The University of Jordan

الجامعة الاردنية

Form: Course Syllabus		
	Form Number	EXC-01-02-02A
	Issue Number and Date	2/3/24/2022/2963 05/12/2022
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	Number of Pages	06

1.	Course Title	Radiology and Nuclear Medicine
2.	Course Number	0500504
3.	Credit Hours (Theory, Practical)	2 hours
	Contact Hours (Theory, Practical)	20 hours/week , 15 Hours theory , 5 hours practical
4.	Prerequisites/ Corequisites	Successfully passing Fourth year
5.	Program Title	Doctor of Medicine
6.	Program Code	05
7.	School/ Center	School of Medicine
8.	Department	Radiology and Nuclear Medicine
9.	Course Level	Bachelor
10.	Year of Study and Semester (s)	Fifth year
11.	Program Degree	Bachelor
12.	Other Department(s) Involved in Teaching the Course	Dermatology, family medicine, forensic medicine and Radiology.
13.	Learning Language	English
14.	Learning Types	☒Face to face learning ☐ Blended ☐Fully online
15.	Online Platforms(s)	☐Moodle ☒Microsoft Teams
16	Issuing Date	31/1/2024
17.	Revision Date	2025/5/11

18. Course Coordinator:

Name: Ass. Prof. Dr Omar Albtoush

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19. Other Instructors:

INSTRUCTOR	*Officenumber*	*officehours*	*phonenumber*	*emailaddress*
Prof. Dr. Azmy Al Hadidy	2216	Sun, Mon. 10 – 12	**Work phone: 5353666 ext 2216**	**Email:** **ahadidy@ju.edu.jo** **amshadidy@yahoo.com**
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Prof. Dr. Osama Samara	2216	8 – 9 Daily		**Email:** Osamara@ju.edu.Jo **samara@yahoo.com**
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Ass. Prof. Dr. Emad Tarawneh	2216	Tues. 10-12 Thur. 10-12	**Work phone: 5353666 ext 2216.**	**Email:** emadtarawneh@ju.edu.jo **emadt_61@yahoo.com**
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20. Course Description:

A- Course Description:

A two weeks rotation. Meeting with students at the beginning of each rotation is held at 9am in Radiology seminar room in the Radiology Department. On each 2-week rotation, students are expected to attend the dedicated daily teaching activities including the lectures and the following tutorials. Then, they are distributed on different intradepartmental modalities to attend reporting sessions

B- Aims:

1. Introduction to basic concepts in diagnostic radiology.
2. Get general knowledge on different radiologic modalities.
3. Train students to identify and diagnose common emergent and non emergent conditions.
4. Introduction to basic radiologic procedures.
5. Attend different reporting sessions in our department in small groups

21. Program Intended Learning Outcomes: (To be used in designing the matrix linking the intended learning outcomes of the course with the intended learning outcomes of the program)

PLO's	*National Qualifications Framework Descriptors*		
	Competency (C)	Skills (B)	Knowledge (A)
1.	☐	☐	☒
2.	☐	☒	☐
3.	☒	☐	☐
4.	☐	☐	☒
5.	☐	☒	☐
6	☒	☐	☐
7	☐	☐	☒
8	☒	☐	☐

* Choose only one descriptor for each learning outcome of the program, whether knowledge, skill, or competency.

1. Demonstrate basic knowledge of normal human structure and function at molecular, genetic, cellular, tissue, organ, system and whole-body levels in terms of growth, development, and health maintenance. Analyze the basic molecular and cellular mechanisms involved in the causation and treatment of human disease and their influence on clinical presentation and therapy.

2. Collect, interpret, document, and communicate accurately a comprehensive medical history, including the psychological and behavioral factors, and a thorough organ-system-specific physical examination inclusive of the mental status of the patient.

