



Mansoura University
Faculty of Pharmacy
Quality Assurance Unit
**Academic Reference Standards for
Postgraduate Programs**



Academic Reference Standards (ARS)
For
PhD degree in Pharmaceutical Sciences
(Clinical Pharmacy)
Clinical Pharmacy & Pharmacy Practice Department

ARS

Academic Year: 2021/2022



Dept. of Clinical Pharmacy
& Pharmacy Practice

رئيس القسم
أ.د/ محمد الحسيني شمس



Mansoura University
Faculty of Pharmacy
Quality Assurance Unit
**Academic Reference Standards for
Postgraduate Programs**



Ph D Degree of Clinical Pharmacy

The Academic Reference Standards (ARS) for Master of Clinical Pharmacy Program regarding attributes and capabilities of the graduates were based essentially on the General Academic Reference Standards of graduate students published by the National Authority for Quality Assurance and Accreditation of Education (NAQAAE, 2009). The following Specific Academic Standards for this program were approved by the Faculty Council on, May 2022

Academic Reference standards for PhD of Clinical Pharmacy

General attributes of the Graduates of PhD Program

By the end of this program, the graduate should demonstrate comprehensive knowledge, clear understanding and outstanding skills as follows:

- a. Provide patient centered pharmaceutical care and be a valuable member of the health care team.
- b. Provide proper patient counseling as a hospital or community pharmacist.
- c. Manage pharmacy operations in hospitals such as; participating in pharmaceutical care plan for patients, patient counseling, adverse drug management, dose adjustment in special populations
- d. Provide education services to the healthcare professionals and patients about rational use of medications.
- e. Command of the relevant research methodology and undertake independent research. The thesis should make a significant contribution to the body of knowledge in the specific clinical area

1. Knowledge and Understanding

- 1.1. Understand principles of pharmacotherapy with applications of principles of evidence based medicine.
- 1.2. Principles of clinical pharmacology and the rational use of drugs.
- 1.3. Recognize different study designs and methods of biostatistical analysis.
- 1.4. Comprehend principles of individualized management and participate with other health care professionals in improving health care services.
- 1.5. Ethical consideration in clinical research and pharmacy practice.



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2. **Intellectual Skills**

- 2.1. Utilize the pharmacological basis of therapeutics in the proper selection and use of drugs in various disease conditions and designing proper therapeutic plan.
- 2.2. Solve drug therapy related problems
- 2.3. Optimize dosage regimen of medications.
- 2.4. Monitor drug therapy and assess drug interactions, medication errors, and adverse drug reactions.
- 2.5. Formulate of clinical questions, generation of test hypotheses using suitable study design and analysis of published literature.
- 2.6. Analyze and evaluate information evidence-based information needed in the pharmaceutical field and pharmacy practice.
- 2.7. Collect research data and analyze it using statistics' software to draw conclusions.

3. **Professional and Practical Skills**

- 3.1. Individualize medicines and design monitoring plans based on understanding of etiology and pathophysiology of diseases and patient's specific factors to maximize benefit and reduce risk.
- 3.2. Advise patients and other health care professionals about safe and proper use of medicines.
- 3.3. Conduct research studies and analyze the results using computational tools.

4. **General and Transferable Skills**

- 4.1. Work effectively in a team, communicate clearly with healthcare professionals and patients and, applying ethics to respect patient's confidentiality.
- 4.2. Retrieve and evaluate information from online sources to improve professional competencies and, implement writing and presentation skills to present collected information.
- 4.3. Practice independent learning and self- evaluation needed for continuous professional development.
- 4.4. Demonstrate creativity, time management abilities, critical thinking, and problem-solving and decision-making abilities.



Mansoura University
Faculty of Pharmacy
Quality Assurance Unit
PhD Program Specification
2021/2022
Postgraduate Studies



Program: PhD in Pharmaceutical Sciences
(Clinical Pharmacy)

Clinical Pharmacy & Pharmacy Practice Department



Dept. of Clinical Pharmacy
& Pharmacy Practice

Program Specification

Academic Year: 2021/2022

رئيس القسم
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A-Basic Information

1	Faculty	Pharmacy
2	Program Title:	PhD in Pharmaceutical Sciences (Clinical Pharmacy)
3	Program Type:	Single
4	Department (s):	Department of Clinical Pharmacy & Pharmacy Practice
5	Final award:	Doctoral degree in clinical Pharmacy
6	Coordinator:	--
7	External Evaluator(s):	--
8	Date of Program Specification Approval:	Department council: 7/5/2022

B-Professional Information

1-Program Aims

Upon successful completion of the program, graduates should demonstrate comprehensive knowledge, clear understanding and outstanding skills in pharmaceutical sciences and clinical pharmacy.

- The clinical Pharmacy PhD degree program is designed for students interested in clinical research. The goal of the program is to advance the science of clinical pharmacology and therapeutics and to improve the safe, effective, and economical use of medications by patients.
- The program emphasizes the integration of clinical and basic research. It involves advanced studies of therapeutics and basics of clinical research. The graduate is well prepared to assume a tenure track academic position or career as a clinical research scientist.



2-Intended Learning Outcomes (ILOs)

a- Knowledge and Understanding:

By the end of this program the graduate should be able to:

A1	Describe the risk factors, clinical presentation, relevant laboratory investigation in relation to updated treatment guidelines of different diseases.
A2	Recognize different scientific resources to make evidence-based informed professional decisions in management of different disorders.
A3	Identify different pharmacological and nonpharmacological options in management of various disorders.
A 4	optimize data collection of clinical drug research in hospitals and various health care setting
A5	Contribute to planning and conducting research studies using appropriate methodologies
A6	Recognize basics of clinical immune-pharmacology and recognize the updated treatment guidelines of different immunological diseases
A7	Understand basic knowledge of clinical data interpretations, lab investigations, and the goal of therapy of different disorders.
A 8	Explain therapeutic effects and evaluate appropriateness, effectiveness, and safety of different treatment options.
A9	Outline the characters, epidemiology, and pathogenesis, of respiratory , neurological, endocrine and rheumatological disorders.

b- Intellectual Skills

By the end of this program the graduate should be able to:

B1	Construct a pharmaceutical care plan for acute and chronic diseases affecting different systems
B2	Apply scientific principles of research and use systematic approaches in the search for best available evidence.



c- Professional and Practical Skills

By the end of this program the graduate should be able to:

C1	Interpret monitoring parameters of patient's response and therapeutic agents to manage drug therapy problems effectively.
C2	Educate patients about goals of therapy, monitoring of response and the possible side effects of the care plan.
C 3	Consult healthcare team to optimize individualized patient care plan and manage drug therapy related problems
C4	Contribute to planning and conducting research studies using appropriate methodologies.
C 5	Apply evidence based practice in management of different diseases

d. General and Transferable Skills

By the end of this program the graduate should be able to:

D1	Practice self-learning to improve professional skills
D2	Share with other healthcare professionals in decision making activities related to patient management.
D3	Problem solving skills, and work in a team to criticize information.
D4	Use proper communication and writing skills when dealing with research communities
D5	Communicate effectively with the healthcare team members.
D6	Manage time efficiently.



