



Yashoda Shikshan Prasarak Mandal's
YASHODA TECHNICAL CAMPUS, SATARA
Faculty of Engineering
Department of Mechanical Engineering

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO 1	Graduates should excel in engineering positions in industry and other organizations that emphasize design and implementation of engineering systems and devices.
PEO 2	Graduates should excel in best post-graduate engineering institutes, acquiring advanced degrees in engineering and related disciplines.
PEO 3	Alumni should establish a successful career in an engineering-related field and adapt to changing technologies.
PEO 4	Graduates are expected to continue personal development through professional study and self-learning.
PEO 5	Graduates should be good citizens and cultured human beings, with full appreciation of the importance of professional, ethical and societal responsibilities.

PROGRAMME OUTCOMES (POs)

PO 1	Apply the knowledge of mathematics, basic sciences, and mechanical engineering to the solution of complex engineering problems.
PO 2	Identify, formulate, research literature, and analyze complex mechanical engineering problems reaching substantiated conclusions.
PO 3	Design solutions for complex engineering problems and design mechanical system components that meet the specified needs.
PO 4	Use mechanical engineering research-based knowledge related to interpretation of data and provide valid conclusions.
PO 5	Create, select, and apply modern mechanical engineering and IT tools to complex engineering activities with an understanding of the limitations.
PO 6	Apply reasoning acquired by the mechanical engineering knowledge to assess societal and safety issues.
PO 7	Understand the impact of engineering solutions on the environment, and demonstrate the knowledge for sustainable development.
PO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
PO 10	Communicate effectively on complex engineering activities with the engineering community and with society at large.
PO 11	Understand the engineering and management principles and apply these to the multidisciplinary environments.
PO 12	Recognize the need for life-long learning in the broadest context of technological change.



Yashoda Shikshan Prasarak Mandal's
YASHODA TECHNICAL CAMPUS, SATARA
Faculty of Engineering
Department of Computer Science & Engineering

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO 1	To provide students with a strong foundation in the mathematical, scientific and engineering fundamentals necessary to formulate, solve and analyze engineering problems and to prepare them for graduate studies, R&D, consultancy and higher learning.
PEO 2	To develop an ability to analyze the requirements of the software, understand the technical specifications, design and provide novel engineering solutions and efficient product designs.
PEO 3	To provide exposure to emerging cutting edge technologies, adequate training & opportunities to work as teams on multidisciplinary projects with effective communication skills and leadership qualities.
PEO 4	To prepare the students for a successful career and work with values & social concern bridging the digital divide and meeting the requirements of Indian and multinational companies.
PEO 5	To promote student awareness on the life-long learning and to introduce them to professional ethics and codes of professional practice.

PROGRAMME OUTCOMES (POs)

PO 1	Graduates will possess knowledge on applied mathematics, applied sciences and foundational engineering concepts.
PO 2	Graduates will demonstrate with an ability to understand, identify, formulate and solve engineering problems.
PO 3	Graduates will possess strong fundamental concepts on database technologies, Operating systems, compiler designs, advanced programming, Software engineering.
PO 4	Graduates will be able to demonstrate with excellent programming, analytical, logical and problem solving skills.
PO 5	Graduates will demonstrate with an ability to design, develop, test and debug the software
PO 6	Graduates will demonstrate with an ability to deploy, analyze, troubleshoot, maintain, manage and secure the computer network.
PO 7	Graduates will be able to design and develop web solutions with rich graphical user interface.

PO 8	Graduates will possess fundamental knowledge on the design of digital, analog systems and communications.
PO 9	Graduates will be able to communicate effectively in both verbal and written forms
PO 10	Graduates will possess leadership & management skills with best professional ethical practices and social concern.
PO 11	Graduates will develop confidence for self & lifelong learning.
PO 12	Graduates can participate and succeed in competitive examinations like GATE, TOEFL, GRE, GMAT



Yashoda Shikshan Prasarak Mandal's
YASHODA TECHNICAL CAMPUS, SATARA
Faculty of Engineering
Department of Civil Engineering

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO 1	Graduates are expected to continue personal development through professional study and self-learning.
PEO 2	Graduates should excel in best post-graduate engineering institutes, acquiring advanced degrees in engineering and related disciplines.
PEO 3	Alumni should establish a successful career in an engineering-related field and adapt to changing technologies.
PEO 4	Graduates should excel in engineering positions in industry and other organizations that emphasize design and implementation of engineering systems and devices.
PEO 5	Graduates should be good citizens and cultured human beings, with full appreciation of the importance of professional, ethical and societal responsibilities.

PROGRAMME OUTCOMES (POs)

PO 1	To prepare students to excel in various educational programmes or to succeed in industry / technical profession through further education/training.
PO 2	To provide students with a solid foundation in mathematical, scientific fundamentals required to solve Structural problems.

PO 3	To train students with a breadth of scientific knowledge to comprehend, analyze, design & create novel products and solutions for real life problems.
PO 4	To train students with a breadth of scientific knowledge to comprehend, analyze, design & create novel products and solutions for real life problems.
PO 5	Create, select, and apply modern mechanical engineering and IT tools to complex engineering activities with an understanding of the limitations.
PO 6	To provide students with academic environment of excellence, leadership, ethical guidelines and life-long learning needed for a long / productive career.



