advertising..
CO 5:To help students formulate international advertising campaigns by identifying strategies, barriers, challenges, and steps to create international advertising.
CO 6: Career opportunities: As Global Brand manager, Global Content Writer for Ads and Ad Campaigns, Global Market Communicators in Digital Media, a career in ad agencies for Global Market

COURSE 5.4 – Agency Management

CO 1:To acquaint the students with concepts, and techniques and give experience in the application of concepts for developing an effective advertising campaign
CO 2:How an ad agency works and what opportunities exist.
CO 3:To familiarize students with the different aspects of running an ad agency
CO 4:To inculcate competencies thereby enabling to undertake professional work in the advertising industry

COURSE 5.5 – Brand Building

CO 1:To understand the awareness and the growing importance of Brand Building
CO 2:To know how to build, sustain and grow brands
CO 3:To know the various new way of building brands
CO 4:To know about the global perspective of brand building

COURSE 5.6 – Documentary and Add Film Making

CO 1:Understanding the planning involved in making audio visual communication effectively.
CO 2:To prepare students for effective and ethical public communication.
CO 3:To help students acquire basic skills in the practical aspects of Documentary and Ad Film making.
CO 4:Equip students with skills to write and shoot effective Documentary and Ad film

TYBAMMC (Journalism)_ Semester V

COURSE 5.1 – Reporting

CO 1:To enable students to become Reporters which is supposed to be a prerequisite while entering into the field of Journalism.
CO 2:To make them understand the basic ethos of the news and news-gathering.

CO 3:To prepare them to write or present the copy in the format of news.
CO 4:To develop a nose for news.
CO 5:To train them to acquire the skills of news-gathering with traditional as well as modern tools.
CO 6:To inculcate the skills for investigative journalism.
CO 7:To make them understand the basic structure/ essential knowledge for various beats.
CO 8: To make them responsible reporters and the face of the media.

COURSE 5.2 – Investigative Journalism

CO 1:Understand the role of investigative reporting in modern journalism
CO 2:To learn to conduct investigative research in an ethical manner.
CO 3:To create and write excellent investigative stories for the media.
CO 4:To acquire advanced investigative journalistic skills
CO 5:Learners will acquire the ability to understand and analyze the key areas of investigative journalism even with limited resources.

COURSE 5.3 - Mobile Journalism And New Media

CO 1:This course was arranged as a preparation program for Media Students, who have an enthusiasm for finding out about the nuts and bolts of versatile news-casting. You needn't bother with any past involvement with the ideas, apparatuses, or assets of portable news coverage. Towards the end of the course, you will leave with information about the Global adoption of mobile and its versatility that has influenced and changed journalism in New Age Media.
CO 2:M-Learning, in the Era of New Media, is the most effective method to get ready for the eventual fate of the media and life in a portable first world.
CO 3:Step-by-step instructions to report and connect with crowds utilizing cell phones.
CO 4:Step-by-step instructions to utilize the accepted procedures for ease of use and item plan when constructing your portable encounters in Journalism.
CO 5:The most effective method to settle on educated choices about the structure of portable news items crosswise over stages. The most effective method to get ready for the eventual fate of wearable different patterns that may change the course of portable media and news-casting

COURSE 5.4 - News Media Management

CO 1:To make students aware of the responsibilities, structure, and functioning of responsibilities of an organization.
CO 2:Students will be able to analyze individual media businesses and understand the Economic drivers of the media economy.
CO 3:Students will have developed hands-on experience as content marketers using journalistic and digital techniques.
CO 4:Students will have gained a perspective on the evolution of media in the last 25 years and on key current trends.

COURSE 5.5 - Journalism and Public Opinion

CO 1:To understand the role of the media in influencing and impacting public opinion.
CO 2:To analyse the formation of public opinion through digital and social media.
CO 3:To analyse the impact of the media on public opinion on socio-economic issues.
CO 4:To make students aware of the theoretical framework of research on media and society.

