COURSE SPECIFICATION

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate MSc program of internal medicine
(2) Department offering the programme:	Internal medicine department
(3) Department responsible for teaching the course:	Physiology department in collaboration with Internal medicine department
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	5/11/2014
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title:	Applied physiology
(8) Course code:	MED503
(9) Total teaching hours:	15 hours
(10) Credit hours	1 (one) hour

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

***Application and integration of physiological basics with the knowledge related to the practice of internal medicine and health care.**

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding of :

A1. Recognize the physiological basics of the following, respiratory function of blood, Regulation of blood pH and acid base Balance, Cardiac properties, Cardiovascular, reflexes, Interstitial fluid formation and pathophysiology of oedema, Regulation of arterial blood pressure, Circulatory shock, Gastrointestinal hormones and their physiological functions ,Motor functions of the GIT and its Abnormalities, Biliary secretion and other secretory functions of the GIT, Anatomical connections between hypothalamus and pituitary, Hypothalamo-pituitary-adrenal axis (HPA axis), Thyroid, suprarenal and parathyroid glands, Endocrine functions of the pancreas, Hormones affecting plasma glucose levels, Insulin receptors, Factors affecting insulin secretion, DI (central , nephrogenic), Measurement and factors affecting GFR, Role of the kidney in regulation of extra cellular fluid volume, Role of kidney in regulation of Na, K, Ca, Mg, and phosphate, Quantitative assessment of diluting and concentrating ability of the kidney, Thermo genesis and thermoregulation, Control of food intake, Pain control system, Ion channel.

B- Intellectual skills:

B1 **identify strengths, deficiencies, and limits in one's knowledge and expertise and be able to be updated and face challenges.**

B 3 **integrate knowledge and understanding of internal medicine and other medical specialties and interpret basic clinical tests and images as well as obscure findings to solve clinical problems .**

B 8 **use information technology to optimize learning and write an essay about a specific medical problem.**

(3) Course content:

Subjects	Lectures 1/week (15 week	Total Teaching Hours (15 hours)
Respiratory function of blood Regulation of blood pH and acid base Balance	1 hours	2 hours / 2week
Cardiac properties Cardiovascular reflexes Interstitial fluid formation and pathophysiology of oedema Regulation of arterial blood pressure Circulatory shock	1 hours	3 hours/3week
Gastrointestinal hormones and their physiological functions Motor functions of the GIT and its Abnormalities Biliary secretion and other secretory functions of the GIT	1 hours	3 hours/3week
Anatomical connections between hypothalamus and pituitary Hypothalamo-pituitary-adrenal axis (HPA axis) Thyroid, suprarenal and parathyroid glands Endocrine functions of the pancreas Hormones affecting plasma glucose levels Insulin receptors Factors affecting insulin secretion DI (central , nephrogenic)	1 hours	3 hours/ 3 weeks
Measurement and factors affecting GFR Role of the kidney in regulation of extra cellular fluid volume Role of kidney in regulation of Na, K, Ca, Mg and phosphate Quantitative assessment of diluting and concentrating ability of the kidney	1 hours	2 hours/2 weeks
Thermo genesis and thermoregulation Control of food intake Pain control system Ion channel	1 hours	2 hours/2 weeks

(4) Teaching methods:

4.1: Lectures with power point presentation.

4.2: Seminars and group discussions.

4.3: Self learning.

(5) Assessment methods:

5.1:written exam (short essay) for assessment of ILOs (a1,4 ; b1,3,8)

Assessment schedule:

Assessment 1: writtem exam for 1.5 hours (short essay) : 72 marks.

Assessment2: oral exam : 60 marks.

Assessment3: MCQ: 18 marks

Other assessment without marks: presentations during seminars, log book.

(6) References of the course:

6.1: Hand books: of the physiology department.

6.2: Text books:

6.1: websites .

(7) Facilities and resources mandatory for course completion:

Lecture rooms with data show availability

Log book

Course coordinators:

Prof

Head of the department: Prof Salah Elgamal