HPH - PHARMACY (HPH)

HPH 1102 Pharmacy Law and Ethics (2-1-2)
This course introduces the UAE pharmacy law and code of conducts to students. It enables the students to application of UAE pharmacy laws and regulations to the preparation and distribution of medications and patient counseling activities. Provides them with the concepts of monitoring the practice site and/or service area for compliance with UAE laws, regulations and professional standards and the ethical conduct in all job-related activities to maintain confidentiality of patient and proprietary business information through various activities and scenarios.

HPH 1502 Introduction to Pharmacy (2-1-2)
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, routes of administration and dosage forms, reading, interpretation, evaluation and process of prescriptions and labels for dispensing.

HPH 2013 Microbiology (3-1-3)
This course includes the study of bacteria, viruses, and other microbes, concepts, prevention and control of infection, pathogenicity, body defense mechanisms, the nature of microorganisms and their roles in causing disease and spoilage of pharmaceuticals. The course covers the microbiological lab procedures and assays, resistance to antimicrobials, antimicrobial stewardship programs and the principles and policies in infection control. It also discuss the aseptic/ sterile processing; preservation of pharmaceutical products; clean rooms; GMP and sterile manufacture.
Prerequisites: HSC 1033

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 2033 Pharmaceutics I (2-2-3)
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 2044 Community Pharmacy Preceptorship (0-180-4)
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 2072

HPH 2053 Pharmacology I (3-1-3)
This course includes the basic principles of pharmacology, including receptor mechanisms, drug distribution and metabolism, and pharmacokinetics. It describes the neurotransmission, chemical mediators that cultivates students' knowledge in drug site targets through the pharmacology of the autonomic and peripheral nervous system, and drug therapy in high-risk groups.
Prerequisites: HSC 1033

HPH 2063 Non-Prescription Medicines and Self-Care (3-1-3)
Throughout this course, students will learn about nonprescription medications and other self-care remedies available to treat many different medical conditions. The course will provide students with the basics of pharmaceutical care knowledge and skills in non-prescription therapeutics of minor ailments and help in gaining a better understanding of the safe and effective use of nonprescription and self-care products.
Prerequisites: HPH 1502

HPH 2072 Pharmacy Practice Skills (2-1-2)
This course introduces students to pharmacy practice, and patient care skills and how to apply it. It provides students with the fundamental skills required for pharmacist including communications skills, inter-professional collaboration, fundamental counselling skills, pharmaceutical calculations, medical records and drug information.
Prerequisites: HPH 1502

HPH 2073 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 2134 Ambulatory Pharmacy Preceptorship (0-180-4)
The Introductory Pharmacy Practice Experiences, in ambulatory healthcare settings, are designed to provide the student with a fundamental understanding and appreciation of patient-centered pharmaceutical care. 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 health care team
Prerequisites: HPH 2044

HPH 2143 Pharmaceutics II (2-2-3)
Acquire of knowledge, skills and competencies related to (a) energetic of chemical and physical processes; (c) disperse systems (d) Inhaled drug delivery system and (e) pre-formulation, formulation, packaging, labeling and presentation procedures of pharmaceutical disperse system.
Prerequisites: HPH 2033

HPH 2163 Pharmacology II (3-1-3)
This course 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 2053

HPH 2173 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 2073

HPH 3014 Pathophysiology and Therapeutics I (4-1-4)
This course provides introduction for cardiovascular and renal diseases. It relates the pathophysiology of these conditions to clinical use of medications. It 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 with emphasis on solving patients drug related problems.
Prerequisites: HPH 2163

HPH 3022 Pharmacokinetics (2-1-2)
This course aims to provide the students with the knowledge required to understand the relationship between drug exposure and drug response. The students will be introduced to the concepts needed for the clinical applications of the pharmacokinetics and pharmacodynamics.
Prerequisites: HPH 2053

HPH 3062 Immunology (2-1-2)
The course introduces the fundamental immunological principles, non-specific and specific immunity. It examines the principles of passive and active immunization, and vaccination including benefits and risks. Develops understanding of disorders related to excessive or abnormal immune responses, the process and control of Graft versus Host reactions and the principles of immunotherapy, including the use of medicinal therapy in autoimmune diseases.
Prerequisites: HPH 2013

HPH 3064 Pharmaceutics III (3-2-4)
This course 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 course also provides students with an understanding of aseptic processing, disinfection and preservation. The laboratory components help students to develop practical capabilities in compounding, sterilization, packaging and testing dosage forms that are directly applicable to the manufacturing procedures of pharmaceuticals.
Prerequisites: HPH 2143

HPH 3073 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 2173

HPH 3102 Clinical Laboratory Investigations (2-1-2)
This course is an introduction to the most commonly used clinical laboratory diagnostic tests where students will explore the underlying physiology within the context of disease disruption. It adopts a system-based approach, where students will be able to acquire the knowledge and skills required to select an appropriate laboratory investigation for different disease states and correctly interpret test results.

