

KHARVEL SUBHARTI COLLEGE OF PHARMACY

Programme name	Programme Outcomes	Course Name	Course Code	Course Outcomes
Diploma of Pharmacy (PH-03)	<p>PO. 1 Pharmacy Knowledge: Students will acquire strong fundamental concepts and adequate scientific information regarding basic principles of pharmaceutical, biomedical; behavioural, social, administrative and manufacturing practices by which they will able to handle drugs safely and ensure the rationale use of drugs.</p> <p>PO. 2 Drug development: Students will acquire the ability to develop and/or evaluate various pharmaceuticals and their formulations including cosmeceuticals and quality assurance of various pharmaceutical dosage forms including those of herbal origin as per</p>	Pharmaceutics -I	DPH 101	<p>Upon completion of the course the student shall be able to-</p> <ul style="list-style-type: none"> • Know the history of profession of pharmacy. • Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations. • Preparation of various conventional dosage forms. • Know to prepare dosage forms including, internal as well as external preparations. • Solve the problem through the application of fundamental principles of pharmaceutical metrology and conclude the decision. • Identify their professional role in the healthcare system. • Explain various unit operations in the design and manufacture of dosage forms and describe preventive measures of corrosion and concept of fluid flow. • Describe phenomenon of size reduction and separation as well as filtration for effective

	<p>standards of official monographs, WHO, and other regulatory agencies.</p> <p>PO. 3</p> <p>Social Awareness: Students will demonstrate the impact of pharmacy knowledge on the society and also will be aware of modern issues. They will create awareness of healthcare issues through interactions with others and will gain a sense of self-respect towards community and citizenship.</p> <p>PO. 4</p> <p>Pharmaceutical Ethics: Students will demonstrate knowledge of professional and ethical responsibilities as per pharmaceutical jurisprudence. They will be able to demonstrate knowledge and skills in all disciplines of Pharmaceutical sciences and develop a sound pharmaceutical care plan to manage medication-related problems. They will retrieve, evaluate, and apply current drug information in the delivery of</p>	<p>Pharmaceutical Chemistry -I</p>	<p>DPH 102</p>	<p>practices on pharmaceutical field.</p> <ul style="list-style-type: none"> • Develop rigorous experimental and analytical skills for extraction and drying of sample in laboratory. <p>Upon completion of the course the student shall be able to-</p> <ul style="list-style-type: none"> • Know about the concept of inorganic compounds basically acid base and their function, antioxidants, Git agents, expectorants and emetics. • Identify the importance and usage of major intra & extracellular electrolytes basically sodium chloride and potassium chloride, physiological acid base balance. • Know about Inorganic Official compounds of iron, iodine, and calcium gluconate and their role in body and its preparation. • Illustrate the various radio pharmaceuticals and contrast media use of radio isotopes their handling and storage and measurement of radioactivity. • Understand the Quality control of drugs & source and control of errors method to check the purity of substance by limit test. • Know the basic principles for identifications of cations and anions according to Indian pharmacopoeia.
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	<p>pharmaceutical care and assure safe and accurate preparation and dispensing of medications.</p> <p>PO. 5</p> <p>Professional Identification: The Students will swear by a code of ethics of Pharmacy Council of India in relation to community and shall act as integral part of a health care system. They will understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).</p> <p>PO. 6</p> <p>Analytical Skills: Students will develop skills in qualitative and quantitative analysis of various pharmaceuticals. They will demonstrate their skills to use modern pharmaceutical tools, software, and equipments to analyze & solve problems. Develop skills in qualitative and quantitative analysis of various</p>	Pharmacognosy	DPH 103	<p>Upon completion of the course the student shall be able to-</p> <ul style="list-style-type: none"> • Know about history, scope & development of pharmacognosy, sources and classification of drugs. • Identify the important crude drugs of natural origin. • Understand cultivation, collection, processing and storage of crude drugs. • Understand adulteration and method of evaluation as per W.H.O. guidelines. • Recall quality control and standardization of crude drugs. • Understand systematic pharmacognostic studies of drugs containing alkaloides, glycosides, carbohydrates, etc and having laxative, purgative, carminative, carditonic, anti-diuretic, anti-inflammatory, vitamins, protein, pharmaceutical aids etc.
	<p>and quantitative analysis of various</p>	Biochemistry and Clinical Pathology	DPH 104	<p>Upon completion of the course the student shall be able to-</p> <ul style="list-style-type: none"> • Understand the structure and functions of biomolecules. • Understand the catalytic activity, factor affecting and therapeutic importance of enzymes. • Know various metabolic pathways of proteins, carbohydrate and lipids.

	<p>pharmaceuticals.</p> <p>PO. 7 Leadership Skills: Students will develop interpersonal skills such as influencing others, negotiating and working with others, conflict management and leading others through the problem-solving process. They will be able to lead and function both individually and as a member of a team.</p> <p>PO.8 Communication: The Students will acquire excellent interpersonal oral communication and writing skills. Demonstrate the ability of verbal communication and writing reports and to lead the team effectively.</p> <p>PO.9 Drugs and diseases: Students will be able to understand different classes of drugs, their mechanism of action, dynamics, kinetics, structure activity</p>			<ul style="list-style-type: none"> • Understand the role of vitamins, coenzyme, minerals and water in human body. • Know about proteins, carbohydrates, amino acids and lipids with their qualitative test. • Know the clinical pathology of blood and urine.
		H.A.P.	DPH 105	<p>Upon completion of the course the student shall be able to-</p> <ul style="list-style-type: none"> • Describe various terms and scope of anatomy & physiology • Explain structure and functions of cells and their various components • Describe elementary tissues of the body and their roles • Explain structure and functions of skeleton. Classification of joints and their functions • Describe composition of blood, blood group and coagulation of blood. Brief information regarding disorder of blood. • Describe structure and functions of various parts of the heart, brief information regarding disorder of heart. • Describe anatomy and physiology of respiratory system. • Discuss basic anatomy and physiology urinary system, physiology of urine formation and