3. Integrate and communicate collected clinical information in the construction of appropriate diagnostic and therapeutic management strategies to identify life-threatening conditions ensuring prompt therapy, referral, and consultation with relevant disciplines and skillfully perform basic medical procedures for general practice on patients with common illness, acute and chronic, taking into account environmental, social, cultural and psychological factors.

4. Demonstrate in-depth knowledge of the epidemiology and biostatistics of common diseases, and analyze the impact of ethnicity, culture, socioeconomic factors and other social factors on health, disease, and individual patient's health care.

5. Communicate effectively and professionally, both orally and in writing, with patients, their families, and with other healthcare providers utilizing information technology resources in his/her scholarly activities and professional development with the ability to teach others, and to understand and respect other healthcare professionals 'roles and apply the principles of multidisciplinary teamwork dynamics and collaboration.

6. Apply scientific methods including evidence –based approach to the medical practice including problem identification, data collection, hypothesis formulation, etc., and apply inductive reasoning to problem solving and ensure that clinical reasoning and decision making are guided by sound ethical principles.

7. Demonstrate knowledge of scientific research methods and ethical principles of clinical research and be able to write research proposals or research papers.

Demonstrate professionally the skills needed for Quality improvement, lifelong learning, and continuous medical education including the ability to identify and address personal strength and weakness, self-assess knowledge and performance, and develop a self-improvement plan

22. Course Intended Learning Outcomes: (Upon completion of the course, the student will be able to achieve the following intended learning outcomes)

Course ILOs #	**The learning levels to be achieved**						**Competencies**
	Remember	**Understand**	**Apply**	**Analyse**	**Evaluate**	**Create**	
1.	✓	✓					Ability to identify different radiologic modalities and their main indications/

							contra-indications.
2.		✓	✓	✓	✓	✓	Know the basic radiologic anatomy.
3.		✓	✓	✓	✓	✓	Develop an insight into ionizing radiation hazards.
4.		✓	✓	✓	✓	✓	Provide knowledge about pattern of common and emergent pathologies in Neuro., chest, musculoskeletal, G.I, uro-genital, mammography, nuclear and interventional radiology

23. The matrix linking the intended learning outcomes of the course -CLO's with the intended learning outcomes of the program -PLOs:

PLO's * / CLO's	1	2	3	4	Descriptors**		
					A	B	C
1		✓			✓		
2	✓					✓	
3			✓				✓
4					✓		
5						✓	
6				✓			✓
7					✓		
8							✓

***Linking each course learning outcome (CLO) to only one program outcome (PLO) as specified in the course matrix.**

****Descriptors are determined according to the program learning outcome (PLO) that was chosen and according to what was specified in the program learning outcomes matrix in clause (21).**

24. Topic Outline and Schedule:

Week	Topic	Course learningObjectives(CLO)	Learning Methods (Face to Face/Blended/ Fully Online)	Evaluation Methods
1	Introduction to Radiology	1. Introduction to history of radiology. 2. Introduction to different radiology modalities e.g MRI, CT, US and fluoroscopy. 3. Biologic effects of radiation protection. 4. Contrast media and latest guidelines.	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE End of year written exam
	Sonolab	1- Apply skills and techniques in ultrasonography. 2- Understand basics of abdominal, neck and vascular ultrasonography. 3- Understanding the physics behind ultrasonography.	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

	Gastrointestinal Radiology	Recognize basic radiological anatomy on plain film, upper and lower GI diagnostic studies and cross sectional images of abdomen and pelvis. Recognize main and or characteristic radiological features of the common diseases encountered in the upper and lower gastrointestinal tract.	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam
	Neuro-radiology	Introduce the use of MRI and CT in neuroimaging, it's standard sequences and recognizing the pattern of main pathologies in the brain and spine.	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam
	Respiratory	Learn the concept of the normal chest radiograph and the ability to recognize the most common abnormalities like pneumonia,pleural effusion and pneumothorax	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

