

## **Program Outcomes:**

B. Pharm Program: 4 years course

D. Pharm Program: 2 years course

### **Patient counseling and Pharmaceutical Care**

- Provide high quality, evidence-based, patient-centered care in cooperation with patients, prescribers and members of the interprofessional health care team
- Promote health and wellness and disease prevention
- 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)
- Provide culturally competent pharmaceutical care and demonstrate cultural competence in all interactions
- Appropriately address patient-specific and population-specific needs

### **Medical and Science Foundations**

- Demonstrate mastery and application of core knowledge and skills in relation to the evolving biomedical, clinical, epidemiological and social-behavioral sciences. This includes competency in areas supporting high quality pharmacy practice (e.g., pharmaceuticals, medicinal chemistry, pharmacokinetics, pharmacodynamics, pharmacology, pathophysiology, pharmacotherapeutics, and pharmaceutical care)

- Demonstrate the ability to use critical analysis and problem solving skills for the provision of high quality, evidence-based pharmacy services and patient care

### **Practice Based Learning and Improvement**

- Evaluate practice and care, and promote continuous improvement in one's own patient care and pharmacy services
- Demonstrate self-calibration skills and a commitment to the lifelong learning needed to provide high quality care
- 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

### **Interpersonal and Communication Skills**

- Demonstrate effective interpersonal written and verbal skills, adapt to socioeconomic and cultural factors as well as situational applications
- Effectively educate families, patients, caregivers and other HCPs
- Function effectively in a team
- Act in a consultative position for other members of the health care team, regulatory agencies and policy makers

### **Professionalism**

- Demonstrate exemplary professional, ethical and legal behaviors, complying with all federal, 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
- Demonstrate the respect for patient privacy and autonomy, as well as sensitivity and responsiveness to diverse patient populations
- Demonstrate a high degree of integrity, truthfulness and fairness
- Demonstrate initiative, reliability and follow-through in fulfilling commitments

### **Systems Based Practice and Management**

- Demonstrate awareness and responsiveness to the system of health care, effectively utilizing systems of care to provide cost-effective, optimal care
- Incorporate cost awareness and risk-benefit analysis in patient and/or population-based care; this includes applying pharmacoeconomic principles to health outcomes and patient care
- Effectively manage medication use systems
- Prioritize patient safety and public health
- Advocate for quality patient care and optimal health care
- Work on interprofessional teams to enhance quality and safety
- Participate in identifying system errors

Subject code	Course title	Course outcome
111	Pharmaceutics-I	This subject helps in study about different types of dosage form and its evaluation.
112	Pharmaceutical Chemistry-I(Inorganic)	The students will be well acquainted with the principle of limit tests, different classes of inorganic pharmaceuticals and their analysis. The practical paper deals with identification of different anions, cations and different inorganic pharmaceuticals.
113	Biochemistry	The students learn about the chemistry and biological importance of biological macromolecules. And in the practical paper they get hands on knowledge on qualitative and quantitative estimation of these. This knowledge is helpful for them in learning about pharmacology, medicinal chemistry and Pharmacognosy.
114	Anatomy and Physiology-I	Subject teaches them about the different systems in our body. This knowledge helps them in subjects like physiology, pharmacology and medicinal chemistry.
115	Pharmacognosy and	This subject helps in study about crude drugs in detail

	Phytochemistry-I	which are obtained from plant, animal, mineral and marine sources.
116	Communicating Skills and soft skill development	This subjects helps in students in English language because all subjects in Pharmacy are studied in English.
121	Pharmaceutics-II	Students will Learn about different types of pharmaceutical formulations and preparation and dispensing of them.
122	Pharmaceutical Chemistry-II (Organic)	The students learn about heterocyclic compounds, and electrophillic and nucleophillic reactions, which helps them in acquiring further knowledge in biochemistry, pharmacology and medicinal chemistry.
123	Anatomy and Physiology-II	Subject teaches them about the different systems in our body. This knowledge helps them in subjects like physiology, pharmacology and medicinal chemistry.
124	Pharmaceutical Analysis-I	The students will learn with the principle of different types of titrimetric and gravimetric analysis. He /she will also be well versed in sampling, analysis of data, ready to perform different types of titrimetric and gravimetric analysis.
125	Pharmacognosy and Phytochemistry II	Student will learn about the knowledge of cultivation, morphology, microscopy, adulteration, chemical composition and marketing processing of crude drugs.

