



## Syllabus: Pharmacotherapy (2) (#131702566) First Semester 202.. /202..

COURSE INFORMATION	
<b>Course Name:</b> Pharmacotherapy (2) ( <b>face-to-face education</b> ) <b>Semester:</b> First <b>Department:</b> Clinical Pharmacy & Pharmacy Practice <b>Faculty:</b> Pharmaceutical Sciences	<b>Course Code:</b> 131702566 <b>Section:</b> As per semester <b>Core Curriculum:</b> 2019 <b>Study Plan</b>
<b>Day(s) and Time(s):</b> According to HU courses timetable/semester  <b>Classroom:</b> As per semester	<b>Credit Hours:</b> 3 <b>Prerequisites:</b> 131702463 or 1917021463 (Pharmacology 3)
COURSE DESCRIPTION	
<p>This course teaches pharmacy students how to integrate their background in biomedical and pharmaceutical sciences with pharmacotherapy to make sensible judgment and decisions about patients' care in a patient-centered and team-based approach. It helps students to develop and refine their skills in critical thinking and problem-solving to identify and manage medication-related problems for safe, appropriate and cost-effective drug therapy regimens that respect the choice of the patient and enhance adherence. These skills promote students' self-confidence and self-learning and allow them to appreciate the vital role of pharmacists as healthcare providers for optimal outcomes of patients' health in preparation for the students' professional practice.</p> <p>Topics that are covered here include infectious diseases, gastrointestinal disorders, anemia, rheumatologic disorders, and other miscellaneous topics. These topics will be discussed based on the knowledge of the pathophysiology, diagnosis, clinical manifestations, risk factors, complications, goals of therapy, and treatment guidelines.</p>	
DELIVERY METHODS	
<p>The course will be delivered through a combination of active learning strategies. These include:</p> <ul style="list-style-type: none"> <li>• PowerPoint lectures and active classroom-based discussion              Students will be encouraged to participate and be actively involved in the learning process. Lectures will start with questions to inquire about the students' prior knowledge of the topic. These questions will also be repeated at the end of the lecture to gain insight into the students' competences (to verify whether students have understood the topic). During delivering the lecture</li> </ul>	

presentation, time will be given to allow students to reflect about what they have learnt and think in and discuss some examples of short case studies.

- Relevant films and documentaries
- Video lectures
- E-learning resources: e-reading assignments and practice clinical case studies through Model and Microsoft Team

### FACULTY INFORMATION

<b>Name</b>	<b>Dr Enaam M. Al Momany</b>
<b>Academic Title:</b>	<b>Assistant Professor</b>
<b>Office Location:</b>	<b>Third Floor</b>
<b>Telephone Number:</b>	<b>Extension: 3433</b>
<b>Email Address:</b>	<b>enaam@hu.edu.jo</b>
<b>Office Hours:</b>	<b>As announced per semester</b>
	<i>Please send an e-mail (enaam@hu.edu.jo) to meet at any other time.</i>

### REFERENCES AND LEARNING RESOURCES

#### **Required Textbook(s):**

1. Joseph T. DiPiro, Gary C. Yee, L. et al. *Pharmacotherapy: A Pathophysiologic Approach* (McGraw Hill: 11e 2020) ISBN-10: 1260116816
2. Crees, Zachary; Fritz, Cassandra; Huedebert, Alonso; et al. *The Washington Manual of Medical Therapeutics* (Wolters Kluwer: 36 e 2019) ISBN-10: 9388696840

#### **Suggested Additional Resources:**

3. Marie A. Chisholm-Burns, Terry L. Schwinghammer, Patrick M. Malone et al. *Pharmacotherapy Principles and Practice* (McGraw Hill / Medical: 5e 2019) ISBN-10: 1260019446
4. Brian K. Alldredge; Robin L. Corelli; Michael E. Ernst; et al. *Applied Therapeutics: The Clinical Use of Drugs* (Wolters Kluwer: 11e 2018) ISBN/ISSN: 9781496318299
5. Roger Walker & Cate Whittlesea Churchill. *Clinical Pharmacy and Therapeutics* (Churchill Livingstone: 5 e 2012) ISBN-10: 0702042935

#### **Useful Web Resources:**

As per each lecture.

