

HPH - PHARMACY (HPH)

HPH 1503 Introduction to Pharmacy (2-2-3)

This course outlines the history and evolution of pharmacy to current practice areas, drug sources and stages of development of drug products from source to final dosage form, drug classification, nomenclature, legislation, routes of administration and dosage forms, reading, interpretation, evaluation and process of prescriptions and labels for dispensing, patient counselling.

HPH 2003 Biological Organic Chemistry (3-1-3)

Provides opportunities to develop the knowledge and analytical skills required to correlate between the structure and reactivity of alkanes, alkenes, alkynes, cyclo/aromatic hydrocarbons, alcohols, phenols, thiols, ethers, aldehydes, carboxylic acids, esters, amines and amides; molecular properties and physiological roles of carbohydrates, amino acids-proteins-enzymes-co-enzymes and co-factors; nucleic acids and lipids; cycles of transformation of matter and energy production; bio-chemical basis of biological functions and specific disorders.

Prerequisites: HSC 1023

HPH 2016 General Pharmacology (6-1-6)

Introduces the basic principles of pharmacokinetics and pharmacodynamics, the effect of physical-chemical properties of drugs, dosage forms and the route of administration on the rate and extent of drug absorption; drug therapy in high risk groups; neurotransmission, chemical mediators which cultivates students' knowledge in drug site targets through the pharmacology of the autonomic nervous system

Prerequisites: HSC 1033

HPH 2023 Pharmaceutics I (4-0-3)

Emphasis is put on the development of fundamental knowledge, skills and competencies required to problem solving in pharmacy. Topics include physical-chemical concepts of the 3 states of the matter; fundamental pharmaceutical calculations; dose calculations based on general considerations and patient parameters; theory and practice of basic practical pharmaceutics.

HPH 2034 Community Pharmacy Preceptorship (0-40-4)

The Introductory Pharmacy Practice Experiences, in a community pharmacy setting, are designed to provide the student with a fundamental understanding and appreciation of pharmacy practice. It provides opportunities to engage in basic distributive and administrative processes in community pharmacies and gain initial experience interacting directly with patients, preceptors, technicians, and other health care providers and pharmacy personnel

Prerequisites: HPH 1503

HPH 2113 Systems Pharmacology (3-1-3)

Provides opportunities to develop the knowledge and ability to integrate essential therapeutics decision making competencies and pharmacological concepts. Emphasis is put on the therapeutic rationale and selection of drugs for specific disorders complimented by the general use of prototype drugs, their actions, pharmacokinetics and adverse effects. Major topics include disorders associated with allergies, inflammation, pain, and musculoskeletal disease.

Prerequisites: HPH 2016

HPH 2123 Microbiology and Immunology (3-1-3)

Topics include the concepts, prevention and control of infection, pathogenicity, body defense mechanisms, the nature of microorganisms and their roles in causing disease and spoilage of pharmaceuticals; microbiological lab procedures and assays, resistance to antimicrobials; aseptic/ sterile processing; preservation of pharmaceutical products; clean rooms; GMP sterile manufacture; fundamental immunological principles, non-specific and specific immunity, vaccination; disorders related to excessive or abnormal immune responses; principles of immunotherapy.

Prerequisites: HSC 1033

HPH 2133 Pharmaceutics II (3-1-3)

Development of knowledge, skills and competencies to (a) energetic of chemical and physical processes; (b) interpretation of the properties of solutions; (c) disperse systems (d) pre-formulation, formulation, packaging, labeling and presentation procedures of pharmaceutical solutions.

Prerequisites: HPH 2023

HPH 2144 Clinical Pharmacy Preceptorship I (0-40-4)

Facilitates experience in providing patient-centred pharmaceutical care mainly in ambulatory care settings. It develops competencies and fundamental skills in medication therapy and medication management, in addition to learning effective professional communication skills in conjunction with prescribing physicians and third party payers to manage medication-related problems. Students also apply integrate basic pharmacy-related concepts to ambulatory patient care as a member of an interdisciplinary health care team.

Prerequisites: HPH 2034

HPH 2153 Medicinal Chemistry I (3-1-3)

Development of knowledge, skills and competencies which empower to apply fundamental concepts of molecular properties of drugs to biopharmaceutical features (solubility, absorption, distribution, drug binding interactions, biotransformation and elimination).

Prerequisites: HPH 2003

HPH 3006 Pathophysiology and Therapeutics I (6-1-6)

Advances essential knowledge required to make judgments in regards to the effects, therapeutic rationale and selection of drugs for specific disorders. Topics include: disorders of the gastrointestinal system, Neurological and Psychiatric associated diseases and disorders of respiratory systems, renal and hepatic system.

Prerequisites: HPH 2113

HPH 3043 Medicinal Chemistry II (3-1-3)

Explores the effect of stereospecific/selective properties on drug action; the phases, technologies and methods of discovery, design and development; concepts of rational drug design to create analogs of a specific drug molecule; structure and function and pharmacodynamics of drug targets and the integration of the pharmaceutical-, pharmacokinetic-, and pharmacodynamic phases of drug action.

