

## B Pharm Programme Version 1 PO - (Programme Outcome)

#### B.Pharmacy - Pharmacy Graduates will be able to

#### PO1: Source of Drugs

Understanding the modern extraction techniques, characterization and identification of the herbal drugs and phytoconstituents along with preparation and development of herbal formulation

#### PO2: Basic Knowledge - Biology

Understanding and applying the basic knowledge of human anatomy, physiology and pathophysiology of diseases. Understanding the pharmacological actions of different categories of drugs and applying the basic pharmacological knowledge in the prevention and treatment of various diseases.

#### PO3: Technological Knowledge & Pharmaceutical Engineering

Understanding the fundamentals of analytical chemistry and to develop the analytical skills, chromatographic separations and analysis of drugs. Understanding the basic knowledge on Pharmaceutical Engineering and development of novel drug delivery skills

#### PO4: Formulation and Dispensing

Understanding the basic knowledge on the preparative pharmacy, development of novel drug delivery system and professional way of handling the prescription and applying pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals. Understanding the importance of physicochemical properties of drug molecules in designing the dosage forms.

#### PO5: Quality Control and Regulatory

Quality control and regulations of pharmaceutical products in different dosage forms and analytical techniques

#### PO6: Drug action and Toxicological Knowledge

Understanding the importance of molecular levels of various chemical processes associated with living cells and metabolism of nutrients in the physiological and pathological condition.



#### PO7: Business and marketing / entrepreneurship

To apply laws in pharmaceutical legislations and their implications in the development and marketing of pharmaceuticals. Understanding the various drug distribution methods in a hospital, monitor drug therapy of patient through medication chart review and conducting community awareness program. Communication skills and ethical aspects in community pharmacy with patient counseling.

#### PO8: Research Promotions and leadership

To practice, develop skills in industrial projects and clinical trials. Ethical values in research and societal commitment.

#### PO9: Drug Design and Synthesis of Drugs

Understanding the structure, chemistry of medicinal drugs with their pharmacological activity and to know the SAR with chemical synthesis of drugs.



## B Pharm Programme Version 2

#### PSO - (Programme Specific Outcome)

- **PSO 1.** Understand the pharmacological and toxicological actions of synthetic and phytomolecules in the diagnosis, prevention, and treatment of various diseases.
- **PSO 2.** To emphasize the significance of quality control and assurance in drug design and formulation development.
- **PSO 3**. Implementing expertise in medicinal chemistry, preparative pharmacy, analytical skills, and pharmaceutical engineering in coming up with novel dosage forms as well as drug delivery skills to cater the needs of industry.
- **PSO 4**. Utilize the knowledge in drug laws for entrepreneurship development and marketing pertaining to drug distribution of all scheduled drugs and cosmetics.

#### PO - (Programme Outcome)

- 1. Apply the basic knowledge gained in chemistry, anatomy, physiology, pathophysiology, biochemistry and computer technology in pharmacy profession.
- 2. Develop required skills in formulation and dispensing in catering to patient needs as well as overcoming potential incompatibilities in formulations.
- 3. Ability to demonstrate and communicate ethical values with commitment to societal welfare.
- 4. To enhance the entrepreneurial capabilities for value added services and systems relating to community pharmacy and clinical trial setups.
- 5. To develop a sense of professional responsibility to be a medication dispenser and be able to master, generate, interpret and disseminate the knowledge of pharmacy practice.
- 6. Proper utility and regulation of marketed drugs and pharmaceuticals in patient care.





# Pharm D Programme Version – 1 PO - (Programme Outcomes)

- PO1: Understanding the modern extraction techniques, characterization and identification of the herbal drugs and phytoconstituents along with preparation and development of herbal formulation.
- PO2: Understanding the fundamentals of analytical chemistry and to develop the analytical skills, chromatographic separations and analysis of drugs. Understanding the basic knowledge on pharmaceutical engineering and development of novel drug delivery skills.
- PO3: Understanding the importance of molecular levels of various chemical processes associated with living cells and metabolism of nutrients in the physiological and pathological condition.
- PO4: Understanding the structure, chemistry of medicinal drugs with their pharmacological activity and to know the SAR with chemical synthesis of drugs.
- PO5: Understanding the basic knowledge on the preparative pharmacy, development of
  novel drug delivery system and professional way of handling the prescription and
  applying pharmaceutical legislations and their implications in the development and
  marketing of pharmaceuticals. Understanding the importance of physicochemical
  properties of drug molecules in designing the dosage forms.
- PO6: Performing pharmaceutical care services such as drug distribution, drug dispensing, inventory control, patient counseling and health screening for better therapeutic outcomes. Analyzing the methods for qualitative and quantitative analysis of various physiological and biochemical parameters and to interpret the results in various disease conditions
- PO7: To apply laws in pharmaceutical legislations and their implications in the
  development and marketing of pharmaceuticals. Understanding the various drug
  distribution methods in a hospital, monitor drug therapy of patient through medication
  chart review and conducting community awareness program. Communication skills and
  ethical aspects in community pharmacy with patient counseling.
- PO8: Modifying prescriptions with respect to a patient's pharmacotherapy and dose
  adjustments at hospital, community pharmacist services. Monitoring, reporting and
  managing adverse drug reactions to avoid undesirable effects. Providing patient
  counseling services for a safe and effective drug therapy and poison information services.
  Ability to demonstrate appropriate ethical and professional behaviour, and comply with
  all federal, state, and local laws related to pharmacy practice.