## STUDENT LEARNING OUTCOMES MATRIX

An alignment matrix of the **program** ILOs of the Bachelor of Pharmacy, the **course** ILOs and knowledge, skills and competencies as mentioned in the Jordan National Qualifications Framework (JNQF)

Field according to (JNQF)	Required to achieve (according to (JNQF))	Core curriculum learning outcomes	B.Sc. Pharmacy Program ILOs	Course Objectives (1-6 as below)						Course Student ILOs (A-D as below)				Assessment Method	
			Main Domain	1	2	3	4	5	6	A	B	C	D		
Knowledge	A systematic understanding of the theories, concepts, principles and circulations related to the field of learning, some of which are within the limits of the latest scientific findings	Foundational Knowledge	- Learner	✓	✓						✓				- Exams - Quizzes - Homework - Project
			- Caregiver - Manager - Promoter - Provider			✓	✓	✓				✓	✓		
Skills	Mastering the skills and tools required to solve complex problems in a specialized field of study	Essentials for Practice and Care	- Creative Thinker & Problem-Solver			✓	✓	✓			✓	✓			- Exams - Quizzes - Homework - Project
	Demonstrate specialized and conceptual skills in the field of study	Approach to Practice and Care	- Educator - Advocate - Collaborator - Includer - Communicator			✓	✓	✓			✓	✓		✓	- Exams - Quizzes - Homework - Project
Competencies	Management of activities and projects	Personal & Professional Development	- Self-aware - Leader - Innovator							✓				✓	- Exams - Quizzes - Homework - Project
	Take responsibility for decision-making in work or study contexts			- Professional							✓				✓
	Take responsibility for group work and work effectively with peer guidance	Pharmaceutical Product Expert	- Manufacturer												- Exams - Quizzes - Homework - Project
	Transfer and apply diagnostic and creative skills in a range of contexts														

## Course Objectives

After course completion students will be able to:

1. Describe and explain the pathophysiology, etiology, diagnosis, risk factors, clinical presentations and complications of the disease processes occurring in the patient.
2. Recognise drugs of choice, alternative therapies, nonpharmacologic and pharmacologic therapy, usual doses and dosage forms, common and serious side effects, clinically significant drug -drug, -food, -disease or -laboratory test interactions, therapeutic and safety monitoring parameters, therapeutic goals and, integration of multiple disease conditions into therapeutic decisions.
3. Integrate and apply knowledge from the basic and clinical sciences courses in the curriculum into the therapeutic decision-making process.
4. Develop appropriate and cost-effective pharmaceutical care plan for their provision of patient-centred care.
5. Identify, analyse, interpret, integrate and evaluate clinical findings to solve patient therapeutic problems.
6. Self-learn how to identify and manage medication-related problems.

## Course Intended Learning Outcomes (ILOs)

### **A. Knowledge and Understanding**

A.1- Develop an appreciation of the epidemiology, pathophysiology, etiology, diagnosis, risk factors, clinical features and complications of specified disease processes.

A.2- Develop an appreciation of the rational choice and use of drugs considering benefits versus risks.

A.3- Distinguish the key guidelines and resources available for management of the conditions covered in this course and how to use them to manage patient's condition.

A.4- Understand the concept of patient-oriented care.

A.5- Know the pharmacist role within a team as one of the healthcare providers for the safe and effective use of medications to achieve optimal outcomes of patients' health.

A.6- Understand the concept of guideline development and how it is periodically updated and the need to look for the most recent resources when searching for certain condition management.

### **B. Essential for Practice and Care (Intellectual Skills):**

B.1- Summarise the clinical features and current options for the management and explain the

rationale for drug therapy of each disease mentioned in the course description section.

B.2- Identify and manage medication-related problems.

B.3- Collect, compare, contrast, analyse, interpret, evaluate (critically think) and summarise information in the scientific literature related to disease management to enhance clinical decision making and impact the patient-centred care.

### **C. Approach to Practice Pharmacy:**

C.1- Formulate evidence-based care plans and recommendations.

