

Course Specification

(2025)

1. Basic Information

Course Title (according to the bylaw)	Human Anatomy for Radiology Technologists II			
Course Code (according to the bylaw)				
Department/s participating in delivery of the course	Technology of Radiology and Medical Imaging			
Number of credit hours/points 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 – 2 nd 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	Dr/ Amira Atef , Lecturer of Biology Radiation , High			

	Technology Institute of Applied Health Science
Course Specification Approval Date	21/9/2024
Course Specification Approval (Attach the decision/minutes of the department /committee/council)	

2. Course Overview (Brief summary of scientific content)

This course continues the content of the first one. It includes GIT, genitourinary tract and musculoskeletal system. It explains the technical terms necessary for written and oral communication. In addition, it discusses how anatomical structure predicts anatomical function and gives the relationship of some diseases and body organs.

3. Course Learning Outcomes CLOs

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

Program Outcomes (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
POs.1. 1.2.	Describe the normal -1.1.2 structure of the body and its major organ systems and .explain their functions	CLOs.1	Describe detailed radiologic anatomy of the limbs, abdominal organs, and pelvis.
POs.2. 3.1.	Collect, analyze and -2.3.1 interpret medical imaging data using scientific .methods		

Program Outcomes (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
POs.1.1.4.	1.1.4-Interpret anatomical structure, pathological findings and imaging data utilizing radiological information systems.	CLOs.2	Identify vascular structures of the upper and lower limbs and major vessels of the thorax and abdomen.
POs.4.3.2.	4.3.2- Engage in inter-professional activities and collaborative learning.		
POs.1.1.3.	1.1.3- Understand the comprehensive knowledge of nuclear physics, plain X-ray, ultrasound, CT, MRI, contrast media, bone densitometry, interventional and cardiovascular techniques .	CLOs.3	Correlate anatomical structures with their appearance on different imaging modalities (X-ray, CT, MRI, Ultrasound).
POs.1.1.4.	1.1.4- Interpret anatomical structure, pathological findings and imaging data utilizing radiological information systems.		
POs.3.	3.1.1- Perform, maintain and evaluate routine and advanced diagnostic imaging procedures (x-ray, ultrasound and nuclear		

Program Outcomes (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
1.1. POs.3.1.4.	medicine). 3.1.4- Apply standard procedures in Contrast Media, bone densitometry, CT and MRI.		
POs.1.1.4. POs.2.4.2. POs.3.2.5.	1.1.4- Interpret anatomical structure, pathological findings and imaging data utilizing radiological information systems. 2.4.2- Troubleshoot technical errors and interpret results effectively in medical radiology practice. 3.2.5- Coordinate with multidisciplinary healthcare teams to confirm all preparatory requirements are met, including equipment readiness, patient positioning, and adherence to infection control and radiation safety measures.	CLOs.4	Explain anatomical variations and their clinical significance in radiologic imaging.
		CLOs.1	Analyze radiological images to differentiate between normal anatomical structures and pathological findings.
		CLOs.2	Solve anatomical localization challenges based on imaging.

Program Outcomes (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
POs.1. 2.4. POs.3. 2.5.	1.2.4- Use Picture Archiving and Communication systems (PACS). 3.2.5- Coordinate with multidisciplinary healthcare teams to confirm all preparatory requirements are met, including equipment readiness, patient positioning, and adherence to infection control and radiation safety measures.	CLOs.3	Evaluate imaging studies to ensure correct anatomical coverage and patient positioning.
POs.1. 1.3.	1.1.3- Understand the comprehensive knowledge of nuclear physics, plain X-ray, ultrasound, CT, MRI, contrast media, bone densitometry, interventional and cardiovascular techniques.	CLOs.4	Apply anatomical knowledge to suggest appropriate imaging projections or slices.
POs.3. 1.6.	3.1.6- Apply technical skills in using medical imaging equipment, tools, devices and materials. 3.2.4- Train and monitor junior staff and students in	CLOs.1	Accurately identify anatomical structures in radiological images.

