

1	Program Title	The Certificate of Higher Specialization in Diagnostic Radiology
2	Program Code	110-08-11-05-2016
3	Awarding Institution	The University of Jordan
4	Level of Study	Postgraduate four-year program
5	Final Qualification	Higher Specialization in Diagnostic Radiology
6	Faculty	Medicine
7	Department	Radiology and Nuclear Medicine
8	Other Department(s) involved in teaching the program	None
9	Mode of Attendance( e.g., full time)	Full time
10	Duration of the Program	4 years
11	Credit hours/ contact hours	NA
12	Language of Instruction	English
13	No. and date of approval by the Ministry of Higher Education	NA
14	No. and date of national accreditation of the program	NA
	Program capacity of students/ year	10-12
	Other accreditations of the program	Jordan Medical Council
15	Date of production/revision	Revised in January 2022
16	No. of current students	25
17	Program Director (name, phone numbers & email)	Dr. Emad Al-Tarawneh <a href="mailto:etarawneh@ju.edu.jo">etarawneh@ju.edu.jo</a> 0798506630

18. Background to the program and subject area:

Our program offers organized training and research opportunities in one of the largest hospital systems in Jordan  
The training program is well-balanced and offers a broad variety of career pathways that include the practice of general radiology and its subspecialties

19. Vision and Mission statements of the program:

Vision: To be one of the premier academic radiology programs in Jordan and region.  
Mission: To provide outstanding clinical care through expertise in medical imaging and interpretation, through innovation and advances in imaging research, and through excellence in teaching and mentoring imaging trainees.

**20. Reasons behind developing this program:**

- 1) National and regional need for well-trained competent radiologists
- 2) National and regional need for academic as well as practical training to be part of future faculty for medical education

**21. Program aims:**

To provide post-graduate medical students who join the program with the knowledge, skills, attitudes, and other attributes fundamental to the practice of radiology organized in a developmental frame work from less to more advanced as students move from entry into diagnostic radiology residency program through graduation at the end of the program. The candidate is eligible and is expected to pass the national and international board examinations in diagnostic radiology.

This will be achieved by make sure that the student at the end of the program will be able to:

1. Define and understand the fundamental principles and recent advances in different imaging modalities.
2. Gain the ability to interpret findings in different imaging modalities.
3. Gain the ability to diagnose cases referred to radiology department or to recommend further imaging modalities to help diagnose the referred cases.
4. Develop effective communication skills with patients and staff.
5. Gain the skills necessary to carry out research projects.
6. Gain the skills necessary to participate in the teaching process.

**22. Program Intended Learning Outcomes:**

<ol style="list-style-type: none"> <li>1. Apply knowledge of fundamental biomedical sciences particularly detailed anatomy and physics relevant to Radiology practice.</li> <li>2. Apply established and evolving knowledge in all aspects of clinical radiology to patient care including understanding of disease, appropriate of imaging to patients, complications and factors affecting interpretation and differential diagnosis.</li> <li>3. Utilize appropriate knowledge of protocols and technical refinements used in different imaging modalities and all aspects related to use of contrast media and radiation protection to avoid the risk of radiation on patients, workers and visitors.</li> <li>4. Suggest, plan, and execute competently the most appropriate imaging modalities for every referred patient.</li> <li>5. Analyze accurately diagnostic results and integrate information from variable sources and write competently professional radiology reports describing the imaging findings, most likely differential diagnoses, and final diagnosis and, when indicated, recommend further testing and/or management.</li> <li>6. Communicate effectively with patients, colleagues, referring physicians and members of the health care team concerning imaging appropriateness, informed consent, safety issues, and results of imaging tests or procedures.</li> <li>7. Participate effectively and appropriately in an interprofessional health care team to assess, plan, provide and integrate care for individual patients or groups of patients.</li> <li>8. Develop leadership skills necessary to organize work and supervise and educate junior and paramedical staff and show a commitment to continuous professional development.</li> <li>9. Apply quality assurance and quality improvement measures in radiology.</li> <li>10. Utilize information technology to optimize patient care, life-long learning and learning of patients, house staff, students and other health professionals</li> <li>11. Evaluate medical information and its sources critically, and apply this appropriately to practice decisions, and utilize different scientific methodologies to conduct and publish scientific research studies and present the results professionally.</li> <li>12. Recognize ethical and medico-legal principles that govern decision-making in radiology practice and implement the professional ethical attitude with patients and their relatives including respect of patient's confidentiality and consent and delivery of care in an honest, considerate and compassionate manner</li> </ol>
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### 23. Entrance Requirements

