



The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Internal Medicine II
2	Course number	1203602
3	Credit hours (theory, practical)	7 (practical)
	Contact hours (theory, practical)	30 (practical)
4	Prerequisites/corequisites	Pharmacotherapy IV
5	Program title	PharmD
6	Program code	
7	Awarding institution	The University of Jordan
8	Faculty	Pharmacy
9	Department	Biopharmaceutics & Clinical Pharmacy
10	Level of course	undergraduate
11	Year of study and semester (s)	First and second semester of the 6 th year
12	Final Qualification	PharmD
13	Other department (s) involved in teaching the course	Pharmaceutics
14	Language of Instruction	English
15	Date of production/revision	9 February 2016

16. Course Coordinator:

Office numbers, office hours, phone numbers, and email addresses should be listed.

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18. Course Description:

As stated in the approved study plan.

This hospital training is directed toward training the students to use the theoretical and basic principles of pharmacology, therapeutic and clinical courses in dealing with real cases to identify and resolve different treatment related problems in internal medicine. There are 4 different sub-specialties practiced over the semester (cardiology, respiratory, infectious diseases and endocrinology). Each sub-specialty lasts for 2 to 3 weeks. Students are distributed so each student will be trained on 4 sub-specialties. During each rotation, students handle all the inpatient cases in the team under the supervision and direction of clinical pharmacists (MSc in clinical pharmacy or PharmDs). Students will also cover cases in outpatient clinics. Some of the activities done by students include: solving a case for TRPs, patient counselling, therapeutic drug monitoring, IV preparation, checking dosage regimen, checking drug interactions and assessing safety and efficacy of medications.

1. 19. Course aims and outcomes:

A- Aims:

- To demonstrate the ability of students to search for specific guidelines and use of EBM for controversial area.
- To learn problem solving skills and analysis when guidelines are unavailable or research in certain area are lacking.
- To assess the ability of students to identify TRPs and to construct optimal care plan for the patient.
- To demonstrate the ability of students to determine if the patient achieved the desired outcomes and to determine the appropriate time for follow up evaluation.
- To demonstrate the ability of students to provide appropriate patient counseling.
- To know the ability of students to check for the most significant drug- drug interactions among patient's medications and how to monitor and manage such interactions.
- To assess the ability of students to communicate with health care providers and their ability to provide a clear recommendations to them.

B- Course Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ... Successful completion of the course should lead to the following outcomes:

A. Knowledge and Understanding:

1. To provide students with the knowledge related to internal 2 most common disorders, clinical anifestations, complications, goal of pharmacotherapy, patient education of selected disorders; as well as the knowledge of medications' mechanism of action, clinical uses, dosing and monitoring parameters.

B. Intellectual Analytical and Cognitive Skills:

1. To enable students to identify drug-related problems and recommend the appropriate pharmacotherapy treatment through case discussion.

C. Subject-Specific Skills:

1. Student is expected to develop the ability to design the rational pharmacotherapy regimen according to the patient specific condition

D. Transferable Key Skills:

1. To enable students to have patient communication skill and provide information related to diseases and their management through browsing the Internet professional sites.
2. To enable students to have the skill of data collection and interpretation from medical journal databases (MEDLINE, library) for EBM.

Program Competencies Achieved:

- 2.1 Recognize main physiological principles that govern normal body functioning
- 2.2 Identify pathophysiological basis of major human diseases
- 2.3 Identify indications, side effects and contraindications of medicines
- 2.4 Identify drug-drug and drug-food interactions of medicines

- 2.5 Identify basic principles of drug pharmacokinetics and recognize disease conditions and other factors that interfere with safety and efficacy of medicines
- 2.6 Assess patients medical records
- 2.7 Respect and protect the confidentiality of patient's information
- 2.8 Maintain, review and update medicine records of patients
- 2.9 Advise patients and other health professionals on proper usage of medicines including their strength, frequency, dosage form and route of administration
- 5.1 Communicate effectively with patients and other healthcare professionals
- 5.2 Prepare and deliver presentations effectively
- 5.3 Express ideas, instructions and information in a clear and comprehensible manner
- 5.4 Considers audience feedback to verify their proper understanding
- 5.5 Respond effectively to enquiries presented by patients and other healthcare professionals
- 5.6 Exhibit negotiation and influencing skills to resolve conflicts
- 5.7 Build positive relationships with patients and other healthcare professionals
- 5.8 Acknowledge and respect cultural and religious differences among patients and colleagues
- 5.9 Listen to patients and respect their views and choice of treatment options

Teaching Methods

- ✓ Lectures
- ✓ Assignments.