COURSE 5.6 - Media Laws and Ethics

CO 1:To provide the learners with an understanding of laws that impact the media.
CO 2:To sensitize them towards the social and ethical responsibility of the media
CO 3:To generate interest and awareness about new issues relating to media laws and media responsibility

TYBAMMC (Advertising)_ Semester VI

COURSE 6.1 - Digital Media

CO 1:Understand digital marketing platform.
CO 2:Understand the key goals and stages of digital campaigns.
CO 3:Understand the of use key digital marketing tools
CO 4:Learn to develop digital marketing plans.

COURSE 6.2 - Newspaper and Magazine Design (Project Paper)

CO 1:The learner is required to understand the process of print media production since the content collection to the final print ready layout.
CO 2:This includes news weightage as well as article relevancy and the visual treatment to the text block. The appearance of the various text blocks matters in layout.
CO 3:The learner should be able to reconstruct headlines suitable for the space keeping the core meaning and intensity intact.
CO 4:Learners are expected to develop software skills to be employable in the industry.
CO 5: Learners shall develop the aesthetic vision and understand the discipline behind a layout.

COURSE 6.3 - Advertising in Contemporary Society

CO 1:To understand the environment of Advertising in Contemporary Society .
CO 2:To understand Liberalization and its impact on the economy and other areas of Indian society
CO 3:To compare and analyze the advertising environment of different countries

COURSE 6.4 - Advertising & Sales Promotion

CO 1:Students should be able to demonstrate a thorough understanding of the major sales promotion concepts.
CO 2:Use a framework to make effective sales promotion decisions.
CO 3:Adopt the necessary skills and point of view of an effective sales promotion campaign.

COURSE 6.5 - Entertainment & Media Marketing

CO 1:To equip students with an understanding of marketing practices,frameworks, and trends in the Entertainment Sector
CO 2: Introducing the students to the television industry and film industry.
CO 3:Will make students go through different case studies regarding radio marketing skills, Social media marketing skills etc. .
CO 4:It will help to know the impact of the media industry on the viewers, and understand its characteristics

COURSE 6.6 -Television Program Production

CO 1:Making Understanding of Indian Television History.
CO 2:Will help to analyse the cultural impact of television on the audience.
CO 3:Understating Television Journalism.

CO 4:Introducing the Contemporary Trends of Television programming to students.
CO 5:Help the students to gain knowledge regarding the various measurement formats and reporting skills of television.

TYBAMMC (Journalism)_ Semester VI

COURSE 6.1 - Digital Media

CO 1:Understand digital marketing platform
CO 2:Understand the key goals and stages of digital campaigns
CO 3: Understand the of use key digital marketing tools
CO 4:Learn to develop digital marketing plans

COURSE 6.2 - Newspaper and Magazine Design (Project Paper)

CO 1:This includes news weightage as well as article relevancy and the visual treatment of the text block. The appearance of the various text blocks matters in layout
CO 2:The learner should be able to reconstruct headlines suitable for the space keeping the core meaning and intensity intact.
CO 3:Learners are expected to develop software skills to be employable in the industry.
CO 4:Introducing the Contemporary Trends of Television programming to students.
CO 5:Learners shall develop the aesthetic vision and understand the discipline behind a layout.

COURSE 6.3 - Contemporary Issues

CO 1:To sensitize students to the environment around them
CO 2:Developing a perspective toward issues related to the marginalized sections of the society.
CO 3: To stress the importance of social-economic political aspects of the society as a media professional.
CO 4:To understand the role of media as a strategy to create awareness on various issues and mobilize to bring social progress.

COURSE 6.4 - Lifestyle Journalism

CO 1: Acquire a conceptual overview of lifestyle journalism and its function in the media industry.
CO 2:Acquire an ability to report on lifestyle journalism stories or events in a clear, concise, factual and meaningful way.

