



Course Specifications
(2018 – 2019)

Pharmacology-3

4305





Course Specifications
(2018 – 2019)

Department of pharmacology and Toxicology

A. Basic Information

Program(s) on which the course is given:	Bachelor of Pharmacy (General)
Department offering the course	Department of Pharmacology and Toxicology, Faculty of Pharmacy, Fayoum University
Faculty offering the program	Faculty of Pharmacy, Fayoum University
Dept. responsible for teaching the course	Department of Pharmacology and Toxicology, Faculty of Pharmacy, Fayoum University
Academic year / level	2018/2019 (Level 4, semester 7)
Course title	Pharmacology-3
Course code	4305
Contact hours (credit hours)	Lecture:(2), Practical: (1), Total: 3(2+1)
Pre-requisite of the course:	Pharmacology-2
Course coordinator	Dr Rasha Abdelhady
Major or Minor element of program	Major
Date of specification approval	09/2018

B. Professional Information

1. Overall Aims of Course

(The course aim and intended learning outcomes are based on that mentioned in the program specifications, with more course-related specific details.)

This Course provides students with definition, epidemiology, prevalence, risk and predisposing factors, pathophysiology, etiology, associated conditions and diagnosis, treatment general measures, non-pharmacological methods, medications and surgery and identification of certain infectious diseases, cardiovascular, psychiatric and neurological disorders.

2. Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

By the end of the course, the students should be able to:

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Course Specifications **(2018 – 2019)**

- a1. Recognize the general principles of pharmacotherapy
- a2. Recognize the pharmacotherapeutic properties of different groups of drugs affecting body systems and effect of the body on drugs
- a3. Describe the basic principles of drug pharmacological actions and their therapeutic uses, adverse effects and principles of dosing for different drugs and clinical manifestations of different diseases
- a4. Identify infectious agents of medical importance and their clinical signs, symptoms, and complications.
- a5. Identifying pathophysiology, etiology as well as risk/prognostic factors for all studied clinical conditions

b- Intellectual Skills

By the end of this course, the student should be able to:

- b1. Identify strategies to avoid or manage drug interactions
- b2. Predict and apply drug design, therapeutic protocols for management of common diseases
- b3. Interpret specific symptoms and signs of the studies clinical condition and interpret the clinical laboratory findings for the diagnosis

c- Professional and Practical Skills

By the end of the course, the student should be able to:

- c1. Construct rational therapeutic strategies for both acute and chronic conditions considering economic issues and patients' variables that influence these strategies.
- c2. Provide updated information to patients and healthcare professionals about the proper use of medicine and its probable adverse effects.
- c3. Apply the principles of diagnosis, medical care and risk management to interact correctly with patients and other health care providers.

d- General and Transferable Skills

By the end of the course, the student should be able to:

- d1. Improve critical thinking regarding problems and situations where decisions should be made on bases of limited information.
- d2. Developing and working in groups which increase the communication and knowledge regarding patient safety and outcome
- d3- Present clearly and effectively a scientific topic among groups.



Course Specifications (2018 – 2019)

3. Contents

Teaching week	TOPIC	No. of lecture hours	Assessment of ILOs
1	Infectious diseases	Total: 3(2+1)	a1, a2, a3, a4, b2, c1
2	Infectious diseases	Total: 3(2+1)	a1, a2, a3, a4, b2, c1
3	Infectious diseases	Total: 3(2+1)	a1, a2, a3, a4, b2, c1
4	Psychiatric disorders (Anxiety)	Total: 3(2+1)	a1, a2, a3, a5, b1, b3, c2, c3
5	Psychiatric disorders (Depression)	Total: 3(2+1)	a1, a2, a3, a5, b1, b3, c2, c3
6	Cardiovascular system disorders (Stable Ischemic Heart Disease)	Total: 3(2+1)	a1, a2, a3, a5, b1, b3, c2, c3
7	Cardiovascular system disorders (Dyslipidemia)	Total: 3(2+1)	a1, a2, a3, a5, b1, b3, c2, c3
8	Neurological disorders (Alzheimer's disease)	Total: 3(2+1)	a1, a2, a3, a5, b1, b3, c2, c3
9	Neurological disorders (Parkinson disease)	Total: 3(2+1)	a1, a2, a3, a5, b1, b3, c2, c3
10	Revision and quiz	Total: 3(2+1)	d1, d2, d3
Total no of hours	30		
12	FINAL Exam		

4. Teaching and Learning Methods

4.1- Lectures (board, data show)

4.2- Assignments

4.3- Class discussion

5. Student Assessment Methods

5.1. Written exams to assess knowledge and understanding as well as intellectual skills.

5.2. Oral exams to assess all types of skills and mainly general and transferrable skills practice.

5.3. Practical exams



Course Specifications (2018 – 2019)

Assessment Schedule

Quiz 1	4 th or 5 th week
Quiz 2	8 th or 9 th week
Practical exam	10 th week
Final exam	12 th week; according to semester schedule
Oral exam	12 th week; according to semester schedule

Weighting of Assessments

Periodical	20%
Practical	30%
Final exam	80%
Oral exam	20%
Total	150%

6. List of References

6.1- Course Notes: Lecture notes in Clinical Pharmacology by Staff Members of the Department of Pharmacology & Toxicology.

6.2- Essential Books (Textbooks)

1. Zeind, Caroline S., and Michael G. Carvalho. 2018. *Applied therapeutics: the clinical use of drugs*. <http://pharmacy.lwwhealthlibrary.com/book.aspx?bookid=2324>.
2. BOOKSTAVAR, P. B., CHISHOLM-BURNS, M. A., KOLESAR, J. M., LEE, K. C., MALONE, P. M., & SCHWINGHAMMER, T. L. (2019). *Pharmacotherapy principles & practice*.
3. Martin, S. and Dasta, J. (2016). *Pharmacotherapy*.

6.3- Periodicals: <https://www.medscape.com>

❖ 6.4- Web Sites: globalrbh.com, drugs.com, lexicomp.org

❖ www.ekb.eg

Facilities required for teaching and learning

1. Lecture rooms with data show
2. Procurement of latest edition of the above-mentioned texts and others to update the education process

Course Coordinator: Dr Rasha Abdelhady

Head of Department: Ass. Prof. Mona El Naa

Date: /09/2018



General Pharmacy Program



Course specifications

A-Basic Information	
Course code	4801
Course name	Pharmaceutical Chemistry-1
Credit hours of the course	Lecture: 2 Practical: 1 Total: 3
Pre-requisite of the course	Pharmaceutical Organic Chemistry II
Department teaching the course	Medicinal Chemistry Department
Program for which the course is given	General
Course coordinator	Dr. Mohammed Ibrahim Abd El Latif Hamed
Head of the department	Ass. Prof/ Farag Farouk Sherbiny
Date of specifications approval	07/9/2017

B-Professional Information

1-Overall aims of the course:

The aim of the course is to provide undergraduates who have a basic grounding in chemistry (organic and analytical) topics in anti-infective agents. It is the first course in pharmaceutical chemistry, which is a scientific discipline at the intersection of chemistry and pharmacology involved in identification, synthesis, and development of new drugs for suitable therapeutic use. This course includes the study of existing drugs that are used as chemotherapeutic agents i.e. study the use of drugs which are selective, more toxic to the invading microorganism than to the host (anti-infective agents, antibacterial antibiotics and sulphonamides, antimycobacterial drugs, antifungal, insecticides, anthelmintic and antiamebic drugs) and anticancer agents. It also includes the study Synthesis, biological properties, QSAR, mechanism of action and pharmacopeia methods for determination of these drugs

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General Pharmacy Program



2-Intended learning outcomes (ILO's):-

a-Knowledge and Understanding:

By the end of this course, the student should be able to:

- a1-Describe the mechanism of action of antibacterial antibiotics, antifungal drugs, anticancer drugs, antimycobacterials...etc
- a2- State the use of different drugs.
- a3-Recognize how to design and synthesis drugs.
- a4-Understand the metabolism of drugs.
- a5- List the different pharmacopeal methods for determination of drugs.
- a6- Relates the chemical structure and biological activity of the drugs.

b-Intellectual Skills:

By the end of this course, the student should be able to:

- b1- Practice tests of special impurities in the studied drugs.
- b2-Evaluate significantly and interpret data derived from laboratory observations.
- b3- Acquiring some skills for in the quantitative and qualitative estimation of some drugs.
- b4-Be coherent with pharmaceutical ethical, legal and safety guidelines.

c-Professional and Practical Skills:

By the end of this course , the student should be able to:

- c1-Set up the appropriate methods for the determining the purity of titled compounds.
- c2- Practice the different tests of purity.
- c3- Solve organic and stereo chemical problems.
- c4- Select the appropriate drugs for the management of different diseases.
- c5- Predict the adverse drug reactions, interactions and contra-indications of different pharmaceutical drug.

d-General Skills:

By the end of this course, the student should be able to:

- d1- Use properly and safely new tools and equipment in the laboratories.
- d2- Know how to explain the results obtained from the practical..
- d3- Work independently or as a team
- d4- Manage and organize his time.
- d5- Evaluate and make decision to deal with different problems

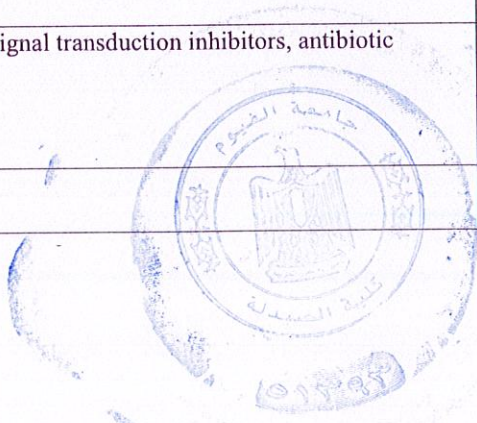




General Pharmacy Program



Course content				
Topic		No.of hours		
		Lecturer	Lecture	Practical
Introduction of chemotherapy and penicillin Lab safety and source of impurities	Dr.mohammed Ibrahim	2	1	3
Cephalosporins Test for chloride and difficulties in Limit test for chloride	Dr.mohammed Ibrahim	2	1	3
Tetracyclines and Macrolides. Limit test for sulphate and difficulties in limit test for sulphate	Dr.mohammed Ibrahim	2	1	3
Quinolones and Aminoglycosides Limit test for Iron (Egyptian and British pharmacopeia)	Dr.mohammed Ibrahim	2	1	3
Chloramphenicol, and Lincomycin Limit test for Lead and qualitative test for heavy metal.	Dr.mohammed Ibrahim	2	1	3
Sulphonamides, and Polypeptides Purity of ammonia sample	Dr.mohammed Ibrahim	2	1	3
Antimycobacterial Purity of hydrochloric acid sample	Dr.farag farouk	2	1	3
Antifungals Purity of sulphuric acid sample	Dr.farag farouk	2	1	3
Antiprotozoal and Anthelmintic Purity of phosphoric acid sample	Dr.farag farouk	2	1	3
Disinfectants, Antiseptics, and Insecticides. Purity of glycerol sample	Dr.farag farouk	2	1	3
Anticancer drugs (classical alkylating agent, topoisomerase inhibitors, and antimetabolites) Revision and tutorial	Dr.farag farouk	2	1	3
Anticancer drugs (Antimiotic agents, Signal transduction inhibitors, antibiotic anticancer Practical exam -	Dr.farag farouk	2	1	3
Total		24	12	36





General Pharmacy Program



4-Teaching and Learning Methods (lectures, open discussion, role plays . etc):-

- 4.1-Lectures (board, overhead projector, molecular models, software chemistry programs and data show)
- 4.2-Tutorials and discussion sessions
- 4.3-Practical sessions.

5- Student Assessment:

a. Assessment methods and weighing :

- 5.1-Quiz I to assess the knowledge and understanding of the first sections of the course.
 - 5.2-written exam to assess the previously studied sections of the course.
 - 5.3-Quiz 2 to assess the knowledge and understanding of the second sections of the course.
 - 5.4-Practical exam to assess the latest practical skills gained by the students.
 - 5.5-Final written exam to assess all the knowledge and understanding of the different sections of the course.
 - 5.6-Oral examination to assess all the intellectual skills and knowledge of the different sections of the course. -
- 1. Class participation: 20% .
 - 2. Practical exam: 30% .
 - 3.Oral exam: 20% .
 - 4.Final exam: 80% .

b-Assessment Schedule:

Class participation: Quiz 1: Week 4-5

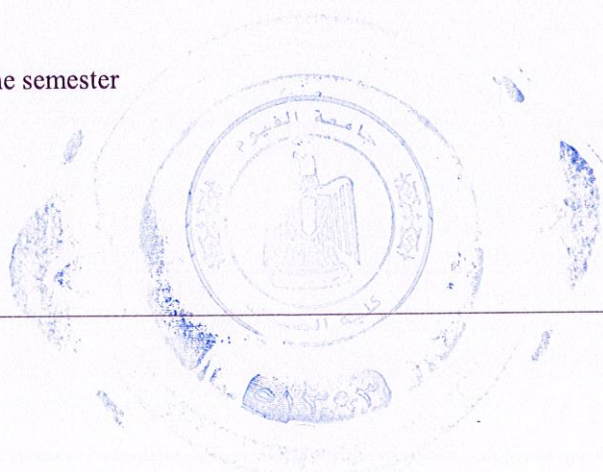
Quiz 2: Week 8-9

Other activities: throughout the semester

Practical exam :Week 13-14

Oral exam: According to semester timetable

Final exam: According to semester timetable



6-list of references	
Course notes	On ELS
Required books	Wilson & Gisvold" Text book of Organic, Medicinal, and pharmaceutical chemistry" William Foye. "Principle of Medicinal Chemistry Burger Medicinal Chemistry. Graham L. Patrick Medicinal Chemistry.
Recommended books	Remington: the science and practice of pharmacy. Martindale: the complete drug reference Goodman and Gilman's: the pharmacological basis of therapeutics Different
Periodicals	pharmacopoeias (Egyptian & British) Merck Index.-
Web sites	Journal of Medicinal Chemistry - http://www.pubmed.com-

Course Coordinator: Dr/Mohammed Ibrahim Abd El Latif Hamed

Ass. Prof/ Farag farouk sherbiny

Head of Department: Ass. Prof./Farag farouk sherbiny

Date: / 09/2017





Course Specifications
(2017 –2018)

Public Health
Course code: 4404





Course Specifications
(2017 –2018)

Microbiology and Immunology

A. Basic Information

Program(s) on which the course is given:	Bachelor of Pharmacy
Department offering the course	Microbiology and immunology
Faculty offering the program	Faculty of Pharmacy, Fayoum University
Dept. responsible for teaching the course	Microbiology and immunology
Academic year / level	Level 4, semester 7
Course title	Public Health
Course code	4404
Contact hours (credit hours)	Lecture 2(2)
Pre-requisite of the course:	Medical Microbiology
Course coordinator	Dr/ Mahmoud Khalil
Major or Minor element of program	Major
Date of specification approval	07/09/2017

B. Professional Information

1. Overall Aims of Course

(The course aim and intended learning outcomes are based on that mentioned in the program specifications, with more course-related specific details.)

The aim of the course is to provide students with the basic knowledge of Epidemiology, communicable and non communicable diseases, control of communicable diseases, immunization, occupational medicine, environmental health, water-borne and food-borne diseases, milk-borne diseases, nutrition and family health, environmental pollution, waste water treatment, waste disposal

2. Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

By the end of the course, the students should be able to:

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Course Specifications **(2017 –2018)**

- a1- Know the principle of-Epidemiology.
- a2-Know food, water, milk-borne diseases.
- a3-Understand the environmental pollution, waste water treatment

b- Intellectual Skills

By the end of this course, the student should be able to:

- b1- Differentiate the Epidemiology methods.
- b2-Determine sources of health threats.
- b3- Determine sources of Environmental pollution.

c- Professional and Practical Skills

By the end of the course, the student should be able to:

- c1- Identify epidemiological techniques.
- c2-Apply hygiene and safety measurements

d-General and Transferable Skills

By the end of the course, the student should be able to:

- d1- Identify the different mode of diseases transmission.
- d2- Identify different protection precautions.

3. Contents

Teaching week	TOPIC	No. of lecture hours	Assessment of ILOs
1	Introduction	2	a1, b1,c1
2	Epidemiology	2	a1, b1,c1
3	Occupational-disease and Nosocomial Infections	2	a2, b2, d2
4	Communicable Disease Non communicable diseases	2	a2, b2, d2
5	Control of communicable diseases	2	a2, b2, d2



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	Immunization		
6	Food borne diseases Milk- borne disease	2	a2, b2, d2
7	water-borne diseases	2	a2, b2, d2
8	Nutrition Family health	2	c2,d1,d2
9	Environmental pollution	2	a3, b3
10	Waste water treatment Waste Disposal	2	a3, b3
Total no of hours	20		
11, 12	FINAL Exam		

4. Teaching and Learning Methods

- 4.1- Lectures (board, data show) ✓
- 4.2- Assignments ✓
- 4.3- Class discussion ✓

5. Student Assessment Methods

- 5.1. Written exams to assess knowledge and understanding as well as intellectual skills.
- 5.2. Oral exams to assess all types of skills and mainly general and transferrable skillspractice.

Assessment Schedule

Quiz 1	4 th week
Quiz 2	9 th week
Practical exam	10 th week
Final exam	12 th week
Oral exam	12 th week



Course Specifications **(2017 –2018)**

Weighting of Assessments

Periodical	20%
Oral Exam	10 %
Final exam	70%
Total	100%

6. List of References

6.1- Course Notes: Public Health and Preventive Medicine, Microbiology and Immunology Department.

6.2- Essential Books (Textbooks)

6.2.a. An Introduction to Community & Public Health, 9th Edition, James F. McKenzie , Robert R. Pinger, Denise Seabert.

6.2.b. Principles and Foundations of Health Promotion and Education, 7th Edition, Randall Cottrell, James Girvan, James McKenzie.

6.3- Periodicals ...

6.4- Web Sites

7. Facilities required for teaching and learning

1. Lecture rooms with data show
2. Procurement of latest edition of the above-mentioned texts and others to update the education process

Course Coordinator: DR/ Mahmoud Khalil

Head of Department: Prof Mona Hetta

Date: /09/2017

Course Specifications

**Biopharmaceutics
And
Pharmacokinetics
(4109)**

**Level 4
Semester 8**

General Pharmacy Program

Course Specification

A-Basic Information	
Course code:	4109
Course name:	Biopharmaceutics and pharmacokinetics
Credit hours of the course:	Lecture: 2 Practical: 1 Total: 3
Pre-requisite of the course:	Pharmaceutics-3
Department teaching the course:	pharmaceutics
Program for which the course is given:	General
Course Co-ordinator:	Dr. Doaa Helal
Head of the Department:	Prof Dr. Mona Hetta
Date of specifications approval:	17/1/2017

B-Professional Information

1- Overall aims of the course:

By the end of this course the students should be able to recognize :

Provide a comprehensive understanding of the principles of radiation and the application of radioactive compounds in medical diagnosis, therapy, and industrial applications. **Equip students with the knowledge of radiopharmaceuticals**, focusing on their preparation, quality control, and the rationale behind their use in clinical and diagnostic settings.

2-intended learning outcomes (ILO'S)

a- knowledge and understanding

by the end of this course, the student should be able to :

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General Pharmacy Program

1. Define and understand the meaning of pharmacokinetics, biopharmaceutics, pharmacodynamics, absorption, distribution, metabolism, and excretion
2. Understand the components of a standard pharmacokinetic study
3. Understand the differences between the pharmacokinetic models and know the advantages: and limitations of each model
4. Demonstrate understanding of the physiological and biological factors that affect drug absorption
5. Relate the physicochemical properties of the drug to its systemic absorption
6. Appreciate the effects of the formulation

B. Intellectual Skills

By the end of this course, the student should be able to:

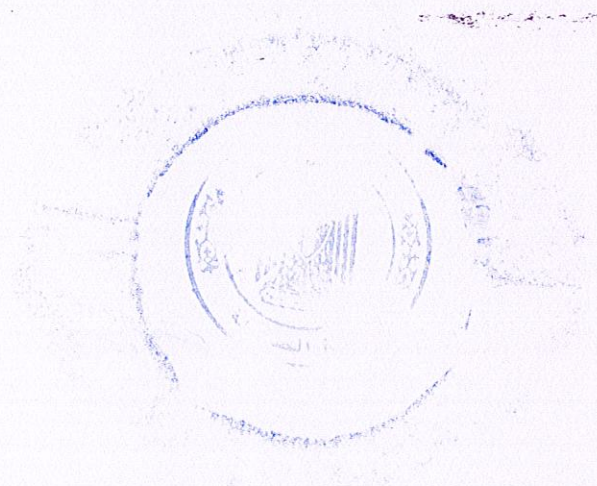
1. Solve different pharmacokinetic problems that depend on data graphing
2. Solve different problems related to drug pharmacokinetics
3. Solve different problems related to drug clearance, and bioavailability
4. Correlate quantitatively the pharmacokinetic theories with development, evaluation and preparation of effective and safe dosage form
5. Suggest alternative dosage forms

c-Professional and Practical Skill

By the end of this course, the student should be able to:

1. Estimate the values of different pharmacokinetic parameters from plasma drug concentration and urinary excretion data
2. Write pharmacokinetic analysis reports.
3. Predict systemic drug absorption based on the biological environment in which it is located, the physiochemical properties of the drug, the formulation factors and the dosage form
4. Evaluate patient characteristics that may influence drug selection and the delivery system
5. Estimate the absolute and relative drug bioavailabilities using plasma and urinary data
6. Design and evaluate of bioequivalence studies

- **D-General Skills:**
 - Demonstrate good oral and written communication
- Write well-structured reports
- Work independently and in groups
- IT Skills
- At the end of this course the student must be able to
- Use relevant software (eg MS Word and Excel) Use current IT facilities, including on-line internet information
- Practice and demonstrate literature retrieval skills
- Group working:
 - During the course, the students will
 - Work as part of a group in order to produce the written presentation.
 - Work within groups and separately in carrying out experiments



General Pharmacy Program

3- Course contents:

Topic	Hours		
Introduction to pharmacokinetics (definitions and pharmacokinetics-pharmacodynamics relationship , mathematic review, a brief background on drug analysis in biological fluids ,plasma and urinary data)	2	2	4
Absorption ,distribution , elimination kinetics	2	2	4
Compartmental pharmacokinetics model(assumptions advantages limitation and pharmacokinetics parameters):	1	1	2
One compartmental model :iv bolus	1	1	2
One compartmental model :iv infusion	1	1	2
One compartmental model EV administration	1	1	2
Two compartment model : iv bolus	1	1	2
Multiple administration	1	1	2
bio pharmaceutics	1	1	2
Bioavailability and bioequivalence	1	1	2
total	12	12	24

4- Teaching and Learning Methods (lectures, open discussion, role plays...etc.):

- 1- Lectures
- 2- Practical laboratory sessions

5.. Student Assessment

a-Assessment Methods and Weighing

- 1- Class participation: 20%
- 2- Practical exam: 30%
- 3- Oral exam 20%
- 4- Final exam: 80%

b- Assessment Schedule:

- 1- Class participation: Quiz 1: Week 4-5
Quiz 2: Week 8-9
Other activities throughout the semester
- 2- Practical exam: Week 13-14
- 3- Oral exam: According to semester timetable
- 4- Final exam: According to semester timetable

Course Coordinator: Dr. Doaa Helal

Head of Department: Prof. Dr. Mona Hetta

Date: /01/2017





Course Specifications
(2017 – 2018)

Course: Bioassay and Biostatistics

Course code: 4306





Course Specifications (2017 – 2018)

A. Basic Information

Program(s) on which the course is given:	General
Department offering the course	Pharmacology and Toxicology
Faculty offering the program	Pharmacy
Dept. responsible for teaching the course	Pharmacology and Toxicology
Academic year / level	Fourth Level, semester 8
Course title	Bioassay and Biostatistics
Course code	4306
Contact hours (credit hours)	3
Pre-requisite of the course:	Pharmacology 3
Course coordinator	Dr. Mohamed Hamzawy
Major or Minor element of program	Major
Date of specification approval	09/02/2018

B. Professional Information

1. Overall Aims of Course

Biological screening and standardization of autonomic nervous system, cardiovascular system, autacoids, neuromuscular blockers, central nervous system, anti-inflammatory drugs, antiprotozoal, antiulcer, hormones and Biostatistics

Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

By the end of the course, the students should be able to:

- a1. Determine different techniques used for screening of autonomic nervous system, cardiovascular system, autacoids, neuromuscular blockers, central nervous system, anti-inflammatory drugs, antiprotozoal, antiulcer, hormones
- a2. Discuss different methods of autonomic nervous system, cardiovascular system, autacoids, neuromuscular blockers, central nervous system, anti-inflammatory drugs, antiprotozoal, antiulcer, hormones standardization.