Program Outcomes (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
POs.3.2.4.	medical imaging procedures.		
POs.3.1.5.	3.1.5- Assist in interventional radiology procedures under professional supervision .	CLOs.2	Assist in selecting imaging protocols based on anatomical region of interest.
POs.3.2.5	3.2.5- Coordinate with multidisciplinary healthcare teams to confirm all preparatory requirements are met, including equipment readiness, patient positioning, and adherence to infection control and radiation safety measures.	CLOs.3	Follow imaging safety guidelines while handling anatomical positioning.
POs.3.2.6.	3.2.6- Implement appropriate physical and psychological preparation measures such as fasting instructions, contrast administration protocols, and anxiety reduction strategies in accordance with established clinical guidelines.		
POs.1.	1.2.1. Use computers and	CLOs.4	Document anatomical findings

Program Outcomes (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
2.1.	software in medical imaging effectively. 4.1.1- Participate in teamwork harmoniously and exhibit collaborate effectively with colleagues and other health care professionals. POs.4.1.1. 4.2.2- Adapt communication style and terminology according to the audience's language proficiency, cultural background, and emotional state, to promote understanding and cooperation.		clearly and systematically.
POs.4.2.2.		CLOs.1	Communicate anatomical information clearly with radiologists and healthcare teams.
POs.4.2.1.	4.2.1- Communicate effectively and develop collaborative relationships with all healthcare team.	CLOs.2	Work effectively in a team to review anatomical cases.
		CLOs.3	Manage time effectively during anatomy-based image analysis and reporting.
POs.2.1.1.	2.1.1- Exhibit appropriate professional behaviors and relationships in all aspects of medical imaging practice. 2.1.2- Ensure confidentiality, privacy of patients' information, comfort, preparation and ethical standards in all radiology	CLOs.4	Demonstrate ethical responsibility and professionalism in patient-centered imaging.
POs.2.1.2.			

Program Outcomes (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
POs.2. 1.3.	procedures. 2.1.3- Practice in an ethical and professional manner consistent with relevant legislation and regulatory requirements in medical imaging.		

4. Teaching and Learning Methods

1. Interactive Lectures.
2. Discussion and brain storming.
3. Asynchronous learning.
4. Case study /problem solving.
5. Self-Directed Learning (SDL).
6. Research and presentations, Assignment and reports.
7. Practical Learning

Course Schedule

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	Introduction to Radiological Anatomy	3	2	2	-	-
2	Bones of the Upper Limb	3	2	2	-	-
3	Bones of the Lower Limb	3	2	2	-	-
4	Vessels of the Upper and Lower Limbs	3	2	2	-	-
5	Liver	3	2	2	-	-
6	Mid-Term Exam					
7	Gallbladder and Biliary Tree	3	2	2	-	-
8	Spleen and Pancreas	3	2	2	-	-
9	Thoracic and Abdominal Aorta	3	2	2	-	-
10	Upper Gastrointestinal Tract (GIT)	3	2	2	-	-
11	Lower Gastrointestinal Tract (GIT)	3	2	2	-	-
12	Kidneys and Adrenal Glands	3	2	2	-	-
13	Male and Female Pelvis	3	2	2	-	-
14	Revision					
15	Practical Exam					
16	Final Written Exam					

5. Methods of students' assessment

No .	Assessment Methods *	Assessment Timing (Week Number)	Marks/ Scores	Percentage of total course Marks
1	Midterm Exam	6 th	10	6.7%
3	Final Written Exam	15 th	100	66.6%
	Final Practical/Clinical/... Exam	14 th	30	20%
	Final Oral Exam	-	-	-
	Assignments	6 th	10	6.7%

*** The methods mentioned are examples, the organization may add and/or delete**

6. Learning Resources and Supportive Facilities *

Learning resource s (books, scientific references, etc.) *	The main (essential) reference for the course (must be written in full according to the scientific documentation method)	Anatomy and Imaging for Radiologic Technologists – Eugene D. Frank & Bruce W. Long
	Other References	Gray's Anatomy for Students – Drake, Vogl, Mitchell Imaging Atlas of Human Anatomy – Weir and Abrahams
	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)	
Supporti	Devices/Instruments	Computers, Boards and Projectors
	Supplies	

ve facilities & equipme nt for	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**

**Name and Signature
Program Coordinator
Dr/ Amira Atef**