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3-Academic Reference Standards (ARS):

Approved by both the department and faculty councils
Department Council Approval Date: 7/5/2022

3a- Academic References Standards: (Attached)

3b-Comparison of provision to External References

Achievement of academic reference standards via program Intended Learning Outcomes.

ILOs	ARS	Program
1. Knowledge and Understanding	1.1	A1,A2,A3,A9
	1.2	A1,A2,A3,A6
	1.3	A4,A5,A7
	1.4	A1,A2,A3
	1.5	A4,A8
2. Intellectual Skills	2.1	B1
	2.2	B1
	2.3	B1
	2.4	B1
	2.5	B2
	2.6	B2
	2.7	B2
3. Professional and Practical Skills	3.1	C1, C3
	3.2	C2, C5
	3.3	C4
4. General and Transferable Skills	4.1	D2, D3, D4, D5
	4.2	D1, D4
	4.3	D1
	4.4	D6



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4-Curriculum Structure and Contents

4.1 The candidate gains his doctoral degree after 50 credit hours of study (8 credit hours of courses and 42 credit hours for thesis).

4.2 The candidate should study at least 8 credit hours of graduate courses. These courses include 6 credit hours of special required courses, in addition to 2 credit hours of special elective (2 credit hours) courses.

4.3 The candidate should perform research thesis (42 credit hours) in a subject assigned by the supervision committee, endorsed by the department council, the committee of graduate studies & research and the faculty council.

4.4 The candidate should publish at least one scientific research paper in scientific journals before the approval of a committee of discussion and judgment.



5- Program Courses

1- Achievement of Program Intended Learning Outcomes via the courses

Course	C.H/ week	Program ILOs (by No.)			
		K.U*	IS**	P.P.S***	G.T.S****
First Semester - Special Courses (4 C.H.)					
Pharmacotherapy in patient care I (PPP-301)	2	A1, A3,A7,A8	B1	C1, C2, C3, C5	D1,D5,D6
Pharmacotherapy in patient care II (PPP-302)	2	A1, A3,A7,A9	B1	C1, C2, C3, C5	D1,D5,D6
Total	4				
Second Semester - Special Courses (4 C.H.)					
Pharmacotherapy in patient care III (PPP-303)	2	A1, A2,A7	B1	C1, C2, C3	D1,D2
Analysis and interpretation of Clinical data (PPM-304) elective	2	A4, A5	B2	C4	D1,D3, D4
Immunopharmacology (PPM-305) elective	2	A6	B1, B2	C2	D1,D2
Total	4				
Thesis	30				
Total	38				

* Knowledge and Understanding

** Intellectual Skills

*** Professional and Practical Skills

**** General and Transferable Skills



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Code	Course title	K.U*									I.S**		
		A1	A2	A3	A4	A5	A6	A7	A8	A9	B1	B2	
(PPP-301)	Pharmacotherapy in patient care I	√		√							√	√	
(PPP-302)	Pharmacotherapy in patient care II	√		√							√	√	
(PPP-303)	Pharmacotherapy in patient care III	√	√								√	√	
(PPP-304) E	Analysis and interpretation of clinical data				√	√							√
(PPP-305) E	Clinical Immunopharmacology						√				√		√

* Knowledge and Understanding

** Intellectual Skills

*** Professional and Practical Skills

E General and Transferable Skill

E Elective course



Code	Course title	P.P.S. ****					G.T.S *****					
		c1	c2	c3	c4	c5	d1	d2	d3	d4	d5	d6
(PPP-301)	Pharmacotherapy in patient care I	√	√	√		√	√				√	√
(PPP-302)	Pharmacotherapy in patient care II	√	√	√		√	√				√	√
(PPP-303)	Pharmacotherapy in patient care III	√	√	√			√	√				
(PPP-304)E	Analysis and interpretation of clinical data				√		√			√	√	
(PPP-305)E	Clinical Immunopharmacology		√				√	√				

* **Knowledge and Understanding**

** **Intellectual Skills**

*** **Professional and Practical Skills**

**** **General and Transferable Skills**



6- Student Assessment Methods

- 6.1- Written exam.
- 6.2- Oral exam.
- 6.2- Published scientific research paper.
- 6.3- Public presentation and discussion of the Thesis.

7- Program Admission Requirements

- 7.1- The candidate should hold a bachelor's degree in pharmacy from any faculty of pharmacy from Egypt or Arabian countries or foreign universities recognized by the Supreme Council of Universities with minimum general grade of "**Good**". Candidates that have Diploma in the area of specialty are preferred. It is possible to enroll foreign students with general grade "**Good**".
- 7.2- The candidate should hold a master's degree in clinical pharmacy from any faculty of pharmacy from Egypt or Arabian countries or foreign universities recognized by the Supreme Council of Universities. Candidates having Diploma in the area of specialty are preferred.
- 7.3- The candidate should be available for study at least two days per week throughout the duration of study.
- 7.4- The candidate should possess at least grade "**Good**" in the subject of the specialty.
- 7.5- The department council starts the registration process for the candidate after his/her successful passing of the general courses of the first semester.
- 7.6- The candidate should follow postgraduate rules of by-law (2014) and its modified by-law (2017) of Faculty of Pharmacy-Mansoura University.

8- Regulations for progression and program completion

- 8.1- The minimum duration of time to gain the doctoral degree is two years from the date of enrollment.
- 8.2- The maximum duration of time to gain the doctoral degree is 5 years from the date of registration, putting in consideration the periods of enrollment suspension. It is possible to extend this period up to two years (one year at a time) based on a request from the candidate's major supervisor, a suggestion from the department council and the committee of graduate studies & research and the approval of the faculty council. The final decision should be endorsed by the university council of graduate studies & research.
- 8.3- The candidate should follow postgraduate rules of by-law (2014) and its modified by-law (2017) of Faculty of Pharmacy-Mansoura University.



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9- Facilities Required for Search:

- 8.1- Computers.
- 8.2- Library and digital library supplied by recent scientific books and journals.
- 8.3- Laboratories with enough chemicals, apparatus and advanced instruments.
- 8.4- Access to research engines for scientific periodicals in the *field of* clinical pharmacy.

10- Thesis

A thesis should be prepared by the student for complete fulfillment of the master degree.

Program Coordinator: Dr. Moetaza M. Soliman

Head of Department: Prof. Dr. Mohamed E. E. Shams

Signature:

Annex 1

Attach courses and thesis specifications.



Mansoura University
Faculty of Pharmacy
Quality Assurance Unit
PhD Thesis Specification
2021/2022
Postgraduate Studies



Program: PhD in Pharmaceutical Sciences
(Clinical Pharmacy)
& Pharmacy Practice Department Clinical Pharmacy



Dept. of Clinical Pharmacy
& Pharmacy Practice

PhD Thesis Specification

Academic Year: 2021/2022

رئيس القسم

أ.د/ محمد الحسيني شمس



A-Basic Information

1	Faculty	Pharmacy
2	Program Title:	PhD in Pharmaceutical Sciences (<i>Clinical Pharmacy</i>)
3	Program Type:	Single
4	Department (s):	Clinical pharmacy and Pharmacy Practice
5	Final award of the Program:	Doctoral degree of Pharmaceutical Sciences (<i>Clinical Pharmacy</i>)
	Total credit of thesis Total credit of program	42 CH 50 CH
6	Coordinator:	Main supervisor The spec should be general for all Theses in the department, and Head of department should be the coordinator of all Theses
7	External Evaluator(s):	
8	Date of Program Specification Approval:	<i>Department council: 7/5/2022</i>

B-Professional Information

1-Aims

The overall aims of the thesis:

- 1.1 To learn basic skills and fundamental knowledge in clinical research and scientific writing.
- 1.2 To learn how to assess the gap of knowledge in specific topic and design a good clinical question.
- 1.3 To learn how to interpret and discuss the results of clinical research.



2-Intended Learning Outcomes (ILOs)

a- Knowledge and Understanding:

Upon successful completion of the thesis, the graduate should be able to efficiently demonstrate the essential knowledge and understanding of:

a1	Etiology, epidemiology, laboratory diagnosis and clinical features of different diseases and their pharmacotherapeutic approaches.
a2	Scientific writing principles.
a3	Pharmacological properties of drugs including mechanisms of action, therapeutic uses, dosage, contra-indications, ADRs and drug interactions.
a4	Different designs of clinical studies, and hierarchy of evidence.
a5	Methods of biostatistical analysis and pharmaceutical calculations.

b- Intellectual Skills

By the end of this thesis, the graduate should be able to:

b1	Using presentation skills efficiently.
b2	Research skills and critical appraisal of clinical research.
b3	Analyze and interpret experimental results as well as published literature.
b4	Analyze and evaluate evidence-based information needed in pharmacy practice.

c- Professional and Practical Skills

By the end of this thesis, the graduate should be able to:

c1	Extracting and collecting related patient's data from healthcare team and patient's sheet.
c2	Using different statistical software for statistical analysis of the results.
c3	Conduct research studies and analyze the results.
c4	Employ proper documentation

d. General and Transferable Skills

By the end of this thesis, the graduate should be able to:

d 1	Communicate with healthcare team effectively.
d 2	Retrieve and evaluate information from different sources to improve professional competencies.
d 3	Practice independent learning needed for continuous professional development.
d 4	Implement writing and presentation skills.
d 5	Use numeracy, calculation and statistical methods as well as information technology tools.
d 6	Demonstrate critical thinking, problem-solving and decision-making abilities.



3- Thesis Contents:

Part	Topics
1	Abstract (Arabic and English)
2	Introduction
3	Aims, Objectives and Rational of the work
4	Results and Discussion, covering all fields
5	Methodology and Experimental Work of all fields
6	Conclusion
7	References

4- Matrix of knowledge and skills of the Thesis:

Part	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S****
2	Introduction	a1, a2, a3			
3	Objectives/Rational	a2, a4	b2		d4, d6
4	Results and Discussion	a5	b2, b3, b4	c2, c3, c4	d1, d2
5	Experimental Work	a5	b1	c1, c2, c3, c4	d3, d4, d5, d6
6	Conclusion		b3, b4	c4	d2, d4, d6

* Knowledge and Understanding

**Intellectual Skills

***Professional and Practical Skills

****General and Transferable Skills

5. Student Assessment:

1. A written Thesis
2. Published Research Paper(s)
3. Public Defense
4. Committee-in-Charge Report
5. Dept Council Approval

Guidelines of the Thesis (according to By-Law).

- 1- The minimum period for obtaining a doctoral degree is two years from the date of enrolment and 18 months from the date of approval of the University's Graduate Studies Council for registration.
- 2- The maximum limit for obtaining a doctoral degree is five years from the date of registration, taking into account cases of suspension of registration, and registration may be extended upon the request of supervisors and the approval of the relevant department council, the Graduate Studies and Research Committee, and the College Board for an academic year with a maximum of two years.



