Program Schemes for B. Pharmacy (BP205)

Cluster: Health & Allied Sciences

Institute: University Institute of Pharma Sciences and Research

Department: Pharmacy

Type of Program: UG

SEMESTER-1		
Course Name	**Course Category**	**Credits**
Basics of Python Programming for Pharmaceutical Sciences	Major Core	2
General Pharmacy	Major Core	3
Healthcare Psychology and Communication Skills	Major Core	1
Human Anatomy, Physiology and Pathophysiology I	Major Core	4
Introduction to Pharmacognosy	Major Core	3
Pharmaceutical Inorganic and Analytical Chemistry	Major Core	3
General Pharmacy-Lab	Major Core	1
Healthcare Psychology and Communication Skills-Lab	Major Core	1
Human Anatomy, Physiology and Pathophysiology-Lab	Major Core	1
Introduction to Pharmacognosy-Lab	Major Core	1
Pharmaceutical Inorganic and Analytical Chemistry-Lab	Major Core	1
Design Thinking and Creativity for Innovation	Skill Enhancement-UC	1
General Proficiency-1	Ability Enhancement-GP	1

SEMESTER-2		
Course Name	**Course Category**	**Credits**
Applied Biostatistics and Data Analytics for Pharmaceutical Sciences	Major Core	2
Biochemistry	Major Core	3
Human Anatomy, Physiology and Pathophysiology II	Major Core	4
Pharmaceutical Organic Chemistry	Major Core	4
Pharmacognosy and Phytochemistry	Major Core	4
Physical Pharmaceutics	Major Core	3
Biochemistry-Lab	Major Core	1
Human Anatomy, Physiology and Pathophysiology II Lab	Major Core	1
Pharmaceutical Organic Chemistry-Lab	Major Core	1
Pharmacognosy and Phytochemistry-Lab	Major Core	1
Physical Pharmaceutics-Lab	Major Core	1
General Proficiency-2	Ability Enhancement-GP	1
Elective 1	Skill Enhancement	1

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SEMESTER-3		
Course Name	**Course Category**	**Credits**
Introduction to Machine Learning in Pharmaceutical Sciences	Major Core	2
Environmental Sciences	Major Core	1
Ethics and Universal Human Values	Major Core	1
General Pharmacology	Major Core	3
Heterocyclic Compounds and Stereochemistry	Major Core	3
Pharmaceutical Dosage Forms I	Major Core	3
Pharmaceutical Engineering	Major Core	3
Pharmaceutical Microbiology	Major Core	3
General Pharmacology-Lab	Major Core	2
Heterocyclic Compounds and Stereochemistry-Lab	Major Core	2
Pharmaceutical Dosage Forms I-Lab	Major Core	1
Introduction to SDGs	Value Education-UC	1
General Proficiency -3	Ability Enhancement-GP	1
Elective 2	Ability Enhancement	1

SEMESTER-4		
Course Name	**Course Category**	**Credits**
Herbal Drug Technology	Major Core	3
Medicinal Chemistry	Major Core	3
Pharmaceutical Biotechnology	Major Core	3
Social Pharmacy and Public Health	Major Core	2
Systemic Pharmacology I	Major Core	3
Herbal Drug Technology-Lab	Major Core	1
Medicinal Chemistry-Lab	Major Core	1
Pharmaceutical Biotechnology-Lab	Major Core	1
Social Pharmacy and Public Health -Lab	Major Core	1
Systemic Pharmacology I-Lab	Major Core	1
Internship-I	Project	4
Universal Human Values, Ethics and Life Skills-2	Value Education-UC	2
Gender Equity and Empowerment	Value Education-UC	1
Aptitude – I	Ability Enhancement	1
Soft Skills – I	Skill Enhancement	1

SEMESTER-5		
Course Name	**Course Category**	**Credits**
Biomedicinal Chemistry	Major Core	3
Industrial Pharmacognosy	Major Core	3
Innovation and Startup Ecosystem	Major Core	2
Pharmaceutical Dosage Form II	Major Core	2
Pharmaceutical Quality Assurance	Major Core	3
Systemic Pharmacology II	Major Core	3
Biomedicinal Chemistry-Lab	Major Core	2
Industrial Pharmacognosy-Lab	Major Core	1
Pharmaceutical Dosage Form II-Lab	Major Core	1
Systemic Pharmacology II-Lab	Major Core	2
Aptitude – II	Ability Enhancement	1
Soft Skills – II	Skill Enhancement	1