YSPM's
Yashoda Technical Campus
 Department of Electrical Engineering
 Wadhe, NH-4, Satara

PROGRAM OUTCOMES :

Upon completion of the Bachelor of Engineering with a major in Electrical Engineering, Students are enabled to achieve the following outcomes:

- PO 1:- Engineering Knowledge Have ability to apply knowledge of mathematics, science and engineering fundamentals to the solution of complex engineering problems.
- PO 2 :- Problem Analysis Have ability to design circuits and conduct experiments, as well as to analyze and interpret data using first principles of mathematics, natural sciences and engineering fundamentals.
- PO 3:- Design / Development of Solutions Have ability to develop project-based learning skills through design and implementation of a system by using component or process that meets the needs within realistic constraints such as socio-economic environmental.
- PO 4:- Modern Tool Usage Have ability to use the techniques, skills and modern engineering tools necessary for engineering practice.
- PO 5:- The Engineer and Society Have ability to identify, formulate and solve engineering problems.
- PO 6:- Environment and Sustainability Have ability to achieve broad education, necessary for understanding the impact of electrical engineering solutions applicable to global and societal context.
- PO 8:- Ethics Have ability to understand and identify the professional and ethical responsibilities.
- PO 9:- Life-long Learning Have ability to understand the learning process concepts of learning to learn and engage in lifelong learning.



Faculty of Engineering
Department of Electronics & Telecommunication

Program Educational Objectives

- To compete on a global platform to pursue their professional career in Electronics & Telecommunication Engineering and allied disciplines.
- To communicate effectively and work as a leader or team member.
- To demonstrate high regard for human rights, respect values in diverse cultures and have a concern for social problems.
- To facilitate research opportunities to faculty as well as students in Electronics & Telecommunication Engineering.
- To develop the ability among students to understand the concept of core electronics subjects that will facilitate understanding of new technology.

FACULTY OF MBA

Programme Outcome

PO1. The main outcome is to prepare the executives and managers for top level and middle level management in public cooperative and private sector organizations. The emphasis will therefore, be on developing a proper role perception of managerial level personnel in the Indian context by exposing them to a wide range of relevant areas, sufficiently in depth so that they may gain the confidence to interact with people at all levels and develop managerial skills for translating policies into action effectively.

PO2: MBA being professional course it is essential for each student to practically apply or understand theoretical concepts what he/she learn during the course. During the training programme student is expected to collect vital information through internal and external source so as to reach concrete conclusions on the given subject. Student has to prepare the project report under the guidance of internal teacher Student has to undergo a practical training of minimum fifty days.

Course Outcome

CO1. 1. To expose students towards different perspectives and concepts in the field of strategic Management. To understand different strategies followed by corporates in the world. To understand different strategic tool.

CO2. Student has to undergo a practical training of minimum fifty days. MBA being professional course it is essential for each student to practically apply or understand theoretical concepts what he/she learn during the course. During the training programme student is expected to collect vital information through internal and external source so as to reach concrete conclusions on the given subject. Student has to prepare the project report under the guidance of internal teacher .Director/Principal of the institution/college will decide the last date of submission of final copy.

CO3. Different skills are expected in course outcomes as to improve Interpersonal Communication, Communication with Sample Customer, Relating Individual and Group Behaviour with Buying Behaviour, investigation Analytical Skills, Selling Skills and Analysis and Interpretation, Data Searching, Synthesis ,Analysis and Comprehension.

Marketing Management

PSO1: Provide an in-depth understanding of the unique challenges inherent in managing and delivering quality services. Develop and understand the importance of the “state of the art” service management thinking. Promote a customer service-oriented mindset and understand the role of services marketing and discuss its theory and core concepts.

PSO2: Deeper insight into the consumer psychographics. Course offers theoretical foundations in Consumer behavior and decision making, and offers many practical insights, that helps to understand the mind of the consumer, and the different buying influences. The knowledge of various modules and framework also helps students to understand consumer behavior.

PO3: Provide an overview of branding aspects in the current context on product and brand management. To understand the various aspects related to Brand Management.

PSO4: Understand the unique challenges inherent in managing and delivering quality Services. Develop and understand the importance of the “state of the art” service management thinking.

PSO5: Promote a customer service-oriented mindset and understand the role of services marketing. Develop understanding of the Sales & Distribution processes in organizations and the practical aspects of the key decision making variables in sales force and distribution channel management. It is an application oriented coursework and hence emphasis is on assimilating the learning through application of the theoretical inputs on real life cases and situation

STRATEGIC MARKETING

PSO1. The course teaches principal concepts and tools of strategic marketing. An understanding of and ability to critically discuss contemporary strategy frameworks and concepts An identification of key strategic issues and challenges facing real life organizations.

PSO2. The ability to apply analytical approaches and strategy frameworks to complex issues and contexts The ability to work in a team and research, plan, structure and present a strategic analysis of a given organization in a comprehensive yet concise way.

Contemporary Issues In Marketing

PSO1. The primary objective of the course is to provide each student with the background and experience necessary to develop and implement marketing communication strategies. The emphasis is on the planning of campaigns in which advertising is a major component. The emergence of alternative media and vehicles necessitates that attention also be devoted to such options (e.g., online advertising, social media) To provide an understanding of the 5 Ms of Advertising. To help the students understand rural Indian markets. To help them understand and develop marketing strategies that are unique to rural India.

Human Resource Management

CO1. To describe the detailed process of HRD. To explain the recruitment and selection process in the organization. To explain the different types of interviews.

CO2. To explain the Concept of HRD To explain the different methods of Training & Development, To explain about – career planning

CO3. How organizational wages and salaries are fixed? How job evaluation is used in pay fixation & incentives? Legislation and polices related to payment off wages and salary.

CO4. To provide an idea of theories, techniques and approaches to manage employee relations To understand the various labour laws and their implications. To familiarize in the major Industrial Relations Systems operating in different context.

