COURSE SPECIFICATION

Applied Pharmacology

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:	**Pharmacology** 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 programme specification by Faculty council	9-8-2016
(8) Course title:	**Applied Pharmacology**
(9) Course code:	**ANET 506**
(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 educate students about pharmacokinetics, pharmacodynamics of different drugs.
- The possible application during practice

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A1	Define receptors.
A2	Describe dose response curve & factors affecting
A3	Identify & clinical significance of (pharmacokinetic, volume of distribution, first order elimination, zero order elimination, elimination half life, steady state plasma concentration & bioavailability)
A4	Define (therapeutic index, safety index, protective index, potency, efficacy, tolerance, habituation, addiction, distribution & redistribution.
A5	Describe metabolism of drugs (oxidative, reductive, 1st pass metabolism) & factors affecting.
A6	Recognize pharmacokintic, mechanism of action, effect & side effect of (symathomimitics, symatholytic, parasympathmimtics, parasympatholytics, heparin & oral anticoagulant)
A7	Classify opioids, pharmacokinetics, mechanism of action, effect, side effect, contraindication & toxicity.
A8	Classify benzodiazepin, distrubution, mechanism of action, effect, side

	effect & antidote.
A9	List preanesthetic medications
A10	Classify antihypertensive drugs & contraindications
A11	Identify pharmacokinetics, mechanism of action, pharmacological effect, indications, contraindications, dose of inotropic drugs(digitalis, dopamine & dobutamine)
A12	Identify mechanism of action, pharmacological effect, indications, contraindications of antiarrhythmic drugs

B- Intellectual skills

B1	Construct appropriate strategies for selecting appropriate drugs according to clinical condition of patients.
B2	Use pharmacological principles during practice

(3) Course content:

Subjects	Lectures
1- General Pharmacology : • **Pharmacokinetics.** • **Dose variation and clearance** • **Adverse drug reactions &Dung interaction**	 1 1 1
2- Autonomic pharmacology: • **Sympathomimetic &Adrenoceptor blocker** • **Para-sympathomimetic and para-sympatholytic** • **Neuromuscular blockers and Autacoids**	 1 1 1 1
3- Cardiovascular system : • **Drug therapy of HTN** • **Vasodilators** • **Antiarrhythmic drugs**	1 1 1

4- CNS : • **Opiate analgesics** • **sedative hypnotics** • **Pre-anesthetic medications**	1 1 1
6- inhalational and intravenous anesthetics :	2
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 pharma 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: Miller's anesthesia

(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