

Course Specification (2025)

1. Basic Information

Course Title (according to the bylaw)	Pathology II			
Course Code (according to the bylaw)	210			
Department/s participating in delivery of the course	-			
Number of credit hours of the course (according to the bylaw)	Theoretical	Practical	Other (specify)	Total
	2	2	-	3
Course Type	compulsory			
Academic level at which the course is taught	Level 2 – 2nd Semester			
Academic Program	Technology of Radiology and Medical Imaging			
Institute	High Technology Institute of Applied Health Science			
Academy	Nile delta for science			
Name of Course Coordinator				
Course Specification Approval Date	2024 - 9 - 21			
Course Specification Approval (Attach the				

2. Course Overview (Brief summary of scientific content)

This course aims to develop foundational skills in radiologic image interpretation by teaching students to differentiate various types of fractures and recognize associated complications. It emphasizes identifying radiologic signs of trauma, dislocations, and critical conditions affecting the thoracic and abdominal regions. Students will gain an understanding of the pathophysiology and imaging characteristics of common skeletal, chest, vascular, and gastrointestinal pathologies, and learn to correlate these findings with clinical scenarios to support effective diagnostic decision-making.

3. Course Learning Outcomes CLOs

Matrix of course learning outcomes CLOs with program outcomes POs (NARS/ARS)

Program Outcomes (NARS/ARS) (according to the matrix in the program specs)		Course Learning Outcomes Upon completion of the course, the student will be able to:	
Cod e	Text	Code	Text
PLO s1	Study human anatomy and pathology to understand the physiological basis of the images.	CLOs1	Describe the basic concepts of radiological pathology and disease processes.
	Discuss the fundamentals of instrumentation components, imaging protocols, techniques and quality assurance used in different imaging modalities.	CLOs2	Identify different types of fractures, patterns, and complications on radiologic images.
	Understand mathematical and	CLOs3	Explain imaging features of trauma, joint dislocations, and chest pathologies.

Program Outcomes (NARS/ARS) (according to the matrix in the program specs)		Course Learning Outcomes Upon completion of the course, the student will be able to:	
Cod e	Text	Code	Text
	physics principles to grasp the fundamental properties of radiation and accurately orient patients for X-rays, 3-D CT imaging,	CLOs4	Recognize key vascular and gastrointestinal emergencies through imaging.
PLO s2	Troubleshoot technical errors and artifacts. Utilize suitable information and communication technology to collect, convey, and enhance the performance and reconstruction of medical images. Adapt to new technologies and .advancements in medical imaging	CLOs1	Analyze radiological images to differentiate normal from pathological findings.
		CLOs2	Interpret image features related to skeletal trauma, thoracic pathology, and abdominal emergencies.
		CLOs3	Solve clinical imaging problems through pattern recognition and differential diagnosis.
		CLOs4	Evaluate case presentations critically, linking radiographic signs with clinical data.
PLO s3	Practice a range of skills used in image processing techniques and in diagnostic imaging systems. Master both general and specialized radiographic .procedures	CLOs1	Apply correct techniques in basic image interpretation and description.
		CLOs2	Assist in preparing and positioning patients appropriately for trauma imaging.
		CLOs3	Document findings and communicate results clearly within a healthcare setting.
		CLOs4	Follow safety and ethical guidelines

Program Outcomes (NARS/ARS) (according to the matrix in the program specs)		Course Learning Outcomes Upon completion of the course, the student will be able to:	
Code	Text	Code	Text
			in imaging critically ill or trauma patients.
PLOs4	Communicate effectively & develop collaborative relationships with all health members. Follow regulation in ethical practice and the rules of healthcare organizations	CLOs1	Communicate effectively using correct medical and radiologic terminology.
		CLOs2	Work effectively as part of a healthcare team.
		CLOs3	Demonstrate critical thinking and time management in interpreting and presenting cases.
		CLOs4	Practice professional responsibility and ethical behavior in clinical environments.

4. Teaching and Learning Methods

1. Interactive Lectures.
2. Discussion and brain storming.
3. Asynchronous learning.

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4. Case study /problem solving.
 5. Self-Directed Learning (SDL).
 6. Research and presentations, Assignment and reports.
 7. Practical Learning

Course Schedule

5. Methods of students' assessment

No	Number of the Week	Scientific content of the course (Course Topics)	Total Weekly Hours	Expected number of the Learning Hours			
				Theoretical teaching (lectures/discussion groups/	Training (Practical/ Clinical/)	Self-learning (Tasks/ Assignments/ Projects/ ...)	Other (to be determined)
1	Final Written Exam	Introduction to Radiological Pathology	3	15	75		50%
2	Final Practical Exam	Pathology		14	45		30%
3	Assignments / Project / Portfolio / Logbook	Bones and Fractures	3	6	30		20%
	3	Types of Fractures	3	2	2		
	4	Fracture Patterns	3	2	2		
	5	Fracture Complications	3	2	2		
	6	Med-term exam					
	7	Trauma	3	2	2		
	8	Joint Dislocations	3	2	2		
	9	Chest Pathology I	3	2	2		
	10	Chest Pathology II	3	2	2		
	11	Aortic Dissection	3	2	2		
	12	Aortic Aneurysm	3	2	2		
	13	Bowel Obstruction	3	2	2		
	14	Revision					
	15	Practical guide					
	16	Final exam					

6. Learning Resources and Supportive Facilities *

Learning resources (books, scientific references, etc.) *	The main (essential) reference for the course (must be written in full according to the scientific documentation method)	Radiologic Pathology for Technologists – Ronald L. Eisenberg
	Other References	Fundamentals of Skeletal Radiology – Clyde A. Helms
	Electronic Sources (Links must be added)	Radiopaedia.org Knowledge bank: https://www.ekb.eg/ar
	Learning Platforms (Links must be added)	https://bislms.mans.edu.eg/
	Other (to be mentioned)	
Supportive facilities & equipment for teaching and learning *	Devices/Instruments	Computers, Boards and Projectors
	Supplies	
	Electronic Programs	Ibn Al-Haytham Program
	Skill Labs/ Simulators	
	Virtual Labs	
	Other (to be mentioned)	Computers, Boards and Projectors

*** The list mentioned is an example, the institution may add and/or delete depending on the nature of the course**

**Name and Signature
Course Coordinator**

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Program Coordinator**