CO5. At the end of the course, student would be able to – 1. Understand how to develop HR system that will help to achieve strategic goals of a company. 2. Know the strategic management process and role of HR in the strategic management process. 3. Challenges faced by the company while operating at global level.

IT & System Management

Strategic Information Technology Management (System-I)

PSO1. Students will be able to understand different IT strategies used in the organization. They become able to know the emerging technologies and its impacts on the organization. They can understand the concepts related to the E-governance and how to implement in the industries. Research on internet use like online marketing, digital marketing, social media etc.

Information System Security and Audit (System-II)

PSO2.Students will be able to understand Information system security threats and its control measures. They can understand Data security, telecommunication security and its control measures. Preparing the system audit report and identify the management controls. Design the security policies with the help of ISO standards and practices.

Software Project Management (System-III)

PSO3. Students will be able to understand the business systems and to develop the system with the help of graphical representation. They become able to know the work of system analyst. They can understand the how to prepare schedule of the project and which techniques are used. Calculating cost estimation of the software and understand the estimation techniques.

Information technology for management

PSO4. . OStudents will be able to understand the basic concepts of Information technology and also the computer networks. They become able to know the e- business, e-commerce, e-banking and their applications. They can understand the database and how it is useful for the organization. Design the database and use normalization forms for reduce the redundancy. They can understand how to acquire the knowledge with the help of data mining and data warehouse.

Finance Management

PSO1. Students will be able to: Acquire knowledge about nature and general aspects of business operations. Understand the nature of business transaction and its recording in books of accounts. Explain the concepts and steps in accounting process including Journal, ledger, Trial Balance and balance sheet.

PSO2. Understand the importance of Computer in accounting system. Understand the various branches of accounting and their relationship with one another. Analyze the cost of product and services in its manufacturing and rendering. Understand both the theoretical and practical role of financial management in business corporations. Apply financial management concepts and tools to the decisions faced by a manager in Financing decisions, investment decisions and dividend decisions.

PSO3. Understand the need of working capital and its effective management. Understand the characteristics of different financial assets such as money market instruments, debentures, bonds, and stocks, and how to buy and sell these assets in financial markets. Appraise the risk profile of firms; specifically, estimate the costs of capital, including debt and equity capital, using financial data.

PSO4. Analyze the finances of corporations both in terms of their performance and capital requirements Have a greater appreciation and understanding of the importance of risk within the context of financial decision making. Access financial information from a wide variety of sources and use of this information.

Agri- Business Management

PSO1. Students should know the nature of agri business management. To make the students aware about the basic principles of agri- business manag. To encourage the students about the agro-processing industries in India. To make the students aware about the agri-input supply Industries in India. The agricultural situation in India has undergone a rapid change in Economic reform period. Investment in agricultural sector, both in public and private sectors, has risen.

Agricultural marketing

PSO1 To understand the meaning, nature and structure of agricultural marketing. To study the marketing functions & system. To study the pricing of agricultural products.

Agripreneurship And Project Management

PSO1. . To understand importance of entrepreneurship development amongst agriculturists. To understand the importance of agricultural project management. To understand the importance of agro tourism.

Entrepreneurship Development And Project Management

PSO1. . To inspire students to start an enterprise. To understand the concept and importance of entrepreneurship. To understand the support system provided by the government. To study different entrepreneurial opportunities. To understand factors to be considered while planning and managing project

Global Quality System

PSO1. To make aware students about quality concepts. To foster thinking of students towards quality parameters and its implementation. To facilitate hands on experience towards various quality concepts.

International Business

PSO1. To explain the concept of International Business. To develop the understanding of difference between domestic & international business. To bring the awareness of International Business Environment & business strategies

International Trade in Agriculture

PSO1. . To gain an understanding of important theoretical and applied issues in international trade. To examine performance of India's agricultural trade. To study International marketing system with quality and regulatory Standards for agricultural produce.

Agri-Business Finance Management

PSO1. To understand the concepts of agricultural finance and financial management. To microfinance in India. To create awareness about agricultural indebtedness in India and financial support to agribusiness

YSPM's YTC, Faculty of Pharmacy

Dept: B. Pharmacy

Program Outcome

PO1 Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.

PO2 Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.

PO3 Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.

PO4 Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.

PO5 Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and well-being.

PO6 Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).

PO7 Pharmaceutical Ethics: Honor personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.

PO8 Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.

PO9 The Pharmacist and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.

PO10 Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO11 Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.

Course Outcome

CO1 To produce pharmacy graduates with strong fundamental concepts and high technical competence in pharmaceutical sciences and technology, who shall be able to use these tools in pharmaceutical industry and/or institutes where ever necessary for success.

CO2 To provide students with a strong and well defined concepts in the various fields of pharmaceutical sciences viz., pharmaceutics, pharmaceutical chemistry, pharmacology and pharmacognosy according to the requirement of pharmaceutical industries, community and Hospital Pharmacy and also to develop a sense of teamwork and awareness amongst students towards the importance of interdisciplinary approach for developing competence in solving complex problems in the area of Pharmaceutical Sciences.

CO3 To promote the development of trained human resource in Pharmaceutical Sciences for dissemination of quality education with highly professional and ethical attitude, strong communication skills, effective skills to work in a team with a multidisciplinary approach.

CO4 To generate potential knowledge pools with interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution in closely related pharmaceutical industries. To train the students to contribute towards health care system and counseling for prophylaxis and prevention of diseases.

CO5 To encourage the students to participate in life-long learning process for a highly productive career and to relate the concepts of Pharmaceutical Sciences towards serving the cause of the society.