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b- Intellectual Skills

By the end of this course, the student should be able to:

- b1. Mention suitable method for screening and standardization of several drugs acting on body systems
- b2. Integrate basic pharmacological knowledge to screen and standardize different drugs
- b.3 Analyze biological data using suitable bio statistical test

c- Professional and Practical Skills

By the end of the course, the student should be able to:

- c1. Utilize proper method for screening and standardization of several drugs acting on body systems

c- General and Transferable Skills

By the end of the course, the student should be able to:

- d1. Communicate professionally with another health care providers and drug manufacturer

Contents

Teaching week	TOPIC	No. of lecture hours	No. of Practical hours
1	Introduction to Bioassay	2	1
2	Biological screening and standardization of the autonomic nervous system	2	1
3	Biological screening and standardization of CVS	2	1
4	Biological screening and standardization of neuromuscular blockers	2	1
5	Biological screening and standardization of CNS	2	1
6	Biological screening and standardization of anti-inflammatory drugs, antiprotozoal	2	1
7	Biological screening and standardization of antiulcer, hormones (1 st quiz)	2	1
8	Importance of biostatistics	2	1



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9	Measure of central tendency	2	1
10	Measure of dispersion	2	1
11	T-Test analysis.	2	1
12	ANOVA analysis (2 nd Quiz)	2	1
Total no of hours	36		
13	FINAL Exam		

2. Teaching and Learning Methods

4.1- Lectures (board, data show)

4.2- Assignments

4.3- Class discussion

3. Student Assessment Methods

5.1. Practical exams to assess knowledge and understanding as well as intellectual skills.

5.2. Written exams to assess all types of skills and mainly general and transferrable skills practice.

Assessment Schedule

Quiz 1

7th week

Quiz 2

12th week

Final exam

13th week; according to semester schedule

Weighting of Assessments

Periodical

20 %

Practical

30 %

Oral

20 %

Final exam

80 %

Total

150%



Course Specifications **(2017 – 2018)**

4. List of References

6.1- Course Notes: Lecture notes in English language

6.2- Essential Books (Textbooks)

Biostatistics for Bioassay | Ann Yellowlees, Matthew Stephenson

Facilities required for teaching and learning

1. Lecture rooms with data show
2. Procurement of latest edition of the above-mentioned texts and others to update the education process

Course Coordinator: Dr. Mohamed Hamzawy

Head of Department: Ass. Prof. Mona Elnaa

Date: /02/2018



Course Specifications
(2018 – 2019)

Course: Toxicology

Course code: 4308





A. Basic Information

B. Professional Information

The aims of the course are to understand the basic principles of toxicology and the different disciplines of toxicology and to understand the mechanism of toxicity, clinical presentation, diagnosis and medications indicated and contraindicated in the treatment of toxicity of common drug and chemical groups. In addition the course aims to gain knowledge regarding the supportive measures, therapeutic interventions, specific antidotes as general guidelines of treatment modalities. Furthermore gain general knowledge regarding forensic chemistry.

a- Knowledge and Understanding:

By the end of this course, the students should be able to:

- a1. Identify the different sources of toxicity and the factors that can enhance the exposure hazards.
- a2. Discuss the possible risks of exposure to toxicants by environmental, occupational and clinical medicine.
- a3. Understand toxic profile of various drugs and other xenobiotics including sources, identification, symptoms and management.
- a4. Discuss the main guidelines of management of injuries and emergency medical problems.

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Course Specifications **(2018 – 2019)**

b- Intellectual Skills

By the end of this course, the students should be able to:

- b1. Differentiate between different toxic agents regarding their symptoms as well as their main lines of toxicity treatment.
- b2. Criticize different methods for the management of poisoning in individual cases of toxicity.

c- Professional and Practical Skills

By the end of this course, the student should be able to:

- c1. Determine the toxicity profiles of different xenobiotics and detect poisons in biological specimens.
- c2. Expect the biological response to a specific dose of the drug.
- c3. Analyse the medical data of poisoned patients to recommend the most suitable management protocol in case scenarios.

c- General and Transferable Skills

By the end of the course, the student should be able to:

- d1. Communicate properly with professor and lab technicians.
- d2. Plan and implement efficient and effective modes of working to manage patient toxicity through group discussions and participation in laboratory sessions.
- d3. Work coherently and successfully as a part of a team.
- d4. Apply ethical guidelines in her/his professional career.

3. Contents

Teaching week	TOPIC	No. of lecture hours	No. of Practical hours	Total
1	General principles of toxicity	6	8	14
2	Toxicity of CNS depressants & stimulants	4		4
3	Toxicity of anticholinergics & pesticides	4		4
4	Toxicity of heavy metals	2		2



Course Specifications
(2018 – 2019)

5	Food poisoning	2		2
6	Teratogenicity and carcinogenicity	4		4
7	Forensic chemistry	2	4	6
Total no of hours		24	12	36

4. Teaching and Learning Methods (Lectures, open discussions, role plays, .etc)

4.1- Interactive Lectures

4.2- Laboratory classes

4.3- Student activities (assignments, Seminars, Researches and Posters)

5. Student Assessment:

a- Assesment methods and weighing:

- Class participation: 20% (assess knowledge and understanding and Intellectual Skills)
- Practical exam: 30% (assess knowledge and understanding and Intellectual and practical Skills)
- Oral exam: 20% (assess knowledge and understanding and Intellectual Skills)
- Final exam: 80% (assess knowledge and understanding and Intellectual Skills)

b- Assessment Schedule

- Class participation: Quiz 1: Week 4-5

Quiz 2: Week 8-9

Other activities: throughout the semester

- Practical exam: Week 12

- Oral exam: according to semester timetable

- Final exam: according to semester timetable





Course Specifications
(2018 – 2019)

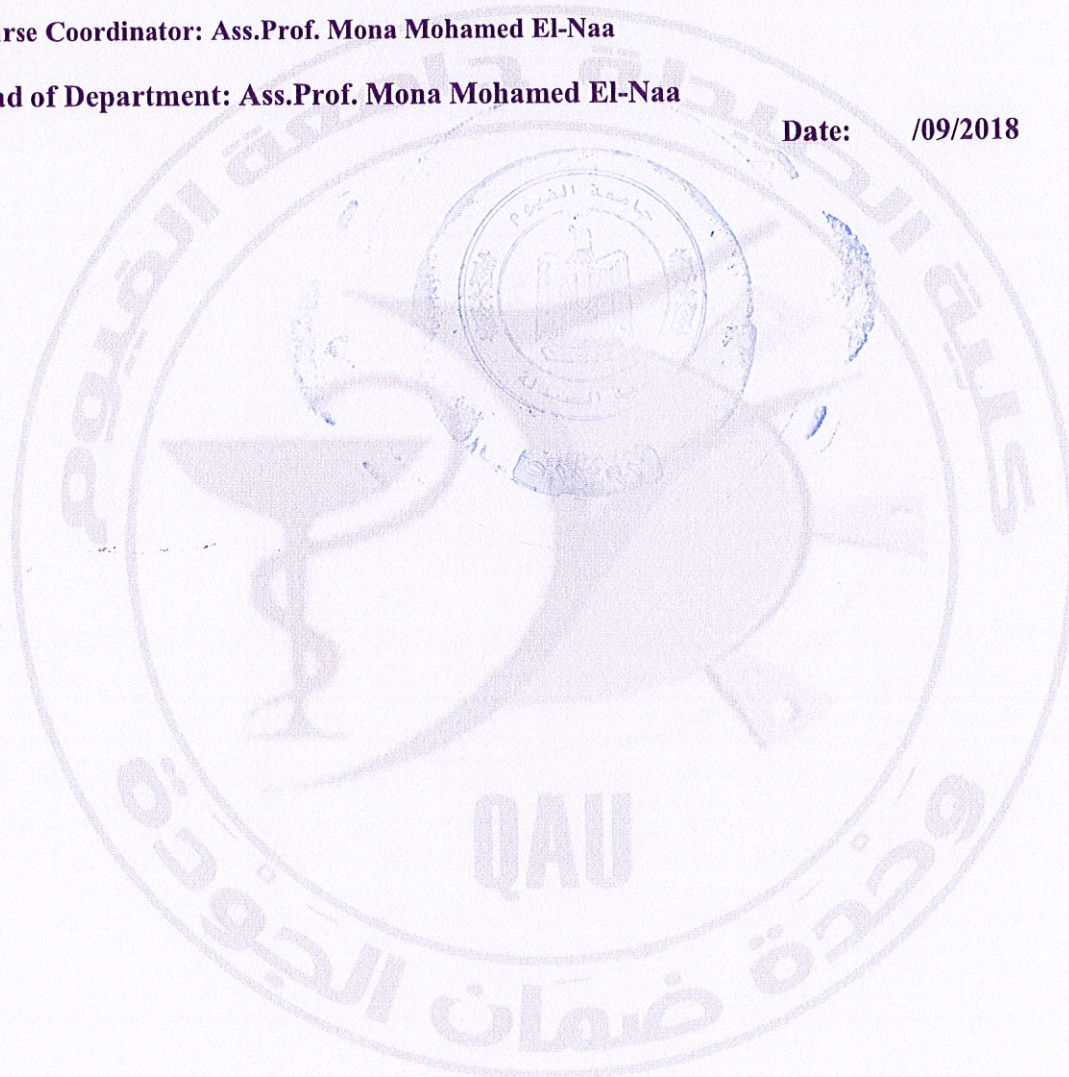
6. List of References

Course Notes	Department notes prepared by instructors
Required Books	Illustrated handbook of toxicology
Recommended Books	Principles of Toxicology: Environmental and Industrial Applications, 3rd Edition
Periodicals	www.pubmed.com
Web Sites	https://www.biomedcentral.com/bmcpharmacol/

Course Coordinator: Ass.Prof. Mona Mohamed El-Naa

Head of Department: Ass.Prof. Mona Mohamed El-Naa

Date: /09/2018





Course Specifications
(2015 – 2016)

Course: Drug Design

Course code: 4804





Course Specifications (2015 – 2016)

A. Basic Information

Program(s) on which the course is given:	General
Department offering the course	Medicinal Chemistry department
Faculty offering the program	Pharmacy
Dept. responsible for teaching the course	
Academic year / level	Fourth Level, semester 8
Course title	Drug Design
Course code	4804
Contact hours (credit hours)	2
Pre-requisite of the course:	No
Course coordinator	
Major or Minor element of program	
Date of specification approval	09/07/2015

B. Professional Information

1. Overall Aims of Course

On completion of this course, students will be able to describe computer-aided tools used in drug design, identify different proteins as drug target, construct a research study and analyze the results and work effectively as a member of a team.

2. Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

By the end of the course, the students should be able to:

- a1. Describe the drug metabolism and the concept of drug latention.
- a2. Outline different phases involved in the development of drug design.

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Course Specifications (2015 – 2016)

b- Intellectual Skills

b1. Identify and quantify physic-chemical properties of pharmaceutical preparation.

b2. Assess drug receptor interactions and concerning theories.

c- Professional and Practical Skills

c1. Predict the physical, chemical properties and biological activity of organic compounds based on drug design theories.

d- General and Transferable Skills

By the end of the course, the student should be able to:

d1. Develop the skills required for continued self -professional development and self- learning.

3. Contents

Teaching week	TOPIC	No. of lecture hours	No. of Practical hours
1	Structure activity relationships	2	0
2	Quantum mechanical approaches	2	0
3	Molecular connectivity	2	0
4	Pharmacophore generation	2	0
5	Molecular modification	2	0
6	Molecular modeling	2	0
7	First periodic exam	2	0
8	Prodrugs	2	0
9	Defining sites and targets	2	0
10	Natural products leading to new pharmaceutical treatment	2	0
11	Drug latention.	2	0



Course Specifications **(2015 – 2016)**

12	Second periodic exam	2	0
Total no of hours	24		
13	FINAL Exam		

4. Teaching and Learning Methods

4.1- Lectures (board, data show)

4.2- Assignments

4.3- Class discussion

5. Student Assessment Methods

5.1. Practical exams to assess knowledge and understanding as well as intellectual skills.

5.2. Written exams to assess all types of skills and mainly general and transferrable skills practice.

Assessment Schedule

Quiz 1	7 th week
Quiz 2	12 th week
Final exam	13 th week; according to semester schedule

Weighting of Assessments

Periodical	20%
Final exam	80%
Total	100%

6. List of References

6.1- **Course Notes:** notes of drug design approved by medicinal chemistry department

6.2- **Essential Books (Textbooks)**

1. the organic chemistry of drug design and drug action, 3rd edition, Richard B. Silverman and Mark W. Holladay (2015).

Facilities required for teaching and learning

1. Lecture rooms with data show



Course Specifications
(2015 – 2016)

2. Procurement of latest edition of the above-mentioned texts and others to update the education process

Course Coordinator:

Head of Department:

Date: /10/2015





General Pharmacy Program



Course specifications

A-Basic Information	
Course code	4802
Course name	Pharmaceutical Chemistry II
Credit hours of the course	Lecture: 2 Practical: 1 Total: 3
Pre-requisite of the course	Pharmaceutical Chemistry I
Department teaching the course	Medicinal Chemistry Department
Program for which the course is given	General
Course coordinator	Dr. Mohammed Ibrahim Abd El Latif Hamed
Head of the department	Prof. Dr./ Mona Hetta
Date of specifications approval	07/01/2018



B-Professional Information

1-Overall aims of the course:

This course is aimed at undergraduates in order to teach them some classes of drugs for suitable therapeutic use. By the end of this course the student can demonstrate knowledge upon chemical structure, nomenclature, synthesis, metabolism, mechanism of action and the therapeutic uses of .Hormones, Ant diabetic Drugs, Central Nervous System Depressant, and cardiovascular drugs

2-Intended learning outcomes (ILO's):

a-Knowledge and Understanding:

By the end of this course, the student should be able to:

:By the end of this course, the student should be able to

- a1- Describe the mechanism of action of the studied drugs
- a2- State the use of different drugs
- a3- Recognize how to design and synthesize drugs
- a4- understand the metabolism of drugs
- a5-.List the different pharmacopeal methods for determination of drugs
- a6-.Relate the chemical structure with the biological activity of drugs

b-Intellectual Skills:

By the end of this course, the student should be able to:

- c1- Solve organic and Stereochemical problems
- c2- Convert one compound to the other
- c3- Outline the appropriate methods for the analysis of titled compounds.

c-Professional and Practical Skills:

By the end of this course , the student should be able to:

- b1-Assay, synthesis of antipyretic, analgesic drugs.....etc
- b2.Perform the limit tests of the related impurity present in these drugs
- b3- Carry out identity tests for the studied drugs
- b4- Understanding the laboratory data as regards their significance and theoretical basis
- b5- Identify some drugs using infra-red spectroscopy and/or UV spectroscopy

d-General Skills:

By the end of this course, the student should be able to:

- d1- Use properly and safely new tools and equipments in the laboratories
- d2- Know how to explain the results obtained from the practical
- d3- Acquiring an ethical attitude and approach

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3-Course contents			
Topic	No. of hours		
	Lecture	Practical	Total
.Steroidal hormones	2	1	3
Oral hypoglycemic drugs	2	1	3
Diuretic drugs	2	1	3
.Antihypertensive drugs	2	1	3
Antidepressant drugs	2	1	3
Antianginal drugs	2	1	3
Antiarrhythmic drugs	2	1	3
Narcotic Analgesic drugs	2	1	3
Sedative and hypnotics	2	1	3
Antiepileptic drugs	2	1	3
Antipsychotic drugs	2	1	3
Antipyretic, Analgesic and Anti-Inflammatory drugs	2	1	3
Total	24	12	36



General Pharmacy Program



4-Teaching and Learning Methods (lectures, open discussion, role plays . etc.):-

4.1-Lectures (board, overhead projector, data show)

4.2- practical training

4.3- class activity

4.4- discussion

5- Student Assessment:

a. Assessment methods and weighing :

5.1-Quiz 1 to assess the knowledge and understanding of the first sections of the course.

5.2-written exam to assess the previously studied sections of the course.

5.3-Quiz 2 to assess the knowledge and understanding of the second sections of the course.

5.4-Practical exam to assess the latest practical skills gained by the students.

5.5-Final written exam to assess all the knowledge and understanding of the different sections of the course.

5.6-Oral examination to assess all the intellectual skills and knowledge of the different sections of the course. -

1. Class participation: 20% .

2. Practical exam: 30% .

3.Oral exam: 20% .

4.Final exam: 80% .

b-Assessment Schedule:

Class participation: Quiz 1: Week 4-5

Quiz 2: Week 8-9

Other activities: throughout the semester

Practical exam :Week 13-14

Oral exam : According to semester timetable

Final exam : According to semester timetable



General Pharmacy Program



6-list of references

Course notes	On ELS
Required books	Wilson & Gisvold" Text book of Organic, Medicinal, and pharmaceutical chemistry" William Foye. "Principle of Medicinal Chemistry Burger Medicinal Chemistry. Graham L. Patrick Medicinal Chemistry.
Recommended books	Remington: the science and practice of pharmacy. Martindale: the complete drug reference Goodman and Gilman's: the pharmacological basis of therapeutics Different
Periodicals	pharmacopoeias (Egyptian & British) European journal of medicinal chemistry Merck Index.-
Web sites	http://www.pubmed.com -

Course Coordinator: Dr/Mohammed Ibrahim Abd El Latif Hamed

Head of Department: prof. Dr. Mona Hetta

Date: /01/2018



Course Specifications
(2017 – 2018)

Course title: Clinical Chemistry and Molecular Biology

Course code: 4703

A. Basic Information:

Course Title:	Clinical Chemistry and Molecular Biology		
Course Code:	4703		
Program on which the course is given:	General		
Department offering the course:	Biochemistry		
Academic year/ level:	1 st Semester 2017/2018	Level:4	
Prerequisite:	Biochemistry 1		
Credit hours:	Lecture:2	Practical:1	Total:3

B. Professional Information

1. Course Aims:

This course provides an overview of how biochemical investigations are employed to develop a clinical diagnosis. To understand the biochemical changes accompanied to metabolic disorders and the role of endocrine system in its regulation. It describes disorders of lipids lipoproteins and Plasma protein abnormalities. It illustrates clinical enzymology, tumor markers and different techniques and applications of molecular biology that used in in clinical biochemistry laboratory.