 PO9: Performing drug utilization reviews and pharmacoeconomics analysis for better therapeutic effectiveness and for reducing health care costs. Pursue research in clinical pharmacy related areas to improve health outcomes. Preparation of various dosage forms and to identify and overcome the incompatibilities in formulations





# Pharm D Programme Version - 2 PSO - (Programme Specific Outcomes)

**PSO 1.** Acquire knowledge in the field of synthetic and natural sources of drugs as well as their formulation and evaluation, including their regulatory requirements.

**PSO 2.** Using the fundamentals in physiology, anatomy and pathology to understand and explain the pharmacological and toxicological aspects of various drugs and increase their creativity in developing novel clinical research initiatives in these areas.

**PSO 3.** Applying their expertise to recognize possible adverse drug interactions and counsel the patients in complying with the prescribed treatment regimen.

**PSO 4.** Graduates can comprehend the role of pharmaceutical care, medication management, pharmacoeconomics, pharmacoeconomics, and the concepts of hospital, community and clinical pharmacy for serving the community.

#### PO - (Programme Outcome)

- 1. Apply the basic knowledge gained in chemistry, anatomy, physiology, pathophysiology, biochemistry and computer technology in pharmacy profession.
- 2. Develop required skills in formulation and dispensing in catering to patient needs as well as overcoming potential incompatibilities in formulations.
- 3. Ability to demonstrate and communicate ethical values with commitment to societal welfare.
- 4. To enhance the entrepreneurial capabilities for value added services and systems relating to community pharmacy and clinical trial setups.
- 5. To develop a sense of professional responsibility to be a medication dispenser and be able to master, generate, interpret and disseminate the knowledge of pharmacy practice.
- 6. Proper utility and regulation of marketed drugs and pharmaceuticals in patient care.





### Post graduation - M. Pharm Version 1 PO - (Programme Outcome)

M. Pharm – graduates will be able to

PO1: Graduates will gain in depth knowledge about the Pharmaceutical sciences and its advancement.

**PO2**: Graduates will be able to apply molecular techniques, bioanalytical methods in drug development and carry out preclinical testing as per regulatory requirements

**PO3**: Graduates can design and participate in clinical research by following regulatory ethical guidelines with more emphasize on pharmacy practice.

**PO4**: Create, select and apply appropriate resources to predict, model and understand the behaviour of cellular systems activities and limitations.

PO5: Interpretation of biological variations related to drug action and application of pharmacometrics and genetic variations relating to therapeutics and better clinical outcome.

**PO6:** Graduates will be able to follow pharmacopoeial standards and international guidelines to emphasize the significance of quality control and assurance in drug analysis and formulation development

**PO7**: Develop required skills in dispensing in catering the patient needs as well as overcoming potential incompatibilities in formulations

**PO8**: Impart basic knowledge and skills to practice quality use of medicines, in clinical practice, analysis of risk and benefits, and identify medication related problems.





### Post graduation - M. Pharm Version 2 PO - (Programme Outcome)

M. Pharm – graduates will be able to

PO1: Graduates will gain in depth knowledge about the drug action, drug delivery and advancement in analysis.

**PO2**: Graduates will be able to apply molecular techniques, bioanalytical methods in new drug designing, formulation, and carry out preclinical testing as per regulatory requirements

**PO3**: Graduates can design and participate in clinical research by following regulatory ethical guidelines and pharmacovigilance of target drugs with more emphasize on pharmacoutical care.

**PO4**: Create, select and apply appropriate resources such as modern, molecular and IT tools to predict, model and understand the behaviour of cellular systems activities and limitations.

**PO5:** Interpretation of biological variations related to drug action and application of pharmacometrics and genetic variations relating to therapeutics, clinical trial, pharmacy practice and pharmacoeconomics.

**PO6:** Graduates will be able to follow pharmacopoeial standards and international guidelines to emphasize the significance of quality control and assurance in drug analysis and formulation development

**PO7**: Develop required skills in formulation and dispensing in catering to patient needs as well as overcoming potential incompatibilities in formulations

**PO8**: Impart basic knowledge and skills to practice quality use of medicines, in clinical practice, analysis of risk and benefits, and identify medication related problems.

