

## Master's CLINICAL PHARMACY

(Thesis Track)

Plan Number	3 \ 12	06	2010	T
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### I. GENERAL RULES CONDITIONS:

1. This plan conforms to the valid regulations of the programs of graduate studies.
2. Areas of specialty of admission in this program:
  - Holders of the Bachelor's degree in:
    - a- Pharmacy
    - b- Pharm.D.

### II. SPECIAL CONDITIONS: None.

### III. THE STUDY PLAN : Studying ( 33) Credit Hours as follows:

#### 1. Obligatory courses: (18) Credit Hours:

Course No.	Course Title	Credit hrs.	Theory	Prac.	Pre-request
1203708	Pharmacotherapy (1)	3	3	-	-
1203729	Pharmacotherapy (2)	2	2	-	-
1203711	Pharmaceutical Care	3	3	-	-
1203712	Hospital Clerkship (1)	2	-	16	-
1203713	Hospital Clerkship (2)	2	-	16	-
1203722	Clinical Pharmacokinetics	2	2	-	-
1203723	Clinical research methods and statistics	2	2	-	-
1203724	Advanced pharmacotherapy	2	2	-	-

- Each credit hour is equivalent to ( 8 ) training hours weekly

**2. Elective Courses: Studying (6) Credit hours from the following:**

<b>Course No.</b>	<b>Course Title</b>	<b>Credit hrs.</b>	<b>Theory</b>	<b>Prac.</b>	<b>Pre-request</b>
1203716	Clinical Biochemistry	3	3	-	-
1203717	Toxicology	3	3	-	-
1203718	Evidence-Based Pharmacy Practice	3	3	-	-
1203720	Drug misuse and abuse	3	3	-	-
1233725	Hospital Pharmacy	3	3		
1203726	Specialty Hospital Clerkship (1)	3	-	24	1203712
1203727	Specialty Hospital Clerkship (2)	3	-	24	1203713
1203728	Pharmacy Administration (Pharmaceutical marketing /PharmacoEconomics)	3	3		-

**3. Thesis: 9 Credit hours (1203799) .**

## **Course description**

**1203708      Pharmacotherapy (1)      (3 Cr.)**

Covers the pathophysiology, clinical presentations, pharmacotherapy (pharmacokinetics & pharmacodynamics, drug/drug interactions, dosage calculations, adverse effects, treatment algorithm, goals of therapy & patient education) of: 1) CVS disorders 2) Endocrine disorders 3) Gastroenterology disorders.

Teaching will be conducted through lecturing, case discussions, and assignments

**1203729      Pharmacotherapy (2)      (2 Cr.)**

Covers the pathophysiology, clinical presentations, pharmacotherapy (pharmacokinetics & pharmacodynamics, drug/drug interactions, dosage calculations, adverse effects, treatment algorithm, goals of therapy & patient education) of: 1) Infectious diseases 2) Neurology disorders 3) Oncology/Hematology disorders 4) Respiratory disorders 5) Renal disorders 6) Dermatovenerology

Teaching will be conducted through lecturing, case discussions, and assignments.

**1203711      Pharmaceutical Care      (3 Cr.)**

This course offers introduction into the basic skills, including interpretation of clinical laboratory tests, case notes, observation charts. Principles of pharmaceutical care (creating patient database, drug therapy problem assessment, pharmacotherapy plan, patient monitoring). Communication skills: patient counseling, interview techniques, presentation & teaching skills, concepts & practice of drug information.

**1203712 Hospital Clerkship (1) (2 Cr.)**

Students will participate in medical ward rounds, case seminars & hospital education programs. Available rotations include cardiology, oncology/hematology, critical care, neurology, nephrology. Students will be involved in clinical research & assignments, as well as in patient monitoring. The level of student competency will be demonstrated to a panel of clinical teacher-practitioner.

**1203713 Hospital Clerkship (2) (2 Cr.)**

Students will participate in medical ward rounds, case seminars & hospital education programs. Available rotations include respiratory, rheumatology, endocrine, infectious diseases, surgery, pediatrics, gynecology/obstetrics. Students will be involved in clinical research & assignments, as well as in patient monitoring. The level of student competency will be demonstrated to a panel of clinical teacher-practitioner.