PROGRAM SPECIFIC OUTCOME

Students will be able to:

HUMAN ANATOMY AND PHYSIOLOGY-I

PSO1 Explain the gross morphology, structure and functions of various organs of the human body.

PSO2 Describe the various homeostatic mechanisms and their imbalances.

PSO3 Identify the various tissues and organs of different systems of human body.

PSO4 Perform the various experiments related to special senses and nervous system.

PSO5 Appreciate coordinated working pattern of different organs of each system.

PHARMACEUTICAL ANALYSIS

PSO1 Understand the principles of volumetric and electro chemical analysis.

PSO2 Carryout various volumetric and electrochemical titrations.

PSO3 Develop analytical skills.

PHARMACEUTICS- I

PSO1 Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations.

PSO2 Understand the professional way of handling the prescription.

PSO3 Preparation of various conventional dosage forms.

PHARMACEUTICAL INORGANIC CHEMISTRY

PSO1 Know the sources of impurities and methods to determine the impurities in inorganic drugs and pharmaceuticals.

PSO2 understand the medicinal and pharmaceutical importance of inorganic compounds.

COMMUNICATION SKILLS

PSO1 Understand the behavioral needs for a Pharmacist to function effectively in the areas of pharmaceutical operation

PSO2 Communicate effectively (Verbal and Non Verbal)

PSO3 Effectively manage the team as a team player

PSO4 Develop interview skills

PSO5. Develop Leadership qualities and essentials

REMEDIAL BIOLOGY

PSO1 know the classification and salient features of five kingdoms of life

PSO2 understand the basic components of anatomy & physiology of plant

PSO3 know understand the basic components of anatomy & physiology animal with special reference to human

REMEDIAL MATHEMATICS

PSO1 Know the theory and their application in Pharmacy

PSO2 Solve the different types of problems by applying theory

PSO3 Appreciate the important application of mathematics in Pharmacy

HUMAN ANATOMY AND PHYSIOLOGY-II

PSO1 Explain the gross morphology, structure and functions of various organs of the human body.

PSO2 Describe the various homeostatic mechanisms and their imbalances.

PSO3 Identify the various tissues and organs of different systems of human body.

PSO4 Perform the hematological tests like blood cell counts, haemoglobin estimation, bleeding/clotting time etc and also record blood pressure, heart rate, pulse and respiratory volume.

PSO5 Appreciate coordinated working pattern of different organs of each system

PSO6 Appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body.

PHARMACEUTICAL ORGANIC CHEMISTRY –I

PSO1 write the structure, name and the type of isomerism of the organic compound

PSO2 write the reaction, name the reaction and orientation of reactions

PSO3 account for reactivity/stability of compounds,

PSO4 identify/confirm the identification of organic compound

BIOCHEMISTRY

PSO1 Understand the catalytic role of enzymes, importance of enzyme inhibitors in design of new drugs, therapeutic and diagnostic applications of enzymes.

PSO2 Understand the metabolism of nutrient molecules in physiological and pathological conditions.

PSO3 Understand the genetic organization of mammalian genome and functions of DNA in the synthesis of RNAs and proteins.

PATHOPHYSIOLOGY

PSO1 Describe the etiology and pathogenesis of the selected disease states;

PSO2 Name the signs and symptoms of the diseases; and

PSO3 Mention the complications of the diseases.

COMPUTER APPLICATIONS IN PHARMACY

PSO1 know the various types of application of computers in pharmacy

PSO2 know the various types of databases

PSO3 know the various applications of databases in pharmacy

ENVIRONMENTAL SCIENCES

PSO1 Create the awareness about environmental problems among learners.

PSO2 Impart basic knowledge about the environment and its allied problems.

PSO3 Develop an attitude of concern for the environment.

PSO4 Motivate learner to participate in environment protection and environment improvement.

PSO5 Acquire skills to help the concerned individuals in identifying and solving environmental problems.

PSO6 Strive to attain harmony with Nature.

PHARMACEUTICAL ORGANIC CHEMISTRY –II

PSO1 write the structure, name and the type of isomerism of the organic compound

PSO2 write the reaction, name the reaction and orientation of reactions

PSO3 account for reactivity/stability of compounds,

PSO4 prepare organic compounds

PHYSICAL PHARMACEUTICS-I

PSO1 Understand various physicochemical properties of drug molecules in the designing the dosage forms

PSO2 Know the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations

PSO3 Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.

PHARMACEUTICAL MICROBIOLOGY

- PSO1 Understand methods of identification, cultivation and preservation of various microorganisms
PSO2 To understand the importance and implementation of sterilization in pharmaceutical processing and industry
PSO3 Learn sterility testing of pharmaceutical products.
PSO4 Carried out microbiological standardization of Pharmaceuticals.
PSO5 Understand the cell culture technology and its applications in pharmaceutical industries.

PHARMACEUTICAL ENGINEERING

- PSO1 To know various unit operations used in Pharmaceutical industries.
PSO2 To understand the material handling techniques.
PSO3 To perform various processes involved in pharmaceutical manufacturing process.
PSO4 To carry out various test to prevent environmental pollution.
PSO5 To appreciate and comprehend significance of plant lay out design for optimum use of resources.
PSO6 To appreciate the various preventive methods used for corrosion control in Pharmaceutical industries.