Prerequisites: HPH 2153

HPH 3054 Pharmaceutics III (3-2-4)

Highlights important pharmaceutical/bio-pharmaceutical and mathematical principles which are essential to product design, development, presentation and testing of liquid, semi-solid and solid pharmaceutical dosage forms. The laboratory components help students to develop practical capabilities in compounding, packaging and testing dosage forms that are directly applicable to the manufacturing procedures of pharmaceuticals.

Prerequisites: HPH 2133

HPH 3133 Clinical Biochemistry and Toxicology (2-2-3)

Develops an in-depth knowledge of interpretation of clinical laboratory investigations of body fluids, and the correlation of these results to biochemical changes associated with specified disorders. The course also focuses on the application of basic toxicological principles to an initial approach for the management of a poisoned patient; assessment of the degree of toxicity of selected therapeutic and non-therapeutic agents; followed by possible treatment strategies.

HPH 3143 Pharmaceutical Analysis (3-1-3)

Covers the theory and practice of wet chemical, spectroscopic and chromatographic methods of modern pharmaceutical analysis; the control of quality during drug analysis (pharmacopoeia standards, instrumentation, reagents, limit test, standard solutions, sampling, calculations of results and errors, and general operations); statistical treatment and interpretation of experimental data; assays based upon knowledge of general, special, physical, and chemical concepts of analytical chemical procedures.

Prerequisites: HPH 3043

HPH 3154 Clinical Pharmacy Preceptorship II (0-40-4)

Students will interact with a number of different healthcare providers and participate in a variety of patient care activities with the pharmacy preceptor and medical teams. The student will be provided with many opportunities to apply her academic basic science and clinical didactic course work to acute patient care in the hospital setting.

Prerequisites: HPH 2144

HPH 3163 Pathophysiology and Therapeutics II (3-1-3)

Advances essential knowledge required to make judgments in regards to the effects, therapeutic rationale and selection of drugs for specific disorders. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on solving patients drug related problems.

Prerequisites: HPH 3006

HPH 4003 Bio-Technology (3-1-3)

Enhances the knowledge and understanding of major bio-technology techniques which include rDNA, Hybridoma Technology (Monoclonal Antibodies), Antisense Technology, PCR, Genomics, Proteomics, Gene Therapy, Transgenics, Glycobiology, Cloning, Peptidomimetics and specific preformulation procedures. Familiarises students with parenteral, oral and specialised delivery procedures of biotech products and the impact of biotechnology on pharmaceutical care.

Prerequisites: HPH 3143

HPH 4013 Complementary Medicine (3-1-3)

Develops the role of the pharmacist in providing medication therapy management services focused upon the safe, appropriate, and effective selection, use, and monitoring of non-prescription, herbal, nutritional and other alternative/complementary medication therapies as well as prevention of health risks and fostering a healthy lifestyle.

Prerequisites: HPH 3163

HPH 4033 Pharmaceutical Care Practice Skills (2-2-3)

Extends students' concepts, principles and functions of the general framework and the systematic method for the process and application of pharmaceutical care, critical thinking and problem-solving skills. The course requires students to assess, resolve and monitor patients drug-therapy needs and problems with a commitment to improving patient treatment outcomes.

Prerequisites: HPH 3163

HPH 4042 Industrial Pharmacy Preceptorship (0-8-2)

Generates student knowledge in various activities of the drug manufacturing industry, such as research and development, manufacturing, quality control, clinical testing, information support, marketing, and regulatory affairs. This course provides opportunities where the student can learn about responsibilities of the industrial pharmacist and also about the variety of career opportunities in the pharmaceutical industry. Students with an interest in an industrial pharmacy career can use this rotation opportunity to explore, focus and refine their career goals

Prerequisites: HPH 3054

HPH 4073 Pathophysiology and Therapeutics III (3-1-3)

Introduces students to the main concepts of pathophysiology and principles of antimicrobial chemotherapy, antineoplastic and immunomodulating drugs. Topics include: application of the appropriate therapeutic management of various common infectious diseases; different classes of antineoplastic agents; analysis of related case scenarios to achieve desired patient specific outcomes.

Prerequisites: HPH 3163

HPH 4103 Pharmacy Law, Ethics and Pharmacoeconomics (2-2-3)

Application of UAE pharmacy laws and regulations to the preparation and distribution of medications and patient counseling activities; Concepts of monitoring the practice site and/or service area for compliance with UAE laws, regulations and professional standards.; Ethical conduct in all job-related activities to maintain confidentiality of patient and proprietary business information.; Application of basic principles of pharmacoeconomics to pharmacy practice

HPH 4114 Advanced Pharmacy Practice (0-40-4)

Advanced practice experience aids the student in applying their integrated knowledge, skills and competences previously learnt in formal coursework toward the practice of pharmacy in Direct Patient Care (Acute/Primary Care; Ambulatory Care; Community Pharmacy) and in Indirect Patient Care (Health System Management and Community Management). Other experiences are chosen as electives from specialty pharmacy experience. Emphasis is placed on the consolidation of student's ability to function as a competent pharmacist practitioner.

Prerequisites: HPH 3154