



COURSE SPECIFICATION
Clinical pharmacology
Faculty of Medicine – Mansoura University

(A) Administrative information

(1) Programme offering the course :	Postgraduate M. Sc. Program of emergency medicine
(2) Department offering the programme :	Multidisciplinary.
(3) Department responsible for teaching the course :	Clinical pharmacology department
(4) Part of the programme :	First part (first semester)
(5) Date of approval by the Department's council :	28/12/2014
(6) Date of last approval of programme Specification by Faculty council :	9/8/2016 EM506
(7) Course title :	Pharmacology
(8) Course code :	EM506
(9) Total teaching hours :	7.5

(B) Professional information

(1) Course Aims :

By the end of the course the students are expected :

- To have knowledge and understanding of pharmacological basis of therapy including pharmacokinetics, side effects, interactions and use of drugs in emergency situations.
- To recognize principles of writing safe prescriptions for medical and emergency cases based on evidence (EBM) according to the patient's weight, age and health conditions.

(2) Intended Learning Outcomes (ILOs) :

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

A- Knowledge and Understanding

- A1 – Explain the pharmacokinetics of different drug groups affecting body systems.
- A2 – Recognize different factors affecting drug response
- A3 – Explain altered drug effect and adverse drug reactions.
- A4– Explain different types of drug interactions.
- A5 – Identify drugs in treatment of Hypertensive emergencies, Acute coronary syndromes, Cardiac dysrhythmias, Venous thromboembolism, Shock states.
- A6 – Describe lines of treatment in Diabetic comas, Thyrotoxic crisis, Acute renal insufficiency, Status epileptics and Pain management.
- A7 – List drugs in acute severe asthma and pulmonary embolism.
- A8 – Discuss commonly used antibiotics in emergency situations.
- A9 – Recognize enteral and parenteral nutrition.

B- Intellectual skills :

- B1 – Design rational therapeutic strategies and dosing adjustment for different disease states such as liver disease and renal impairment.
- B2 – Evaluate the defect available drugs and choose the best treatment for specific cases.
- B3– Monitor the effectiveness and toxicity of therapy.
- B4 –Recognize the value of a comprehensive drug history of the patient.

D – Communication & Transferable skills

D1 – Employ information technology effectively in the field of clinical pharmacology.
D2 – Predict the possibility that clinical emergency events are drug related.
D3 – Recognize and effectively deal with unethical behavior of other members of healthcare team.

(3) Course content :

The course fulfils ½ credit hours through the first semester including the following topics.

I Introduction of clinical pharmacology.

A. Clinical pharmacokinetics

- 1- Drug absorption
- 2- Drug Distribution
- 3- Drug Metabolism
- 4- Elimination.

B. Altered drug effect

- 1- Adverse drug reaction
- 2- Adverse drug events.
- 3- Drug- drug interaction.

II Clinical pharmacology in high risk patient.

- 1- Dosing in liver disease and other disease states.
- 2- Dosing in renal impairment.
- 3- Dosing in extremes of age.
- 4- Dosing in pregnancy and lactation.

III Clinical pharmacology of cardiovascular disorder in emergencies

- 1- Hypertensive emergencies.
- 2- Acute coronary syndromes.
- 3- Cardiac dysrhythmias.
- 4- Venous thromboembolism
- 5- Shock states.

IV Clinical pharmacology of endocrine metabolic and CNS disorders

- 1- Diabetic comas.
- 2- Thyrotoxic crisis
- 3- Acute renal insufficiency.
- 4- Status epilepticus.
- 5- Pain management.

V Clinical pharmacology of respiration disorder

- 1- Acute severe asthma.
- 2- Pulmonary Embolism.

VI Infections drug commonly used in emergency room

General chemotherapy:

- B-lactam antibiotics.
- Antimicrobial agents affecting bacterial protein synthesis.
- Antimicrobial agents affecting topoisomerase.

V Management and of enteral and parenteral nutrition and hypertensive stated.

4- Teaching and learning methods:

- 1- **Lectures:** to provide knowledge of course contents and intellectual skills
PowerPoint presentations & simulations.
- 2- **Tutorials:** to discuss clinical problems using clinical case scenarios and discusses facts and concepts in therapy (PBL) using video simulation and electronic board.

5- Assessment methods:

A) Attendance criteria: candidate needs to attend at least 75% of lectures and tutorial classes to sit for the final exam.

B) Assessment

Type of exam	Aimed ILOs
Written examination & MCQ	Knowledge & understanding intellectual skills
Oral examination	Intellectual skills, communication skills

Assessment schedule

- I. Continuous assessment after completion of the course:
MCQ exam is done at the end of the semester (18 Marks)
- II. Final exam : at the end of the semester:
Assessment 1, written exam (72 Marks)
Assessment 2, oral exam (60 Marks)

(4) References of the course:

Pharmacotherapy principles & practice 2nd edition.
Lecture notes
Instant clinical pharmacology

(5) Facilities and resources mandatory for course completion:

Candidates and their learning are supported in a number of ways e.g. presence of data show and computer facilities

Course coordinators :

Prof. Dr. Mohamad-Hesham Daba

Head of the department :

Prof. Dr. Hussien Mahmoud El-beltagi.

Date : 8/2/2016