COURSE SPECIFICATION

Applied Physiology

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Program offering the course:	**Postgraduate master degree of Anesthesia and Surgical Intensive Care**
(2) Final award / degree	**MSc**
(3) Department offering the program:	**Anesthesia** and Surgical Intensive Care department
(4) Department responsible for teaching the course:	Physiology Department.
(5) Part of the program:	First part
(6) Date of approval by the Department`s council	20-4-2016
(7) Date of last approval of program specification by Faculty council	9-8-2016
(8) Course title:	**Applied Physiology**
(9) Course code:	**ANET 503**
(10) Credit hours	**one hour**
(11) Total teaching hours:	15 lecture

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

- To shed the light on physiology of different body system
- To understand effect of anesthesia on body physiology

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1	Define, receptor, types, mechanism of stimulation of pain sensation
A2	Define, location of pain control system & how to control of pain
A3	Recognize definition, component of (stretch reflex, muscle spindle)
A4	Discuss types of blood pressure control
A5	Classify shock & explain its mechanism
A6	Define haemorrhage, its classification & effect
A7	Define, resting membrane potential & explain its value, measurment &mechanism
A8	Describe phases of action potential
A9	Explain structure, mechanism of transmission & properties of neuromuscular transmission
A10	Discuss phases of excitation contraction coupling
A11	Discuss regulation of respiration

A12	Define hypoxia , its types, causes& effect
A13	Define cyanosis, its causes, types & factors affecting
A14	Explain transportation of O2 & CO2 and O2 haemoglobin dissociation curve

B- Intellectual skills

B1	Interprets perioperative care for solving critical clinical problems under anesthesia.
B2	Use information obtained from physiological changes to understand organ compensation during anesthesia and critical situations.

(3) Course content:

Subjects	Lectures
1-CNS : • **pain sensation & pain control system** • **motor ms tone & stretch reflex** • **descending motor pathway** • **cerebral blood flow (circulation)**	4
2-CVS : • **regulation of ABP ,** • **COP** • **shock & Hge**	3
3-Ms & nerve: • **Resting membrane potential** • **Action potential** • **Neurons transmission** • **Excitation-contraction coupling**	4
4- Respiration : • **Regulation of respiration** • **Pulmonary ventilation (factors effecting)** • **Transportation of O_2, &CO_2** • **H^+ regulation** • **Diffusion of gases through respiratory membrane**	4

• **Hypoxia** • **Cyanosis**	
Total teaching hours	15

(4) Teaching methods:

4.1: Lectures

4.2: Power point presentation

(5) Assessment methods:

5.1: Written exam for one hour in physiology after 6 months of date of registration for graduate studies for MSc.

5.2: MCQ exam

5.3: Structured oral exam

Assessment to the total mark:
Written exam: 48
MCQ exam: 12
Structured oral exam: 40

(6) References of the course:

6.1: Clinical anesthesiology 4th ed

(7) Facilities and resources mandatory for course completion:

Lecture halls and data show.

Course coordinator: Dr. Maged Talaat Salama

Head of the department: Prof.Dr. Mona Abdelglil Hashish

Date: 04/04/2016