COURSE SPECIFICATION

(Applied physiology-HEM 503)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Master degree of clinical hematology/HEMA 500
(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:	26/04/2016
(6) Date of last approval of programme specification by Faculty council:	9\8\2016
(7) Course title:	Applied physiology
(8) Course code:	HEM 503
(9) Total teaching hours:	7.5 hours
(10) Credit hours	0.5 hour

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

1- To educate the candidate the basics of hemostasis & homeostasis

2- To educate the candidate the basics of blood gases, hypoxia & cyanosis.

(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.

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

A- Knowledge and Understanding

A1: To identify structure and function of the bone marrow, the hematopoietic microenvironment and the lymphoid tissues.

A2: To identify physiological basis of Haemeostatsis, regarding role of platelets, vessel wall and coagulation system

A3: To identify the physiologic principles of transfusion medicine, including the evaluation of antibodies, blood compatibility, and the indications for and complications of blood component therapy and apheresis procedures.

A4: To identify basis of acid base balance and different compensatory mechanisms

A5: To identify physiologic functions of endocrinal glands and their effects on physiological different system

B- Intellectual skills

B6: To interpret results of complete blood count, including platelets and white cell differential to approach patients with blood disorders.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
(1)Respiration •Blood gases (carriage of O2 & CO2) •Hypoxia. •Cyanosis.	3 h				
(2)Blood • Haemeostatsis: – Mechanism – Blood clotting factors & blood coagulation – Intravascular clotting • Red blood cells • Erythropoiesis • Anemia & polythycemia • Blood group • Blood transfusion • Leucocytes & immunity • Leukemia	5h				
(3)endocrine • Thyroid gland • Suprarenal gland: • Cortex • Medulla	2h				
(4)Circulation • Cardiac output • Arterial blood pressure • Capillary &	2h				

lymphatic circulation • Pulmonary circulation • Coronary circulation • Cerebral circulation • Hemorrhage • Shock					
5) homeostasis: • Blood PH regulation • Water & electrolyte balance • Body temperature regulation	3h				
	15h				Lectures 15h

(4) Teaching methods:

4.1: Power point presentation.

(5) Assessment methods:

5.1: Written and MCQ exams for assessment of (Knowledge and intellectual

5.2: Oral exam for assessment of knowledge, and intellectual skills)

5.3: MCQ exam assessment for assessment of knowledge, and intellectual skills

Assessment schedule:

Assessment 1: Final exam 6 months after admission

Marks of each assessment

MCQ exam: 18 marks

Written exam: 72 marks

Oral exam: 60 marks

(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.

-Equipped Laboratory.

Course coordinator: Prof. Sameh Shamaa

Prof. Mohamed Nasr Mabed

Prof. Emad Azmy

Head of the hematology unit: Prof. Mohamed Nasr Mabed

Head of the department: Prof. Salah El-Gamal

Date of First Approval: 22/12/2010

Date of last Approval: 30/3/2016