**1203722      Clinical Pharmacokinetics      (2 Cr.)**

This course includes introduction to mathematical techniques required for the treatment of pharmacokinetic modeling. Additionally, application of pharmacokinetic principles to clinical practice and its relevance to the rational design of individualized drug dosage regimens in the total clinical context, taking into account such special problems as hepatic and renal functional impairment, other effects of disease, immaturity of drug metabolizing enzymes, and drug interactions.

**1203723      Clinical Research Methods and Statistics      (3 Cr.)**

This course introduces the students to the fundamentals of research including measurement, reliability, validity, ethical concerns, clinical research design; data analysis and presentation

**1203724      Advanced Pharmacotherapy      (2 Cr.)**

Covers the pathophysiology, clinical presentations, pharmacotherapy (pharmacokinetics & pharmacodynamics, drug/drug interactions, dosage calculations, adverse effects, treatment algorithm, goals of therapy & patient education) of: Rheumatology/Immunology disorders, Neurology disorders, Women's health, Gastrointestinal, and Psychiatric disorders. Teaching will be conducted through lecturing, case discussions, and assignments.

**1203716      Clinical Biochemistry      (3 Cr.)**

This course aims to cover the advanced topics in clinical biochemistry e.g. endocrinology, clinical chemistry in pregnancy, clinical chemistry of the extremes of age and tumor markers.

**1203717      Toxicology      (3 Cr.)**

The course covers the following topics :

Special aspects of perinatal and pediatrics, Special aspects of geriatric patients,

Drug-induced disorders and Drugs of abuse.

**1203718      Evidence-Based Pharmacy Practice      (3 Cr.)**

This course introduces pharmacist to the concepts and analytical foundation underlying Evidence-Based Pharmacy Practice. Course content will focus on: concepts of evidence-based Pharmacy Practice; and the structure and evaluation of clinical research proposals and reports. Upon completion of the course, the student will be able to critically evaluate the medical literature for use in clinical decision making.

**1203720      Drug Misuse and Abuse      (3 Cr.)**

This course introduces the students to the background knowledge about the most common drugs of abuse and the medical complications associated with their misuse/abuse. Also it aims to provide knowledge and clarify terminology associated with drug use. In addition knowledge about transmission, treatment and prophylaxis of diseases to which drug users can be susceptible will be provided. Finally an overview of the most common treatment methods and services offered to drug dependents in the world and in Jordan will be discussed.

**1233725**

**Hospital Pharmacy**

**(3 Cr.)**

This course covers a detailed discussion of the practice of Hospital Pharmacy including the different duties of the hospital pharmacists, namely: organization of the hospital and hospital pharmacy, purchase and inventory control, the Pharmacy and Therapeutics committee, the Hospital Formulary, unit dose system, preparation of intravenous admixture services, and how to conduct patient education and counseling.

By the end of this course students are expected to be familiar with the following information about the practice of Hospital pharmacy:

- \* Organization of the hospital pharmacy
- \* The hospital pharmacist responsibilities.
- \* How to communicate information to the patient and hospital staff

**1203726**

**Specialty Hospital Clerkship (1)**

**(3 Cr.)**

Students will practice in a specific medical specialty to improve his knowledge and clinical skills (Cardiovascular or Oncology or Intensive Care or Neurology or Nephrology or Family medicine). This clerkship allows students to tailor their education to best meet their career goal.

**1203727      Specialty Hospital Clerkship (2)      (3 Cr.)**

Students will practice in a specific medical specialty to improve his knowledge and clinical skills (Respiratory or Rheumatology or Endocrinology or Infectious diseases or Surgery or Pediatrics or Gynecology or Ambulatory Care) . This clerkship allows students to tailor their education to best meet their career goal.

**1203728      Pharmacy Administration (Pharmaceutical marketing/  
PharmacoEconomics)      (3 Cr.)**

This course is designed in order to introduce the applications of PharmacoEconomics' principles & cost-effectiveness methodologies into clinical aspects of health technology programs and the applications of marketing strategies into medicines. This will include Budget Impact Analysis, best recourse allocation aspects and health economics modeling simulations as well as how to link marketing pharmaceutical services with patient/physician behavior as a consumer.