

Course Specification

(2025)

1. Basic Information

Course Title (according to the bylaw)	Human Anatomy for Radiology Technologists I			
Course Code (according to the bylaw)	TRMI 204			
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
	1	4	-	3
Course Type	Compulsory			
Academic level at which the course is taught	Level 2 – 1 st 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 Science of			

	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 is an introductory course in systemic gross anatomy specific to further study in radiology. It introduces the students to basic projection, and cross-sectional anatomy as displayed in different medical imaging modalities including conventional X-ray, ultrasonography, CT, and MRI. This part includes head and neck, neuro-anatomy, and chest.

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	1.1.2. Describe the normal structure of the body and its major organ systems and explain their functions.	CLOs.1	Describe the anatomical structures of the skull, Para nasal sinuses, brain, spine, spinal cord, thoracic cage, respiratory system, and mediastinum.
	Interpret anatomical .1.1.4 structure, pathological findings and imaging data utilizing radiological information systems	CLOs.2	Explain the anatomical relationships and functions of these structures in relation to radiological imaging.
		CLOs.3	Identify anatomical landmarks important for diagnostic procedures

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
.1.4			and medical imaging interpretation.
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	Demonstrate understanding of anatomical orientation and sectional anatomy relevant to radiologic views (axial, sagittal, and coronal).
		CLOs.1	Analyze anatomical structures in cross-sectional and radiological images.
POs.3. .1.1	3.1.1- Perform, maintain and evaluate routine and advanced diagnostic imaging procedures (x-ray, ultrasound and nuclear medicine).	CLOs.2	Correlate clinical and imaging findings with underlying anatomical structures.
POs.1. .1.4	1.1.4- Interpret anatomical structure, pathological findings and imaging data utilizing radiological information systems.	CLOs.3	Differentiate between normal and pathological anatomical features in diagnostic images.
		CLOs.4	Apply critical thinking to solve anatomy-based problems in radiological practice.
		CLOs.1	Accurately identify anatomical structures on X-ray, CT, and MRI images.
POs.3. .1.4	3.1.4- Apply standard procedures in Contrast Media, bone densitometry, CT and MRI.		

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
	4.1.2-Apply critical and reflective thinking to resolve questions.		
POs.1. .2.1 POs.3. .2.4 POs.4. .2.2	1.2.1. Use computers and software in medical imaging effectively.	CLOs.2	Use anatomical knowledge to assist in proper patient positioning and image acquisition.
	3.2.4- Train and monitor junior staff and students in medical imaging procedures.	CLOs.3	Handle anatomical models and imaging software to explore and review relevant structures.
	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.	CLOs.4	Demonstrate basic competency in interpreting anatomical features relevant to radiology.
		CLOs.1	Communicate effectively using appropriate anatomical and medical terminology.
POs3.1 .7	3.1.7- Manage workflow efficiency by coordinating patient scheduling, optimizing resource allocation, and minimizing delays while maintaining a	CLOs.2	Work collaboratively in groups to analyze and discuss anatomical cases.
		CLOs.3	Manage time efficiently in both theoretical and practical components of the course.

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.4.1.1	high standard of patient care and staff productivity. 4.1.1- Participate in teamwork harmoniously and exhibit collaborate effectively with colleagues and other health care professionals.		
POs.1.3.2 POs.4.1.3	1.3.2- Apply quality control measures to ensure test accuracy and reliability. 4.1.3- Take responsibility for one's action and decision in practice.	CLOs.4	Demonstrate responsibility and commitment to accuracy in anatomical identification and reporting.

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

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 anatomy	3	1	4	-	-
2	Classification of Bones	3	1	4	-	-
3	Skull divisions and sutures	3	1	4	-	-
4	Bones of the skull	3	1	4	-	-
5	Para nasal sinuses	3	1	4	-	-
6	Mid-Term Exam					
7	Brain anatomy	3	1	4	-	-
8	Spine: Cervical & Dorsolumbar	3	1	4	-	-
9	Spine: Lumbosacral, Sacrum & Coccyx	3	1	4	-	-
10	Intervertebral discs & Spinal Cord	3	1	4	-	-
11	Bones of the Thoracic Cage	3	1	4	-	-
12	Respiratory System	3	1	4	-	-
13	Mediastinal Structures	3	1	4	-	-
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	20	13%
3	Final Written Exam	15 th	75	50%
	Final Practical/Clinical/... Exam	14 th	45	30%
	Final Oral Exam	-	-	-
	Assignments	6 th	10	6.6%

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

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)	Sectional Anatomy for Imaging Professionals – Lorrie L. Kelley and Connie M. Petersen
	Other References	Gray's Anatomy for Students.
	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)	
	Devices/Instruments	Computers, Boards and Projectors

Supportive facilities & equipment for teaching and learning *	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**

Dr/ Mohamed Ouef

**Name and Signature
Program Coordinator**

Dr/ Amira Atef