	<p>relationships, pathophysiology and pharmacotherapeutics of various diseases.</p> <p>PO.10</p> <p>Problem analysis and Planning: Students will utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills.</p>			<p>pathophysiology of renal disease</p> <ul style="list-style-type: none"> • Explain physiology of muscle contraction and neuromuscular junction. • Describe various parts of central nervous system, brain and its parts, anatomy and physiology of autonomic nervous system. • Discuss basic anatomy and physiology of sense organs. • Describe various parts of digestive system and their functions. Explain physiology of digestion and absorption. • Discuss basic anatomy and physiology of endocrine glands • Describe anatomy and physiology of reproductive system.
	<p>PO. 11</p> <p>Life-long learning: Students will recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing</p>	<p>Health Education and Community Pharmacy</p>	<p>DPH 106</p>	<p>Upon completion of the subject, student shall be able to:</p> <ul style="list-style-type: none"> • Know about the concepts of health including physical, mental, social and spiritual aspects. • Identify the importance of nutrition in health. • Know about demography and family planning related issues. • Illustrate the various methods of first aid in case of shock, snake bite, burns, fractures, etc. • Understand the effect of environmental hazards on

	basis.			<p>health and illustrate the various arthropod borne diseases and their control.</p> <ul style="list-style-type: none"> • Know and assess basic principles of microbiology and techniques of staining. • Describe communicable diseases including respiratory, intestinal, surface infections and sexually transmitted diseases. • Describe non-communicable diseases including cancer, diabetes, blindness and CVDs. • 9. Memorize the basics of epidemiology, principles of disease control and study of disinfections.
		Pharmaceutics - II	DPH 201	<p>Upon completion of the course the student shall be able to-</p> <ul style="list-style-type: none"> • Understand the professional way of handling the prescription. • Classify different dosage forms and apply principles of pharmaceutical science in formulation and dispensing the various dosage forms. • Know and formulate biphasic liquid dosage forms such as emulsion and suspension. • Preparation of various conventional dosage forms. • Understand the basics of different dosage forms, pharmaceutical incompatibilities and pharmaceutical calculations.

				<ul style="list-style-type: none"> Analyze the error in prescription and relative patient oriented problems.
		Pharmaceutical Chemistry -II	DPH 202	<p>Upon completion of the course the student shall be able to-</p> <ul style="list-style-type: none"> Discuss nomenclature, preparation, Properties,uses and brand names of different class of drugs. Discuss nomenclature, preparation, Properties, uses storage conditions, and brand names of Antiseptics and Disinfectants, Sulfonamides, Antileprotic Drugs, Anti-tubercular drugs. Discuss nomenclature, preparation, Properties, uses storage conditions, and brand names of antiamoebic and anthelmintic drugs, antibiotics, antifungal agents, antimalarial drugs, tranquilizers, hypnotics, anticancer and anticonvulsant drugs. Discuss nomenclature, preparation, properties, uses storage conditions, and brand names of General anaesthetics, Antidepressant drugs, analeptics, adrenergic drugs, non-steroidal anti-inflammatory agents and diagnostic agents. Discuss nomenclature, preparation, Properties, uses, storage conditions and brand names of cholinergic drugs, cardiovascular drugs, diuretic drugs, hypoglycaemic agents, coagulants and anti-coagulants, local anaesthetics, histamine and

				Anti-histaminic agents, analgesics and anti-pyretics drugs.
		Pharmacology and Toxicology	DPH 203	<p>Upon the completion of this course, the student will able to</p> <ul style="list-style-type: none"> • Understand the basic concept of pharmacology. • Understand the various sources of drug. • Understand the merits and demerits of different route of administration. • Understand the pharmacokinetics and pharmacodynamics. • Understand receptor, various kinds of receptors and Explain GPCR. • Understand general measures in the treatment of poisoning. • Know about aims of new drug discovery and the process of drug discovery. • Know about modern approaches in drug discovery. • Able to differentiate Parasympathetic and sympathetic system • Understand the pharmacology of different class of drugs
		Pharmaceutical Jurisprudence	DPH 204	<p>Upon completion of the course, the student shall be able to understand:</p> <ul style="list-style-type: none"> • Understand the Pharmaceutical legislations and their implications in the development and marketing • Knowledge of various Indian pharmaceutical Acts and Laws.

			<ul style="list-style-type: none"> • Knowledge of the regulatory authorities and agencies governing the manufacture and sale of Pharmaceuticals. • Understand the code of ethics during the pharmaceutical practice
	Drug Store and Business Management	DPH 205	<p>Upon completion of the course, the student shall be able to understand:</p> <ul style="list-style-type: none"> • Understand the legal requirements to setup a community Pharmacy. • Knowledge of vender selection and ordering. • Understand the procurement and inventory management. • Understand the Financial planning and management.
	Hospital and Clinical Pharmacy	DPH 206	<p>Upon completion of the course, the student shall be able to understand</p> <ul style="list-style-type: none"> • Understand the responsibilities of hospital pharmacist and clinical pharmacist • Know the drug distribution methods and inventory control Techniques. • Identify the biochemical parameters and their significance • Understanding of adverse drug reaction monitoring and Reporting.