COURSE SPECIFICATION

Applied physiology

Endocrinology, Diabetes, Clinical Nutrition and Metabolism

MD

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate MD program of **Endocrinology, diabetes ,clinical nutrition and metabolism. EDCNM600**
(2) Department offering the programme:	Internal medicine department **(Endocrinology , diabetes and metabolism unit)**
(3) Department responsible for teaching the course:	Internal medicine department **(Endocrinology , diabetes and metabolism unit) Applied physiology department**
(4) Part of the programme:	First part (first semester)
(5) Date of approval by the Department`s council	12/7 / 2016
(6) Date of last approval of programme specification by Faculty council	9/8 /2016
(7) Course title:	**Applied physiology**
(8) Course code:	EDCNM 603/ EDCNM 610 AP
(9) Total teaching hours:	15

(B) Professional information

(1) Course Aims:

- Educate the candidate the basic mechanisms of homeostasis by integrating the functions of cells, tissues, organs, and organ systems
- Educate the candidate the functional mechanisms and their regulation to explain the pathophysiology underlying common endocrine diseases.
- Educate the candidate the physiological mechanisms of nutrition

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1 Define the terms hormone, target cell, and receptor.
A2 Recognize the major mechanisms of action of peptides, steroid, and thyroid hormones and the role of hormone-binding proteins
A3 Explain the feedback control mechanisms of hormone secretion.
A4 Recognize the role of the hypothalamus and pituitary gland in maintaining homeostasis
A5 Recognize how the endocrine system is involved with fluid and electrolyte balance
A6 Recognize The role of the adrenal gland in maintaining homeostasis
A7 Describe the role of The endocrine system in reproduction
A8 Explain the role of the thyroid gland in maintaining homeostasis
A9 Recognize calcium homeostasis and define The role of the parathyroid gland
A10 Explain The role of the endocrine pancreas and intestinal hormones in carbohydrate metabolism
A11 Define hormonal regulation of protein and fat metabolism
A12 Recognize Dietary Balances; Regulation of Feeding and energy storage
A13 Define adipose tissue as an endocrine organ
A14 Discuss Principles of neuroendocrine regulation

A15 Recognise Endocrine functions of kidneys, heart & pineal gland
A16 Identify Endocrine disruptors in the Environment

B- Intellectual skills

B1 Differentiate the terms endocrine, paracrine, and autocrine
B2 Compare and contrast hormone actions exerted via plasma membrane receptors with those mediated via intracellular receptors
B3 : Integrate appetite and energy balance in nutrition

(3)Course content:

Subject	Lectures	Seminar
1. Regulations of hormone functions	1	
2. The role of the anterior pituitary gland in maintaining homeostasis 3. Post pituitary hormones	2	
4. Reproductive and Hormonal Functions of the Male 5. Reproductive and Hormonal Functions of the female and in pregnancy	2	
6. The role of the adrenal gland in maintaining homeostasis	1	
7. The role of the thyroid gland in maintaining homeostasis	1	
8. Hormonal control of calcium metabolism & the physiology of bone The role of the parathyroid gland in maintaining homeostasis	1	1
9. Regulation of carbohydrate metabolism The role of the endocrine pancreas in maintaining homeostasis The incretins and Gastrointestinal hormones	2	
10. Hormonal regulations of protein and fat metabolism	1	
11. Dietary Balances, Regulation of Feeding		1

energetics		
12.10.Endocrine functions of kidneys, heart & pineal gland		1
13.Endocrine disruptors in the Environment		1
Total teaching hours	**15**	

(4) Teaching methods:

4a Lecture

4b Seminar

(5) Assessment methods:

Written exam 80 marks
MCQ Exam 20 marks

To be eligible for the final exam , the candidate must have , fulfilled the credit hours of the courses and log book activities .
The candidate must earn 60% of the marks to pass the exam.

(6) References of the course:

6a. Text books:

1. Williams textbook of endocrinology

2. Guyton and hall textbook of medical physiology

(7) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department
- library
- Computer laboratories with a wide range of software
- Intranet with a wide range of learning support material

Course coordinator:

Prof Nagy Shaaban, Head of endocrinology and diabetes unit

Prof Manal Tarshoby, Professor of internal medicine, endocrinology and diabetes unit.

Prof Mohamed Yaqoot Abdul Aziz , Professor of internal medicine, endocrinology and diabetes unit.

Head of the department:

Prof Salah Elgamal, Professor of internal medicine

Date: 23 /4/2016