COURSE SPECIFICATION

Elective course

(Experimemtal radiobiology)

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:	Experimental radiobiology.
(8) Course code:	CONM517ERP
(9) Total teaching hours:	30 hours

(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- Educate the candidates biological character of malignant cells

2- Teach the candidate the different techniques used in experimental radiobiology.

3- provide the candidate with different terms of importance in experimental radiobiology.

(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.

A1: Discuss model tumor systems& cell lines (definition, preparation, tumor growth,…..).

A2 : Define biological characters of malignant cells.

A3:discus general characters of spheroids, predictive assay (aim, how to measures intrinsic radiosensitivity, o2 status,….).

A4: **Recognize** hyperthermia and its effect.

A5: identify invitro cell survival curve.

2- Intellectual activities (I)

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

B- Intellectual skills

B1: recognize biological characters of malignant cells

B2: Predict effects of radiation on cells, and factors affecting.

B3. Interprete different techniques to define radiosensitivity.

B4 : apply different techniques to detect

(3) Course content:

Subjects	Lectures	Clinical	Laboy	Field	Total Teaching Hours
***Biological characters of malignant cells**	3				
***Model tumor systems:**					
-definition	1				
-preparation	2				
-tumor growth measurment	3				
-tumor control dose	2				
-dilution assay technique	2				
-lung colony assay	2				
***Invivo/ Invitro technique**	2				
***spheroids**	2				
***predictive assay**					
-aim	1				
-Intrinsic radiosensitivity	2				
-O2 status	2				
-proliferative potential	2				
***Invitro cell survival curve**	2				
***hyperthermia and relation to irradiation**	2				

(4) Teaching methods:

4.1: lectures.

(5) Assessment methods:

5.1: written exam for assessment of Knowledge and understanding.
MCq continuous assessment for assessment of knowledge , intellectual ILOs

Assessment schedule:

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 2nd, 3rd, 4th semester.

Percentage of each Assessment to the total mark:
Written exam:80 marks
Oral exam: 50 marks.
MCQ as continuous assessment 20 marks.

References of the course:

6.2: Text books:

- **PerezCA, Brady LW,HalperinEC,etal.,**editors.*Principles and Practice of RadiationOncology*. 5th ed. Philadelphia:Lippincott

Williams&Wilkinns; 2008.

- **Hansen EK and Roach M.**: *Handbook of Evidence-based Radiation Oncology*.1st edition. New York: springer science+ business media, LLC; 2007.
- **Casciato DA,** editor. *Manual of clinical oncology*.6th edition. Philadelphia: Lippincott Williams&Wilkins; 2009.
- **DeVita VT, Hellman S, Rosenberg SA,** editors**.** *Principles and Practice of Oncology*.8th ed. Philadelphia: Lippincott; 2008.

(6) 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 Eteiba

Assisstant prof: Rasha Abdel Latif

Head of the department:

Prof.d: Ibrahim Awad

Date:

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