



COURSE SPECIFICATION

(Applied physiology)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course.	Postgraduate Master degree of Medical Oncology
(2) Department offering the programme	Internal Medicine Department
(3) Department responsible for teaching the course.	Physiology Department
(4) Part of the programme.	First part
(5) Date of approval by the Department's council	2/08/2016
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title.	Applied physiology
(8) Course code.	MONC 503
(9) Total teaching hours.	7.5 hours/15 weeks

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows.

1. The program is a professional degree that enables candidates to specialize in research, teaching and clinical testing in human physiology including organ, cellular and system Physiology.
2. The candidates should achieve satisfactory levels of basic scientific knowledge, clinical and research skills in all aspects of general Physiology as well as field of medical oncology, interact with clinical research problems, respect ethical guidelines in all areas of practice and promote their medical standards through engaging in continuing medical education.

(2) Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding :

- A1. Explain the functions of all body systems at the organ level.
- A2. Describe the general cellular mechanisms involved in cellular genomics, function, communication, regeneration and death.
- A3. Explain physiological expertise of specific chosen body system or at a specific area of cellular function area as it relates to physiological knowledge.
- A4. Identify the physiological background of applied physiology in medical practice.

B-Intellectual skills:

- B1. Choose a research question in clear terms and develop a realistic research plan.
- B2. Evaluate and judge alternatives.
- B3. Integrate Human Physiology with other sciences studied during the program.
- B4. Analyse clinical physiology test results

(3) Course content.

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching
(1) Digestion <ul style="list-style-type: none"> • Stomach. A-Cellular mechanism of HCL secretion B-Control of HCL secretion C-Function of HCL D-Peptic ulcer	1h				1h
(2) CNS: <ul style="list-style-type: none"> • Pain sensation, Headache, and pain control system. 	1h				1h
(3) Respiration <ul style="list-style-type: none"> • Exchange of gases a. Ventilation/perfusion ratio b. Diffusion through placental membrane • Respiratory function of blood. • Regulation of acid-base balance. • Regulation of respiration • Hypoxia. • Cyanosis. 	1h				1h

<p>(4) Blood</p> <ul style="list-style-type: none"> • General function of blood • Composition of the blood • Hemoglobin • Erythropoiesis • Leucopoiesis • Functions of the leukocytes • Immunity • Types and functions of T-lymphocytes • Blood groups and blood transfusion • Functional structure of the platelets • Functions of the platelets • Hemostasis 	1.5 h				1.5 h
<p>(5) Kidney</p> <ul style="list-style-type: none"> • Function of renal glomeruli • Function of renal tubules • Diuretics 	1h				1h
<p>(6) Endocrine</p> <ul style="list-style-type: none"> • The pituitary gland • The adrenal cortex • The adrenal medulla • Physiology of male reproduction • Physiology of female reproduction 	1h				1h
<p>(7) Circulation</p> <ul style="list-style-type: none"> • Capillary circulation • Lymphatic circulation • Venous circulation • Regulation of Arterial blood pressure • Hemorrhage • Shock 	1h				1h

(4) Teaching methods:

- 4.1. Power point presentation.
- 4.2. Laboratory observation.

(5) Assessment methods:

- 5.1. Written exam for assessment of A1-4, B1-4,
- 5.2. Oral exam for assessment of A1-4, B1-4,
- 5.3. MCQ exam for assessment of A1-4, B1-4,

Assessment schedule:

Assessment 1: Final exam week/month 24th week

Percentage of each Assessment to the total mark:

Written exam: 72 marks	: 48 % of total Physiology exam.
Oral exam: 60 marks	: 40% of total Physiology exam.
MCQ exam: 18 marks	: 12% of total Physiology exam.

Physiology exam represent 16.7 % of total marks of the first part.

(6) References of the course:

- 6.1. Hand books. Medical Physiology, Physiology department, Faculty of Medicine, Mansoura University
- 6.2. Text books: Text book of Medical Physiology (Guyton and Hall).

(7) Facilities and resources mandatory for course completion.

-Lectures Halls.

-Data show.

Course coordinator:

Prof. Sameh Shamaa

Prof. Tawfik Elkhodary

Dr. Ziad Emarah

Head of the department:

Prof. Salah El-Gamal

Date of First Approval: 22/12/2010

Date of Last Approval: 23 /08/2016