2. Intended Learning Outcomes (ILOs):

a. Knowledge and understanding:

At the end of this course, student should be able to:

A1	a1.	Describe major concepts and applications of clinical biochemistry.
	a2.	Recognize the functions and blood levels of hormones, including adrenal gland, thyroid gland, pituitary gland, gonads and insulin hormone, in health and disease state.
A11	a3.	Define the principles of laboratory diagnosis (the reference range) and clinical aspects of different disorders in cases of lipids, lipoproteins, plasma protein abnormalities and carbohydrate metabolism disorders.
	a4.	Recall main Techniques of molecular biology used in diagnosis of different diseases



Course Specifications
(2017 – 2018)

		(liver, kidney and heart diseases)
	a5.	Define tumor markers and outline the most common tumor markers used for laboratory diagnosis of different malignancies

b. Intellectual Skills:

At the end of this course, student should be able to:

B13	b1.	Interpret laboratory results based on relevant biochemical principles
B14	b2.	Evaluate evidence-based information (complete blood counts and blood indices) needed in clinical decisions
B17	b3.	Formulate a systemic approach for the laboratory clinical diagnosis using clinical enzymology and tumor markers in lipids, lipoproteins, plasma protein abnormalities and endocrine disorders
B18	b4.	Integrate basic biochemical and physiological facts in cancer with clinical data
B21	b5.	Interpret clinical laboratory tests in carbohydrate metabolism disorders with the impact of clinical symptoms.

c. Professional and Practical Skills:

At the end of this course, student should be able to:

C1	c1.	Utilize the proper information about endocrine system, clinical enzymology and complete blood counts to communicate with other health care professionals
C5	c2.	Apply good pharmacy practice by proper understanding of human physiology and pathophysiology of endocrine system disorders, cancer, Inborn errors of CHO metabolism
C11	c3.	Conduct scientific research using internet materials followed by presentation, analysis and interpretation of the results.

d. General and Transferable Skills:

At the end of this course, student should be able to:

D3	d1.	Work effectively as a part of a team to perform the required tasks
D6	d2.	Develop skills required for self-learning
D11	d3.	Generate effective and reasonable solutions for rising problems based on the available information.



Course Specifications (2017 – 2018)

3. Contents:

3.1. Lectures:

Study week	Topics	No. of Credit Hours
1.	Disorders of lipids & Lipoproteins	2
2.	Endocrine disorders	2
3.	Endocrine disorders	
4.	Plasma protein abnormalities	2
5.	Inborn errors of CHO metabolism	2
6.	Prenatal diagnosis	2
7.	Tumor markers	2
8.	Haemoglobin disorders	2
9.	Recombinant DNA technology	2
10.	Techniques & application of molecular biology	2
11.	Techniques & application of molecular biology	2
12.	Final Exam	Total:
13.		2 credit hours

3.2. Practical:

Study week	Topics	No. of Credit Hours
1.	Introduction, handling processes and safety Clinical Enzymology	1
2.	Clinical enzymology	1
3.	Liver Function Tests	1
4.	Bilirubin and cases on liver disease	1
5.	Case study on Diabetes mellitus	1



Course Specifications
(2017 – 2018)

6.	Serum cholesterol determination and case study	1
7.	Triglycerides determination and case study	1
8.	Molecular biology	1
9.	PCR (Polymerase Chain Reaction)	1
10.	Revision	1
11.	Practical Exam	
12.	Final Exam	Total: 1 credit hour

4. Teaching and Learning Methods:

4.1.	Lectures
4.2.	Research in library and web (homework and assignments)
4.3.	Discussion
4.4.	Practical lab
4.5.	E- learning and demonstrating videos

5. Student Assessment Methods:

5.1. Assessment methods:

1. Written exam	to assess knowledge, understanding, intellectual and professional skills.
2. Practical exam	to assess professional and practical skills.
3. Course work	to assess knowledge, understanding, intellectual skills, general and transferable skills.
4. Oral exam	to assess knowledge, understanding, intellectual skills, general skills and confidence.
5. Quizzes	to assess knowledge, understanding and intellectual skills.



Course Specifications **(2017 – 2018)**

5.2 Assessment schedule:

Assessment 1	Quiz 1	4 th week
Assessment 2	Mid-Term	8 th week
Assessment 5	Practical exam	11 th week
Assessment 6	Oral exam	12 th & 13 th weeks
Assessment 7	Written exam	12 th & 13 th weeks

5.3 Weighing of Assessments:

1. Course work:	
- Quiz 1	10
- Mid-Term	10
2. Final-Term Exam	80
3. Oral Exam	20
4. Practical Exam	30
Total	150%

6. List of References:

No.	Reference	Type
1.	- Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics by Carl A. Burtis, and David E. Bruns, editors. (St. Louis, MO: Elsevier Saunders; 7th edition, 2014). - Bishop Textbook for Clinical Chemistry principles, techniques and correlations by Michael L. Bishop , Edward P. Fody and Larry E. Schoeff (Lippincott Williams & Wilkins; 7th edition, 2013). - Clinical biochemistry: An Illustrated Color Text, By Allan Gaw Michael Murphy Rajeev Srivastava Robert Cowan Denis O'Reilly. (Churchill Livingstone; 5th edition, 2013).	textbook
2.	- Clinical Chemistry. http://clinchem.aaccjnls.org/ - Clinical Chemistry and Laboratory Medicine. https://www.degruyter.com/view/j/cclm - Annals of Clinical Biochemistry. https://journals.sagepub.com/toc/acb/current - Clinical biochemistry https://www.sciencedirect.com/journal/clinical-biochemistry	periodical

7. Matrix of course contents versus ILOs:



Course Specifications (2017 – 2018)

7.1. Lectures:

Study week	Course Contents	ILOs			
		K&U	IS	P&PS	G&TS
1.	Disorders of lipids & Lipoproteins	a1 a3	b1 b3	c1 c2	---
2.	Endocrine disorders	a2	b3	c2 c3	---
3.	Endocrine disorders	a2	b3	c2 c3	d3
4.	Plasma protein abnormalities	a3	b2	c2 c3	d3
5.	Inborn errors of CHO metabolism	a3	b5	c2 c3	d1 d3
6.	Prenatal diagnosis	a3	b5	c2 c3	d1 d3
7.	Tumor markers	a1, a5	b4	c3	d2
9.	Haemoglobin disorders	a1, a3	b2	c2 c3	d2
10.	Recombinant DNA technology	a1, a4	b1	c1	d3
11.	Techniques & application of molecular biology	a1, a4	b1	c2	d1

7.2. Practical:

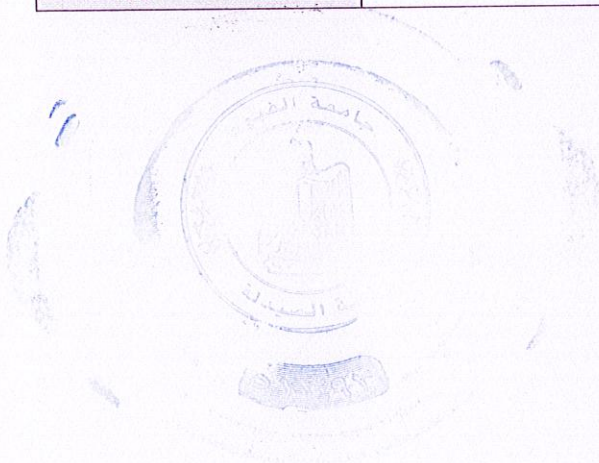
Study week	Course Contents	ILOs			
		K&U	IS	P&PS	G&TS
1.	Introduction, handling processes and safety	a1	b1	c1	--
	Clinical Enzymology	a4	b3		
2.	Clinical enzymology	a1	b1	c1,c3	--
		a4	b3		
3.	Liver Function Tests	a1	b1	c3	d1
		a4			
4.	Bilirubin and cases on liver disease	a1	b1	c3	d1,d2