126	Computer Application in Pharmacy and Statics	Student will learn relationship between ethics in clinical trials; computational tools etc. and their relevance to today's society are introduced to the student. It enables us to prepare our students to become more ethical pharmaceutical technologists.
231	Pharmaceutics-III	The students learn about different unit operations and process controls that are employed in the pharmaceutical industry. It prepares them to work in a pharmaceutical manufacturing unit.
232	Pharmaceutical Chemistry-III	The students learn about heterocyclic compounds, and electrophillic and nucleophillic reactions, which helps them in acquiring further knowledge in biochemistry, pharmacology and medicinal chemistry.
233	Pharmacology-I	The pharmacology of different endocrine and gastrointestinal systems is introduced to the students thereby helping them to correlate between diseases and their cures.
234	Pathophysiology and Clinical Biochemistry	Student will learn about different diseases in detail and their laboratory tests.
235	Pharmaceutical Microbiology I	Students will learn about detail study of microorganism and fermentation technology for the production of Antibiotics.
236	Pharmaceutical	Detail study about laws in Pharmacy practice in India.

	Jurisprudence	
241	<b>Pharmaceutics-IV</b>	The students learn about different unit operations and process controls that are employed in the pharmaceutical industry. It prepares them to work in a pharmaceutical manufacturing unit.
242	<b>Pharmaceutical chemistry-IV</b>	Students will learn about synthesis, chemical reactions and uses of Hetero cyclic compounds.
243	Pharmacology II	Students will learn detail study about drugs acting on CNS, ANS and cardio vascular system
244	<b>Pharmaceutical Analysis-II</b>	Students will learn about instrumental analysis techniques such as Polarimeter, conductometry etc.
245	<b>Pharmaceutical Microbiology II</b>	Students will learn about immunology and sterilization in detail.
246	Pharmaceutical Management	The subject imparts management and leadership skills in the students
351	<b>Pharmaceutics-V</b>	Students will learn about particle size and liquid dosage form in detail.
352	<b>Pharmaceutical Medicinal Chemistry-I</b>	Student will learn about detail study of drug metabolism, hormones and steroids.
353	<b>Pharmacognosy and Phytochemistry-III</b>	Student will study about Extraction and isolation techniques of crude drugs and also learn about volatile oil and resins.
354	<b>Pharmacology-III</b>	Student will study about drugs acting on GIT and CNS

		system.
355	Clinical Pharmacy	Students will learn about clinical trials and clinical Pharmacy.
356	<b>Intellectual Property Right and Regulatory Affairs</b>	Students will learn about patent and regulatory action in Pharma industries
361	<b>Pharmaceutics-VI</b>	Student will learn about drug solubility, Rheology and kinetics and drug stability.
362	<b>Pharmaceutical Medicinal Chemistry- II</b>	Detail study about synthesis, reactions, SAR of antibiotic and chemotherapeutic agents.
363	<b>Pharmacognosy and Phytochemistry-IV</b>	Detail study about alkaloid , tannin and extraction and isolation of some important herbal constituents.
364	<b>Pharmacology-IV</b>	Detail study about drugs acting as microbes, CNS and immune system.
365	<b>Pharmaceutical Analysis-III</b>	Detail study about Extraction and Chromatography.
366	<b>Clinical Pharmacotherapeutics- I</b>	Detail study of disease related to CNS, CVS, respiratory and muscular system.



471	<b>Pharmaceutics</b>	Detail study of Dosage form
472	<b>Pharmaceutical Medicinal Chemistry- III</b>	Study of chemistry of ANS , CVS and steroidal drugs.
473	<b>Pharmaceutical Analysis-IV</b>	Study of IR, MASS,UV and NMR Spectroscopy
474	<b>Clinical Pharmacotherapeutics- II</b>	<b>Etiopathogenesis and pharmacotherapy of diseases/disorders of various system of our body</b>
475	<b>Pharmacognosy and Phytochemistry-V</b>	Detail study of Alkaloid, extraction and isolation of some important herbal constituent
476	<b>Biopharmaceutics and Pharmacokinetics</b>	Detail kinetic study of drugs
481	Industrial pharmacognosy	Student will learn about extraction and isolation techniques of herbal drugs.
482	Quality Assurance	Detail study about evaluation and assay of drugs.
483	Chemistry of Natural Product	Detail study of structure elucidation and characterization of natural molecules.
484	Pharm Biotechnology	Detail study of biological products.
485	Pharmaceutics VIII	Detail study of novel drug delivery system.