CO 3: It is a combination of practical skills and conceptual understanding of how this form of journalism is increasingly relevant for the 21st century. This course will help the learner acquire an ability to understand audiences and markets in which the lifestyle journalists provide information.
CO 4:It will teach students how to do lifestyle journalism with integrity, exploring the broader lifestyle field while focusing on a variety of sub-fields such as travel, music, movies, arts and food, along with students' special interests

COURSE 6.5 - Crime Reporting

CO 1:Understanding the Police system, IPC, and Cr.PC, Criminal Investigative system, Judicial system, and Procedures .
CO 2:Sources of Crime Reporting: Collecting and cross-checking information .
CO 3: Tools and Techniques of Crime Reporting: Interviewing, researching, investigation,follow-up.
CO 4:Role of a Crime Journalist: Do's and Don'ts for a crime reporter Art.

COURSE 6.6 - Digital Media

CO 1:To acquaint and prepare students for Digital Global Environment.
CO 2: Develop skills for digital marketing and reach.
CO 3: To engage students in the world of Digital media and impart new modes of learning and creating digital communities.

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(Accredited by NAAC)
(ISO 9001: 2015 Certified)
Program: Master of Information Technology
Pillai HOCL Educational Campus, Rasayani
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Maharashtra ,India

Programme- M.Sc- Masters of Information Technology

Programme- MSc.- Masters of Information Technology
PROGRAM OUTCOME (PO)

CO 1: To equip postgraduate students with an integrated set of skills that will allow them to develop their professional careers in Information Technology.
CO 2: To equip students with the theoretical and practical knowledge that is necessary to enable them to understand the design of complex computer application/science.
CO 3:The program helps students to acquire the latest skills and build their future capabilities using world-class technology.
CO 4: Skills to work with higher end applications in internet technologies; also managerial ability to analyze, design, develop and to maintain software development.
CO 5:To realize that pursuit of knowledge is a lifelong activity and in combination with untiring efforts and positive attitude and other necessary qualities leads towards a successful life.

Semester I

Course - Soft Computing Technique

CO 01 Soft computing concepts like fuzzy logic, neural networks and genetic algorithms, where Artificial Intelligence is the mother branch of all.
CO 02 All these techniques will be more effective to solve the problem efficiently
CO 03 To analyze various neural network architectures
CO 04 To understand perceptrons and counter propagation networks.
CO 05 To analyze the genetic algorithms and their applications.

Course - Data Science

CO 01 Develop in depth understanding of the key technologies in data science and business analytics: data mining, machine learning, visualization techniques, predictive modeling, and statistics.
CO 02 Practice problem analysis and decision-making.
CO 03 Gain practical, hands-on experience with statistics programming languages and big data tools through coursework and applied research experiences.
CO 04 The students should be able to perform data cleaning, and Data preparation using programming techniques and tools
CO 05 The students should be able to define suitable solution for the Statistical Modelling and Machine Learning problems

Course - Research in Computing

CO 01 To be able to conduct business research with an understanding of all the latest theories.
CO 02 To develop the ability to explore research techniques used for solving any real world or innovative problem.
CO 03 To gain practical, hands-on experience with basic knowledge of statistical methods.
CO 04 To Know the purpose of research in assisting business operations.
CO 05 To understand what Descriptive analysis is and the reason why they are used.

Course-Cloud Computing

CO 01 To learn how to use cloud services.
CO 02 To implement virtualization.
CO 03 To implement Task Scheduling algorithms.
CO 04 To Apply Map-Reduce concept to applications.
CO 05 To build Private Cloud
CO 06 To broadly educate to know the impact of engineering on legal and societal issues involved.

Semester II

Course - Image Processing

CO 01 Review the fundamental concepts of a digital image processing system.
CO 02 Analyze images in the frequency domain using various transforms.
CO 03 Evaluate the techniques for image enhancement and image restoration
CO 04 Categorize various compression techniques.
CO 05 Interpret Image compression standards.
CO 06 Interpret image segmentation and representation techniques.

Course - Microservice Architecture

CO 01 Gain a thorough understanding of the philosophy and architecture of Web applications using ASP.NET Core MVC;
CO 02 Gain a practical understanding of.NET Core;
CO 03 Acquire a working knowledge of Web application development using ASP.NET Core MVC 6 and Visual Studio
CO 04 Persist data with XML Serialization and ADO.NET with SQL Server
CO 05 Create HTTP services using ASP.NET Core Web API; Deploy ASP.NET Core MVC applications to the Windows Azure cloud.