<ol style="list-style-type: none"> <li>1- Bachelor degree of Medicine or equivalent.</li> <li>2- Passing a year of internship.</li> <li>3- Passing an entry exam and interview.</li> </ol>
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### 24. Teaching, learning and assessment methods:

<p>Development of the learning outcomes is promoted through the following teaching and learning methods:</p> <ul style="list-style-type: none"> <li>— Group discussion and interactive teaching.</li> <li>— Professional power point presentations on specific topics</li> <li>— Didactic lectures, tutorials, multimedia presentation of materials and self directed learning.</li> <li>— Case based learning and interesting case presentations.</li> <li>— Individual and group tasks.</li> <li>— Encourage independent learning.</li> <li>— Critical reflection of teaching methods, subject matter and presentation.</li> </ul>	<p>Development of</p> <ol style="list-style-type: none"> <li>1) Hands on tra</li> <li>2) Large group</li> <li>3) Small group</li> <li>4) Teaching ses</li> <li>5) Simulations f</li> </ol>
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— Supporting and encouraging extra-curricular learning	
<p>Opportunities to demonstrate achievement of the learning outcomes are provided through the following assessment methods:</p> <ol style="list-style-type: none"> <li>1) Feedback on performance on daily basis during morning teaching tutorials and reporting sessions</li> <li>2) Monthly evaluation of performance with feedback</li> <li>3) Yearly examinations including written exam to assess knowledge, and clinical exam to assess skills</li> </ol>	<p>Opportunities to demonstrate achievement of the learning outcomes are provided through the following assessment methods:</p> <ol style="list-style-type: none"> <li>1) Skill assessment under direct supervision done every 3 months</li> <li>2) Knowledge, skills and attitude assessment at the end of the program</li> <li>3) Assessment of clinical skills during resuscitation</li> <li>4) Assessment of clinical skills during resuscitation</li> <li>5) Monthly feedback</li> <li>6) Mid formativ</li> </ol>

**25. Reference points:**

The learning outcomes have been developed to reflect the following points of reference:

- 1) Program is accredited by Jordan medical council
- 2) Program is accredited for Arab board committees

**26. Four prestigious universities have the same programme**

Our logbook is designed according to The University of Virginia

**27. Program regulations:**

Regulations concerning the program. Can include a link to such detailed regulations.

Regulations of Granting the Certificate of Higher Specialization in Medicine and the Certificate of Higher Specialization in Dentistry of the University of Jordan.

**28. Study plan:**

University requirements: Complete successfully four years of training. Passing in every year with cumulative score of at least (B)

Obligatory courses: Not applicable

Elective courses: Not applicable

Faculty requirements: As University requirement

Obligatory courses: Not applicable

Elective courses: Not applicable

Specialty requirements: As University requirement

Obligatory courses: Not applicable

Elective courses: : Not applicable

**29. Field Experience:**

Description, timing and number of credit hours:

Not applicable

Training and study is totally carried out within the Jordan University Hospital, affiliate institutions, or approved Universities for selected rotations

**30. Project/research:**

Description, timing and number of credit hours:

Participation in a single research project is required, no credit hours allocated for research

**31. Program Learning Outcome Mapping Matrix: Not applicable to program of higher specialization in medicine**

Learning outcome Course code	PL O 1	PL O2	PL O 3	PL O 4	PL O 5	PL O6	PL O7	PL O8	PL O9	PL O10	PL O11	PL O12
Radiology Year 1	√		√			√			√	√		√
Radiology Year 2		√				√		√	√	√		√
Radiology Year 3				√	√	√	√	√	√	√	√	√
Radiology Year 4				√	√	√	√	√	√	√	√	√

**32. Student development over the course of study**

For each year, there is a predetermined level of competency that the student is expected to achieve monitored by faculty members via his/her logbook with dynamic changes to the privileges and level of supervision that is objectively done periodically as dictated by the study plan.

