

## Courses Descriptions

### Obligatory Courses:

#### **(PHM610) Population Health and Pharmacoepidemiology (2-0-0)**

The course aimed to describe concepts of local and global health issues and also the pharmacoepidemiology in the broad context of therapeutic evaluation and drug decision-making. It focuses on the practice and research concerned with the health of groups of individuals and the equitable distribution of health within these groups.

It prepares students to develop a methodology to study public health issues and medication use in large number of populations, reports adverse drug reaction and use post-marketing surveillances, drug utilization reviews in order to study the safety and efficacy of medications.

Pre-requisite: NA

#### **(PHM612) Advanced Therapeutics I (3-0-0)**

This course highlights role of the pharmacist as a member of the interdisciplinary care team in the management of commonly encountered critical care conditions. The course aims to improve students' ability to identify and critically assess the relevant factors in the management of various types of critical illnesses with specific care needs, including evaluation of medications for appropriate indication, dose, and general appropriateness; monitoring of medications and identification of ADEs.

Pre-requisite: NA

#### **(PHM613) Advanced Therapeutics II (2-0-0)**

This course aims to examine antimicrobial stewardship core elements and practices that help optimize antimicrobial use and prevent emergence of resistance. It also provides in-depth knowledge and skills concerning the therapeutic management of commonly encountered infections such as upper and lower respiratory, urinary, skin and soft tissue, and bone infections.

Pre-requisite: NA

#### **(PHM614) Pharmacoinformatics and Telehealth (2-0-0)**

The purpose of this course is to explain the importance of informatics in delivering Pharmaceutical care. This course will introduce key issues & applications of Health Informatics at theoretical & applied levels. Students will explore the existing practices & recommend change based on evidence. Emphasis will be placed on current ethical, cultural, & financial issues accompanying

the increasing use of the health related Internet applications by healthcare providers, & consumers. This course will also emphasize on the use of social media as a way of delivering care and advise for patients with chronic diseases.

Pre-requisite: NA

### **(PHM616) Pharmacy Management and Leadership (2-0-0)**

The purpose of this course is to provide the student with the skills and knowledge to run and manage pharmacy service(s) as a successful business while maintaining to deliver high quality patient care through the appropriate and effective utilization of the pharmacy's monetary, human, and material resources. The course will also introduce the student to aspect of pharmacy leadership with emphasis on the role of communication and adoption of change in the profession of pharmacy.

Pre-requisite: NA

### **(PHM617) Research Methodology (2-0-0)**

This course develops students' knowledge and understanding of the role and conduct of quantitative and qualitative research methods. The course equips students with the skills to review and conduct methodologically sound research as a part of their professional work. Students develop the skills to recognize and reflect on the strengths and limitations of different research methodologies, understand the links between theory and practice, critically assess research, and address ethical and practical issues. The course takes a step-by-step approach to the design a research proposal and implementation of quantitative and qualitative techniques including case study, surveys, interviews and focus groups.

Pre-requisite: NA

### **(PHM621) Thesis (6-0-0)**

This course aims to impart advanced level of research skills in clinical pharmacy, research new ideas, encourage and facilitate the development of advanced pharmacy services through primary research. Furthermore, the course will help equip pharmacists capable of conceiving, implementing, and communicating research on patient care services that promote the rational, safe, effective, and economical use of drug therapy.

Pre-requisite: NA

### **(PHM622) Advanced Therapeutics III (2-0-0)**

This course emphasizes on the role of the pharmacist in handling cytotoxic preparations, and providing supportive and palliative care to patients receiving chemotherapy. It identifies various

drug-induced diseases and allergy. The course also covers the principles of nutritional support and counseling regarding enteral, parenteral nutrition and obesity.

Pre-requisite: NA

### **(PHM623) Medication Therapy Management (3-2-2)**

The course provides students with foundational information on Medication Therapy Management (MTM) and the various components involved in performing MTM Comprehensive Medication Reviews. The course helps students with skills to apply pharmaceutical care principles in managing common disease states encountered in a variety of settings working as part of the multidisciplinary healthcare team. It identifies a systematic approach to problem solving in patient care.

Pre-requisite: NA

### **(PHM624) Patient Centered Care (3-2-2)**

This course builds on the advanced therapeutics courses, providing students with the knowledge and skills to provide patient-centered pharmacy care. The course covers contemporary care issues of patients with low health literacy and nonadherence and other cultural care needs across healthcare systems. The clinical application of pharmacokinetic drug predisposition in populations within different age and genetic backgrounds will be illustrated. The care of the patient with multi-morbidities and complex health care needs will be explored.

Pre-requisite: NA

### **(PHM635) Internal Medicine - 1 (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in Internal Medicine wards covering cardiovascular, respiratory, endocrinology, gastrointestinal, and immune-related diseases. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM636) Internal Medicine – 2 (Infectious Disease) (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in dealing with patients suffering from infectious diseases. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, interpreting culture sensitivity reports, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM637) Pediatrics (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in pediatric patient care. Students apply pharmacokinetic principles in dosage adjustment in pediatrics and choose patient specific pediatric formulations. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM641) Ambulatory Care (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in outpatient settings. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM642) Critical Care (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in dealing with critically ill patients admitted to intensive care units. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **Elective Clinical Rotations:**

#### **(PHM643) Nephrology (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in nephrology units (both inpatients and out patients). Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, dosage adjustments in renal impaired patients, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

#### **(PHM644) Surgery (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in Surgery wards covering antibiotic selection, pain management and nutritional support . Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM645) Pain Management (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in dealing with patients suffering from pain conditions. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM646) Drug Information (2-0-0)**

This rotation provides students with clinical pharmacy practice experience in handling drug information services. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based pharmacotherapeutic regimens, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to team rounding, preceptor shadowing, written assignments, oral presentations, and other clinical pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM647) Community Pharmacy (2-0-0)**

This rotation provides students with community pharmacy practice experience in managing a community pharmacy. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals. The tasks performed by the students include collecting patient-specific information, assessing drug therapy, recommending evidence-based over-the-counter treatments, monitoring drug therapy, educating patients and caregivers, and teamwork. The goals of the rotation will be achieved through a variety of ways including but not limited to preceptor shadowing, written assignments, oral presentations, and other community pharmacy-related tasks assigned by the onsite preceptor.

Pre-requisite: NA

### **(PHM648) Pharmacy Administration (2-0-0)**

This rotation provides students with managerial and administrative experience in hospital pharmacy. Students are expected to apply various proficiencies learned during their curriculum in order to achieve the goals of the rotation. The course will cover areas related to human resource management, medicine procurement, inventory management, dealing with business challenges and communicating effectively with other health providers. Learning will be accomplished through a variety of ways including but not limited to preceptor shadowing, written assignments, oral presentations, and other administrative tasks assigned by the onsite preceptor.

Pre-requisite: NA