Course - Modern Networking

CO 01 To understand the state-of-the-art in network protocols, architectures and applications.
CO 02 Analyze existing network protocols and networks.
CO 03 Develop new protocols in networking
CO 04 To understand how networking research is done
CO 05 To investigate novel ideas in the area of Networking via term-long research projects.

Course- Big Data Analytics

CO 01 To provide an overview of an exciting growing field of big data analytics.
CO 02 To introduce the tools required to manage and analyze big data like Hadoop, NoSql MapReduce.
CO 03 To teach the fundamental techniques and principles in achieving big data analytics with scalability and streaming capability.
CO 04 To enable students to have skills that will help them to solve complex Real world problems in decision support.

Semester III

Course-Machine Learning

CO 01: Understand the key issues in Machine Learning and its associated applications in intelligent business and scientific computing.
CO 02: Acquire knowledge about classification and regression techniques where a learner will be able to explore his skill to generate database knowledge using the prescribed techniques.

CO 03: Understand and implement the techniques for extracting the knowledge using machine learning methods.
CO 04: Achieve adequate perspectives of big data analytics in various applications like Recommender systems, social media applications etc.
CO 05: Understand the statistical approach related to machine learning. He will also Apply the algorithms to a real-world problem, optimize the models learned and report on the expected accuracy that can be achieved by applying the models.

Course - Robotics Process Automation.

CO 01: Understand the mechanism of business process and can provide the solution in an optimize way
CO 02: Understand the features used for interacting with database plugins.
CO 03: Use the plug-ins and other controls used for process automation.
CO 04: Use and handle the different events, debugging and managing the errors.
CO 05: Test and deploy the automated process.

Course - Applied Artificial Intelligence

CO 01: be able to understand the fundamentals concepts of the expert system and its applications.
CO 02: be able to use probability and the concept of fuzzy sets for solving AI based problems.
CO 03: be able to understand the applications of Machine Learning. The learner can also apply a fuzzy system for solving problems.
CO 04: learner will be able to apply to understand the applications of genetic algorithms in different problems related to artificial intelligence.
CO 05: A learner can use knowledge representation techniques in natural language processing.

Course - Technical Writing and Entrepreneurship Development

CO 01: Develop technical documents that meet the requirements with standard guidelines. Understanding the essentials and hands-on learning about effective Website Development.
CO 02: Write Better Quality Content Which Ranks faster at Search Engines. Build effective Social Media Pages.

CO 03: Evaluate the essential parameters of effective Social Media Pages.
CO 04: Understand the importance of innovation and entrepreneurship.
CO 05: Analyze research and development projects.

Semester IV
Course - Blockchain

CO 01: The students would understand the structure of a blockchain and why/when it is better than a simple distributed database.
CO 02: Analyze the incentive structure in a blockchain based system and critically assess its functions, benefits and vulnerabilities
CO 03: Evaluate the setting where a blockchain based structure may be applied, its potential and its limitations
CO 04: Understand what constitutes a "smart" contract, what are its legal implications and what it can and cannot do, now and in the near future
CO 05: Develop blockchain DApps.

Course - Deep Learning

CO 01: Describes basics of mathematical foundation that will help the learner to understand the concepts of Deep Learning.
CO 02: Understand and describe model of deep learning
CO 03: Design and implement various deep supervised learning architectures for text & image data.
CO 04: Design and implement various deep learning models and architectures.
CO 05: Apply various deep learning techniques to design efficient algorithms for real-world applications

Course - Human Computer Interaction

CO 01: Have a clear understanding of HCI principles that influence a system's interface.
CO 02: Understand the evaluation techniques used for any of the proposed systems.
CO 03: Understand the cognitive models and its design.
CO 04: Able to understand how to manage the system resources and do the task analysis.
CO 05: Able to design and implement a complete system.

