



## COURSE SPECIFICATION

### (Nuclear Medicine level 2)

Faculty of Medicine– Mansoura University

#### (A) Administrative information

(1) Programme offering the course.	Postgraduate Master degree of Clinical Oncology and Nuclear Medicine/ CONM517
(2) Department offering the programme.	Clinical oncology and nuclear medicine department
(3) Department responsible for teaching the course.	Clinical oncology and nuclear medicine department
(4) Part of the programme.	Second part
(5) Date of approval by the Department's council	7/6/2016
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title.	<b>Nuclear Medicine</b>
(8) Course code.	CONM 517 NM2
(9) Credit hours	4 hours
(10) Total teaching hours.	60 hours lectures



## **(B) Professional information**

### **(1) Course Aims:**

The broad aims of the course are as follows:(either to be written in items or as a paragraph)

- 1- Provide the concepts and terminology of Nuclear Medicine .**
- 2- Educate the preparation of dose, protection, and quality control.**
- 3- Teach the use of different radio-isotopes in the diagnosis and treatment of different diseases.**

### **(2) Intended Learning Outcomes (ILOs):**

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

**A1: Explain the general basis of nuclear medicine**

**A2: Explain concepts of quality control in nuclear medicine.**

**A3: Identify uses of nuclear in diagnosis and treatment of different body parts.**

**A4: Discuss radiopharmacology, radioimmunoassay, and instrumentation and how to use.**

**A5: Demonstrate radiation exposure of unsealed isotopes.**

**A 6 : describe laboratory techniques used in dose preparation and waste disposal.**

**A 7 : Identify different devices in nuclear medicine**



## 2- Intellectual activities (I)

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

### B- Intellectual skills

- B1: Practice diagnostic and therapeutic use of isotopes in different body systems.**
- B2: Distinguish the dose preparation, waste disposal.**
- B3: interpret different techniques according to the diagnosis.**
- B4: Analyse concepts of quality control, and different devices.**
- B5: demonstrate radiopharmacology**



### (3) Course content:

semistar	Subjects	Lectures	Clinic	Labora	Field	Total Teaching Hours
1st	<b>*General basis of nuclear medicine.</b>	3				3
	<b>*Laboratory techniques used in nuclear medicine including preparation of standards.</b>	2				2
	<b>*Dose preparation and quality assurance of the dose calibrators.</b>	3				3



	<b>*Radiopharmacology.</b>	2				2
	<b>*Health physics-waste disposal and decontamination.</b>	2				2
	<b>Nuclear medicine detectors</b>	3				3
<b>2nd</b>	<b>* Concepts of quality control in nuclear medicine.</b>	2				2
	<b>* Radiation exposure of unsealed source</b>	2				2
	<b>* SPECT</b>	1				2
	<b>*Monitoring devices</b>	1				
	<b>*PET</b>	1				3
	<b>*whole body counters</b>	1				
	<b>*scintillation counters</b>	1				
	<b>* Therapeutic uses of isotopes:</b>					
	<b>-thyroidcancers,</b>	2				2
	<b>- thyrotoxicosis,</b>	2				2
	<b>-bone metastasis,</b>	2				2
<b>3rd</b>	<b>* Diagnostic scintigraphic studies of:</b>					
	<b>-brain,</b>	2				2
	<b>-myocardium</b>	2				2
	<b>-kidney</b>	2				2
	<b>- thyroid</b>	3				3
	<b>-parathyroid</b>	2				2
	<b>-lung</b>	3				3
	<b>-bone</b>	2				2
	<b>- liver</b>	2				2
<b>-spleen</b>	2				2	



- pancreas	2			2
-salivary glands	2			2
	2			2
-gastrointestinal	2			2
-genitourinary	2			2
-reticuloendothelial systems	2			2



#### (4) Teaching methods:

- 4.1. Lectures
- 4.2. Scientific meetings
- 4.3. Case presentation
- 4.4. PANEL discussion
- 4.5. Club journal

#### (5) Assessment methods:

- 5.1. written exam for assessment of Knowledge and intellectual skills.
- 5.2. oral exam for assessment of Knowledge and intellectual skills, and practical skills.

Assessment 1. written exam held after 36 months of admission to job or 30 months of registration to the MS degree.

Assessment 2. Oral exam held after 36 months of admission to job or 30 months of registration to the MS degree.

Assessment 3. MCQ exam held at the end of 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> semester.

Percentage of each Assessment to the total mark.

Written exam. 120 marks ,

MCQ (as a continuous assessment).30 marks.

Oral exam. 150marks,.

#### (6) References of the course.



### 6.1: Text books:

- **Fred A. Mettler and Milton J. Guiberteau:** *Essentials of Nuclear Medicine Imaging, 5<sup>th</sup> edition 2006*
- **Shackett.,***Nuclear Medicine Technology: Procedures and Quick Reference, (2ND edition 2008)*

### 6.3: Journals:

Seminars in nuclear medicine

### 6.1: Websites:

[www.snm.com](http://www.snm.com)

## (7) Facilities and resources mandatory for course completion.

Candidates and their learning are supported in a number of ways:

- Candidates logbook
- Programme Specification
- Extensive library and other learning resources
- Computer laboratories with a wide range of software
- Intranet with a wide range of learning support material
- MSc/MD Dissertation Supervisor

Course coordinator:

Prof.d. Soumaya Eiteba

Assistant prof. Rasha Abdel Latif

Head of the department.





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**Prof.d. Ibrahim Awad**

**Date:**

**P.S. This specification must be done for each course.**