Dr. Bhimrao Ambedkar University, Agra

A State University of Uttar Pradesh (Paliwal Park, Agra -282004)

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A Documentary Support

for

Matric No. – 1.1.1

Programme Outcomes & Course Outcomes

under the

Criteria – I

(Curriculum Design and Development)

Key Indicator - 1.1

in

Matric No. – 1.1.1

MASTER OF PHARM(PHARMACEUTICAL CHEMISTRY)

2021

Registrar
Dr. B.R.A University, Agra

Mapping:

Local Need *Regional* *National* *Global Need*

Signature Not Verified
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PROGRAM OBJECTIVES

Sr.No	POs
1	To progress in professional specialization leading to Master degree so as to increase inclination for higher education and research studies.
2	To acquire knowledge, skills and techniques to identify analyze and solve realistic problems at diverse area of professional practice
3	To cater needs of society, industry, health care and to contribute in R&D
4	To adapt professional values, morality, ethics and interpersonal skills to practiceprofession
5	To Comprehend current national and global issues in pharmacy profession and foster lifelong learning

Name of Programme	**M.Pharma (Pharmaceutical Chemistry)**
Course wise Cos	

YEAR/ Sem	SUBJECT & SUBJECT CODE	Course Outcomes (COs)
1 sem	**ADVANCED ORGANIC CHEMISTRY 1 MPC101T**	**CO1: To explain various reaction mechanisms involved in the Synthesis of various drug molecules**
		CO2:To acquire adequate knowledge and necessary practical skills.
		CO3: To discuss and understanding reaction mechanisms, identification of lead molecules and their eventual refinement for development as drugs.
		CO4: To identify the natural and synthetic molecules used as therapeutic agents
	ADVANCED MEDICINAL CHEMISTRY MPC102T	**CO1** **To identify the different types of organic reactions in the synthesis ofdrug molecules.**
		CO2 **To understand the mechanism ofaction of drugs belonging to the classes of Anti-hypertensive, Psychoactive.**
		CO3 **Anticonvulsant, H1/H2 receptor antagonistic, COX1 & COX2 inhibiting, Adrenergic & Cholinergic, Antineoplastic and Antiviral agents.**
		CO4 **A detailed understanding of the processes involved in the design, development and discovery of medicinal compounds.**

YEAR/ Sem	SUBJECT & SUBJECT CODE	Course Outcomes (COs)
1 Sem	CHEMISTRY OF NATURAL PRODUCTS MPC104T	CO1: To attain detailed knowledge about chemistry of medicinal compounds fromnatural origin.
		CO2: To understand general methods of structural elucidation of medicinallyactive natural compounds.
		CO3: To attain knowledge regarding isolation and purification of medicinal compounds from natural origin.
		CO4: To characterize products by physical a spectroscopic means including IR, NMR,GC, and MS.
		CO5: To identify different types of natural products, their occurrence, structure,biosynthesis and properties.
		CO6: To know the use of natural products as starting materials.

YEAR/ Sem	CSUBJECT & SUBJECT CODE	Course Outcomes (COs)
1 Sem	MODERN PHARMACEUTICAL ANALYTICAL TECHNIQUES MPC104T	CO1: Apply fundamentals of pharmaceutical chemistry,Pharmaceutics, Pharmaceutical technology, Pharmacy practice, Pharmacology, Pharmacognosy and Quality assurance to elucidate and regulate drug discovery, drug development care practice
		CO2: An ability to design and conduct experiments, as well as to analyze and interpret data of appropriate pharmaceutical system or process
		CO3: An ability to design, synthesis, isolate a drug and drug formulation system, component, or drug use process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety manufacturability, and sustainability
		CO4 : An ability to function on multidisciplinary teams, at different organizational levels of academic, industry, research and health care

		CO5: An ability to identify, formulate and solve pharmaceutical problems meeting professional challenges	
		CO6: An understanding of pharmacy professional values and ethical responsibility in discharging professional obligations at society, national and global perspectives	
		CO7: An ability to communicate effectively both verbal and written to gain recognition at professional circle andsocietal level.	

YEAR/ Sem	**SUBJECT & SUBJECT CODE**	**Course Outcomes (COs)**	
2 Sem	**ADVANCED SPECTRAL ANALYSIS MPC201T**	**CO1**	**Apply fundamentals of pharmaceutical chemistry, Pharmaceutics, Pharmaceutical technology, Pharmacy practice, Pharmacology, Pharmacognosy and Quality assurance to elucidate and regulate drug discovery, drug development care practice**
		CO2	**An ability to design and conduct experiments, as well as to analyze and interpret data of appropriate pharmaceutical system or process**
		CO3	**An understanding of pharmacy professional values and ethical responsibility in discharging professional obligations at society, national and global perspectives.**
		CO4	**An ability to employ the techniques, skills, and modern tools necessary for professional practice, research and development**
	ADVANCED ORGANIC CHEMISTRY 2 MPC202T	**CO1**	**To identify the different types of organic reactions in the synthesis of drug molecules**
		CO2	**To discuss the applications of intermediates to account for stability/reactivity/orientation in designing new drug molecules**

		CO3	**The stereo chemical aspects of organic compounds and its reactions to facilitate to synthesize the selective isomer**
		CO4	**To understand the applications of reaction mechanism in the synthesis of new chemical entities**
		CO5	**To identify and isolate the natural and synthetic molecules used as**

YEAR/ Sem	**SUBJECT & SUBJECT CODE**	**Course Outcomes (COs)**
2 Sem	**COMPUTER AIDED DRUG DESIGN MPC203T**	**CO1: To Overview the concepts of computers in pharmaceutical research and development and QBD**
		CO2: To study the basic concepts of computational modeling of drug disposition and introduction to modeling techniques including drug absorption, solubility, permeation, ADME, Active transport.
		CO3: To gain the knowledge of computer aided formulation development and to know the optimization parameters and factorial design.
		CO4: To understand the aspects of biopharmaceutical characterization through computer aided techniques.
	PHARMACEUTICAL PROCESS CHEMISTRY MPC204T	**CO1: To develop synthetic routes that is safe, cost-effective, environmentallyfriendly, and efficient**
		CO2: To impart knowledge on the development and optimization of asynthetic route/s
		CO3: The pilot plant procedure for the manufacture of Active Pharmaceutical Ingredients and newchemical entities for the drug development phase.
		CO4: To create and carry out work up and separation procedure.
		CO5: To predict the outcome of organic reactions using a basic understanding of the general reactivity of functional groups and mechanism.

PROGRAM SPECIFIC OUTCOMES

Sr.No	PSOs
I	Knowledge: Enable graduates to understand the core and basic knowledge in different subjects of pharmaceutical sciences as per the requirement of pharmaceutical sectors.
II	Employment & Entrepreneur: Enable graduate to succeed in technical or professional careers in various pharmaceutical industry/institute or health care system
III	Professional Practice: Enable graduate to practice profession and adapt in a globe of constantly developing trends
IV	Lifelong Learning & Professional Ethics: Enable graduate to streams a lifelong career of personal and practicing professional growth with ethical codes and self esteem