Course - Natural Language Processing

CO 01: Students will get ideas about know-hows, issues and challenges in Natural Language Processing and NLP applications and their relevance in the classical and modern context.
CO 02: Students will get an understanding of Computational techniques and approaches for solving NLP problems and develop modules for NLP tasks and tools such as Morph Analyzer, POS tagger, Chunker, Parser, WSD tool etc.
CO 03: Students will also be introduced to various grammar formalisms, which they can apply in different fields of study.
CO 04: Students can take up project work or work in R&D firms working in NLP and its allied areas.
CO 05: Student will be able to understand applications in different sectors

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Maharashtra ,India

Programme- M.com - Masters of Advanced Accountancy

PROGRAM OUTCOME (PO)

1. Understand the basic concepts of business and its role in society.
2. Understand financial and marketing both local and international issues and responsibilities of a business organization.
3. Gain knowledge on legal and ethical issues in a business organization.
4. Identify reasons for profit or loss and give solutions for economic viability of a business.
5. Acquire practical skill in accounting by having an opportunity for a summer internship programme.
6. Use current techniques and skills necessary for business and costing.
7. Serve as a human resource needed for industry, consultancy, education, service, research, public administration, insurance and management. current techniques and skills necessary for business and costing.

COURSE OUTCOME (CO)
SEMESTER – I

Course - Cost and Management Accounting

CO 01 To enhance the abilities of learners to develop the concept of Cost and management accounting and its significance in the business
CO 02 To enable the learners to understand, develop and apply the techniques of costing in the decision making in the business corporates
CO 03 To enable the learners in understanding, developing, preparing and presenting the financial report in the business corporate

Course -Strategic Management

CO 01 On successful completion of this subject the learners would be able to understand new forms of Strategic Management concepts and their use in business.
CO 02 After gaining subject knowledge the learner would develop analytical skills which would help them to solve cases and to provide strategic solutions for the smooth functioning of business

Course - Business Ethics and Corporate Social Responsibility

CO 01 The students get awareness of Ethical way of doing business so that cordial relations can be maintained with employees, customers and community.
CO 02 The students learn the importance of business ethics in this modern world.
CO 03. The students understand the concept of CSR and its importance for the growth and success of business

Course - Economics for Business Decisions

CO 01. Once students have a foundational knowledge of core concepts, they can apply their understanding to contemporary economics issues.
CO 02 It will help the students to appreciate resource decisions at individual and business levels.

SEMESTER – II

Course - E- Commerce

CO 01 On successful completion of this subject the learners would acquire the knowledge about the various dimensions of E commerce.
CO 02 . After gaining subject knowledge the learner would develop analytical skills which would help them to understand Web- based Commerce and equip the learners to assess e-commerce requirements of a business.

Course - Research Methodology

CO 01 The students get an understanding of scope and importance of Research.
CO 02 The students understand the use of appropriate methods in their research.
CO 03 The students get knowledge of various statistical tools and techniques that can be used.
CO 04 It develops data analytical skills of the students and enables them to solve research problems.
CO 05 It gives an understanding of hypothesis, sampling, research report , research designing, etc.

Course -Macro Economics concepts and Applications

CO 01 This course is meant to give students insight into the dynamics of the national economy. The knowledge gained in the course will make students better informed citizens and allow them to follow the debates over national economic policy reported in the news media.
CO 02 This course is also a foundation course that will prepare students to be successful in upper division finance, marketing, business administration, economics, government, and social work courses.

Course - Corporate Finance

CO 01 Enhance the abilities of learners to develop the objectives of Financial Management

CO 02 Enable the learners to understand, develop and apply the techniques of investment in the financial decision making in the business corporate
CO 03 Enhance the abilities of learners to analyze the financial statements

SEMESTER – III

Course – Advanced Financial Accounting

CO 01 To prepare the financial statement of a Cooperative Society
C**O 02** To Convert trial balance of A company into a foreign currency and make Final accounts for the same
CO 03 To understand the accounting of an Insurance Company
CO 04 To prepare the financial statement of a Banking Company