PHARMACEUTICAL ORGANIC CHEMISTRY –III

- PSO1 understand the methods of preparation and properties of organic compounds
PSO2 explain the stereo chemical aspects of organic compounds and stereo chemical reactions
PSO3 know the medicinal uses and other applications of organic compounds

MEDICINAL CHEMISTRY – I

- PSO1 understand the chemistry of drugs with respect to their pharmacological activity
PSO2. Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs
PSO3 know the Structural Activity Relationship (SAR) of different class of drugs
PSO4 write the chemical synthesis of some drugs

PHYSICAL PHARMACEUTICS-II

- PSO1 Understand various physicochemical properties of drug molecules in the designing the dosage forms
PSO2 Know the principles of chemical kinetics & to use them for stability testing and determination of expiry date of formulations
PSO3 Demonstrate use of physicochemical properties in the formulation development and evaluation of dosage forms.

PHARMACOLOGY-I

- PSO1 Understand the pharmacological actions of different categories of drugs
PSO2 Explain the mechanism of drug action at organ system/sub cellular/macromolecular levels.
PSO3 Apply the basic pharmacological knowledge in the prevention and treatment of various diseases.
PSO4 Observe the effect of drugs on animals by simulated experiments
PSO5 Appreciate correlation of pharmacology with other bio medical sciences

PHARMACOGNOSY AND PHYTOCHEMISTRY I

- PSO1 to know the techniques in the cultivation and production of crude drugs
PSO2 to know the crude drugs, their uses and chemical nature
PSO3 know the evaluation techniques for the herbal drugs
PSO4 to carry out the microscopic and morphological evaluation of crude drugs

MEDICINAL CHEMISTRY – II

- PSO1 Understand the chemistry of drugs with respect to their pharmacological activity

PSO2 Understand the drug metabolic pathways, adverse effect and therapeutic value of drugs

PSO3 Know the Structural Activity Relationship of different class of drugs

PSO4 Study the chemical synthesis of selected drugs

INDUSTRIAL PHARMACY I

PSO1 Know the various pharmaceutical dosage forms and their manufacturing techniques.

PSO2 Know various considerations in development of pharmaceutical dosage forms

PSO3 Formulate solid, liquid and semisolid dosage forms and evaluate them for their quality

PHARMACOLOGY-II

PSO1 Understand the mechanism of drug action and its relevance in the treatment of different diseases

PSO2 Demonstrate isolation of different organs/tissues from the laboratory animals by simulated experiments

PSO3 Demonstrate the various receptor actions using isolated tissue preparation

PSO4 Appreciate correlation of pharmacology with related medical sciences

PHARMACOGNOSY AND PHYTOCHEMISTRY II

PSO1 to know the modern extraction techniques, characterization and identification of the herbal drugs and phytoconstituents

PSO2 to understand the preparation and development of herbal formulation.

PSO3 to understand the herbal drug interactions

PSO4 to carryout isolation and identification of phytoconstituents

PHARMACEUTICAL JURISPRUDENCE

PSO1 The Pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals.

PSO2 Various Indian pharmaceutical Acts and Laws

PSO3 The regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals

PSO4 The code of ethics during the pharmaceutical practice

MEDICINAL CHEMISTRY – III

PSO1 Understand the importance of drug design and different techniques of drug design.

PSO2 Understand the chemistry of drugs with respect to their biological activity.

PSO3 Know the metabolism, adverse effects and therapeutic value of drugs.

PSO4 Know the importance of SAR of drugs.

PHARMACOLOGY-III

PSO1 understand the mechanism of drug action and its relevance in the treatment of different infectious diseases

PSO2 comprehend the principles of toxicology and treatment of various poisonings

PSO3 appreciate correlation of pharmacology with related medical sciences.

HERBAL DRUG TECHNOLOGY

PSO1 understand raw material as source of herbal drugs from cultivation to herbal drug product

PSO2 know the WHO and ICH guidelines for evaluation of herbal drugs

PSO3 know the herbal cosmetics, natural sweeteners, nutraceuticals

PSO4 appreciate patenting of herbal drugs, GMP .

BIOPHARMACEUTICS AND PHARMACOKINETICS

- PSO1 Understand the basic concepts in biopharmaceutics and pharmacokinetics and their significance.
- PSO2 Use of plasma drug concentration-time data to calculate the pharmacokinetic parameters to describe the kinetics of drug absorption, distribution, metabolism, excretion, elimination.
- PSO3 To understand the concepts of bioavailability and bioequivalence of drug products and their significance.
- PSO4 Understand various pharmacokinetic parameters, their significance & applications.

PHARMACEUTICAL BIOTECHNOLOGY

- PSO1 Understanding the importance of Immobilized enzymes in Pharmaceutical Industries
- PSO2 Genetic engineering applications in relation to production of pharmaceuticals
- PSO3 Importance of Monoclonal antibodies in Industries
- PSO4 Appreciate the use of microorganisms in fermentation technology

PHARMACEUTICAL QUALITY ASSURANCE

- PSO1 understand the cGMP aspects in a pharmaceutical industry
- PSO2 appreciate the importance of documentation
- PSO3 understand the scope of quality certifications applicable to pharmaceutical industries
- PSO4 understand the responsibilities of QA & QC departments

INSTRUMENTAL METHODS OF ANALYSIS

- PSO1 Understand the interaction of matter with electromagnetic radiations and its applications in drug analysis
- PSO2 Understand the chromatographic separation and analysis of drugs.
- PSO3 Perform quantitative & qualitative analysis of drugs using various analytical instruments.

