



Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Respiratory Therapy Department

RTH311 Cardiovascular Pharmacology - JNQF Level: 7
First Semester 2023-2024

Course Catalog
<p>2 Credit Hours. This course provides students with basic concepts and principles of pharmacology including principles of pharmacokinetics and pharmacodynamics. Emphasis is given to the most commonly medications used for respiratory and cardiovascular care regarding drug classification, categories, mechanism of action, dosage calculations, routes of administration, physiological reactions, and therapeutic applications. Emphasis is given to the most prescribed drugs for respiratory care as bronchodilator therapy, anti-inflammatory drugs, wetting and mucoactive agents, aerosolized antimicrobial therapy, critical care, and advanced cardiac life support pharmacotherapy. Upon completion of this course, students should become equipped with the necessary pharmacology knowledge required for proper respiratory care in clinical practice.</p>
Teaching Method: On Campus

Text Book	
Title	Principles of Pharmacology for Respiratory Care
Author(s)	Georgine Bills, Christina Rose
Edition	3rd Edition
Short Name	Ref #1
Other Information	Year,2021. Publisher: Jones & Bartlett Learning

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Rau's Respiratory Care Pharmacology	Douglas S. Gardenhire	11th Edition	Year,2023. Publisher: Elsevier

Instructor	
Name	Dr. Ala Ashour
Office Location	-
Office Hours	

Email	afashour@just.edu.jo
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Class Schedule & Room
Section 1: Lecture Time: Sun, Tue : 08:30 - 09:30 Room: SOUTH HALL

Prerequisites		
Line Number	Course Name	Prerequisite Type
1162160	RTH216 Patient Care	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	General Pharmacological \ Medication Concepts (Drug, drug names, therapeutic effect, tolerance, tachyphylaxis, allergy, adverse reaction, carcinogens, placebo, and drug dependence)	Chapter 1 From Ref #1
Week 2	General Pharmacological \ Medication Principles (Drug doses, drug absorption, drug mechanism, distribution, metabolism, drug excretion, factors that alter drug effects and routes of administration)	Chapter 2 From Ref #1
Week 3	Pharmacology of the Autonomic Nervous System	Chapter 3 From Ref #1
Week 4	Respiratory care Pharmacology: Aerosolized and Instilled Medications and Bronchodilator Therapy	Chapter 5-6 From Ref #1
Week 5	Respiratory care Pharmacology: Anti-inflammatory Drugs.	Chapter 7-8 From Ref #1
Week 6	Respiratory care Pharmacology: Wetting Agents and Mucoactive Drugs Used in Respiratory Disease. Aerosolized Antimicrobial Therapy	Chapter 7-8, 10-11 From Ref #1
Week 7	Agents Used in Special Procedures and of Pulmonary Importance.	Chapter 10-11 From Ref #1
Week 8	Critical Care Pharmacotherapy.	Chapter 12 From Ref #1
Week 9	Advanced Cardiac Life Support (ACLS) medications.	Chapter 12 From Ref #1
Week 10	Cardiovascular Pharmacology.	Chapter 13 From Ref #1
Week 11	Anticoagulant and Antiplatelet medications.	Chapter 13 From Ref #1

Week 12	Pharmacology of the Central Nervous System:Pharmacology of the Central Nervous System: Effects of Drugs on the CNS Sedative Hypnotics and Antianxiety Drugs.	Chapter 14 From Ref #1
Week 13	Pharmacology of the Central Nervous System: Discuss Analgesics and Pain Management medications	Chapter 15 From Ref #1
Week 14	Review	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Define the basic concepts of pharmacology including principles of pharmacokinetics and pharmacodynamics. [100PLO 1] [1L7K1]	10%	
Identify factors that alter drug effects [100PLO 1] [1L7K1]	10%	
Discuss respiratory and cardiovascular medications, including indications, contraindications, dosages, adverse reactions and side effects, and interactions. [100PLO 1] [1L7K1]	10%	
Classify the medications used for Critical Care Pharmacotherapy. [100PLO 1] [1L7K1]	10%	
Suggest the most appropriate ACLS therapy, including the drug of choice and route of administration based on evidence-based guidelines. [50PLO 3, 50PLO 5] [1L7K1, 1L7S1, 1L7S3, 1L7C2, 1L7C4]	10%	
Demonstrate proficiency in calculating medication dosages. [50PLO 2, 50PLO 7] [1L7S2, 1L7C1, 1L7C2, 1L7C4]	10%	
Demonstrate proficiency in the role of respiratory to communicate effectively with patients and their families regarding the purpose, dosage, administration, and potential side effects of respiratory and cardiac medications. [50PLO 4, 50PLO 7] [1L7K1, 1L7S2, 1L7C2, 1L7C3]	10%	
Differentiate the pathophysiologic bases that relate to pharmacological mechanisms of medications used in the treatment and management of respiratory and cardiac disorders. [50PLO 1, 50PLO 5] [1L7K1, 1L7S1, 1L7S3, 1L7C2]	10%	
Organize specific medications that have effects on the Central Nervous System. [100PLO 1] [1L7K1]	10%	
Compare the mechanisms of action, common uses, and adverse effects of respiratory and cardiac medications. [50PLO 1, 50PLO 5] [1L7K1, 1L7S1, 1L7S3, 1L7C2]	10%	

Relationship to Program Student Outcomes (Out of 100%)						
PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
60	5	5	5	15		10

Relationship to NQF Outcomes (Out of 100%)							
L7K1	L7S1	L7S2	L7S3	L7C1	L7C2	L7C3	L7C4
59.5	7	5	7	2.5	12	2.5	4.5

Evaluation	
Assessment Tool	Weight
First Exam	30%
Second Exam	30%
Final Exam	40%

Policy	
Statement on Professionalism	Professional behavior is expected of students at all times. Attitude and professional behavior are a minimum criterion for passing this class. Examples of unprofessional behavior include but are not limited to: missing classes, tardiness, lack of attention for a speaker, talking to others during a lecture, leaving a lecture before its completion without prior authorization of the instructor, working on other class material during class, and sleeping during class.
Cheating	University regulations will be applied to cases of cheating and/or plagiarism.
Cell phone	The use of cellular phones is prohibited in classrooms and during exams. The cellular phone must be switched off in classrooms and during exams.
Attendance	No points will be counted for points attendance in this class, however, attending the lectures will greatly enhance your grade. The student is responsible for any information discussed in lecture sessions. It is imperative to attend all classes!
Absences	University regulations will be applied. Students are not allowed to be absent for more than 20% of lectures for any reason or excuse. If a student exceeds the absence limit, he or she will not be allowed to sit for future course exams. (Please review university regulations for more details)
Make-up Exam	Make-up exams are entitled to students who miss the exam with accepted legal or medical excuse endorsed by the instructor within 24 hours after the scheduled exam (Please review university regulation for more details)
Feedback	Concerns, complaints, questions, and/or feedback are appreciated and will be important to the instructor. You can contact your instructor using the e-mail or during office hours

Date Printed: 2024-02-14