PROGRAMME SPECIFICATION

Faculty of Medicine–Mansoura University

(A) Administrative information

(1) Programme Title& Code	MSc degree of clinical pharmacology **Cpharm 500**
(2) Department (s)	Clinical pharmacology department
(3) Coordinator	– Prof. Dr **Hussein El -Beltagy** – Prof. Dr. Mohamad–HeshamDaba – Dr.Amira Eladl Clinical pharmacology department
(4) External evaluator (s)	– **Prof. Dr. Magda Hagras, professor of clinical pharmacology, Suez Canal University**
(5) Date of approval by the Department`s council	10/7/2016
(6) Date of last approval of programme specification by Faculty council	9–8–2016

(B) Professional information

(1) Programme Aims:

The broad aims of the Program are to:

1- Develop the ability to perform focused relevant history taking and accurate clinical examination in patients with different diseases affecting various body systems.

2- Optimize clinical application of drugs in medical practice.

3- Provide candidate with a basic knowledge in modern biochemistry and molecular biology and the principles of their techniques.

4- Provide the candidate with a basic knowledge about the integration of physiological functions and the human body homeostasis for better understanding of pharmacology of drugs affecting different body systems.

5- Acquire basic knowledge of various aspects of medical virology and systemic bacteriology for better understanding of chemotherapy.

6- Give the candidate the ability to understand different mechanisms of normal and abnormal immune response & relevant diseases.

7- Acquire comprehensive knowledge of commonly used and newly developed drugs through study the pharmacodynamics, kinetics, adverse effects, clinical applications & drug-drug Interactions.

8- Study classical and modern approaches to drug development.

9- Acquire skill of preparing animal model of disease for experimental drug use.

10- Gain the skill of carrying out a scientific research and an effective presentation.

11- Gain knowledge about evidence based pharmacotherapy to be able to prescribe rationally in different case scenarios.

12- Study in depth drugs acting by different mechanisms on autonomic nervous system, autacoids and immune system and recommendations of immunization.

13- Acquire comprehensive knowledge about herbal medications; their uses, precautions and interactions

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

1. Recognize importance of different elements of history.
2. Describe pathophysiology, causes, clinical presentations and new guidelines in treatment of different medical diseases.
3. Study bacterial and viral morphology, growth curve, virulence and management of their subsequent diseases.
4. Recognize metabolic pathways and functions of carbohydrates, lipids, proteins, nucleotides, enzymes and hormones and their related metabolic disorders.
5. Identify the basics of molecular biology (structure, function & synthesis).
6. Recognize physiological properties and factor affecting functions of different body systems .
7. Describe pharmacodynamics/ pharmacokinetics of commonly used and newly developed drugs.
8. Study basis of sympathetic and parasympathetic A.N.S and autacoids.
9. Explain Indications, contraindications, side effects, interactions and dosage regimens of commonly used and newly developed drugs.
10. Categorize different pharmacotherapies used in various disorders affecting different body systems.
11. Recognize the cytokines and immunological reactions causing hypersensitivity and autoimmune diseases and their role in pharmacology
12. List immunosupressive drugs, antimetabolites, Glucocorticoids, Calcineurin inhibitors and anti-proliferative drugs and their clinical applications including organ transplantation.
13. Study pharmacological effects, uses, adverse effects and drug interactions of common herbal medicines
14. Recognize research ethics
15. Outlines the principles of designing a study, writing a proposal and articles for publication

B- Intellectual skills

1. To predict diseases that alters, the normal clinical and laboratory parameters and correlate their pathogenesis to the used pharmacotherapies.
2. Elaborate an effective antimicrobial policy and strategies of Infection prevention of different infectious diseases.
3. Predict adverse drug reactions and explain the molecular and pharmacological basis behind it.
4. Interpret the effects of age, body size, organ dysfunction and concurrent illness on drug distribution and metabolism relevant to the trainee's practice.
5. Predict the risks of treatments to be able to make decisions about treatment options.
6. Apply knowledge of pharmacotherapy in different clinical situations through case scenarios and field visits.

C- Professional/practical skills

1. Perform techniques to evaluate physiological effects of drugs like Bl.P. measurement, ECG monitoring, pulse recording, temp measurement, etc.
2. Prescribe medications rationally in different case scenarios.
3. Construct and adjust dose regimen correctly in different age groups, pregnancy, lactation, physiological change (e.g. deteriorating physiological function) and following therapeutic drug monitoring.
4. Practice experimental work on isolated animal tissues and living animals to understand principles of biological responses and to determine an unknown drug.
5. Apply animal models of disease to use them as tools in detecting effect, toxicities & pharmacokinetics of drugs.
6. Design clinical trials to a new drug to test its pharmacokinetics, side effects and toxicity.
7. Analyze case scenarios to illustrate important interactions and adverse drug effects for benefits of patients and doctors
8. Apply principles of individualization of therapy when necessary.
9. Design therapeutic plan in different clinical situations according to evidence based pharmacotherapy

D- Communication &Transferable skills

1. Work effectively within a team.
2. Access information effectively in library and midline data base.
3. Keep up to date with national reviews and guidelines of practice (e.g. NICE and SIGN).
4. Show respect and behaves in accordance with Good Medical Practice.
5. Ensure appropriate personal language and behavior.
6. Adopt the principles of medical ethics and confidentiality.

