

# GIET SCHOOL OF PHARMACY

## PROGRAM OBJECTIVES

### B.Pharmacy

#### Program Educational Objectives (PEO's)

**PEO1:** To provide graduates with profound knowledge in various fields of Pharmaceutical sciences according to the needs of Pharmaceutical industry, community and Hospital Pharmacy.

**PEO2:** Graduates will be able to acquire theoretical and practical concepts in delivering the quality pharmaceutical care to the general public.

**PEO3:** Graduates will be prepared to become better communicators and leaders of Pharma and health sectors.

**PEO4:** Graduates will be equipped with integrity and ethical values and update their knowledge by organizing/attending the workshops, seminars and conferences at National and International level.

#### Program Specific Outcomes (PSO's)

**PSO-1:** Students will be able to provide cost effective solutions for the maladies that exists in the health sector.

**PSO-2:** Our graduates will able to apply the pharmaceutical concept in different research ventures.

#### Program's Objectives (PO's)

- I. Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioural, social, and administrative pharmacy sciences; and manufacturing practices.
- II. 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.
- III. 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.

- IV. Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.
- V. 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 wellbeing.
- VI. 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).
- VII. Pharmaceutical Ethics: Honour 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.
- VIII. 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.
- IX. 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.
- X. 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.
- XI. 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.

## **M. Pharmacy**

### **PROGRAMME SPECIFIC OUTCOMES**

#### **MASTER OF PHARMACY (PHARMACEUTICS)**

- **PSO 1:** Academic Excellence: To acquire in-depth knowledge and adequate scientific information regarding basic principles of Pharmaceutics and its application in design of dosage form.

- **PSO 2: Fundamental Skill:** To produce research associates with strong fundamental concept and high technical competence in Novel drug delivery system to serve the need of F&D and Production department of pharmaceutical industry.
- **PSO 3: Presentation Skills:** The postgraduate student should able to write, interpret and communicate effectively and scientifically to accomplish the requirements of Regulatory affairs department.

#### **MASTER OF PHARMACY (QUALITY ASSURANCE)**

- **PSO 1: Academic Excellence:** To attain thorough knowledge and ample scientific information regarding basic principles of Pharmaceutical Analysis and its application in built up the quality in pharmaceutical product.
- **PSO 2: Fundamental Skill:** To create analyst with strong basic concept and high technical competence in sophisticated analytical instrument handling and troubleshooting to serve the need of Analytical development laboratory.
- **PSO 3: Presentation Skills:** The postgraduate student should able to write, interpret and communicate effectively and scientifically to fulfill the desires of Validation and Quality Affairs department.

#### **MASTER OF PHARMACY (PHARMACOLOGY)**

- **PO 1: Knowledge:** Students will have strong theoretical background along with necessary skills in pharmaceutical sciences and the ability to apply them in research and development.
- **PO 2: Core Competence:** Students will be competent in the domain of specialization viz., Quality Assurance, Biological Evaluations, Regulatory Affairs, GMP, Research Methodology and Statistical Evaluation of data as per the requirement of pharmaceutical industry.
- **PO 3: Breadth:** Trained students will have practical efficiency in analytical techniques in drug and formulation development and in clinical research, new drug application and application of quality assurance in all aspects of drug research so that they are able to extend this knowledge to create new products for the benefit of life.
- **PO 4: Preparation:** Students will be prepared to excel in pharmaceutical research and also to succeed in pharmaceutical industry or academics through innovative teaching methodologies that stimulates students to self-learning and further their knowledge.
- **PO 5: Professionalism:** Students will be inculcated with professional values, effective research communication skills, prioritizing problems and solutions and an ability to view pharmaceutical issues in broader context.
- **PO 6: Evaluation:** The ability to evaluate important aspects of the matter they have studied, weigh the pros and cons of the ideology they adhere to in the field of pharmaceutical sciences.

#### **MASTER OF PHARMACY (PHARMACEUTICAL TECHNOLOGY)**

After successful completion of the program the graduate will be able to

- **PSO1:** Apply the principles of drug delivery system in the development of eco-friendly, efficacious dosage forms.

- PSO2: Develop an ability to undertake multidisciplinary tasks in the pharmaceutical quality system.
- PSO3: Analyze, criticize, organize, improvise and manage documents, data and information related to pharmaceutical production process.
- PSO4: Imbibe ethical practices and moral values in personal and professional endeavours.
- PSO5: Execute team based research to implement innovative solutions in the area of formulation, quality assurance and technology transfer.
- PSO6: Apply problem-based learning approach and analytical thinking in academic and professional life.
- PSO7: Validate the knowledge and skills gained through education to gain recognition in Pharmaceutical society and related field.

## Pharm D

### Program's Objectives (PO's)

- **PO1:** Life Sciences Knowledge: Impart fundamental knowledge of physiology, anatomy, formulation science, and applied biochemistry, Chemistry of organic and inorganic compounds as per the monographs
- **PO2:** Pathology and Pharmacology knowledge: Impart a thorough knowledge of relevant aspects of pathophysiological mechanisms, application of microbiology in pharmacy field, medical uses of natural drugs, and Pharmacological aspects of drugs.
- **PO3:** Community Pharmacy knowledge: To improve skills such as dispensing of drugs, ensure safe medication usage, patient counseling and improve patient care in community pharmacy set up.
- **PO4:** Clinical Pharmacist Knowledge: To enhance practical clinical discussions, attending ward rounds, follow-up progress of patients, case presentation at discharge are imbibed through hospital postings.
- **PO5:** Environment and sustainability: To understand the instrumental techniques applied in Good Laboratory Practice and following ICH-GCP guidelines, total quality management, quality review and documentation and study of regulatory bodies such as Drugs and Cosmetics Act, CDSCO guidelines, pertaining to regulatory environment.

- **PO6:** Design/Development of solutions: To study the modern concept of rational drug design such as Quantitative Structure Activity Relationship, Computer Aided Drug Design and concept of antisense molecules.
- **PO7:** Conduct investigations of complex problems: To understand biopharmaceutical principles and pharmacokinetic principles through different compartment models, multiple dosage regimens, non-linear pharmacokinetics, and assessment of bioavailability and bioequivalence.
- **PO8:** Toxicology Knowledge: To understand the toxicological aspects of individual class of xenobiotics such as pesticides, opiates, NSAIDs, Caustics, radiation, heavy metals, plant, food poisonings, snake bites, and envenomations.
- **PO9:** Ethics: To understand the clinical aspects of drug development, such as phases, ethical issues, and roles and responsibilities of clinical trial personnel, design of clinical study documents, data management and safety monitoring in clinical trials.
- **PO10:** Problem analysis and learning: In house scientific and social poster competition, Case study presentations, prescription auditing, and contribution to drug information centre.
- **PO11:** The Clinical Pharmacist and society – Participation in hospital camps, disease awareness programs will inculcate the social responsibility of the clinical pharmacists.

## **PROGRAMME SPECIFIC OUTCOMES**

After successful completion of the program the graduate will be able to:

- **PSO1:** Provide pharmaceutical care including, but not limited to, Medication Therapy Management (MTM), vaccinations and drug therapy monitoring in all practice areas (e.g., inpatient, ambulatory and community practice).
- **PSO2:** Provide high quality, evidence-based, patient-centered care in cooperation with patients, prescribers and members of the inter-professional health care team.
- **PSO3:** Demonstrate mastery and application of core knowledge and skills in relation to the evolving biomedical, clinical, epidemiological and social-behavioural sciences. This includes competency in areas supporting high quality pharmacy practice (e.g., pharmaceuticals, medicinal chemistry, pharmacokinetics, pharmacodynamics, pharmacology, pathophysiology, pharmaco-therapeutics, and pharmaceutical care).

- **PSO4:** Demonstrate the ability to use critical analysis and problem solving skills for the provision of high quality, evidence-based pharmacy services and patient care.
- **PSO5:** Locate, appraise and assimilate evidence from scientific studies to enhance the quality of care and services. Effectively utilize information, informatics and technology to optimize learning and patient care.
- **PSO6:** Effectively educate families, patients, caregivers and other HCPs.
- **PSO7:** Demonstrate exemplary professional, ethical and legal behaviour, complying with all state and local laws and regulations related to pharmacy practice. Contribute to the training of pharmacy students, future colleagues, and the growth and success of the profession.
- **PSO8:** Demonstrate the respect for patient privacy and autonomy, as well as sensitivity and responsiveness to diverse patient populations and demonstrate a high degree of integrity, truthfulness and fairness.
- **PSO9 :** Effectively manage medication use systems, Prioritize patient safety and public health, Participate in identifying system errors.