HPH 3124 Pathophysiology and Therapeutics II (4-1-4)
This course provides introduction for liver, pancreas, gastrointestinal and respiratory diseases. It relates the pathophysiology of these conditions to clinical use of medications. It 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 with emphasis on solving patients drug related problems.
Prerequisites: HPH 2163

HPH 3152 Pharmaceutical Care Practice Skills I (2-1-2)
This course 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 in disorders and conditions entailing the following systems; cardiovascular, renal, gastrointestinal and respiratory (patient centric approach). 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 3014

HPH 3162 Industrial Pharmacy Preceptorship (0-80-2)
This preceptorship course 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 3173 Pharmaceutical Analysis (2-2-3)
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 3073

HPH 4011 Applied Pharmacokinetics (1-1-1)
The course provides in-depth knowledge on pharmacokinetic principles, design of drug dosing schemes, and adapting the doses to individual patients. In this course students will work on and discusses real and complex patient cases with an emphasis on the possible treatment options, solutions for drug-related problems and justification for it according to evidence- based medicine and pharmacokinetics calculations.
Prerequisites: HPH 3022

HPH 4034 Pathophysiology and Therapeutics III (4-1-4)
This course provides introduction for infectious, neoplastic and dermatological diseases. It relates the pathophysiology of these conditions to clinical use of medications. It 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 with emphasis on solving patients drug related problems.
Prerequisites: HPH 2163

HPH 4043 Clinical Toxicology and Pharmacovigilance (3-1-3)
This course 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. It also provides an overall understanding of the global development of pharmacovigilance and medication safety concepts with focus on pharmacist role in the safe use of medication in practical settings.
Prerequisites: HPH 2163

HPH 4053 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 3173

HPH 4063 Pharmacy Research Methods and Data Analysis (3-1-3)
The course develops an understanding and experiencing of the process of scientific inquiry in Pharmacy research. The course emphasizes on developing a critical scientific approach to evaluating scientific literature and developing a research proposal. It provides information and understanding about data collection, handling, extraction and analysis. It includes the development of theoretical background to a capstone research project.
Prerequisites: LSS 1123

HPH 4122 Pharmacoeconomics (2-1-2)
This course demonstrates concepts and methods for ascertaining, measuring, and comparing the costs and consequences of drug therapy to health care systems and societies. It integrates the evaluation of published studies and the employment of economic models, for the purposes of medication formulary management, direct patient care, and medication policy formation.

HPH 4132 Pharmacogenomics (2-1-2)
This course focuses on introducing the concept of personalized medicine with brief review of fundamentals of genetics. It covers the principles of genetics core associations between genetic variants and disease susceptibility and drug response in populations. It allows students to understand the concept of tailored doses as per the person's genetic makeup to ensure effective and safe use of medications.

HPH 4143 Pharmacy Management and Informatics (3-1-3)
This course introduces the basic concepts of business development and management. It teaches students how to manage effectively the business environment and the people working within pharmaceutical organizations. The course also introduces essential concepts and applications of information and communication technologies in healthcare. Provides the students with the essential and unique skills related to electronic health records, databases and information systems.

HPH 4144 Pathophysiology and Therapeutics IV (4-1-4)
This course provides introduction for Neurology, psychiatry and endocrine diseases including male and female health. It relates the pathophysiology of these conditions to clinical use of medications. It 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 with emphasis on solving patients drug related problems.
Prerequisites: HPH 2163

HPH 4152 Pharmaceutical Care Practice Skills II (2-1-2)
This course extends students' concepts, principles and functions of patient-centric approach, person-centric approach, therapeutic drug monitoring, communication skills and drug information. It entails the application of pharmaceutical care, critical thinking and problem-solving skills in disorders and conditions involving the following systems; infectious, cancer, dermatology, neurology, psychiatry, endocrine and male and female disorders. The course requires students to assess, resolve and monitor patients' drug-therapy needs and problems for the improvement of patient treatment outcomes.
Prerequisites: HPH 3014, HPH 3124, HPH 4034

HPH 4163 Pharmacy Capstone Research Project (3-3-3)
This course provides an opportunity to work interdependently on a pharmacy research project. It helps students to develop practical research skills and to critically evaluate literature and research findings. Students will work collaboratively on their project planning, development and analysis throughout a final presentation and dissertation. In addition, the course helps students to acquire the 21st century skills; skilled communication, collaboration, knowledge construction, self-regulation, critical thinking and use of ICT and innovation.
Prerequisites: HPH 4063

HPH 5014 Advanced Pharmacy Preceptorship I – Hospital Pharmacy (0-180-4)
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 within a hospital pharmacy setting. This course exploits pharmacist roles including communication, collaboration, evidence based practice, and professional responsibilities. The student will be provided with many opportunities to apply the academic basic science and clinical didactic course work to a clinical, acute care / institutional, team-based environment.
Prerequisites: HPH 2134

HPH 5024 Advanced Pharmacy Preceptorship II – Internal Medicine I (0-180-4)
In this preceptorship course, students are expected to demonstrate competency and skills to provide direct patient care in the areas of internal medicine with main focus on (cardiology, gastrointestinal, renal disorders, Endocrine disorders, Neurological disorders, pulmonary disorders). It includes patient assessment to identify and prioritize medication related problems, develop and implement pharmaceutical care plans including monitoring, follow-up, documentation and education within the inpatient hospital setting with a variety of medical conditions typically seen in the inpatient setting.
Prerequisites: HPH 2134, HPH 3014

HPH 5034 Advanced Pharmacy Preceptorship III- Internal Medicine II (0-180-4)
In this preceptorship course, students are expected to demonstrate competency and skills to provide direct patient care in the areas of internal medicine with focus on infectious diseases and critical care. It includes patient assessment to identify and prioritize medication related problems, develop and implement pharmaceutical care plans including monitoring, follow-up, documentation and education within the inpatient hospital setting with a variety of medical conditions typically seen in the inpatient setting.
Prerequisites: HPH 2134, HPH 4034

HPH 5044 Advanced Pharmacy Preceptorship IV- Surgical and Emergency Care (0-180-4)
In this preceptorship course, students are expected to demonstrate knowledge, competency and skills to provide direct patient care in the areas of surgical and emergency care. It includes patient assessment to identify and prioritize medication related problems, develop and implement pharmaceutical care plans including monitoring, follow-up, documentation and education within the inpatient hospital setting with a variety of medical conditions typically seen in the inpatient setting.
Prerequisites: HPH 2134, HPH 3014, HPH 3124