



COURSE SPECIFICATION

Elective course

(Experimental 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	6/5/2020
(6) Date of last approval of programme specification by Faculty council	20/9/2020
(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. Interpret different techniques to define radiosensitivity.

B4 : apply different techniques to detect

(3) Course content:

Subjects	Lectures	Clinical	Labo y	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					
*Invivo/ Invitro technique	2				
*spheroids	2				
*predictive assay					
-aim	1				
-Intrinsic radiosensitivity	2				
-O2 status	2				
-proliferative potential	2				
*Invitro cell survival curve					
*hyperthermia and relation to irradiation	2				

(4) Teaching Methods

4.1, lectures

4.2, interactive teaching

(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.

- Perez CA, Brady LW, Halperin EC, et al., editors. *Principles and Practice of Radiation Oncology. 7th edition.* Wolters Kluwer, 2018

- Zhong, Jim. "Book Review: Handbook of Evidence-Based Radiation Oncology." (2019).
- Chmielowski, Bartosz, and Mary Territo. *Manual of clinical oncology*. Lippincott Williams & Wilkins, 2017.
- DeVita, Hellman, and T. S. Lawrence. "Rosenberg's. Cancer Principles & Practice of Oncology [Internet]." (2019)

(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

Programme Coordinator:

Prof Dr Somaya Eteba

Prof Dr: Rasha Abdellatif

Head of Department : Prof Dr Magda Allam

Date:

6/5/2020

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

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	Signature & date:
Dean: Prof Dr Nesreen Salah Omar	Signature & date:
Executive director of the quality assurance unit: Prof Dr Nesreen Shalaby	Signature & date: