



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Clinical Pharmacy Practice 1203561
2	Course number	1203561
3	Credit hours (theory, practical)	1 hour
	Contact hours (theory, practical)	(theory: 3 hours /day for 5 days; practical : 3 hours/day for 5 days)
4	Prerequisites/corequisites	Therapeutics 2
5	Program title	Pharmacy
6	Program code	12
7	Awarding institution	The University of Jordan
8	Faculty	Pharmacy
9	Department	Department of biopharmaceutics and clinical pharmacy
10	Level of course	Undergraduate
11	Year of study and semester (s)	5 th year, spring semester
12	Final Qualification	Pharmacy
13	Other department (s) involved in teaching the course	-----
14	Language of Instruction	English
15	Date of production/revision	Fall semester-2015/2016

16. Course Coordinator:

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17. Other instructors:

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18. Course Description:

This course is directed toward introducing students to Drug Therapy Management (DTM) and Evidence Based Medicine (EBM). Students will be taught skills that will enable them to apply theoretical and basic principles of pharmacology, therapeutic and clinical courses in dealing with real cases to identify and resolve different treatment related problems.

19. Course aims and outcomes:**A- Aims:**

- To understand steps of Pharmaceutical Care
- To become familiar with evidence based medicine
- To learn how to collect patient data base
- To learn interviewing skills
- To learn counseling skills and methods
- To classify and analyze the problems properly according to the classification system in the manual.
- To write " Pharmacist Care Plan" and "Pharmacist monitoring sheet"
- To apply all skills learned to patient care

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

Intended Learning Outcomes (ILOs):**A. Knowledge and Understanding:**

- A1- To grasp the concept of Pharmaceutical Care & DTM
- A2 – To be able to classify actual and potential treatment related problems
- A3- To learn counseling and interviewing skills
- A4 – To understand principles of EBM

B. Intellectual Analytical and Cognitive Skills: Student is expected:

- B1 – To apply knowledge in disease pharmacotherapy and pathophysiology, pharmacokinetics and other pharmaceutical subjects to the process of patient care
- B2 – To be able to use EBM-based approach in developing recommendations for appropriate pharmacotherapy

C. Subject-Specific Skills

- C1- To learn how to interpret abnormalities in lab tests
- C2-To learn how to calculate ideal body weight and body mass index
- C3- To learn how to assess kidney and liver function
- C4 – To learn how to build patient database from existing sources (patient interview, medical file, lab tests, medication sheet)
- C5 – To learn effective interviewing skills
- C6 – To be able to provide assessment of potential and actual treatment related problems
- C7- To be able to select the most optimal pharmacotherapy choice for individual patients
- C8 - To learn to provide effective patient education
- C9 - To be able to solve treatment related problems

C10 – To be able to develop rational pharmaceutical care plan with optimal monitoring parameters

D. Transferable Skills

D1 – To learn about basic internet-web browsing skills needed to obtain guidelines treatment of various diseases encountered during rotations as well as to drug databases

D2 – To develop independent problem-solving abilities through learning how to find and use existing resources with a particular emphasis on the use of current literature.

D3 - To practice the processes of group discussion, teamwork, and synergy in finding answers to basic and clinical questions arising from case study.

Expected competencies:

1) Patient Care

- A. Identify indications, side effects and contraindications of medicines.
- B. Identify drug-drug and drug-food interactions of medicines
- C. Assess patients medical records
- D. Respect and protect the confidentiality of patient's information
- E. Maintain, review and update medicine records of patients
- F. Advise patients and other health professionals on proper usage of medicines including their strength, frequency, dosage form and route of administration

2) Interpersonal and Communication

- A. Communicate effectively with patients and other healthcare professionals
- B. Respond effectively to enquiries presented by patients and other healthcare professionals
- C. Build positive relationships with patients and other healthcare professionals
- D. Acknowledge and respect cultural and religious differences among patients and colleagues
- E. Listen to patients and respect their views and choice of treatment options

20. Topic Outline and Schedule:

Content	Reference	LAB#	ILO/s	Evaluation method
❖ Introduction to the course Evidence Based Medicine ❖ Evidence Based Medicine ➤ What is evidence based medicine, ➤ Steps for evidence	1-- Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services (3rd edition) Cipolle, RJ, Strand, LM, & Morley, PC, McGraw-Hill, 2012.	1	<ul style="list-style-type: none"> • To understand principles of EBM • To grasp the concept of Pharmaceutical Care & DTM • To learn about basic internet-web browsing skills needed to obtain guidelines treatment 	EBM 5%

<p>based medicine,</p> <ul style="list-style-type: none"> ➤ Study design and statistical terms, ➤ Where to find evidence <p>✓ Assignment 1: EBM</p> <p>❖ Discuss Pharmaceutical care</p> <p>Patient data base:</p> <ul style="list-style-type: none"> ➤ Students will learn how to read medical files and medications Sheets, decipher abbreviations, understand and extract necessary Information. ➤ Students will learn how to create patient data base ➤ Students will learn how to write hospital course ➤ Copies of a recent medical file and associated medication sheet from JUH will be distributed to students ➤ Copies of JUH-lab tests forms with references values will be distributed to students ➤ Each group will handle the in-school case working in teams and a test evaluating their skills will be conducted 			<p>of various diseases encountered during rotations as well as to drug databases</p> <ul style="list-style-type: none"> • To develop independent problem-solving abilities through learning how to find and use existing resources with a particular emphasis on the use of current literature. • To be able to use EBM-based approach in developing recommendations for appropriate pharmacotherapy. • To learn how to collect patient data base. • To learn how to build patient database from existing sources (patient interview, medical file, lab tests, medication sheet. • To learn how to calculate ideal body weight and body mass index • To learn how to assess kidney and liver function • To learn how to interpret abnormalities in lab tests 	
<p>Drug related problems</p> <p>❖ To classify and analyze the problems properly according to the classification</p>	<p>1-Pharmacy practice Manual (The classification system approved in the manual is Aburuz <i>et al</i> classification system</p>	<p>2</p>	<ul style="list-style-type: none"> • To be able to classify actual and potential treatment related problems • To be able to solve treatment related problems • To be able to develop rational pharmaceutical care plan with optimal monitoring 	

<p>Care plan</p> <p>❖ Write appropriate "Pharmacist Care Plan" and "Pharmacist Care Plan Monitoring Worksheet".</p> <p>➤ Students will be introduced to the different forms that are used</p> <p>➤ Students will work individually on actual patient case and then discuss their work in groups</p>	<p>1- Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services (3rd edition) Cipolle, RJ, Strand, LM, & Morley, PC, McGraw-Hill, 2012.</p>	<p>3</p>	<p>parameters</p> <ul style="list-style-type: none"> • To apply knowledge in disease pharmacotherapy and pathophysiology, pharmacokinetics and other pharmaceutical subjects to the process of patient care • To be able to select the most optimal pharmacotherapy choice for individual patients. • To develop independent problem-solving abilities through learning how to find and use existing resources with a particular emphasis on the use of current literature. 	
<p>Consult Notes</p> <p>❖ Resolve and prevent treatment related problems.</p> <p>➤ This will be achieved through submitting "Consult Notes" and "Patient Education Forms". The "Consult Note" needs to be written in SOAP format.</p> <p>➤ students will learn how to communicate their recommendations to health care professionals</p> <p>➤ Students will be introduced to the different forms that are used</p> <p>➤ Students will work individually on actual patient case and then discuss their work in groups</p>	<p>1- Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services (3rd edition) Cipolle, RJ, Strand, LM, & Morley, PC, McGraw-Hill, 2012.</p> <p>2-Pharmacy practice Manual (The classification system approved in the manual is Aburuz <i>et al</i> classification system</p>	<p>4</p>	<ul style="list-style-type: none"> • To apply knowledge in disease pharmacotherapy and pathophysiology, pharmacokinetics and other pharmaceutical subjects to the process of patient care • To be able to select the most optimal pharmacotherapy choice for individual patients 	<p>Brochure 10%</p>