Course Material and Announcements

Students need to use the e-learning page at the JU website in order to get all lecture handouts and guidelines which will be uploaded there.

In addition, course related announcements and exam results will be posted on the e-learning page and is the responsibility of each student to check the site regularly.

Username and password to access the course on the e-learning page will be provided to students in the beginning of the semester.

20. Topic Outline and Schedule:

Varies depending on sub-specialty the topics will be covered throughout the rotation		
Cardiology Topic	References	ILO's
Hypertension	JNC8 Guidelines on the management of HTN, Dipiro chap: 19 -	A1,B1,C1, D1-2
Dyslipidemia	- Cardiovascular Risk in Adults: A Report of the American College of Cardiology/American 2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic, Dipiro chap:28)	A1,B1,C1, D1-2
Heart Failure and Acute Decompensated Heart Failure	- ACC/AHA Guidelines on the management of HF, Dipiro chap:20+21+22	A1,B1,C1, D1-2
Acute Coronary Syndrome	- ACC/AHA Guidelines on the management of STEMI, Unstable Angina/NonSTEMI, Dipiro chap:24	A1,B1,C1, D1-2
Atrial Fibrillation	- ACC/AHA Guidelines on the management of AFib , Dipiro chap:25	A1,B1,C1, D1-2
Endocrinology/Infectious diseases		
Diabetes mellitus and its complications	- Standards of Medical Care in Diabetes, American Diabetes Association 2016.	A1,B1,C1, D1-2
Diabetic ketoacidosis and hyperosmolar hyperglycemic state	- Diabetic ketoacidosis and hyperosmolar hyperglycemic state in adults: Clinical features, evaluation, and diagnosis, UpToDate 2015. - Diabetic ketoacidosis and hyperosmolar hyperglycemic state in adults: Treatment, UpToDate 2015.	A1,B1,C1, D1-2
Diabetic neuropathy	- Treatment of diabetic neuropathy, UpToDate 2015.	A1,B1,C1, D1-2
Thyroid disorders Hyperthyroidism Hypothyroidism Thyroidectomy	- Katzung, chapter 38 - Initial and reoperative thyroidectomy, UpToDate 2015.	A1,B1,C1, D1-2

Meningitis	-Clinical features and diagnosis of acute bacterial meningitis in adults, Up To Date 2016.	A1,B1,C1, D1-2	
	-Initial therapy and prognosis of bacterial meningitis in adults, Up To Date 2016.		
Infectious diarrhea (Shigellosis, salmonellosis, amebiasis, giardiasis).	- Practice Guidelines for the Management of Infectious Diarrhea, IDSA guideline, 2001.	A1,B1,C1, D1-2	
UTI	<ul style="list-style-type: none"> - Asymptomatic Bacteriuria in Adults, American Family Physician, 2006. - Diagnosis and Management of Uncomplicated Urinary Tract Infections, American Family Physician, 2005. - Acute complicated cystitis and pyelonephritis, Up To Date 2016. 	A1,B1,C1, D1-2	
Diabetic foot infection	- Diabetic Foot Infections, American Family Physician, 2013.	A1,B1,C1, D1-2	
Respiratory			

Asthma	GINA Report 2015	A1,B1,C1, D1-2	
COPD	GOLD Report 2016	A1,B1,C1, D1-2	
CAP	IDSA/ATS Guidelines on the management of CAP 2007	A1,B1,C1, D1-2	
HAP/VAP	IDSA/ATS Guidelines on the management of HAP/VAP 2005	A1,B1,C1, D1-2	
Aspiration pneumonia	Uptodate data base	A1,B1,C1, D1-2	

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following teaching and learning methods:

ILO/s	Learning Methods	Evaluation Methods
A B C D	-Hospital Clinical Pharmacy rounds -Hospital Medical rounds (with MD consultants) -Homework and Assignments -Presentation.	-Exam -Oral Discussions -Pharmacy practice manual. -Homework and assignments -Quiz, presentation.