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- 3- The student must pass the English Language Examination with the minimum score specified by the University Studies Board to approve the Doctoral defense date.
- 4- The student studies courses of at least 8 credit hours of postgraduate courses including compulsory specialized courses (6 credit hours) and one elective course (2 credit hours).
- 5- The student conducts a research on a topic determined by the supervisory committee and approved by the relevant department council and the college, graduate studies and research councils.
- 6- The researcher submits, before registering for the academic degree, the research plan in a public discussion in the department to discuss the topic of the thesis, determine the objectives of the research, the extent of its application, potential problems and how to overcome them.
- 7- The scientific thesis is the responsibility of the relevant department council and is accomplished scientifically and technically under the responsibility of the supervisory committee. Scientific, technical and administrative support must be provided to the researcher for its completion, and the supervision committee is formed as follows:
 - 8- The College Council, upon the proposal of the relevant Department Council, appoints a professor who supervises the thesis (principal supervisor). The council may entrust the supervision of the thesis to one of the assistant professors.
 - 9- It is permissible for the supervisors to be many professors or assistant professors, and teachers may participate with a maximum of one in the same specialty.
 - 10- A member from abroad who has experience in the specialty to which the dissertation belongs may be joined to the supervision committee.
 - 11- The student should meet his main supervisor at least once monthly and a semi-annual report must be provided by the supervisor(s) on the progress of student to the department council and the Graduate Studies Committee and the graduate should be given a copy of the report. The annual report must be submitted to the college council in October each year.
 - 12- A postgraduate student registered to obtain a doctorate degree, after completing the thesis preparation, holds a public discussion session on the thesis summary and the results he reached, during which the supervisors determine the extent to which the student fulfills the research point before submitting the thesis to the department council.
 - 13- The principal supervisor submits an application that includes a proposal to form a discussion committee and judge the thesis after preparing it and preparing it for discussion in preparation for presentation to the Postgraduate Studies and Research Committee and then the College Board for approval and is supported by the following:
 - 14- The report on the validity of the dissertation for discussion, signed by the majority of the members of the supervisory committee, one of whom is the main supervisor.
 - 15- A copy of the thesis prepared according to the instructions for writing scientific theses in the faculty.
 - 16- At least one research published in a scientific refereed journal.
 - 17- The committee for discussion and judgment on the dissertation is formed of three members based on the proposal of the relevant department council, the graduate studies and research committee, and the approval of the college council, one of whom is the main supervisor or two members with one vote. And two other members from among the professors or assistant professors, at least one of them is from outside the college for master's theses, and at least one of them is from outside the University for



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Doctoral Theses (the two are from outside the college) according to the text of Article 153 of the Universities Organization Law.

- 18- The department council approves the individual reports, the group report, and what indicates that the student has made the proposed amendments from the discussion and judgment committee and submitted them to the Graduate Studies and Research Committee and the College Board in preparation for presentation to the University Council.
- 19- The date of awarding the academic degree is the date on which the University Council approved the College Board's recommendation for grants.
- 20- The college council, based on the proposal of the discussion and judgment committee, may return the message to the student to correct the errors and complete what the committee deems short of or submit another message in case the thesis is rejected.

6 – Facilities Required:

Laboratory	-----
Library	-----
Others	-----

Thesis Coordinator	Head of Department	Date *
Prof Dr. Mohamed E. E. Shams	Prof Dr. Mohamed E. E. Shams	7/ 5 / 2022

* Date of Dept. Council Approval



Mansoura University
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Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care I
Course Specification



Dept. of Clinical Pharmacy & Pharmacy Practice	Course Specification	PhD Clinical pharmacy
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PhD Clinical Pharmacy
Course Specification
Academic year: 2021/2022

البرنامج
دكتوراه الصيدلة الإكلينيكية

توصيف مقرر
العلاج الدوائي في رعاية المرضى 1
Pharmacotherapy in patient care I

رئيس القسم
أ.د. محمد الحسيني السبيعي شمس

منسق المقرر



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care I
Course Specification



General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Clinical Pharmacy & Pharmacy Practice
Department supervising the course	----
Program on which the course is given	Clinical Pharmacy PhD Program
Academic Level	Postgraduate
Academic year	2021/2022 First semester
Date of course specification approval	February 2022

A. Basic Information : Course data :

Course Title	Pharmacotherapy in patient care I
Course Code	PPP 301
Prerequisite	-----
Teaching Hours: Lecture	2
Practical:	0
Total Credit Hours	2

B. Professional Information

1- Overall Aims of Course:

This course aims at focusing on the clinical pharmacy practice in a number of therapeutic conditions and developing rational drug therapy and pharmacotherapeutic care plans for the pathological conditions under study in order to provide safe and effective management of the following diseases.

- Renal disorders (acute kidney injury, chronic kidney disease and end-stage renal diseases)
- Hepatic disorders (adverse effects of drugs on the liver diseases)
- Gastrointestinal disorders (peptic ulcer disease, and inflammatory bowel disease)
- Cardiovascular disorders (hypertension, coronary heart disease, chronic heart failure, stroke, angina, arrhythmia, thrombosis, dyslipidemia).



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PhD Clinical Pharmacy Program
Pharmacotherapy in patient care I
Course Specification



2- Intended Learning Outcomes (ILOs)

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
A1	a1	Explain the etiology and clinical presentation of renal , cardiovascular, gastrointestinal and hepatic disorders.
A3	a2	Recommend appropriate individualized interventions according to the updated guidelines for renal , cardiovascular, gastrointestinal and hepatic disorders.
A7	a3	Recognize diagnosis, clinical investigations, and goal of management of different disorders according to clinical practice guidelines.
A8	a4	Explain therapeutic effects and evaluate appropriateness, effectiveness, and safety of different treatment options.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
B1	b1	Compare the main sources of drug information relevant to management of different diseases.
	b2	Design a monitoring plan to assess the safety and effectiveness of pharmacotherapy.
	b3	Evaluate and communicate the risks of various treatment modalities.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
C1	c1	Interpret monitoring parameters to manage drug therapy problems effectively.



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C2	c2	Provide patient counseling to rationalize management of diseases affecting different systems
C3	c3	Consult healthcare team to optimize individualized patient care plan and manage drug therapy related problems.
C5	c4	Integrate patient preference, the best available evidence and the expert opinion in management of different diseases.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
D1	d1	Practice self-learning to improve professional skills
D5	d2	Communicate effectively with the healthcare team members
D6	d3	Manage time efficiently.



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Pharmacotherapy in patient care I
Course Specification



3. Course Contents

Week No.	Topics	Lecture Hours
1-3	Renal diseases : Acute kidney injury, chronic kidney disease, and End-stage renal diseases.	6
4-6	Gastrointestinal diseases: Inflammatory bowel diseases, peptic ulcer, , GERD , irritable bowel disease. (Self-learning)	6
7-8	Hepatic diseases: complications of cirrhosis , hepatitis.	4
9-10	Cardiovascular diseases: arrhythmia, chronic heart failure, stroke, thrombosis, coronary heart disease, and dyslipidemia.	4
11-12	Dermatological Diseases: Diagnosis, Clinical Presentation, Treatment of Dermatitis, Psoriasis, eczema	4
13-15	Final exams	
	Total	24 hours



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4- Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S**** *
1-2	Renal diseases : Acute kidney injury, chronic kidney disease, and End-stage renal diseases.	a1-a4	b1-b3	c1-c4	d2, d3
3-5	Gastrointestinal diseases: Inflammatory bowel diseases, peptic ulcer, , GERD , irritable bowel disease. (Self-learning)	a1-a4	b1-b2	c1-c4	d1
6-8	Hepatic diseases: Complications of cirrhosis , hepatitis.	a1-a4	b1-b3	c1-c4	d2, d3
9-10	Cardiovascular diseases: Arrhythmia, chronic heart failure, stroke, thrombosis, coronary heart disease, and dyslipidemia.	a1-a4	b1-b3	c1-c4	d2, d3
11-12	Dermatological Diseases: diagnosis, clinical presentation, treatment of dermatitis, psoriasis, eczema	a1-a4	b1-b3	c1-c4	d2

* Knowledge and understanding

**Intellectual Skills

***Professional and Practical Skills

****General and Transferable Skills



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5- Teaching and Learning Methods:

5.1	Computer aided learning: a. Lectures using whiteboard or data show, power Point presentations b. Distance learning <ul style="list-style-type: none">On line learning: as Video-recorded lectures, uploaded to the Google drive of the programInter active session through Microsoft Teams
5.2	Self-learning

6- Student Assessment:

	Assessment Methods		Assessment Schedule	Weighing of Assessments
Assessment 1	Written Exam (Final)	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	13-15 th week	90
Assessment 2	Oral Exam	To assess understanding, intellectual skills, General and Transferable skills	13-15 th week	10
				100 %

7- List of References

	Reference	Type
1.	Chisholm-Burns M.A., & Schwinghammer T.L., & Malone P.M., & Kolesar J.M., & Lee K.C., & Bookstaver P(Eds.), (2022). Pharmacotherapy Principles and Practice, 6e. McGraw Hill. https://ppp.mhmedical.com/content.aspx?bookid=2440&sectionid=189491584	Essential Book (Text Books)
2.	http://www.ekb.eg	Websites



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care I
Course Specification



8- Facilities required for teaching and learning

-Class room	Data show- Computers, Internet.
Others	

9. Signature

Course Coordinator	Head of Department	Date
	Prof Dr. Mohamed E. E. Shams	8/2/2022

* Date of Dept. Council Approval



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



Dept. of Clinical Pharmacy & Pharmacy Practice	Course Specification	PhD Clinical pharmacy
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PhD Clinical Pharmacy
Course Specification
Academic year: 2021/2022

البرنامج
دكتوراه الصيدلة الإكلينيكية

توصيف مقرر
العلاج الدوائي في رعاية المرضى 2
Pharmacotherapy in patient care II

رئيس القسم
أ.د. محمد الحسيني السبيعي شمس

منسق المقرر



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Clinical Pharmacy & Pharmacy Practice
Department supervising the course	----
Program on which the course is given	Clinical Pharmacy PhD Program
Academic Level	Postgraduate
Academic year	2021/2022 First semester
Date of course specification approval	February 2022

A. Basic Information : Course data :

Course Title	Pharmacotherapy in patient care II
Course Code	PPP 302
Prerequisite	-----
Teaching Hours: Lecture	2
Practical:	0
Total Credit Hours	2

B. Professional Information

1- Overall Aims of Course:

This course aims at focusing on the clinical pharmacy practice in a number of therapeutic conditions and developing rational drug therapy and pharmacotherapeutic care plans for the pathological conditions under study in order to provide safe and effective management of the following diseases.

1. Pulmonary disorders (asthma, chronic obstructive pulmonary disease)
2. Neurological and CNS disorders (insomnia, anxiety disorders, affective disorders, schizophrenia, dementia, Alzheimer, epilepsy, Parkinson's disease, pain)
3. Endocrine disorders (thyroid, parathyroid disorders and diabetes mellitus)
4. Rheumatologic disorders (rheumatoid arthritis).



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



2- Intended Learning Outcomes (ILOs)

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
A1	a1	Explain the etiology and clinical presentation of respiratory , neurological, endocrine and rheumatological disorders.
A3	a2	Recommend appropriate individualized interventions according to the updated guidelines for respiratory , neurological, endocrine and rheumatological disorders.
A7	a3	Recognize diagnosis, clinical investigations, and goal of management of different disorders according to clinical practice guidelines.
A9	a4	Outline the characters, epidemiology, and pathogenesis, of respiratory , neurological, endocrine and rheumatological disorders.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
B1	b1	Compare the main sources of drug information relevant to management of different diseases.
	b2	Design a monitoring plan to assess the safety and effectiveness of pharmacotherapy.
	b3	Evaluate and communicate the risks of various treatment modalities.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
C1	c1	Interpret monitoring parameters to manage drug therapy problems effectively.
C2	c2	Provide patient counseling to rationalize management of diseases affecting different systems
C3	c3	Consult healthcare team to optimize individualized patient care plan and manage drug therapy related problems.
C5	c4	Integrate patient preference, the best available evidence and the expert opinion in management of different diseases.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
D1	d1	Practice self-learning to improve professional skills
D5	d2	Communicate effectively with the healthcare team members
D6	d3	Manage time efficiently.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



3. Course Contents

Week No.	Topics	Lecture Hours
1-2	Respiratory diseases: <ul style="list-style-type: none"> • Asthma • Chronic obstructive pulmonary disease • Cystic fibrosis • Drug-induced pulmonary problems 	4
3-6	Neurological diseases: <ul style="list-style-type: none"> • Schizophrenia • Depression • Anxiety • Seizure disorders • Parkinsonism 	8
7	Rheumatic diseases: self-learning Rheumatoid arthritis	2
8-12	Endocrine diseases <ul style="list-style-type: none"> • Diabetes mellitus • Thyroid disorders • Adrenal Gland Disorders • Pituitary Gland Disorders 	10
13-15	Final exams	
	Total	24 hours