<p>Interviewing technique and counseling skills</p> <p>❖ Learn interviewing skills:</p> <ul style="list-style-type: none"> ➤ To verify and to fill gaps of information obtained from Medical file. ➤ To conduct Review of symptoms ➤ To assess patients' knowledge of their diseases and medications. ➤ To assess patients' adherence to their drugs. <p>❖ Learn Counseling Skills and methods</p> <p>❖ Students will be introduced to the different forms that are used in interviewing patients</p> <p>✓ Assignment 2: brochure for Patient counseling</p> <p>Case discussion.</p>	<p>1- Pharmaceutical Care Practice: The Patient-Centered Approach to Medication Management Services (3rd edition) Cipolle, RJ, Strand, LM, & Morley, PC, McGraw-Hill, 2012.</p>	<p>5</p>	<ul style="list-style-type: none"> • To learn counseling and interviewing skills. • To learn effective interviewing skills • To learn to provide effective patient education • To practice the processes of group discussion, teamwork, and synergy in finding answers to basic and clinical questions arising from case study. 	
<p>✓ Assignment 3: Each student will handle a new case from A to Z at JUH and a test evaluating their skills will be conducted</p>	<p>Hospital Training at JUH</p>	<p>6-10</p>	<ul style="list-style-type: none"> • To apply all skills learned previously • A+B+C+D 	<p>Manual 15%</p>
<p>Midterm Exam</p>	<p>The students will be asked to study;</p> <p>1) 10-alarming medications (digoxin, warfarin, theophylline, cyclosporine, phenytoin, valporic acid, lithium, carbamazepine, haloperidol and insulin).</p> <p>2) Patient education of 10 drugs (amiodarone, ciprofloxacin, metronidazole, isosorbide dinitrate, alendronate, pulmicort, ventolin, levothyroxine, omeprazole, olanzapine).</p>	<p>Week 6 Sunday 6/3/2016</p>		<p>Mid-term exam 30%</p>

	3) Self-study material from drug information handbook including 10 medications (metformin, simvastatin, prednisolone, glimberide, diclofenac, paracetamol, loratidine, enoxaparine, vancomycin, enalapril), you need to know the following(mechanism of action, pharmacological category, pharmacological use, dose adjustment in renal and hepatic failure, black box warning, common and significant adverse effect, and the route of administration).			
Final Exam	Open book exam (certain guidelines will be specified), also the exam will cover all material covered in lectures. The material and the topics for the final exam will be announced 2 weeks before the final exam.	Week 14 Monday 2/5/2016		Final exam 40%

21. Teaching Methods and Assignments: & 22. Evaluation Methods and Course Requirements:

ILO/s	Learning Methods	Evaluation Methods
A	Instructor presentations, home works, assignments (manual)	Quizzes, assignments
B	Group discussions, home works, assignments (EBM and brochure)	Exam, home works, assignments
C	Individual work on a patient case (manual)	Evaluation of case manual
D	Group discussions, home works, assignments (manual and EBM)	Home works, case presentations

Expected learning skills:

1) Digital literacy:

The ability to find, evaluate, utilize, share, and create content using digital devices (such as smartphones, tablets, and computers) and their networks (such as the internet)

2) Communication skills:

The ability to receive and convey ideas and meanings from and to other individuals effectively and efficiently by verbal, non-verbal and visual means

3) Problem-solving skills:

Using analytical and creative skills to identify a problem, break it down into key components, consider alternative ways to resolve it, and decide and implement the most appropriate of these ways.

23. Course Policies:

A- Attendance policies:

Attendance is mandatory.

- First warning – with 1 absences
- Failing in the subject – with 2 absences

B- Absences from exams and handing in assignments on time:

Absences from exam are forbidden except in critical cases

Handing in assignments on time are mandatory

C- Health and safety procedures:

Hepatitis B, Hepatitis C and HIV tests are required before the practical sessions.

Flu vaccine and hepatitis B vaccine are recommended.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

- No side talks
- No mobile phones
- Entering the lecture theatre after the instructor is not permitted.
- The participation, the commitment of cheating will lead to applying all following penalties together:
 - ✓ Failing the subject he/she cheated at
 - ✓ Failing the other subjects taken in the same course
 - ✓ Not allowed to register for the next semester. The summer semester is not considered as a semester

E- Grading policy: Evaluation sheets for EBM, brochures and manuals are available. Mid and final exam corrected by scanning device. Students grading follow the university grading system (A, A-, B+,....etc).

- EBM 5%
- Brochure 10%
- Manual 15%
- Mid-term exam 30%
- Final exam 40%

F- Available university services that support achievement in the course:

24. Required equipment:

Lab coats and smartphones.

25. References:

- A- Required book (s), assigned reading and audio-visuals:
1. Drug Information Handbook, American Pharmacist Association, edition 24.
 2. Lexi-comp application
- B- Recommended books, materials, and media:
1. Updated guidelines-case specific.

26. Additional information:

Name of Course Coordinator: **Ph.Sumaya AbuLoha** Signature: ----- Date: 8-2-2016

Head of curriculum committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: -----Signature: -----

Copy to:
Head of Department
Assistant Dean for Quality Assurance
Course File