

Vidarbha Youth Welfare Society's
INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH
Borgaon (Meghe), Wardha (M.S.)

PROGRAMME OUTCOMES (PO) AND PROGRAMME SPECIFIC OUTCOMES (PSO)

Programme	PO/PSO Number	Programme outcome/Programme Specific Outcome
B. Pharm	PO1	Pharmacy Knowledge: possess and apply core and basic knowledge associated with chemical synthesis, pharmaceutical technology, pharmacology, pharmacognosy and formulation development.
	PO2	Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop plans, and implement them. Organize work to meet deadlines.
	PO3	Problem Analysis: can identify and analyze the problem and interpret data generated from formulation development, quality control and quality assurance to find the solution.
	PO4	Modern tool usage: Create, select and apply appropriate techniques, resources and modern pharmacy related IT tools to complex activities in the field of pharmacy with an understanding of limitations.
	PO5	Leadership skills: Understand and consider the human reaction to change, motivation issues, leadership and team-building, assume participatory roles as responsible citizens or leadership role while fulfilling professional and societal responsibilities.
	PO6	Professional Identity: understand and communicate the value of their professional role in society (health care professionals, promoters of health, educators, managers, employers, employees).
	PO7	Pharmaceutical Ethics: Apply ethical frameworks, and ethical principles while making decisions and take responsibility for the outcomes associated with the decision. Capable of working with sense of involvement exhibiting leadership quality and expertise in soft skills.
	PO8	Communication: Able to communicate effectively with pharmacy community and with the society in both verbal and written form.
	PO9	The Pharmacist and society: serving the community as a member of health care system, should be able to deliver quality pharmaceutical care in hospital/ community pharmacy set up.

	PO10	Environment and sustainability: understand the impact of Pharmacy Professional solutions in societal and environmental contexts and strive for eco-friendly pharmaceutical operations/ services to maintain public health.
	PO11	Life-long learning: recognize the need for, and instil the ability to engage in independent, and lifelong learning ability in ever evolving technological world. Self- assess effectively to identify learning needs and satisfy these needs on an ongoing basis.
	PSO1	To enrich students with a graspable theoretical and practical concept in myriad fields of pharmaceutical sciences such as, pharmaceuticals, pharmaceutical chemistry, pharmacology and pharmacognosy apropos the requirement of pharmaceutical industries and research.
	PSO2	Able to do multidisciplinary jobs in the pharmaceutical industries in various departments and would be able to write effective project reports in multidisciplinary environment in the context of changing technologies.
	PSO3	Able to utilize the knowledge and skills gained to partake in the drug development team involving varied scientific disciplines like drug discovery, preclinical, clinical, analytical, formulation development, regulatory, management and marketing.
M. Pharm	PO1	Problem Analysis and development of solutions: capable of using statistical tools for sampling, analysis and interpretation of scientific data and arrive at scientifically reliable results.
	PO2	Innovations: acquired expertise to carry research and development in the respective disciplines of pharmaceutical sciences and technology.
	PO3	Modern tool usage: acquired expertise in the operation and maintenance of sophisticated instruments and equipment and different kinds of software to perform experiments in the selected specialization.
	PO4	Apply ethical principles while making decisions and take responsibility for the outcome associated with decisions.
	PO5	Individual and Team work: function effectively as an individual and as an active member or leader of a team in multidisciplinary setting.
	PO6	Communication: possess effective written communication, verbal communication and scientific documentation skills.
M. Pharm. Pharmaceutics	PSO1	Select polymers and drugs based on their physicochemical properties desired for designing a specific formulation.
	PSO2	Understand various preformulation elements, industrial management and GMP considerations, Pilot Plant Scale Up Techniques, Stability testing, sterilization and packaging of dosage forms
	PSO3	Impart knowledge and skills in generic drug development, various regulatory filings in the approval process, and concept of generics across the globe.

	PSO4	Use skills for dose calculations, dose adjustments and apply biopharmaceutics theories in practical problem solving and use the pharmacokinetic models to calculate bioavailability, determine bioequivalence and various pharmacokinetic parameters.
	PSO5	Develop skill in Pharmaceutical research, Pharmacoinformatics, in drug development in Computational modeling, Preclinical development, clinical development, Artificial Intelligence and Robotics, and Computational fluid dynamics
	PSO6	Gain skills necessary for cosmetics and cosmeceuticals development, their safety and efficacy evaluation and use current technologies in cosmetic industry
	PSO7	Gain knowledge to use advanced instrumentation for formulation and evaluation of advanced drug delivery and targeting systems like polymeric nanocarriers, liposomes and lipid carriers and to understand the concept and techniques of gene delivery.
	PSO8	Develop their technical skill knowledge in computer simulations, population modelings, in vitro and in vivo correlations.
	PSO9	Undertake research projects and publish them.
	PSO10	Motivate themselves to undertake higher studies for career growth.
M. Pharm. Pharmaceutical Quality Assurance	PSO1	Carry out highly sensitive analytical procedures using sophisticated instruments and interpret the data scientifically.
	PSO2	Gain skill in developing and validating newer analytical methods for pharmaceutical dosage forms using advanced analytical techniques and modern computing tools as per regulatory needs.
	PSO3	Carry out quality control tests for pharmaceuticals, food products, herbal formulation and cosmetics.
	PSO4	Demonstrate the ability to establish quality control protocols for pharmaceuticals, herbal drugs, cosmetics and food products and to develop the skills for the management of hazards.
	PSO5	Able to apply the knowledge of IPR, Validation concept, impurity profiling and pharmaceutical regulatory affairs.
	PSO6	Gain skills necessary for performing SIAM studies, impurity profiling studies as per ICH guidelines.
	PSO7	Gain expertise to carry calibration and validation of various analytical instruments and write the validation report.
	PSO8	Develop skill in computer handling and also handling of design software for QbD studies.

	PSO9	Undertake research projects and publish them.
	PSO10	Motivate themselves to undertake higher studies for career growth.
M. Pharm. Pharmacology	PSO1	Understand pathophysiology and pharmacotherapy of certain diseases.
	PSO2	Explain the mechanism of drug actions at cellular and molecular level and understand the adverse effects, contraindications and clinical uses of drugs used in treatment of diseases.
	PSO3	To apply the knowledge of preclinical evaluation of drugs and recent experimental techniques used in the drug discovery and development.
	PSO4	Understand the maintenance of laboratory animals as per the guidelines and learn basic techniques of in-vitro and in-vivo preclinical evaluation processes.
	PSO5	Apply a fundamental knowledge of the structure and functions of cellular components and understand the role of these components with drug action.
	PSO6	Imparts knowledge on the preclinical safety and toxicological evaluation of drug & new chemical entity and learn about regulatory toxicological evaluation.
	PSO7	Apply the basic knowledge of drug discovery process for genomics, proteomics and bioinformatics in drug discovery, various targets for drug discovery, various lead seeking method and lead optimization.
	PSO8	Understand current requirement in clinical research and pharmacovigilance and develops skills on conceptualizing, designing, conducting, managing and reporting of clinical trials.
	PSO9	Undertake research projects and publish them.
	PSO10	Motivate them to undertake higher studies for career growth.



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