Evaluation is done on 3-monthly basis.

Written, oral and OSCE exams are done at the end of the year to ensure competency and development.

**33. Educational facilities and support for the program teaching-learning process**

- a- Facilities and laboratories (include name of lab, its area and student's capacity):  
Not applicable
- b- Supporting staff (include name, work place, position, specialty):  
Not applicable
- c- Tools and equipment:  
Not applicable
- d- Faculty members:

No.	Name	D.O.B	Nationality	Specialty & sub-specialty	University of graduation & Year of graduation (of most recent qualification)	Qualifications	Academic rank, date obtained and donor university	Course/s that will be taught
1.	Nosaiba Al Ryalat	01/03/1979	Jordanian	Diagnostic Radiology/ Neuroimaging	Royal Adelaide Hospital/ Australia 2012	Fellowship	Associate Professor	
2.	Mahasen Sadiq Al Najar	16/07/1974	Jordanian	Diagnostic Radiology/ Women's Imaging	Tuebingen University Hospital / Germany 2009	Fellowship	Associate Professor	
3.	Emad Saleh Tarawneh	1961	Jordanian	Diagnostic Radiology	Royal College of Surgeons Ireland 1997	Fellowship	Associate Professor	
4.	Osama Samara	29/05/1971	Jordanian	Diagnostic Radiology/ Interventional & Vascular Radiology	Royal Adelaide Hospital/ Australia 2008	Fellowship	Associate Professor	
5.	Azmy Al Hadidy	1/04/1956	Jordanian	Diagnostic Radiology	Royal College of Radiologists- London-UK 1995	Fellowship	Professor	
6.	Waleed Mahafza	8/09/1962	Jordanian	Diagnostic Radiology	Royal College of Radiologists (F.R.C.R.) London, UK. 2001	Fellowship	Professor	
7.	Malik E. Juweid	21/07/1961	American	Nuclear Medicine	American Board of Nuclear Medicine 1992	Board	Professor	

8.	Abedallatif A. AlSharif	19/10/1974	Jordanian	Nuclear Medicine	Specialist degree in Nuclear medicine at the University of Pisa /Italy 2004	Ph.d	Professor	
9.	Omar							
10.								

e- Library materials:

Library material	No.	Available for		
		Faculty members	Students	Faculty and students
Books	>10			X
Journals	>10			X
E-books	>100			X
E-journals	>300			X
Databases	3			X

f- Entities that offer facilities to receive practical and field experiences:

Not applicable

#### 34. Ways that are followed for program quality assurance:

- What processes are followed for evaluation of teaching and learning experiences, assessment methods, and the effectiveness of the curriculum or study plan:
  - Internal audit, following end of year exam
  - Faculty member meeting for discussion of results and performance in the national Jordanian board exam
- What processes are followed to obtain feedback from students enrolled in the program about the quality of teaching and learning experiences provided:
  - Monthly resident meeting, includes all students with chairman of department and program director
    - \* One on one meeting with the students with difficulties on a monthly basis with the program director or other faculty members
- What processes are followed to develop the skills, knowledge and capabilities of faculty

members:

- Training courses and workshops carried out by the University of Jordan for all new faculty members.
- Conference attendance sponsored by the University of Jordan
- What indicators and standards are used to guarantee commitment to quality in the program:
  - We are subject to the standards applied by the quality office of medical education and clinical practice standards at Jordan University Hospital

35. An official document of statistics and surveys issued by official bodies show the unemployment rate for this specialization

**Not available**

Program Director: Dr. Emad Al-Tarawneh      Signature: -----Date: 02/01/2022

Head of Department: Dr. Osama Samara      Signature: -----

Head of curriculum committee/Faculty: ----- Signature: -----

Dean: ----- -Signature: -----