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



4- Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S**** *
1-2	Respiratory diseases: <ul style="list-style-type: none"> • Asthma • Chronic obstructive pulmonary disease • Cystic fibrosis • Drug-induced pulmonary problems 	a1-a4	b1-b3	c1-c4	d2, d3
3-6	Neurological diseases: <ul style="list-style-type: none"> • Schizophrenia • Depression • Anxiety • Seizure disorders • Parkinsonism 	a1-a4	b1-b2	c1-c4	d2, d3
7	Rheumatic diseases: Rheumatoid arthritis	a1-a4	b1-b3	c1-c4	d1
8-12	Endocrine diseases <ul style="list-style-type: none"> • Diabetes mellitus • Thyroid disorders • Adrenal Gland Disorders • Pituitary Gland Disorders 	a1-a4	b1-b3	c1-c4	d2, d3

* Knowledge and understanding

**Intellectual Skills

***Professional and Practical Skills

****General and Transferable Skills



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



5- Teaching and Learning Methods:

5.1	Computer aided learning: a. Lectures using whiteboard or data show, power Point presentations b. Distance learning <ul style="list-style-type: none"> ● Online learning: as Video-recorded lectures, uploaded to the Google drive of the program ● Inter active session through Microsoft Teams
5.2	Self-learning

6- Student Assessment:

	Assessment Methods		Assessment Schedule	Weighing of Assessments
Assessment 1	Written Exam (Final)	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	13-15 th week	90
Assessment 2	Oral Exam	To assess understanding, intellectual skills, General and Transferable skills	13-15 th week	10
				100 %

7- List of References

	Reference	Type
1.	Chisholm-Burns M.A., & Schwinghammer T.L., & Malone P.M., & Kolesar J.M., & Lee K.C., & Bookstaver P(Eds.), (2022). Pharmacotherapy Principles and Practice, 6e. McGraw Hill. https://ppp.mhmedical.com/content.aspx?bookid=2440&sectionid=189491584	Essential Book (Text Books)
2.	http://www.ekb.eg	Websites



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care II
Course Specification



8- Facilities required for teaching and learning

-Class room	Data show- Computers, Internet.
Others	

9. Signature

Course Coordinator	Head of Department	Date
	Prof Dr. Mohamed E. E. Shams	8/2/2022

* Date of Dept. Council Approval



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care III
Course Specification



Dept. of Clinical Pharmacy & Pharmacy Practice	Course Specification	PhD Clinical pharmacy
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PhD Clinical Pharmacy
Course Specification
Academic year: 2021/2022

البرنامج
دكتوراه الصيدلة الإكلينيكية

توصيف مقرر
العلاج الدوائي في رعاية المرضى 3
Pharmacotherapy in patient care III

رئيس القسم
أ.د. محمد الحسيني السبيعي شمس

منسق المقرر



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care III
Course Specification



General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Clinical Pharmacy & Pharmacy Practice
Department supervising the course	----
Program on which the course is given	Clinical Pharmacy PhD Program
Academic Level	Postgraduate
Academic year	2021/2022 second semester
Date of course specification approval	February 2022

A. Basic Information : Course data :

Course Title	Pharmacotherapy in patient care III
Course Code	PPP 303
Prerequisite	-----
Teaching Hours: Lecture	2
Practical:	0
Total Credit Hours	2

B. Professional Information

1- Overall Aims of Course:

This course aims at focusing on the clinical pharmacy practice in a number of therapeutic conditions and developing rational drug therapy and pharmacotherapeutic care plans for the pathological conditions under study in order to provide safe and effective management of the following diseases.

- Hematological & oncologic disorders (anemia, leukemia, lymphoma, solid tumors).
- Infections (respiratory infections, urinary tract infections, gastro-intestinal infections, infective meningitis, surgical site infection and antimicrobial prophylaxis, tuberculosis, HIV infection and fungal infections).
- Dermatological disorders (psoriasis, dermatitis, eczema).
- Menstrual cycle disorders, menopause, pregnancy and prostate disease.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care III
Course Specification



2- Intended Learning Outcomes (ILOs)

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
A1	a1	Explain the clinical presentation of hematological, oncological, infectious, dermatological diseases and disorders affecting men and women's health.
A2	a2	Recognize recent clinical practice guidelines in management of different disorders.
A3	a2	Recommend appropriate interventions according to the updated guidelines for hematological, oncological, infectious, dermatological diseases and disorders affecting men and women health.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
B1	b1	Compare the main sources of drug information relevant to management of different diseases.
	b2	Design a monitoring plan to assess the safety and effectiveness of pharmacotherapy.
	b3	Evaluate and communicate the risks of various treatment modalities.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
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Pharmacotherapy in patient care III
Course Specification



2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
C1	c1	Interpret monitoring parameters to manage drug therapy problems effectively.
C2	c2	Provide patient counseling to rationalize management of diseases affecting different systems
C3	c3	Consult healthcare team to optimize individualized patient care plan and manage drug therapy related problems.

2.4. General and Transferable Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
D1	d1	Practice self-learning to improve professional skills
D2	d2	Share with other healthcare professionals in decision making activities related to patient management.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care III
Course Specification



3. Course Contents

Week No.	Topics	Lecture Hours
1-2	Hematological diseases: Anemia , coagulation, and platelet disorders	4
3-5	Oncological diseases : cancer principles and therapeutics, breast cancer, colorectal cancer, supportive care in oncology, leukemia	6
6-8	Infectious diseases: Patient assessment, antimicrobial selection, and stewardship; central nervous system infections; lower respiratory tract infections, upper respiratory tract infections; tuberculosis, HIV infection and fungal infections.	6
9-10	Dermatological Diseases: Diagnosis, Clinical Presentation, Treatment of Dermatitis, Psoriasis, eczema	4
11-12	Men and women health: Pregnancy and Lactation: Therapeutic Considerations, Contraception; Menopause and Menstruation-Related Disorders; Benign Prostatic Hyperplasia (self-learning)	4
13-15	Final exams	
	Total	24 hours



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care III
Course Specification



4- Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S****	G.T.S**** *
1-2	Hematological diseases: Anemia , coagulation, and platelet disorders	a1-a3	b1-b3	c1-c3	d2
3-5	Oncological diseases : Cancer Principles and Therapeutics, Breast Cancer, Colorectal Cancer, Supportive Care in Oncology, leukemia	a1-a3	b1-b2	c1-c3	d2
6-8	Infectious diseases: Patient assessment, antimicrobial selection, and stewardship; central nervous system infections; lower respiratory tract infections, upper respiratory tract infections; tuberculosis, HIV infection and fungal infections.	a1-a3	b1-b3	c1-c3	d2
9-10	Dermatological Diseases: Diagnosis, Clinical Presentation, Treatment of Dermatitis, Psoriasis, eczema	a1-a3	b1-b3	c1-c3	d2
11-12	Men and women health: Pregnancy and Lactation: Therapeutic Considerations, Contraception; Menopause and Menstruation-	a1-a3	b1-b3	c1-c3	d1



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care III
Course Specification



	Related Disorders; Benign Prostatic Hyperplasia. (Self-learning).			
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* Knowledge and understanding

**Intellectual Skills

***Professional and Practical Skills

****General and Transferable Skills

5- Teaching and Learning Methods:

5.1	Computer aided learning: a. Lectures using whiteboard or data show, power Point presentations b. Distance learning <ul style="list-style-type: none"> ● On line learning: as Video-recorded lectures, uploaded to the Google drive of the program ● Inter active session through Microsoft Teams
5.2	Self-learning

6- Student Assessment:

	Assessment Methods		Assessment Schedule	Weighing of Assessments
Assessment 1	Written Exam (Final)	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	13-15 th week	90
Assessment 2	Oral Exam	To assess understanding, intellectual skills, General and Transferable skills	13-15 th week	10
				100 %

7- List of References

	Reference	Type
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Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Pharmacotherapy in patient care III
Course Specification



1.	Chisholm-Burns M.A., & Schwinghammer T.L., & Malone P.M., & Kolesar J.M., & Lee K.C., & Bookstaver P(Eds.), (2022). Pharmacotherapy Principles and Practice, 6e. McGraw Hill. https://ppp.mhmedical.com/content.aspx?bookid=2440&sectionid=189491584	Essential Book (Text Books)
2.	http://www.ekb.eg	Websites

8- Facilities required for teaching and learning

-Class room	Data show- Computers, Internet.
Others	

9. Signature

Course Coordinator	Head of Department	Date
	Prof Dr. Mohamed E. E. Shams	8/2/2022

* Date of Dept. Council Approval



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical
data
Course Specification



Dept. of Clinical Pharmacy & Pharmacy Practice	Course Specification	PhD Clinical pharmacy
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PhD Clinical Pharmacy
Course Specification
Academic year: 2021/2022

البرنامج
دكتوراه الصيدلة الإكلينيكية

توصيف مقرر
تحليل وتفسير البيانات الإكلينيكية
Analysis and interpretations of
clinical data

رئيس القسم
أ.د. محمد الحسيني السبيعي شمس

منسق المقرر



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical
data
Course Specification



General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Clinical Pharmacy & Pharmacy Practice
Department supervising the course	----
Program on which the course is given	Clinical Pharmacy PhD Program
Academic Level	Postgraduate
Academic year	2021/2022 second semester
Date of course specification approval	February 2022

A. Basic Information : Course data :

Course Title	Analysis and interpretations of clinical data
Course Code	PPP 305 (Elective)
Prerequisite	-----
Teaching Hours: Lecture	2
Practical:	0
Total Credit Hours	2

B. Professional Information

1- Overall Aims of Course:

This course aims at focusing on data processing, cleaning, analysis, and writing up of the findings. The course introduces the student to the following

- Basic principles of clinical research design and types of studies with deeper insight on clinical trials.
- Teach students statistical presentation of research data.
- Develop understanding of how to collect, and analyze, and clinical data.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical
data
Course Specification



2- Intended Learning Outcomes (ILOs)

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
A4	a1	Describe the different types of research studies, statistical analysis.
	a2	Understand suitable methods of data collection according to the research design.
A5	a3	Present and analyze data of observational and interventional trials.
	a4	Locate most updated evidence-based information to discuss research findings.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
B2	b1	Using proper keywords and search techniques on PubMed to find related clinical evidence
	b2	Using clinical research to compare efficacy and safety of therapeutic interventions in clinical settings.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
C4	c1	Utilize different levels of evidence in the field of clinical pharmacy to discuss research findings.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical
data
Course Specification



2.4. General and Transferable Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
D1	d1	Practice self-learning to improve professional skills
D3	d2	Problem solving skills, and work in a team to criticize information.
D4	d3	Use clear verbal and non-verbal communication and writing skills when dealing with research communities



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical data
Course Specification



3. Course Contents

Week No.	Lecture Topics	Lecture Credit Hours
1-2	Research types and design Data collection of observational studies, interventional studies	4
3	Controlling different types of bias. <ul style="list-style-type: none"> • Definition • Examples of different types • Controlling bias 	2
4-5	Statistical analysis in different types of clinical trials <ul style="list-style-type: none"> • Descriptive statistics • Inferential statistics 	4
6-7	Systematic reviews: <ul style="list-style-type: none"> • Preferred reporting items for systematic reviews and meta analysis (PRISMA) statement • Qualitative systematic reviews (systematic reviews) (metaanalysis). 	4
8-9	Clinical trials <ul style="list-style-type: none"> • Randomized controlled trials (RCTs): consolidated standards of reporting trials (CONSORT) statement. • Observational studies (cohort, case–control, cross sectional): strengthening the reporting of observational studies in epidemiology (STROBE) statement). 	4
10-11	How to Write a Scientific Paper The different components of the IMRAD format The format for submitting clinical trials and systematic reviews Preparation of the manuscript Writing the manuscript Final presentation of the manuscript	2
12	Revision	4
13-15	Final written and oral exam	24



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical data
Course Specification



4- Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S**** *
1-2	Research types and design	a1-a2, a4	b1-b2		d1, d2
3	Controlling different types of bias	a1-a2, a4	b1	c1	d1, d2
4-5	Statistical analysis in different types of clinical trials	a1-a2, a4	b2	c1	d1, d2
6-7	Systematic reviews:	a1-a2, a4	b1	c1	d1, d2
8-9	Clinical trials	a3	b2	c1	d1, d2
10-11	How to Write a Scientific Paper	a1-a2, a4			d3

* Knowledge and understanding

**Intellectual Skills

***Professional and Practical Skills

****General and Transferable Skills



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical
data
Course Specification



5- Teaching and Learning Methods:

5.1	Computer aided learning: a. Lectures using whiteboard or data show, power Point presentations b. Distance learning <ul style="list-style-type: none">On line learning: as Video-recorded lectures, uploaded to the Google drive of the programInter active session through Microsoft Teams
5.2	Self-learning

6- Student Assessment:

	Assessment Methods		Assessment Schedule	Weighing of Assessments
Assessment 1	Written Exam (Final)	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	13-15 th week	90
Assessment 2	Oral Exam	To assess understanding, intellectual skills, General and Transferable skills	13-15 th week	10
				100 %

7- List of References

	Reference	Type
1.	Stephen B. Hulley, Steven R. Cummings, Warren S. Browner, et al. Designing Clinical Research, fourth edition 2013	Essential Book (Text Books)
2.	http://www.ekb.eg	Websites



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Analysis and interpretations of clinical
data
Course Specification



8- Facilities required for teaching and learning

-Class room	Data show- Computers, Internet.
Others	

9. Signature

Course Coordinator	Head of Department	Date
	Prof Dr. Mohamed E. E. Shams	8/2/2022

* Date of Dept. Council Approval



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Clinical immunopharmacology
Course Specification



Dept. of Clinical Pharmacy & Pharmacy Practice	Course Specification	PhD Clinical pharmacy
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PhD Clinical Pharmacy
Course Specification
Academic year: 2021/2022

البرنامج
دكتوراه الصيدلة الإكلينيكية

توصيف مقرر
العلاج المناعي الإكلينيكي
Clinical immunopharmacology

رئيس القسم
أ.د. محمد الحسيني السبيعي شمس

منسق المقرر



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Clinical immunopharmacology
Course Specification



General

University	Mansoura
Faculty	Pharmacy
Department offering the course	Clinical Pharmacy & Pharmacy Practice
Department supervising the course	----
Program on which the course is given	Clinical Pharmacy PhD Program
Academic Level	Postgraduate
Academic year	2021/2022 second semester
Date of course specification approval	February 2022

A. Basic Information : Course data :

Course Title	Clinical immunopharmacology
Course Code	PPP 304 (Elective)
Prerequisite	-----
Teaching Hours: Lecture	2
Practical:	0
Total Credit Hours	2

B. Professional Information

1- Overall Aims of Course:

1. This course explores the rationale and mechanisms of therapeutic targeting of the immune system in allergies, autoimmunity and transplantation will be expounded, as will the targeting of the immune system by animate and chemical etiological factors to produce hyper- and hypo-activation.
2. This course also aims at studying up-to-date information about the human immune system and treatment of the immunological disorders.
3. It deals with the recent therapy of infectious diseases related to immune systems. Application of immunological products in treatment, vaccines and toxoids (monoclonal antibodies).



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Clinical immunopharmacology
Course Specification



2- Intended Learning Outcomes (ILOs)

2.1. Knowledge and Understanding

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
A6	a1	Recognize the comprehensive basics of immunological diseases (pathophysiology, signs, symptoms, and prognosis), and their drug treatment.
	a2	Understand and implement the clinical immune-pharmacotherapeutic principles by clinical pharmacists.

2.2. Intellectual Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
B1	b1	Use applications to handle immunopharmacotherapy related questions.
	b2	Evaluate and communicate the risks of a various treatment modalities.
B2	b3	Practice of evidence-based pharmacotherapy.

2.3. Professional and Practical Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
C2	c1	Apply a systematic approach to counseling on the use of drugs in management of immunological different diseases

2.4. General and Transferable Skills

After completion of the course, graduates will be able to

Program ILOs No.	Course ILOs No.	Course ILOs
D1	d1	Practice self-learning to improve professional skills
D2	d2	Share with other healthcare professionals in decision making activities related to patient management.



Mansoura University
Faculty of Pharmacy
Postgraduate Studies
PhD Clinical Pharmacy Program
Clinical immunopharmacology
Course Specification



3. Course Contents

Week No.	Topics	Lecture Hours
1-2	Introduction to immunopharmacology	4
3-4	Vaccines	4
5-6	Immunological diseases	4
7-8	Organ transplantation	4
9-10	Chronic inflammatory diseases	4
11	Selected topics: development of novel antibody therapeutics, gene-based strategies self-learning	2
12	Revision	2
13-15	Final exams	24

4- Matrix of knowledge and skills of the course (contents versus ILOs of the course)

Week	Topics	Course ILOs			
		K.U*	IS**	P.P.S***	G.T.S****
1-2	Introduction to immunopharmacology	a1-a2	b1-b3		d2
3-4	Vaccines	a1-a2	b1-b2	c1	d2
5-6	Immunological diseases	a1-a2	b1-b3	c1	d2
7-8	Organ transplantation	a1-a2	b1-b3	c1	d2
9-10	Chronic inflammatory diseases	a1-a2	b1-b3	c1	d2
11	Selected topics: development of novel antibody therapeutics, gene-based strategies	a1-a2	b1-b3	c1	d1

* Knowledge and understanding

**Intellectual Skills

***Professional and Practical Skills

****General and Transferable Skills



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5- Teaching and Learning Methods:

5.1	Computer aided learning: a. Lectures using whiteboard or data show, power Point presentations b. Distance learning <ul style="list-style-type: none"> • On line learning: as Video-recorded lectures, uploaded to the Google drive of the program • Inter active session through Microsoft Teams
5.2	Self-learning

6- Student Assessment:

	Assessment Methods		Assessment Schedule	Weighing of Assessments
Assessment 1	Written Exam (Final)	Paper exams that are corrected electronically and/or manually. To assess understanding, intellectual, professional skills	13-15 th week	90
Assessment 2	Oral Exam	To assess understanding, intellectual skills, General and Transferable skills	13-15 th week	10
				100 %

7- List of References

	Reference	Type
1.	Levinson W, & Chin-Hong P, & Joyce E.A., & Nussbaum J, & Schwartz B(Eds.), (2018). <i>Review of Medical Microbiology & Immunology: A Guide to Clinical Infectious Diseases, 15e.</i> McGraw Hill	Essential Book (Text Books)
2.	http://www.ekb.eg	Websites

8- Facilities required for teaching and learning

-Class room	Data show- Computers, Internet.
Others	



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9. Signature

Course Coordinator	Head of Department	Date *
	Prof Dr. Mohamed E. E. Shams	8/2/2022

* Date of Dept. Council Approval