Course – Advanced Cost Accounting

CO 01 To study the costing concept and methods
CO 02 To analyse the unit cost and job costing
CO 03 To know the process costing with normal and abnormal loss
CO 04 To update the standard costing methods
CO 05 To prepare the reconciliation statements

Course – Direct Tax

CO 01 To distinguish between types of Taxation (Direct & Indirect)
CO 02 To classify 5 Heads of Income
CO 03 To compute Total Taxable Income
CO 04 To analyse the tax Liability of a citizen

SEMESTER – IV

Course – Corporate Financial Accounting

CO 01 To understand the concept , contents and import ants of corporate financial reporting
CO-02 To understand similarities and differences between IFRS AND In AS
CO -03 To calculate value of business by different methods

CO - 04 To understand the Procedure of Consolidation of Balance-sheet & Profit & Loss Account

Course – Financial Management

CO1: Learners understand the need, types and sources of finance.
CO2: Learners are made aware of the importance of Capital Budgeting and different techniques of capital budgeting for decision making
CO3: Learners understand the concept of working capital, cash management, receivable management, inventory management and its requirements and control policies.
CO4: Learners understand the concept of budgetary control, its importance, limitations and preparation of different types of budget.
CO5: Learners understand the concept of strategic financial management, financial decision making and financial planning process.

Course – Indirect Tax -II

CO 01 To explain the various terms related to Goods and Service tax(GST)
CO 02 To explain the registration process under GST
CO 03 To compute the amount of CGST, SGST and IGST
CO 04 To determine the place of supply of goods and services or both in IGST
CO 05 To explain the procedures of payments of GST

Mahatma Education Society's

Pillai HOC College of Arts , Science & Commerce ,Rasayani

(Accredited by NAAC)
(ISO 9001: 2015 Certified)
Program: Master of Information Technology
Pillai HOCL Educational Campus, Rasayani
Taluka -Khalapur Dist. Raigad -410207
Maharashtra ,India

Programme- M.Sc- Masters of Science(Organic)

Programme- M.Sc- Masters of Science(Organic Chemistry)

PROGRAM OUTCOME (PO)
At the post-graduation in science a student should have:

1. Acquired the knowledge and generic skills for employment or further training in R&D, science-based industry and establishments, education, and for training at management levels in other professions.
2. Understood the laboratory techniques including instrumentation and inculcated research aptitude and reasoning ability in the students.
3. Able to decide about new synthetic routes, choice of reagents and conditions taking into account cost, safety and environmental factors.
4. Acquire the skills about modern chemical tools, Models, software's, charts, equipment's and develop research-oriented skills.
5. Analyze the information on molecular methods (IR, Raman, UV-VIS, NMR and EPR) and students will be able to select molecular spectroscopy methods suitable for solving scientific problems.

COURSE OUTCOMES
SEMESTER-1

Course 1: Physical Chemistry

CO1: Students should be able to account for the basic principles and concepts of quantum mechanics.
CO2: Students will be able to understand the Joule Thomson experiment and its application to Ideal gas.
CO3: Students will be able to understand the kinetics of Composite /Complex reactions.
CO4: Students will be able to understand explosion reaction
CO5: Students will be able to understand concepts of batteries and bio electrochemistry.

Course 2: Inorganic Chemistry

CO1: Students should be able to understand VBT,MOT ,hybridization, and weak forces of attraction.
CO2: Students will be able to understand molecular Symmetry and Group Theory.
CO3: Students will able to understand Solid State Chemistry and Nanomaterials preparative methods
CO3: Students will be able to understand Characterisation of Coordination compounds by IR,NMR,ESR.

Course 3: Organic Chemistry

CO1: Able to understand thermodynamic and kinetic requirements of a reaction
CO2: Understand SN1, SN2 and SNi mechanism and stereochemistry & NGP by pi and sigma bonds
CO3: Understand stereo chemical principles, enantiomeric relationship R and S ,E and Z nomenclature in C,N,S,P containing compound
CO4: Understand reactivity of various reagents used in oxidation and reduction.
CO5:Understand general mechanism, selectivity, and important applications

Course 4: Analytical chemistry

CO1: Know the Language of Analytical Chemistry and Quality in Analytical Chemistry
CO2: Understand and able to solve Calculations based on Chemical.
CO3: Know about various Optical Methods of analysis like Molecular Ultraviolet and Visible Spectroscopy, Infrared Absorption Spectroscopy etc
CO4: Understand the Thermal Methods of analysis and Differential Scanning Calorimetry and Automation in chemical analysis.