INDUSTRIAL PHARMACYII

- PSO1 Know the process of pilot plant and scale up of pharmaceutical dosage forms
- PSO2 Understand the process of technology transfer from lab scale to commercial batch
- PSO3 Know different Laws and Acts that regulate pharmaceutical industry
- PSO4 Understand the approval process and regulatory requirements for drug products

PHARMACY PRACTICE

- PSO1 know various drug distribution methods in a hospital
- PSO2 appreciate the pharmacy stores management and inventory control
- PSO3. monitor drug therapy of patient through medication chart review and clinical review
- PSO4. obtain medication history interview and counsel the patients
- PSO5. identify drug related problems
- PSO6. detect and assess adverse drug reactions
- PSO7. interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states
- PSO8. know pharmaceutical care services
- PSO9. do patient counseling in community pharmacy;
- PSO10. appreciate the concept of Rational drug therapy.

NOVEL DRUG DELIVERY SYSTEMS

- PSO1 To understand various approaches for development of novel drug delivery systems.
- PSO2 To understand the criteria for selection of drugs and polymers for the development of Novel drug delivery systems, their formulation and evaluation

BIOSTATISTICS AND RESEARCH METHODOLOGY

PSO1 Know the operation of M.S. Excel, SPSS, R and MINITAB®, DoE (Design of Experiment)
PSO2 Know the various statistical techniques to solve statistical problems
PSO3 Appreciate statistical techniques in solving the problems.

SOCIAL AND PREVENTIVE PHARMACY

PSO1 Acquire high consciousness/realization of current issues related to health and pharmaceutical problems within the country and worldwide.
PSO2 Have a critical way of thinking based on current healthcare development.
PSO3 Evaluate alternative ways of solving problems related to health and pharmaceutical issues

PHARMA MARKETING MANAGEMENT

PSO1 The course aims to provide an understanding of marketing concepts and techniques and their applications in the pharmaceutical industry.

PHARMACEUTICAL REGULATORY SCIENCE

PSO1 Know about the process of drug discovery and development
PSO2 Know the regulatory authorities and agencies governing the manufacture and sale of pharmaceuticals
3. Know the regulatory approval process and their registration in Indian and international markets

PHARMACOVIGILANCE

PSO1 Why drug safety monitoring is important?
PSO2 History and development of pharmacovigilance
PSO3 National and international scenario of pharmacovigilance
PSO4 Dictionaries, coding and terminologies used in pharmacovigilance
PSO5 Detection of new adverse drug reactions and their assessment
PSO6 International standards for classification of diseases and drugs
PSO7 Adverse drug reaction reporting systems and communication in pharmacovigilance
PSO8 Methods to generate safety data during pre clinical, clinical and post approval phases of drugs' life cycle
PSO9 Drug safety evaluation in paediatrics, geriatrics, pregnancy and lactation
PSO10 Pharmacovigilance Program of India (PvPI) requirement for ADR reporting in India
PSO11 ICH guidelines for ICSR, PSUR, expedited reporting, pharmacovigilance planning
PSO12 CIOMS requirements for ADR reporting
PSO13 Writing case narratives of adverse events and their quality

QUALITY CONTROL AND STANDARDIZATION OF HERBALS

PSO1 know WHO guidelines for quality control of herbal drugs
PSO2 know Quality assurance in herbal drug industry
PSO3 know the regulatory approval process and their registration in Indian and international markets
PSO4 appreciate EU and ICH guidelines for quality control of herbal drugs

COMPUTER AIDED DRUG DESIGN

PSO1 Design and discovery of lead molecules
PSO2 The role of drug design in drug discovery process
PSO3 The concept of QSAR and docking

PSO4 Various strategies to develop new drug like molecules.

PSO5 The design of new drug molecules using molecular modeling software

CELL AND MOLECULAR BIOLOGY

PSO1 Summarize cell and molecular biology history.

PSO2 Summarize cellular functioning and composition.

PSO3 Describe the chemical foundations of cell biology.

PSO4 Summarize the DNA properties of cell biology.

PSO5 Describe protein structure and function.

PSO6 Describe cellular membrane structure and function.

PSO7 Describe basic molecular genetic mechanisms.

PSO8 Summarize the Cell Cycle

PHARMACOLOGICAL SCREENINGMETHODS

PSO1 Appreciate the applications of various commonly used laboratory animals.

PSO2 Appreciate and demonstrate the various screening methods used in preclinical research

PSO3 Appreciate and demonstrate the importance of biostatistics and research methodology

PSO4 Design and execute a research hypothesis independently

ADVANCED INSTRUMENTATION TECHNIQUES

PSO1 understand the advanced instruments used and its applications in drug analysis

PSO2 understand the chromatographic separation and analysis of drugs.

PSO3 understand the calibration of various analytical instruments

PSO4 know analysis of drugs using various analytical instruments

DIETARY SUPPLEMENTS AND NUTRACEUTICALS

PSO1 Understand the need of supplements by the different group of people to maintain healthy life.

PSO2 Understand the outcome of deficiencies in dietary supplements.

PSO3 Appreciate the components in dietary supplements and the application.

PSO4 Appreciate the regulatory and commercial aspects of dietary supplements including health claims

Master of Computer Application(MCA)-Programme Outcomes	
Sr.No.	Programme Outcomes
PO1	Computational Knowledge: Apply knowledge of computing fundamentals and domain knowledge.
PO2	Problem Analysis: Identify, formulate and solve complex computing problems reaching substantiated conclusions.
PO3	Development of Solutions: Design and evaluate solutions for complex computing problems with appropriate consideration
PO4	Investigations of complex Computing problems :Use research-based knowledge and research methods for analysis and interpretation of data, and synthesis of the information to provide valid conclusions
PO5	Modern Tool Usage :Create, identify and apply appropriate techniques, resources, and modern computing tools to complex computing activities.
PO6	Professional Ethics: Understand and commit to professional ethics and cyber regulations for professional computing practices.
PO7	Life-long Learning: Identify the need and have the ability, to engage in independent learning as a computing professional.
PO8	Project management and finance: Understand and apply computing, management principles to manage multidisciplinary projects
PO9	Communication Efficacy: Communicate effectively with the computing community, and with society.
PO10	Societal and Environmental Concern :Understand and assess societal, environmental, health, safety, legal, and cultural issues
PO11	Individual and Team Work: Function effectively in diverse teams and in multidisciplinary environments.
PO12	Innovation and Entrepreneurship: Identify a timely opportunity and using innovation to pursue that opportunity.

Program Specific Outcome (MCA)	
Sr.No.	PSOs
PSO1	Apply the knowledge of computer application to find solutions for real-life applications
PSO2	Ability to analyze, design, develop and maintain the software application with latest technologies
PSO3	Utilize skills and knowledge for computing practice with commitment on social, ethical, cyber and legal values
PSO4	Inculcate employability and entrepreneur skills among students who can develop customized solutions for small to large Enterprises.

Master of Computer Application (MCA) - First Year

Course Name:- Fundamental of Computers Subject Code- MCA11	
Sr. No	Course Learning Outcome:
CO1	Understand basic components and capabilities of a typical computing system
CO2	To impart the knowledge in the field of digital electronics
CO3	To understand the importance of the hardware interface
CO4	To understand the working of Multiprocessor systems

Course Name:- Python Programming Subject Code- MCA12	
Sr. No	Course Learning Outcome:
CO1	Understand principles of Python
CO2	Understand object oriented programming
CO3	Demonstrate file handling techniques
CO4	Understand how Python can be used for application development
CO5	Design Real life problems and think creatively about solution of them
CO6	Apply a solution clearly and accurately in a program using python

Course Name:- Discrete Mathematics Subject Code- MCA13	
Sr. No	Course Learning Outcome:
CO1	To develop logical thinking and its application to computer science (to emphasize the importance of proving statements correctly and de-emphasize the hand-waving approach towards correctness of an argument). The subject enhances one's ability to reason and ability to present a coherent and mathematically accurate argument. About 40% of the course time will be spent on logic and proofs and remaining 60% of the course time will be devoted to functions, relations, etc.

Course Name:- Database Management System Subject Code- MCA14	
Sr. No	Course Learning Outcome:
CO1	Learn and practice data modeling using the entity-relationship and developing database designs.
CO2	Understand the use of Structured Query Language (SQL) and learn SQL syntax.
CO3	Apply normalization techniques to normalize the database
CO4	Understand the needs of database processing and learn techniques for controlling the consequences of concurrent data access.

Course Name:- Principles of Management and Accounting Subject Code- MCA15	
Sr. No	Course Learning Outcome:
CO1	Students will get foundation of the process of management's four functions: planning, organizing, leading, and controlling.
CO2	Students will have effective decision making and controlling skills for working as a team leader.
CO3	Students can understand the nature and role of the principal financial statements.
CO4	Students can understand the basic concepts of costs in financial statements.

Course Name:- Linux Foundation Subject Code- MCA21	
Sr. No	Course Learning Outcome:
CO1	1. Learn the Linux Command Line interface and become a skilled user of this powerful operating system.
CO2	2. In this course, students will learn the principles of shell programming.
CO3	3. Learn how to write and build C programs within the Linux operating system.
CO4	4. Students will learn basics of Linux administration and socket programming with Linux.

Course Name:- Data Structures using Python Subject Code- MCA22	
Sr. No	Course Learning Outcome:
CO1	Select appropriate data structures as applied to specified problem definition.
CO2	Implement operations like searching, insertion, and deletion, traversing mechanism etc. on various data structures.
CO3	Students will be able to implement linear and Non-Linear data structures.
CO4	Implement appropriate sorting/searching technique for given problem.
CO5	Design advance data structure using Non-Linear data structure.
CO6	Be familiar with advanced data structures such as balanced search trees, hash tables, priority queues, Red-Black trees, Btrees.
CO7	Be familiar with some graph algorithms such as shortest path and minimum spanning tree
CO8	Determine and analyze the complexity of given Algorithms.

Course Name:- Statistics Computing Subject Code- MCA23	
Sr. No	Course Learning Outcome:
CO1	<p>The main objective of this course is to acquaint students with some basic concepts in statistics.</p> <p>They will be introduced to some elementary statistical methods of analysis of data and at the end of this course students are expected to be able to compute various measures of central tendencies, dispersion, Correlation and Regression analysis.</p>

Course Name:- Web Designing Technology Subject Code- MCA24	
Sr. No	Course Learning Outcome:
CO1	Understand the basic structure of web designing technology.
CO2	Apply the concepts of web technology in designing static and dynamic.
CO3	Select and apply markup languages for processing, identifying, and presenting of information in web pages.
CO4	Design interactive web pages using scripting technology like JavaScript, AJAX and XML.

Course Name:- Software Engineering Subject Code- MCA25	
Sr. No	Course Learning Outcome:
CO1	Students will get foundation of software engineering, various process models and can apply the new models in development process.
CO2	Students will have effective communication and interaction skills for requirement engineering tasks.
CO3	Students can apply design principles for various types of software and designing object oriented software using UML tools.
CO4	Students can implement testing strategies thoroughly using testing tools.
CO5	Students will understand the need of lifelong learning and adapt to new software engineering concepts.

MCA-II SEM-I

Course Name:- Java Programming Subject Code- IT32	
Sr. No	Course Learning Outcome:
CO1	Apply the core principles of the Object oriented programming using Java Language
CO2	Use visual tools to produce well designed, effective applications and applets
CO3	Implement multi tasking using multi threading concept

Course Name:- Computer Networks Subject Code- IT33	
Sr. No	Course Learning Outcome:
CO1	Build an understanding of the fundamental concepts of computer networking.
CO2	learning about computer network organization and implementation, obtaining a theoretical understanding of data communication
CO3	Gaining practical experience in installation, monitoring, and troubleshooting of LAN systems

Course Name:- Management Support System Subject Code- BM31	
Sr. No	Course Learning Outcome:
CO1	Provide the knowledge of contemporary issues related to the field of managing information systems,
CO2	Introduction to MIS Database Management for Information system Introduction to Telecommunications Building E-Commerce and E-business E-Commerce Security
CO3	Develop knowledge and skills required to work effectively in a profession,

Course Name:- Probability and Combinatorics Subject Code- MT31	
Sr. No	Course Learning Outcome:
CO1	Use logical notation to define and reason about fundamental mathematical concepts such as sets, relations, functions, and integers
CO2	Calculate numbers of possible outcomes of permutations and combinations
CO3	Express and apply principle of inclusion and exclusion
CO4	Calculate probabilities and discrete distributions for random & continuous variables
CO5	Compute different generating functions using mean and variance

Course Name:- Communication Skill –II Subject Code- CS31	
Sr. No	Course Learning Outcome:
CO1	Build self confidence when speaking to an audience

CO2	Prepare a speech that is clear and easy to follow
CO3	Exhibit behaviors and mannerisms associated with successful presentations

Course Name:- Software Engineering Subject Code- IT31	
Sr. No	Course Learning Outcome:
CO1	Understand requirements analysis, system design and SDLC methodologies
CO2	Creation of system interfaces and discuss various maintenance tools
CO3	Use of CASE tools in practice and new generation SDLC methodologies

SEM-II

Course Name:- Advance Java Subject Code- IT41	
Sr. No	Course Learning Outcome:
CO1	write programs for resource sharing using socket programming and RMI
CO2	Design and Develop server side applications with database Connectivity
CO3	Design and develop applications using servlets , JSP and spring-hibernate

Course Name:- Data Mining Subject Code- IT42	
Sr. No	Course Learning Outcome:
CO1	Understand the concept related to data warehouse architecture
CO2	Compare Online Analytical Processing (OLAP) and Online Analytical Transaction Processing(OLTP) tools
CO3	Discuss the techniques of clustering, classification, association finding to real world data
CO4	Comprehend to design various algorithms based on data warehousing and mining

Course Name:- Python Programming Subject Code- IT4E	
Sr. No	Course Learning Outcome:
CO1	Understand the basic concepts of Python programming language
CO2	Understand the object oriented concept in Python programming language
CO3	Apply the programming & object oriented technique to write different programs
CO4	Create an application based on real life problems

Course Name:- Organizational Behavior Subject Code- BM41	
Sr. No	Course Learning Outcome:
CO1	Understand the basic concepts of management
CO2	Demonstrate the use of management functions in the organization
CO3	Understanding and analyzing human behavior in the work place, from individual, group and organization perspectives

Course Name:- Human Resource Management Subject Code- BM4E	
Sr. No	Course Learning Outcome:
CO1	Infer the concept and framework of Human Resource Management
CO2	Understand the concepts related to HR Procurement including Recruitment and selection, HRP and training and development
CO3	Integrate the importance of Performance Appraisal and compensation and its correlation with employee retention

MCA-III

SEM-I

Course Name:- Artificial Intelligence and Applications Subject Code- IT51	
Sr. No	Course Learning Outcome:
CO1	present an overview of artificial intelligence (AI) principles and approaches
CO2	Develop a basic understanding of the building blocks of AI as presented in terms of intelligent agents
CO3	Search, Knowledge representation, inference, logic, and learning.

Course Name:- Advance Web Technology Subject Code- IT52	
Sr. No	Course Learning Outcome:
CO1	Demonstrate dynamic webpage development
CO2	Design a well formed / valid XML document
CO3	Create a server side ASP application using database

Course Name:- Cryptography & Network security Subject Code- IT5E	
Sr. No	Course Learning Outcome:
CO1	To develop basic skills of secure network architecture
CO2	Understand the theory behind the security of different cryptographic algorithms.
CO3	To describe common network vulnerabilities and attacks, defense mechanisms against network attacks, and cryptographic protection mechanisms.

Course Name:- Management Information System Subject Code- BM5E	
Sr. No	Course Learning Outcome:
CO1	Understand the scope & importance of Management Information Systems
CO2	Understand the concept and applications of DBMS, Systems Engineering Analysis and Design
CO3	Understand & Apply Decision Support Systems Models with Digital Firm

Course Name:- Optimization Techniques Subject Code- MT51	
Sr. No	Course Learning Outcome:
CO1	Apply Maximizing benefit/minimizing product costs in various manufacturing and construction processes using graphical method
CO2	Understand and apply queuing theory and replacement theory and inventory theory in business applications
CO3	Compute Critical path and network analysis using project Evaluation and Review techniques

CO4	Calculate & solve sequencing problem for one and two machine
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SEM-II

Course Name:- Project Work Subject Code- IT61	
Sr. No	Course Learning Outcome:
CO1	Understand specific functional areas in IT sector like development, testing, database, networking etc.
CO2	Gain practical insights of selected technology
CO3	Experience the actual work environment in an IT organization
CO4	Explore career opportunities in the IT sector