**Institute of Pharmacy**

**Program Outcomes**

**M. Pharm (Pharmaceutical Chemistry)**

**PO-1:** **Advanced Pharmaceutical Chemistry Knowledge**

Demonstrate in-depth knowledge of advanced concepts in pharmaceutical chemistry, including organic synthesis, medicinal chemistry, and analytical techniques.

**PO-2:** **Research and Problem-Solving Skills**

Develop research aptitude and problem-solving skills by designing, conducting, and analyzing experiments in drug discovery, development, and quality control.

**PO-3:** **Modern Analytical Techniques**

Apply modern analytical tools like HPLC, GC, NMR, and Mass Spectrometry for drug characterization, stability studies, and impurity profiling.

**PO-4:** **Drug Design and Development**

Utilize computational chemistry, molecular modeling, and QSAR studies for rational drug design and lead optimization.

**PO-5:** **Regulatory and Quality Compliance**

Understand global regulatory guidelines (FDA, ICH, WHO) and ensure compliance in pharmaceutical research, development, and manufacturing.

**PO-6: Synthesis and Characterization of Bioactive Molecules**

Develop expertise in synthesizing, purifying, and characterizing new chemical entities (NCEs) with potential pharmacological activity.

**PO-7: Pharmaceutical Formulation and Development**

Collaborate with formulation scientists to develop stable and effective pharmaceutical dosage forms.

**PO-8: Interdisciplinary and Industrial Applications**

Integrate knowledge from pharmacology, biotechnology, and material sciences to contribute to interdisciplinary drug development projects.

**PO-9: Ethical and Professional Responsibility**

Uphold professional ethics, intellectual property rights (IPR), and good laboratory practices (GLP) in pharmaceutical research and industry.

**PO-10: Communication and Scientific Writing**

Develop effective communication and technical writing skills for publishing research articles, patents, and regulatory submissions.

**PO-11: Entrepreneurship and Innovation**

Foster innovation and entrepreneurship in the pharmaceutical sector through the development of novel drugs, delivery systems, or analytical methodologies.

**PO-12: Lifelong Learning and Career Development**

Engage in continuous learning, skill development, and professional growth to adapt to evolving technologies in pharmaceutical sciences.