Course Specifications
(2017 – 2018)

		a4			
5.	Case study on Diabetes mellitus	a2 a3	b1	c2,c3	d1,d3
6.	Serum cholesterol determination and case study	a4	b3	c2,c3	d1,d3
7.	Triglycerides determination and case study	a4	b1	c1,c3	d1,d3
9.	Molecular biology	a1	b1	c3	d1,d3
10.	PCR (Polymerase Chain Reaction)	a1	b1	c3	d1,d3

	Name	Signature
Course Coordinator:	Dr. Alyaa Ali	
Head of Department:	Prof. Mona Hetta	
Approval Date	/01/2018	





Fayoum University



Faculty of Pharmacy

General Pharmacy Program

Course Specifications

A-Basic Information	
Course code:	4114
Course name:	Community pharmacy practice
Credit hours of the course:	Lecture: 2 Practical:1 Total:3
Pre-requisite of the course:	Registration
Department teaching the course:	Department of Clinical Pharmacy Practice
Program for which the course is given:	General Pharmacy Program
Course Co-ordinator:	Dr. Azza Mancy
Head of the Department:	Prof. Dr. Mona Hetta
Date of specifications approval:	17-01-2017

B-Professional Information
1-Overall aims of the course: This course aims at familiarizing the student with the role of community pharmacist, introducing the student to the structures, processes & outcomes of the variety of services provided by the community pharmacist, providing knowledge and skills on recommendation of non-prescription medications and building a patient care practice capable of providing a consistent service to every patient.
2-Intended learning outcomes (ILO's):
a-Knowledge and Understanding: By the end of this course, the student should be able to:



Fayoum University



Faculty of Pharmacy

General Pharmacy Program

- a1-Know the difference between simple ailments and major diseases
- a2-Know the main outlines of the structured response to symptoms in the community pharmacy for minor and moderate infantile and children diseases
- a3-Understand the role of a community pharmacist
- a4- Identify patient's primary complaint and reason for seeking medical care.
- a5-Define the process of patient monitoring for other minor and moderate diseases.

b-Intellectual Skills:

By the end of this course, the student should be able to:

- b1-Solve the discrepancies between prescribed and over the counter medications
- b2- Design non-pharmacological, pharmacological treatments or both for the management of a disease to ensure optimum drug therapy.
- b3-Evaluate symptoms in the Community Pharmacy for verification of the degree of illness and hence treatment by non- prescription or prescription medication.
- b4: Predict optimal drug therapy for minimizing drug therapy problems.

c-Professional and Practical Skills:

By the end of this course, the student should be able to:

- c1-Apply learned knowledge to perform his job as a community pharmacist by the best professional and social behaviors
- c2-Select the most effective, safe and economic non-prescription medication based on best gathering of information to ensure patient's drug related needs.
- c3-Estimate self-patient monitoring criteria to ensure achievement of the desired therapeutic outcomes
- c-4: Practice clear, accurate and confident communication with patients and health care professionals to establish team working.

d-General Skills:

By the end of this course, the student should be able to:

- d1-Have the power to Communicate with patients, caregivers, other health care professionals, and the public using appropriate listening, verbal, nonverbal, and written communication skills
- d2- Show empathy while establishing rapport and communicating with the patient and/or caregiver.
- d3- Apply gained information about ethics to exhibit a caring and respectful attitude.



Fayoum University



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Topic	No. of hours		
	Lecture	Practical	Total
Role of Pharmacist in Management of Minor Illness.	2	0	2
Common cold & Cough.	2	1	3
Sore Throat.	2	1	3
Primary headaches	2	2	4
Indigestion & Heart Burn	2	1	3
Constipation	2	1	3
Diarrhea.	2	1	3
Nausea & Vomiting	2	1	3
Minor eye disorders	2	1	3
Hemorrhoids	2	1	3
Musculoskeletal disorders	2	1	3
Vaginal thrush	2	1	3
Total	24	12	36

4-Teaching and Learning Methods (lectures, open discussion, role plays, ..etc):

1. Self-Learning assignments
2. Interactive lectures & open discussions ((Tools; board, data show)
3. practical tutorials (tools; case studies, Group-based research project for patient counseling)
4. Office hours for Probation Students



Fayoum University



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General Pharmacy Program

5- Student Assessment:	
a-Assessment Methods and Weighing:	
-	Class participation (two quizzes, assignments/ presentations): 20 %
-	Practical exam: 30 %
-	Oral exam: 20 %
-	Final exam: 80 %
b-Assessment Schedule:	
-	Class participation: Quiz 1: Week 4-5 Quiz 2: Week 8-9 Other activities: throughout the semester
-	Practical exam: Week 13-14
-	Oral exam: According to semester timetable
-	Final exam: According to semester timetable

6-List of References:	
Course Notes	Lectures and practical notes prepared by instructors
Required Books	N/A
Recommended Books	1. Symptoms in the pharmacy a Guide to the management of common illnesses", Alison Blenkinsopp, 7th edition, 2014. 2. "The common symptom guide", John Wasson, McGraw Hill Professional, 2009.
Periodicals	Journal of pharmacy practice and community medicine
Web Sites	i. www.drugs.com ii. www.pubmed.com

Course Coordinator: Dr. Azza Mancy

Head of Department: Prof. Dr. Mona Hetta

Date: 17-01-2017



Course Specifications
(2017 –2018)

Phytotherapy

4208





Course Specifications
(2017 –2018)

Pharmacognosy Department

A. Basic Information

Program(s) on which the course is given	Bachelor of pharmacy
Department offering the course	Pharmacognosy department
Faculty offering the program	Faculty of Pharmacy, Fayoum University
Dept. responsible for teaching the course	Pharmacognosy department
Academic year / level	Forth level, semester 7
Course title	Phytotherapy
Course code	4208
Contact hours (credit hours)	Lecture (2) + Practical (1): Total (3)
Pre-requisite of the course:	Phytochemistry 2
Course coordinator	Prof. Mona Hetta
Major or Minor element of program	Major
Date of specification approval	07/01/2018

B-Professional Information

1-Overall aims of the course:

Coordination between the disease and its natural treatment.

2-Intended learning outcomes (ILO's):

a-Knowledge and Understanding:

By the end of this course, the student should be able to:

- a1. Symptoms of different diseases affecting different body systems
- a2. Methods of treatments using herbal medicines
- a3. Pharmacological actions of each plant as well as their methods of action

b-Intellectual Skills:

By the end of this course, the student should be able to:

- b1. from the patient investigations how to figure out the disease
- b2. how to prepare mix of different herbs for treatment
- b3. the contraindication of each herb and what to mix with as well as what not to mix with.

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Course Specifications (2017 –2018)

b-Intellectual Skills:

By the end of this course, the student should be able to:

- b1. from the patient investigations how to figure out the disease
- b2. how to prepare mix of different herbs for treatment
- b3. the contraindication of each herb and what to mix with as well as what not to mix with.

c-Professional and Practical Skills:

By the end of this course, the student should be able to:

- c1. be able to share his knowledge with MD
- c2. to give his suggestions for treatment
- c3. Use his knowledge to overcome synthetic drugs side effects by replacing them with natural ones.

d-General Skills:

By the end of this course, the student should be able to:

- d1. Make different dissections with patient
- d2. Updated by the most recent through world treatments
- d3. Use surrounding available tools for treatments

3.Contents

Teaching week	TOPIC	No. of lecture credit hours	No. of practical credit hours	Assessment of ILOs
1	Introduction	2	-----	
2	Introduction + Wound healing	2	1	
3	Digestive system diseases	2	1	
4	Skin diseases	2	1	
5	Urinary tract diseases	2	1	
6	Immunity system	2	1	
7	Introduction to different CVS diseases + CHF	2	1	
8	Hypertension+ Angina	2	1	
9	Varicose vein + arterial occlusions	2	1	
10	Respiratory problems Part 1	2	1	
11	Respiratory problems Part 2	2	1	
12	Endocrine (hormonal imbalance + Diabetes)	2	1	
	Total	12	11	



Course Specifications **(2017 –2018)**

4-Teaching and Learning Methods (lectures, open discussion, role plays, ..etc):

Using advanced teaching techniques as power point presentation as well as discussion circles in addition to carrying out projects.

