



BAREILLY INTERNATIONAL UNIVERSITY

BIU COLLEGE OF PHARMACY



Rohilkhand Medical College & Hospital Campus, Pilibhit by Pass Road, Bareilly.
(U.P) – 243006 INDIA

E-mail: biucollegeofpharmacy@gmail.com

PROGRAM: M. PHARM (PHARMACOLOGY)

Program Outcome

Program Outcome (PO)	Description
PO-1	Comprehensive understanding of pharmacology principles, including mechanisms of drug action.
PO-2	Proficiency in research methods, including designing and conducting pharmacological research studies.
PO-3	Ability to analyze pharmacological data and interpret research findings effectively.
PO-4	Knowledge and skills in drug development, including preclinical and clinical trial methodologies.
PO-5	Understanding of regulatory affairs and ethical considerations in pharmacological research and practice.
PO-6	Effective communication of pharmacological concepts and research findings to diverse audiences.
PO-7	Demonstration of professionalism, integrity, and ethical conduct in pharmacological practice.
PO-8	Recognition of the importance of lifelong learning and continuing professional development in pharmacology.
PO-9	Leadership and collaboration skills for working in multidisciplinary teams and engaging with stakeholders.
PO-10	Preparedness for diverse career opportunities in pharmacology-related fields and adaptability to changes.



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Program Specific Outcome

Program Specific Outcome (PSO)	Description
PSO-1	Understanding the application of pharmacological information of active chemical entity (Drug) present in a medicine that is used for diagnosis, prevention, treatment/cure of a disease.
PSO-2	Illustrating pharmacodynamic and pharmacokinetic investigation to evaluate the efficacy and safety of drugs in animal models.
PSO-3	Demonstrating mechanism of action of drug in preclinical research involved in Neurotransmission and Neurohumoral transmission apply in biomedical research.
PSO-4	Practicing animals handling of different species / strains along with their breeding and maintenance as per CPCSEA/international Guidelines/Good laboratory practice (GLP).
PSO-5	Identifying the in vivo, in vitro, and other possible animal alternative models for screening of new substances.
PSO-6	Developing the core concept of establishing toxicological profile of a new drug while evaluating during research.



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Course Outcome

Course Code	Course Name	COs No.	Description
17141	Modern Pharmaceutical Analytical Techniques	CO1.	Understanding the basic concepts and advances in analytical techniques and theoretical skills of the analytical instruments.
		CO2.	Applying advanced analytical instrumental techniques for identification, characterization and quantification of drugs.
		CO3.	Performing quantitative & qualitative analysis of drugs using various analytical instruments in single and combination dosage forms.
		CO4.	Evaluating given samples with respect to official standards.
17150	Advanced Pharmacology - I	CO1	Understanding the basic knowledge in the field of pharmacology pertaining to the drugs and its therapeutic applications for the treatment of various diseases.
		CO2	Analyzing the mechanism of drug actions at cellular and molecular level.
		CO3	Evaluating the adverse effects, contraindications and clinical uses of drugs used in treatment of various diseases
17151	Pharmacological And Toxicological Screening Methods - I	CO1	Understanding and evaluating the recent experimental techniques in the drug discovery and development.
		CO2	Understanding the maintenance of laboratory animals as per the guidelines, and various in-vitro and in-vivo preclinical evaluation processes.
		CO3	Applying the various screening methods involved in the drug discovery process.
17152	Cellular And Molecular Pharmacology	CO-1	Understanding the fundamental knowledge on the structure and functions of cellular components.
		CO-2	Appreciating the interaction of cellular components with drugs and applying the knowledge in drug discovery process.
		CO-3	They would have learnt to explain the molecular pathways affected by drugs.
		CO-4	Applying the molecular pharmacology and biomarkers in drug discovery process.

17788	Pharmacology Practical - I	CO1:	Understanding the various handling techniques of laboratory animals.
		CO2:	Practicing the technique of blood Sampling and route of drug administration.
		CO3:	Analysing drugs and Pharmaceuticals.
		CO4:	Evaluating drugs in various animal models
17153	Advanced Pharmacology – II	CO1:	Understanding the basic knowledge in the field of pharmacology pertaining to the drugs and its therapeutic applications for the treatment of various diseases
		CO2:	Analysing the mechanism of drug actions at cellular and molecular level.
		CO3:	Evaluating the adverse effects, contraindications and clinical uses of drugs used in treatment of various diseases.
17154	Pharmacological And Toxicological Screening Methods-II	CO1:	Understanding and evaluating the recent experimental techniques in the drug discovery, development and importance of ethical and regulatory requirements for toxicity studies.
		CO2:	Understanding the maintenance of laboratory animals as per the guidelines, and various in-vitro and in-vivo preclinical and toxicological evaluation processes.
		CO3:	Applying the various screening methods involved in the drug discovery process and Demonstrate the practical skills required to conduct the preclinical toxicity studies
17155	Principles Of Drug Discovery	CO1:	Understanding the importance of the role of genomics, proteomics and bioinformatics in drug discovery
		CO2:	Understanding and explain various targets for drug discovery.
		CO3:	Evaluation of various lead seeking method and lead optimization
		CO4:	The various computer aided drug design in drug discovery
17156	Clinical Research And Pharmacovigilance	CO1:	Understanding the regulatory requirements for conducting clinical trial.
		CO2:	Understanding the types of clinical trial designs and explain the responsibilities of key players involved in clinical trials.
		CO3:	Applying the safety monitoring, reporting and close-out activities in clinical trials

		CO4:	Evaluation Pharmacovigilance, detect new adverse drug reactions and their assessment, reporting of ADR.
17789	Pharmacology Practical – II	CO1:	Understanding the concept of bioassay in experimental pharmacology.
		CO2:	Applying various techniques to determine the strength of drugs in isolated tissues
		CO3:	Predicting the dose toxicity studies
		CO4:	Evaluating the various effect of drugs on different animal models
17300	Research Methodology & Biostatistics	CO1.	Understanding the basic concept of research methodology.
		CO2.	Applying skills in qualitative and quantitative data analysis and presentation
		CO3.	Understanding and applying the maintenance of laboratory animals of laboratory animals.