(1) Academic standards:

Academic standards for the programme are attached in Appendix I. in which **NARS** issued by the National Authority for Quality Assurance & Accreditation in Education are used. External reference points/Benchmarks are attached in Appendix II.

3. a- External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the programme:

1. Joint royal colleges of the physician training board (70 %) (WWW.jrcptb.org.uk or www.gmc-uk.org/CPT_3_Jul _07_Curr_0010.pdf_30543337.pdf).

2. University of Glasgow, medicine, clinical pharmacology (30%) (http://www.gla.ac.uk/postgraduate/taught/medicine/clinicalpharmacology/)

3.b- Comparison of the specification to the selected external reference/ benchmark:

The main difference is that this course specification does not include teaching through ward-based rounds.

(2) Curriculum structure and contents:

4.a- Duration of the programme (in years or months): 4 semisters

4.b- programme structure:

Candidates should fulfill a total of 45 credit hours

●4.b.1: Number of credit hours:

First part: 8 Second part: 27 Dissertation: 10

●4.b.2: Teaching hours/week:

First part: Lectures: 7 Clinical/lab: 1 Total: 8 hrs

Second part: Lectures : 15 Clinical/lab: 10 Scientific activities : 2

Total: 27 hrs

(3) Programme courses:

First part

a- Compulsory courses:

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
1- Internal medicine (30 week)	**CPHARM 510**	**6**		**1**		**7**	**120**	

b- Elective courses: the student choose one of the following

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
2- Physiology (15 week)	**CPHARM 503**	**1**					**15**	
3- Microbiology (15 week)	**CPHARM 507**	**1**					**15**	
4- Medical biochemistry (15 week)	**CPHARM 504**	**1**					**15**	

Second part

a- Compulsory courses :

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
Basic pharmacology (15 weeks)	**CPHARM 506 BP**	**7**		**5**		**12**	**255**	
Clinical Pharmacology &(15 weeks)	**CPHARM 506 CP**	**7**		**5**		**12**	**255**	

b- Elective courses: the student choose one of the following

Course Title	Course Code	NO. of hours per week					Total teaching hours	Programme ILOs covered (REFERRING TO MATRIX)
		Theoretical		Laboratory /practical	Field	Total		
		Lectures	seminars					
Immuno pharmacology	**CPHARM 506 IP**	**1**					**15**	
Complementary Medicine	**CPHARM 506 CM**	**1**					**15**	

Programme-Courses ILOs Matrix

(4) Programmeadmission requirements:

General requirements:

- Previous degree : MBBCH (very good or excellent)

- Experience : training as a demonstrator in clinical pharmacology.

(5) Regulations for progression and programme completion:

First part

Assessment rules
1- Attendance criteria:Minimum acceptance attendance in each course is 70%
2- Log book should be fulfilled and signed by Head of the department.
3- Assessment tool

Tools	Mark	Percentage of the total mark
Compulsory course		
Written exam	180	60%
Oral exam	60	20%
Practical exam	60	20%
Total Marks	300	100%
Elective course		
Written exam	50	100%

Second part

Assessment rules
1- Attendance criteria:Minimum acceptance attendance in each course is 70%
2- Log book should be fulfilled and signed by Head of the department.
3- Assessment tool.

Tools	Mark	Percentage of the total mark
Compulsory course		
Written exam	300	50%
Oral exam	150	25%
Practical exam	150	25%
Total Marks	600	100%
Elective course		
Written exam	50	100%

Classification of final result for the MSc.

- The total marks of the first part examination result represents 30% of the final MSc. result.
- The total marks of the second part examination result represents 70% of the final MSc. result.
- To qualify for the award of the MSc with distinction, candidates must pass at least 60% of the final exam.

(6) Evaluation of Programme'sintended learning outcomes (ILOs):

Evaluator	Tools*	Sample size
Internal evaluator (s) - Prof. Dr. Gamal Mohamed Maamon Dahab - Prof. Dr. Abd El – Rahman Yassin. - Prof. Dr.Mohammed Abd El-Ghany	Interview Communication	
External evaluator (s) - Prof. Dr. Magda Hagras, professor of clinical pharmacology, Suez Canal University	Questionnaire	
Senior student (s)		
Alumni		
Stakeholder (s)		
others		

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programmeis contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinators: **– Prof. Dr. Hussein Elbeltagy** **–Prof. Dr. Ali Gaball** **– Prof. Dr. Mohamad-Hesham Daba** **– Dr. Amira Eladl**	Signature & date:
Dean: Name:	Signature & date:
Executive director of the quality assurance unit: Name:	Signature & date: