COURSE SPECIFICATION

(Nuclear Medicine level 2)

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programmeoffering 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	**6/5/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	**Nuclear Medicine**
(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: interprete different techniques according to the diagnosis.
B4: Analyse concepts of quality control, and different devices.
B5:demonsterate radiopharmacology

(3) Course content.

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

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

(5) Assessment methods:

5.1: written exam for assessment of Knowlede and intellectual skills.
5.2: oral exam for assessment ofKnowlede 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^{nd}, 3^{rd}, 4^{th} semester.

Percentage of each Assessmentto 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:

- Mettler, Fred A., and Milton J. Guiberteau. *Essentials of Nuclear Medicine and Molecular Imaging E-Book*. Elsevier Health Sciences, 2018.
- Eckelman, William C., Marie Boyd, and Robert J. Mairs. "Principles of molecular targeting for radionuclide therapy." *Nuclear oncology: From pathophysiology to clinical applications*. Springer International Publishing AG, 2017.

6.3: Journals:

Seminars in nuclear medicine

6.1: Websites:

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

Programme Coordinator:
Prof Dr Somaya Eteba
Prof Dr: Rasha Abdellatif
Head of Department : Prof Dr Magda Allam

6/5/2020

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinators: Prof Dr Somaya Eteba Prof Dr Rasha Abdellatif **Dean:** Prof Dr Nesreen Salah Omar	**Signature & date:** **Signature & date:**
Executive director of the quality assurance unit: Prof Dr Nesreen Shalaby	**Signature & date:**