SEMESTER-2

Course 1: Physical Chemistry

CO1: Students will be able to understand concept of fugacity
CO2: Students will be able to understand concept of bioenergetics
CO3: Students will be able to understand concept of rigid rotor and Hückel Molecular Orbitals theory
CO4: Students will be able to understand Kinetics of reactions catalyzed by enzymes and in the Solid State
CO5: Students will be able to understand concept defects in solids and application of phase rule to three component systems.

Course 2: Inorganic Chemistry

CO1: Students will be able to understand inorganic reaction mechanisms of octahedral and square planar complexes.
CO2: Students will be able to understand organometallic chemistry,structure and bonding of transition metals .
CO3: Students should be able to understand toxicity of metallic species,interaction of radiation in context with the environment.
CO4: Student will be able to understand Bioinorganic chemistry

Course 3: Organic Chemistry

CO1: Able to understand alkylation and acylation reaction
CO2: Understand mechanisms, stereochemistry and applications of various reactions
CO3: Understand molecular Orbital Theory for Organic Chemistry
CO4: Understand applications of UV, IR, NMR and mass spectroscopy:

Course 4: Analytical chemistry

CO1: Understand the Recapitulation of basic concepts in chromatography,Principles of gas chromatography and HPLC
CO2: Study the principle and applications various methods of analysis like X-ray spectroscopy, Mass spectrometry, Radio analytical Methods.
CO3: Understand the Introduction, Principle, Instrumentation and Applications of Surface Analytical Techniques.
CO4: Know and solve problems based on Electroanalytical Methods of analysis.

Semester- III

Course:Theoretical organic chemistry-I

1. Students are able to differentiate between various organic reactive intermediates.
2. To understand various Pericyclic and photochemical reactions and rearrangements
3. To understand stereochemistry of fused ring and bridged ring compounds.
4. To understand photochemistry of carbonyl compounds.

Course: Synthetic Organic Chemistry-I

1. To understand name reactions with mechanism and application
2. To understand chemistry of radicals in organic synthesis
3. To understand Enamines, Ylides and α-C-H functionalization
4. To understand use of Metals / Non-metals in organic synthesis

Course:Natural products and heterocyclic chemistry

1. To study the different natural products used with its structure and importance.
2. To understand the synthesis of different natural products.
3. To understand the advanced spectroscopic techniques like proton NMR and 13C-NMR.
4. To understand the advanced techniques in spectroscopy.

Course:Medicinal , Biogenesis and green chemistry

1.To understand drug discovery, design and development.
2. To study drug design, development and synthesis.
3. To study the biogenesis and biosynthesis of natural products
4. To study green chemistry.

Semester- IV

Course:Theoretical organic chemistry-II

1. To understand structural effects and reactivity in physical organic chemistry
2. To understand supramolecular chemistry.
3. To determine enantiomer and diastereomer composition.
4. To understand principles of asymmetric synthesis

Course: Synthetic Organic Chemistry-II

1. To understand retrosynthetic analysis and synthetic planning
2. To understand one and two group C-C disconnection
3. To understand electro-organic chemistry and methods of organic synthesis
4. To understand use of transition and rare earth metals in organic synthesis

Course:Natural products and heterocyclic chemistry

1. To study the synthesis of different natural products like steroids
2. To study the synthesis of natural products like vitamins, antibiotics, terpenoids etc.
3. To study monocyclic heterocyclic compounds.

4. To study bi/tricyclic heterocyclic compounds..

Course:Research Methodology

1.. To know about different journals, web sources and library resources
2. To know the different data analysis methods.
3. To understand the different methods of scientific research and writing.
4. To understand the chemical safety and ethical handling of chemicals.