SEMESTER-6		
Course Name	**Course Category**	**Credits**
Advanced Pharmacognosy	Major Core	3
Biopharmaceutics and Pharmacokinetics	Major Core	3
Intellectual Property Rights	Major Core	2
AI applications in Pharmaceutical Sciences	Major Core	2
Pharmaceutical Analysis	Major Core	3
Pharmaceutical Jurisprudence	Major Core	3
Biopharmaceutics and Pharmacokinetics-Lab	Major Core	1
Pharmaceutical Analysis-Lab	Major Core	2
Internship-II	Project	4
Elective 3	Ability Enhancement	1
Elective 4	Skill Enhancement	1
Elective 5	Ability Enhancement	1

SEMESTER-7		
Course Name	**Course Category**	**Credits**
Biostatistics Research methodology	Major Core	3
Cosmetics and Cosmeceuticals	Major Core	2
AI in Clinical applications	Major Core	2
Modern Analytical Techniques	Major Core	3
Pharmacovigilance	Major Core	3
Pharmacy Practice	Major Core	3
Regulatory Affairs	Major Core	2
Modern Analytical Techniques-lab	Major Core	1
Research Project-I	Project	6
Open elective- I	Elective	3
Soft Skills - III	Skill Enhancement	1
Elective 6	Ability Enhancement	1

SEMESTER-8		
Course Name	**Course Category**	**Credits**
Ethical Considerations and Translational Applications of AI in Pharmacy	Major Core	2
Clinical Pharmacotherapeutics	Major Core	2
Industrial Pharmacy and Facility Design	Major Core	3
Pharmaceutical Management	Major Core	2
Sterile Dosage Forms and Novel Drug Delivery System	Major Core	3
Pharmaceutical Marketing Skills-Lab	Major Core	1
Sterile Dosage Forms and Novel Drug Delivery System-Lab	Major Core	2
Research Project-II	Project	6
Domain Aptitude	Skill Enhancement	2
Elective 7	Ability Enhancement	2
Elective 8	Ability Enhancement	1

Program Electives			
Semester	**Course Name**	**Course Category**	**Credits**
Elective 1			
2	Communication Skills	Skill Enhancement	1
2	Mental Well-Being, Stress & Conflict Management	Skill Enhancement	
2	Fundamentals of Computer Operations	Skill Enhancement	
Elective 2			
3	Nutraceuticals and Functional Foods	Ability Enhancement	1
3	Food Analysis	Ability Enhancement	
3	Yoga and Life Sciences	Ability Enhancement	

Elective 3			
6	Green Chemistry	Ability Enhancement	1
6	Materiovigilance and Hemovigilance	Ability Enhancement	
6	Scientific Writing	Ability Enhancement	
6	Drug Store and Business Management	Ability Enhancement	
6	Career Building in Cultivation of Medicinal Plants	Ability Enhancement	
6	Active Pharmaceutical Ingredients and Excipient Sciences	Ability Enhancement	
Elective 4			
6	Computer-Aided Drug Design	Skill Enhancement	1
6	Analytical Method Development and Validation	Skill Enhancement	
6	Principles of Preclinical Studies	Skill Enhancement	
Elective 5			
6	Professional Skills	Ability Enhancement	1
6	Process Analytical Technology (PAT) and QbD in Formulation Science	Ability Enhancement	
Elective 6			
7	Current Good Manufacturing Practices (cGMP)	Ability Enhancement	1
7	Pharmaceutical Automation	Ability Enhancement	
7	Modern Techniques in Cellular Biology	Ability Enhancement	
7	Medical Devices	Ability Enhancement	
7	Transformation of Food Waste into Medicinal Products	Ability Enhancement	
7	Biosimilars, Vaccines & Macromolecules	Ability Enhancement	
Elective 7			
8	Pharmaceutical Packaging	Ability Enhancement	2
8	Supply Chain Management	Ability Enhancement	
8	Industrial Safety and Waste Management	Ability Enhancement	
8	Traditional Healing Practices of India	Ability Enhancement	
8	Futuristic Pharma through AR/VR: Pharma 4.0	Ability Enhancement	
8	Herbal Cosmetics for Industry Perspective	Ability Enhancement	
Elective 8			
8	Cleaning Validation	Ability Enhancement	1
8	Basic Training in Aseptic Handling Techniques	Ability Enhancement	
8	Impurity Profiling	Ability Enhancement	