Jordan University of Science and Technology

Faculty of Applied Medical Sciences

Respiratory Therapy Department

RTH343 Pulmonary Radiography - JNQF Level: 7

First Semester 2023-2024

Course Catalog
2 Credit Hours. This course provides students with a foundation in pulmonary radiography, safety precautions, various radiology modalities, and the ability to interpret chest radiography. Students will develop the essential skills for effective collaboration within the medical team to contribute to accurate diagnoses of heart and lung diseases. The course also focuses on displaying different x-ray images to introduce students to the diseases that are diagnosed using various radiology equipment and the role of the respiratory therapist in caring for the patient within the radiology department.
Teaching Method: Blended

Text Book	
Title	Radiology Fundamentals: Introduction to Imaging & Technology
Author(s)	William J. Hendrick Jr, Carlton (Tad) Phelps, Harjit Singh, MD.
Edition	5th Edition
Short Name	Ref #1
Other Information	Publisher: Springer

Instructor	
Name	**Dr. Maram Alakhras**
Office Location	-
Office Hours	Sun : 12:30 - 14:00 Mon : 11:00 - 12:30 Wed : 11:00 - 12:30 Thu : 09:00 - 10:30
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Class Schedule & Room

Section 1:
Lecture Time: Sun : 10:30 - 11:30
Room: NB53

Prerequisites		
Line Number	**Course Name**	**Prerequisite Type**
1162110	RTH211 Physiology And Anatomy Of The Heart And Respiratory System	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Week 1	Fundamental Principles of Radiologic Imaging	From **Ref #1**
Week 2	Radiodensities and Projections of Chest Radiography	From **Ref #1**
Week 3	Components and Image Generation of Computed Tomography.	From **Ref #1**
Week 4	Interpretation of Normal Chest X-ray	From **Ref #1**
Week 5	Pulmonary and Respiratory Pathologies 1: Extrapulmonary Air in Abnormal Chest Radiographs	From **Ref #1**
Week 6	Pulmonary and Respiratory Pathologies 2: Lung Volume Changes in Chest Radiograph.	From **Ref #1**
Week 7	Pulmonary and Respiratory Pathologies 3: Abnormal Radiological Features in Pulmonary Diseases	From **Ref #1**
Week 8	Advanced Pulmonary Radiography 1: Nuclear Medicine	From **Ref #1**
Week 9	Advanced Pulmonary Radiography 2: Nuclear Medicine 2	From **Ref #1**
Week 10	Applications of Radiology in Lung Cancer: Screening, and Diagnosis.	From **Ref #1**
Weeks 11, 12	Radiographic Evaluation and Case studies	From **Ref #1**

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Define the fundamental principles of radiology, and discuss their relevance to respiratory care practices. [1PLO 1] [1L7K1]	10%	

Practice radiation safety precautions to meet safety standards and maintain quality of care. [1PLO 2, 1PLO 6] [1L7S2, 1L7C2, 1L7C4]	10%	
Assess the technical aspects of chest radiographs to ensure accurate interpretation and optimize patient care. [1PLO 2, 1PLO 6] [1L7S2, 1L7S3, 1L7C1, 1L7C4]	15%	
Apply a systematic approach to interpret chest radiographs and distinguish between normal and abnormal findings. [1PLO 2, 1PLO 5] [1L7S1, 1L7S2, 1L7C2, 1L7C4]	15%	
Distinguish between different radiographic pulmonary abnormalities and correlate them with patient history and clinical presentations. [1PLO 5] [1L7S1, 1L7S2, 1L7C2]	20%	
Analyze case studies and clinical scenarios to integrate theoretical knowledge and radiographic findings with respiratory care management plans. [1PLO 5] [1L7S1, 1L7C2, 1L7C4]	20%	
Contribute to multidisciplinary team discussions, by sharing knowledge and skills to optimize treatment planning and coordination. [1PLO 4] [1L7C3, 1L7C4]	10%	

Relationship to Program Student Outcomes (Out of 100%)						
PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
10	20		10	47.5	12.5	

Relationship to NQF Outcomes (Out of 100%)							
L7K1	L7S1	L7S2	L7S3	L7C1	L7C2	L7C3	L7C4
10	17.08	17.5	3.75	3.75	20.42	5	22.5

Policy	
Academic integrity	All graded clinical forms and documentation must be your own work. Helping other students to cheat in any way or form will not be tolerated. If we become aware of any violations of these rules, we will initiate the actions described in the Policy of Academic Integrity. Each student is responsible for having their daily documentation signed by their preceptors at each department, unit, or station.
Attendance	Regular attendance in the classroom and laboratory sessions is mandatory. When three unexcused absences are accumulated, the student may be issued a written warning. If an additional absence occurs, the student may be dropped from the program in accordance with the attendance policies outlined in the general college catalogue.

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