2	Nuclear Medicine	Introduce nuclear medicine imaging and therapy and their importance in the management of patients with cancer and cardiac diseases	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam
	Musculoskeletal Radiology	Orientation to the imaging features of musculoskeletal illnesses and its differential diagnosis using different imaging modalities.	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam
	Mammography	Introduce the mammographic imaging modality and its value in breast cancer detection	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam
	Vascular Radiology	Introduction to vascular anatomy and basics of 1-Non-vascular interventional radiology procedures are those completed percutaneously with ultrasound or CT guidance including biopsies, drain placements. 2-Vascular interventional radiology encompasses any procedure requiring vascular access, including IVC placement, vascular catheter placement, nephrostomy tube placement,and chemoembolizations	Lecture notes and Tutorial discussions	Evaluation/ attendance and discipline End of rotation OSCE Final written exam

25. Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Opportunities to demonstrate achievement of the SLOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
Evaluation/ attendance and discipline	20	Lecture attendance	Week 1-2	JUH
		Radiology modalities attendance	Week 1-2	
		Tutorials	Week 1-2	
		Participation	Week 1-2	
		Short exams	Week 1-2	
		Discipline	Week 1-2	
End of rotation OSCE	30	True/False questions regarding radiological images	End of 8th week	Faculty of medicine
Final written exam	50	Multiple choice written exam assessing the course ILO mastery	End of academic year (June of each year)	Exam builder

*** According to the instructions for granting a Bachelor's degree.**

****According to the principles of organizing semester work, tests, examinations, and grades for the bachelor's degree.**

Final exam specifications table

(Table is completed on a separate form by course coordinators prior to conduction of each exam according to Accreditation and Quality Assurance Centre procedures and forms)

No. of questions/ cognitive level						No. of questions per CLO	Total exam mark	Total no. of questions	CLO Weight	CLO no.
Create %10	Evaluate %10	analyse %10	Apply %20	Understand %20	Remember %30					
										1
										2
										3
										4
										5

26. Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:
OSCE Exam 30% at the end of 2 weeks rotation.
Evaluation 20% at the end of 2 weeks rotation.
Final exam 50% May of each year.

Teaching Methods and Assignments:

Development of ILOs is promoted through the teaching and learning methods:
1- Lectures and tutorials: Provided by the radiology consultants.
2- Intradepartmental rotations on different modalities including Sonolab.

27. Course Policies:

A- Attendance policies:

Lecture attendance is obligatory.

B- Absences from exams and handing in assignments on time:

If proved with a valid excuse not attending his scheduled exam will re-schedule it with the next rotation.

C- Health and safety procedures:

None

D- Honesty policy regarding cheating, plagiarism, misbehavior:

Cheating is totally not acceptable.

E- Grading policy:

Marks

F- Available university services that support achievement in the course:

University and hospital library

28. References:

A- Required book (s), assigned reading and audio-visuals:

1. Learning radiology: Recognizing the basics Authors: William Herring Publisher: Saunders
2. Radiology 101: The Basics and fundamentals of Imaging Authors: Wilbur smith, William Erkonen Publisher: Lippincott Williams and Wilkins
3. Imaging Atlas of Human Anatomy Authors: Jamie Weir, Peter Abrahams Publisher: Mosby

B- Recommended books, materials, and media:

Medical library: textbooks, journals, periodicals/ Web based **resources:**

1. Grainger & Allison's Diagnostic Radiology: 2-Volume Set 6th Edition

Textbook of Radiology and Imaging: 2-Volume Set 7th Edition by David Sutton

29. Additional information:

Name of the Instructor or the Course Coordinator: Dr. Omar Albtoush	Signature:	Date: 17.07.2025
Name of the Head of Quality Assurance Committee/ Department Dr.Enas Al-Zayadneh	Signature:	Date:
Name of the Head of Department Professor Walid Mahafzah	Signature:	Date: 21/7/2025
Name of the Head of Quality Assurance Committee/ School or Center Professor Ayman Wahbeh	Signature:	Date:
Name of the Dean or the Director Professor Ayman Wahbeh	Signature:	Date:

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