C.2- Implement and present research findings in the therapeutic decision-making process.

C.3- Rationalize and optimize drug therapy for a specific patient group.

C.4- Recognize clinically significant drug interactions along with the expected common & serious adverse drug reactions & the appropriate action to prevent and/or manage them.

C.5- Conduct a benefit versus risk assessment of medication use in certain situations and groups of patients for safe, appropriate, and cost-effective therapeutic decisions.

C.6- Deliver patient-centered care that respect the choice of the patient and enhance adherence to treatment.

### **D. Personal and Professional Development:**

D.1- Communicate effectively with patients, caregivers, peers, and other healthcare providers about management of patients.

D.2- Display positive self-esteem and confidence when working with others.

D.3- Demonstrate creative decision making when facing novel problems or challenges.

## **ACADEMIC SUPPORT**

It is The Hashemite University policy to provide educational opportunities that ensure fair, appropriate and reasonable accommodation to students who have disabilities that may affect their ability to participate in course activities or meet course requirements. Students with disabilities are encouraged to contact their instructor to ensure that their individual needs are met. The University through its Special Need section will exert all efforts to accommodate for individual's needs.

### **Special Needs Section:**

**Tel:** 00962-5-3903333 Extension: 4209

**Location:** Students Affairs Deanship/ Department of Student Welfare Services

**Email:** [amalomoush@hu.edu.jo](mailto:amalomoush@hu.edu.jo)  
[amalomoush@staff.hu.edu.jo](mailto:amalomoush@staff.hu.edu.jo)

### ***Participation***

Class participation and attendance are important elements of every student's learning experience at The Hashemite University, and the student is expected to attend all classes. A student should not miss more than 15% of the classes during a semester. *Those exceeding this limit of 15% will receive a failing grade regardless of their performance.* It is a student's responsibility to monitor the frequency of their own absences. **Attendance record begins on the first day of class irrespective of the period allotted to drop/add and late registration. It is a student's responsibility to sign-in; failure to do so will result in a non-attendance being recorded.**

In exceptional cases, the student, with the instructor's prior permission, could be exempted from attending a class provided that the number of such occasions does not exceed the limit allowed by the University. The instructor will determine the acceptability of an absence for being absent. A student who misses more than 25% of classes and has a valid excuse for being absent will be allowed to withdraw from the course.

On average, students need to spend 15 hrs of study and preparation weekly. At the beginning of the lectures, students should be on time and should not leave before the end of the lecture without an accepted excuse. **If the student missed a class, it is him/her responsibility to find out about any announcements or assignments they have missed.** For any clarification, students should communicate with their instructor at her posted office hours or by appointment. Students should listen well to the lecture, if anyone has a question, he/she should ask the instructor. Students can find the course material at the course Microsoft team/Model after the lecture.

**Sharing of course materials is forbidden.** No course material including, but not limited to, course outline, lecture hand-outs, videos, exams, and assignments may be shared online or with anyone outside the class. Any suspected unauthorized sharing of materials, will be reported to the university's Legal Affairs Office. If a student violates this restriction, it could lead to student misconduct procedures.

### ***Plagiarism***

Plagiarism is considered a serious academic offence and can result in your work losing marks or being failed. HU expects its students to adopt and abide by the highest standards of conduct in their interaction with their professors, peers, and the wider University community. As such, a student is expected not to engage in behaviours that compromise his/her own integrity as well as that of The Hashemite University.

Plagiarism includes the following examples, and it applies to all student assignments or submitted work:

- **Use of the work, ideas, images or words of someone else without his/her permission or reference to them.**
- **Use of someone else's wording, name, phrase, sentence, paragraph or essay without using quotation marks.**
- **Misrepresentation of the sources that were used.**

**The instructor has the right to fail the coursework or deduct marks where plagiarism is detected**

***Missed Assessments***

In all cases of assessment, students who fails to attend an exam on the scheduled date without prior permission, and/or are unable to provide a medical note, will automatically receive a failure .grade for this part of the assessment

- In cases where a student misses an assessment on account of a medical reason or with prior permission; in line with university regulations an incomplete grade for the specific assessment will be awarded and an alternative assessment or extension can be arranged.

***Cheating***

Cheating, academic misconduct, fabrication and plagiarism will not be tolerated, and the university policy will be applied. Cheating policy: 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

***Student Complaints Policy***

Students at The Hashemite University have the right to pursue complaints related to faculty, staff, and other students. The nature of the complaints may be either academic or non-academic. For more information about the policy and processes related to this policy, you may refer to the students' handbook.

**COURSE ASSESSMENT**

***Course Calendar and Assessment***

Students will be graded through the following means of assessment:

Assessment	Grade Weighting	Deadline Assessment
First Exam	25%	~ 6 <sup>th</sup> week
Second Exam	25%	~ 10 <sup>th</sup> week
Quizzes/Homework Assignments/Projects	10%	During the semester
Final Exam	40%	~ 15 <sup>th</sup> /16 <sup>th</sup> week

**Description of Exams**

Test questions will predominately come from material presented in the lectures and the lectures themselves. Semester exams may be conducted during the regularly scheduled lecture period.

Exam may consist of a combination of multiple choice, short answer, match, true and false, and/or descriptive questions.

**Quizzes:** Unannounced quizzes will be given during or/and at the end of each chapter based upon the previous lectures. It will enforce that you come prepared to the class.

No make-up exams will be given. Only documented absences will be considered as per HU guidelines. Make-up exams may be different from regular exams in content and format.

Grades are not negotiable and are awarded according to the following criteria:

Letter Grade	Description	Grade Points
A+	Excellent	4.00
A		3.75
A-		3.50
B+	Very Good	3.25
B		3.00
B-		2.75
C+	Good	2.50
C		2.25
C-		2.00
D+	Pass	1.75
D	Pass	1.50
F	Fail	0.00
I	Incomplete	-

## WEEKLY LECTURE SCHEDULE AND CONTENT DISTRIBUTION

*“Lecture hours and weeks are approximate and may change as needed”*

Note: For the 2 lecture periods per week (S/T, M/W), one lecture period covers 1.5 lecture hours (75 minutes). The course content specifies chapters of the textbook that will be included in exams.

<b><u>Introduction</u></b> Introduction to Pharmacotherapy & the Course Outline	<b><u>Week 1</u></b>	<b><u>Lecture 1</u></b>
<b><u>Topic 1</u></b> Infectious Diseases <ul style="list-style-type: none"> <li>• Upper Respiratory Tract Infections (Pharyngitis, Rhinosinusitis, Otitis Media, Influenza)</li> <li>• Lower Respiratory Tract Infections (Bronchiolitis, Pneumonia)</li> <li>• Urinary Tract Infections (Symptomatic Abacteriuria, Asymptomatic Bacteriuria, Lower UTIs, Upper UTIs, Prostatitis)</li> </ul>	<b><u>Week 1-5</u></b>	<b><u>Lecture 2-10</u></b>
<b><u>Topic 2</u></b> Gastrointestinal Disorders <ul style="list-style-type: none"> <li>• Peptic Ulcer Disease</li> <li>• Gastroesophageal Reflux Disease</li> </ul>	<b><u>Week 6-7</u></b>	<b><u>Lecture 11-13</u></b>
<b><u>Topic 3</u></b> Anemia	<b><u>Week 7-8</u></b>	<b><u>Lecture 13-14</u></b>



<b><u>Topic 4</u></b> Rheumatologic Disorders	<b><u>Week 8-13</u></b>	<b><u>Lecture 14-23</u></b>
<ul style="list-style-type: none"> <li>• Rheumatoid Arthritis</li> <li>• Osteoarthritis</li> <li>• Gout</li> </ul>		
<b><u>Topic 5</u></b> Geriatrics Pharmacotherapy	<b><u>Week 13</u></b>	<b><u>Lecture 24</u></b>
<b><u>Topic 6</u></b> Practical Aspects in CrCl	<b><u>Week 14</u></b>	<b><u>Lecture 25</u></b>
<b><u>Review</u></b>	<b><u>Week 14</u></b>	<b><u>Lecture 26</u></b>
University Final Exams	<b><u>Week 15</u></b>	