Learning skills:

Critical thinking
Digital literacy
Problem-solving skills
Self-directed learning

22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

- Exam
- Oral Discussions
- Pharmacy practice manual.
- Homework and assignments
- Quiz, presentation.

23. Course Policies:

A- Attendance policies:

Being 15 minutes late for two days is considered as one absence

One absence is given first warning

Two absences merits dismissing student from class

Other hospital clerkship specific policies:

In each training course the students will be divided into groups. Each group will undergo training in the hospital for two weeks -daily (Sunday-Thursday), from (8.00 AM-2:00 PM).

- Students will require doing the following during their internship:

1. Students must attend a minimum of 2 teaching rounds per week.
2. Students will be responsible for one full case 1st week (follow up until DISCHARGE), then two cases per week.
3. Students must conduct full patient interview and counselling for full case, otherwise case will not be accounted for, and student must submit another case or receive a "zero" for that certain case.
4. Students must pick their main full case within the first 2 days of the week (Sunday or Monday), By Tuesday, they must have read about the disease and medications and prepared primary PCP. Students will be asked about their cases and input on their cases

during the week.

5. Students must attend daily morning report and clinical pharmacy round and be prepared for any questions the preceptor may have regarding their case as well as cases that other members of their group have.
6. Students will have a weekly case discussion (during same week of particular cases) with their supervisor and must be fully prepared. Anything regarding disease, pharmacotherapy or pharmacology of drugs may be asked.
7. Students will be assigned a topic by their preceptor in whom they must prepare a brief presentation (no longer than ten minutes). There will be one presentation per student per rotation. Topic will be assigned by preceptor.
8. Attendance will be taken daily, and a tardiness of 15 minutes or more will be considered an absence.
9. If a student is caught cheating or filling manual with false data then he/she will receive a zero in the area they are caught cheating in.

***** At the beginning of each week (Sunday) except the first week, students must submit full cases. Marks will be deducted for late submission.**

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

Will result in zero achievement unless health report or other significant excuse is documented.

C- Health and safety procedures:

Before training, it is mandatory to get blood tests for Hepatitis B, C and HIV.

Flue and H1N1 vaccination are obligatory to obtain prior to training

D- Honesty policy regarding cheating, plagiarism, misbehavior:

The participation, the commitment of cheating will lead to applying all following penalties together

- 1) Failing the subject he/she cheated at
- 2) Failing the other subjects taken in the same course
- 3) Not allowed to register for the next semester. The summer semester is not considered as a semester

E- Grading policy:

Evaluation	Point %	Date
Assessment, evaluation and Attitude	5	Determined with each students group
Presentations	5	Starting from the Tuesday of 1 st week of each rotation.
Discussion with PhD holder	10	Arranged with the PhD holder
Homework and Assignments/quizzes	10	Short assignments and homework on daily basis during the rotation.
Oral case discussion of cases	15	At the beginning of each week (Sunday) except the first week
Pharmacy practice manual grading	15	At the beginning of each week (Sunday) except the first week, students must submit full cases
Final Exam	40	

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

Classrooms, internet classes, hospital training site at RMS, JUH and PHH

24. Required equipment:

Data-show and internet connection

25. References:

A- Required book (s), assigned reading and audio-visuals:

ISBN	Title	Author	Year
978-1585283-28-6	Extemporaneous Formulations for Pediatric, Geriatric, and Special Needs Patients, 2nd Edition	Rita K. Jew, Winson Soo-Hoo, Sarah C. Erush	
978-1585283-42-2	Extended Stability for Parenteral Drugs, 5th Edition	Bing, Caryn Dellamorte and Nowobilski-Vasilios, Anna Nowobilski-Vasilios	
978-1-4496-3397-4	Cancer Therapy: Prescribing and Administration Basics	Trinh Pham, Lisa Holle	2015

ISBN: 978-1-4511-0145-4	The Chemotherapy Source Book, Fifth Edition	Michael C. Perry, M.D.; Donald C. Doll, M.D.; and Carl E. Freter, M.D.	2012
978-1-58528-228-9	Fundamentals of Geriatric Pharmacotherapy: An Evidence-Based Approach	Lisa C. Hutchison, Pharm.D., MPH, FCCP, BCPS; and Rebecca B. Sleeper, Pharm.D., FASCP, BCPS	2010
978-1451191042	Healthy Aging: Principles and Clinical Practice for Clinicians	Virginia Burggraf, Kye Y. Kim, Aubrey L. Knight	2014
978-1-59195-298-5	Anesthesiology & Critical Care Drug Handbook, 10th Edition	Baughman VL, Golembiewski J, Gonzalez JP, Alvarez W	2011
978-1-4511-1221-4	Antibiotic Basics for Clinicians, Second Edition	Alan R. Hauser	2012
978-1-60913-713-7	Applied Therapeutics: The Clinical Use of Drugs, 10th Edition	Brian K. Alldredge, Pharm.D.; Robin L. Corelli, Pharm.D.; Michael E. Ernst, Pharm.D.; B. J. Guglielmo Jr., Pharm.D.; Pamala A. Jacobson, Pharm.D.; Wayne A. Kradjan, Pharm.D.; and Bradley R. Williams, Pharm.D	2012
978-0-07-180053-2	Pharmacotherapy: A Pathophysiologic Approach, Ninth Edition	Joseph DiPiro, Pharm.D., FCCP; Robert Talbert, Pharm.D., FCCP, BCPS; Gary Yee, Pharm.D., FCCP; Barbara Wells, Pharm.D., FASHP, FCCP, BCPP; and L. Michael Posey, BS Pharm	2014
978-1932658-248	Gastroenterology and Nutrition I and II - PSAP-VII, Book 11	ACCP	2012
978-1-932658-56-9	Neurology and Psychiatry I, II, and III – PSAP-VII, Book 10	ACCP	2012
978-1-932658-55-2	Infectious Diseases I, II, and III – PSAP-VII, Book 9	ACCP	2012
ISBN: 978-1-932658-53-8	Geriatrics I, II, and III – PSAP-VII, Book 7	ACCP	2011
978-1-932658-52-1	Oncology I, II, and III – PSAP-VII, Book 6	ACCP	2011

978-1-932658-46-0	Critical and Urgent Care I, II, and III – PSAP-VII, Book 2	ACCP	2010
978-1-880401-01-09	Critical and Urgent Care - PSAP 2014 Book 1	ACCP	2014
ISBN-13: 978-1-932658-93-4	Cardiology and Endocrinology – PSAP 2013 Book 1	ACCP	2013
ISBN-13: 978-1-932658-97-2	Special Populations – PSAP 2013 Book 2	ACCP	2013
ISBN-13: 978-1-939862-07-5	Chronic Illnesses - PSAP 2014 Book 2	ACCP	2014
978-1-58528-343-9	Basic Skills in Interpreting Laboratory Data, Fifth Edition	Mary Lee	2013

B- Recommended books, materials, and media:

1. Clinical Pharmacy and Therapeutics, ed. Walker & Edwards, 5th edition, 2012
2. Basic & Clinical Pharmacology, ed. Katzung, 12 th edition

26. Additional information:

Name of Course Coordinator: Amal Akour-Signature: ----- Date:Feb, 8, 2016

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

Head of Department: Nailya Bulatova Signature: -----

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

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

Assurance

Copy to:
Head of Department
Assistant Dean for Quality

Course File