5- Student Assessment:

Periodical exams (2-3 exams) – activities: (search – presentation)

Practical exam

Final theoretical exam

Oral exam

a-Assessment Methods and Weighing:

- Class participation: 20marks (20%)
- Tutorial/Practical exam: 30 marks (30%)
- Oral exam: 20 marks (20%)
- Final exam: 80 marks (80%)

b-Assessment Schedule:

- Class participation: Quiz 1: Week 4-5
Quiz 2: Week 10-11
Other activities: throughout the semester
- Case study: weeks: 8, 9, 10.
- Presentations: weeks: 4 till 8.
- Practical exam: Week 12 delivery of products, identification of samples (A.C.)
- Oral exam: According to semester timetable
- Final exam: According to semester timetable

6-List of References:

Course Notes

Lecture and practical notes prepared by instructors

Required Books

WHO monographs on selected medicinal plants volume 1&2,
World Health, Organization, Geneva, 1999.

Recommended
Books

- Medicinal Natural Products A Biosynthetic Approach, Second Edition, Paul M Dewick, 2002
- Fundamentals of Pharmacognosy and Phytotherapy was written by Michael Heinrich, 2004, and published by Elsevier Science, Spain.

Periodicals

Web Sites

<http://www.pubmed.com>
<http://www.botanical.com>
<http://www.herbmed.com>

Teaching professors: Prof. Dr. Abdel Salam Ibrahim – Prof. Dr. Mona Hetta

Course Coordinator: Prof. Mona H. Hetta

Head of Department: Prof. Mona H. Hetta

Date: 07/01/2018



Course Specifications
(2017 – 2018)

Drug interactions

4307





Course Specifications
(2017 – 2018)

Department of Pharmacology and Toxicology

A. Basic Information

Program(s) on which the course is given:	General
Department offering the course	Department of Pharmacology and Toxicology, Faculty of Pharmacy, Fayoum University
Faculty offering the program	Faculty of Pharmacy, Fayoum University
Dept. responsible for teaching the course	Department of Pharmacology and Toxicology, Faculty of Pharmacy, Fayoum University
Academic year / level	2017/2018 (Level 4, semester 7)
Course title	Drug interactions
Course code	4307
Contact hours (credit hours)	Lecture:(2), Practical: (1), Total: 3
Pre-requisite of the course:	Pharmacology-2
Course coordinator	Dr Rasha Abdelhady
Major or Minor element of program	Major
Date of specification approval	01/2018

B. Professional Information

1. Overall Aims of Course

(The course aim and intended learning outcomes are based on that mentioned in the program specifications, with more course-related specific details.)

The aim of the course is to ensure that the graduated pharmacist achieved the competencies of integration of the knowledge concerning the types, mechanisms, significance, as well as management of drug interaction. It also provides knowledge regarding drug interaction of specific classes of drugs such as antibiotics, antiarrhythmic, anticoagulants, anticonvulsants, barbiturates, beta-agonists and antagonists, calcium channel antagonists, sulfonamides. In addition to, drug-food interaction and drug-smoking interaction.

2. Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

By the end of the course, the students should be able to:

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Course Specifications **(2017 – 2018)**

- a1. Recognize the main types of drug interactions
- a2. Describe the general mechanisms underlying drug interactions
- a3. Identify the most potential interactions for specific classes of drugs such as antiarrhythmic and anticonvulsants
- a4. Identify general measures for management/avoidance of potential adverse effects of drug interactions.
- a5. Identifying both drug-nutrient and drug-smoking interactions

b- Intellectual Skills

By the end of this course, the student should be able to:

- b1. Identify strategies for patient monitoring for identification of adverse drug interactions
- b2. Predict and apply drug design, therapeutic protocols for avoidance or management of drug interactions
- b3. Interpret specific symptoms and signs related to adverse effects of drug interactions

c- Professional and Practical Skills

By the end of the course, the student should be able to:

- c1. Select the suitable medicines for multiple drugs treated patients.
- c2. Provide updated information to patients and healthcare professionals about the proper use of medicine and its probable clinically significant adverse interactions.

d- General and Transferable Skills

By the end of the course, the student should be able to:

- d1. Improve critical thinking regarding problems and situations where decisions should be made on bases of limited information.
- d2. Developing and working in groups which increase the communication and knowledge regarding patient safety and outcome
- d3- Present clearly and effectively a scientific topic among groups.



Course Specifications (2017 – 2018)

3. Contents

Teaching week	TOPIC	No. of lecture hours	Assessment of ILOs
1	Types and mechanisms of drug interactions	Total: 3(2+1)	a1, a2, b3, c1, d1, d2
2	Sulphonamides interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
3	Ca channel blockers interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
4	Drug-nutrient interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
5	Drug-smoking interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
6	Antibiotic interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
7	Antiarrhythmic interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
8	Barbiturates interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
9	Anticonvulsant interactions Anticoagulants interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
10	Beta agonists and antagonists interactions	Total: 3(2+1)	a2, a3, a4, b2, b1, b3, c2, d1, d2
Total no of hours		30	
12	FINAL Exam		

4. Teaching and Learning Methods

4.1- Lectures (board, data show)

4.2- Assignments

4.3- Class discussion

5. Student Assessment Methods

5.1. Written exams to assess knowledge and understanding as well as intellectual skills.

5.2. Oral exams to assess all types of skills and mainly general and transferrable skills practice.

5.3. Practical exams



Course Specifications **(2017 – 2018)**

Assessment Schedule

Quiz 1	4 th or 5 th week
Quiz 2	8 th or 9 th week
Practical exam	10 th week
Final exam	12 th week; according to semester schedule
Oral exam	12 th week; according to semester schedule

Weighting of Assessments

Periodical	20%
Practical	30%
Final exam	80%
Oral exam	20%
Total	150%

6. List of References

6.1- Course Notes: Lecture notes in Drug interactions by Staff Members of the Department of Pharmacology & Toxicology.

6.2- Essential Books (Textbooks)

1. Brophy, G. (2007). Stockley's Drug Interactions Pocket Companion..
2. Trevor, A. J., Katzung, B. G., Masters, S. B., & Kruidering-Hall, M. (2010). Pharmacology examination & board review. New York: McGraw-Hill Medical.
3. Howland, R. D., & Mycek, M. J. (2006). 1-Lippincotts illustrated reviews: Pharmacology. Teaching Learning, 5, 5.

6.3- Periodicals : <https://www.webmd.com/interaction-checker/default.htm>.

<https://www.drugs.com>.

<https://www.medscape.com>

✱ **6.4- Web Sites:** globalrbh.com, lexicomp.org and www.ekb.eg



Course Specifications **(2017 – 2018)**

Facilities required for teaching and learning

1. Lecture rooms with data show
2. Procurement of latest edition of the above-mentioned texts and others to update the education process

Course Coordinator: Dr Rasha Abdelhady

Head of Department: Ass. Prof. Mona El Naa

Date: /01/2018





Course Specifications
(2017 – 2018)

Course: Drug Marketing

Course code: 4209





Course Specifications (2017 – 2018)

A. Basic Information

Program(s) on which the course is given:	General
Department offering the course	Clinical pharmacy
Faculty offering the program	Pharmacy
Dept. responsible for teaching the course	Clinical pharmacy
Academic year / level	Fourth Level, semester 8
Course title	Drug Marketing
Course code	4209
Contact hours (credit hours)	1
Pre-requisite of the course:	No
Course coordinator	Dr. Ahmed Adel
Major or Minor element of program	Minor
Date of specification approval	07/01/2018

B. Professional Information

1. Overall Aims of Course

Marketing analysis, orientation to decision making, management of new product venture, advertising distribution, marketing information system.

2. Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

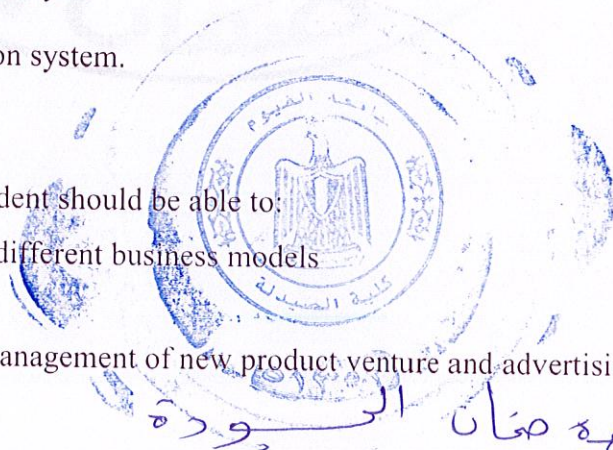
By the end of the course, the students should be able to:

- a1. Perform suitable marketing analysis
- a2. Discuss marketing information system.

b- Intellectual Skills

By the end of this course, the student should be able to:

- b1. Apply marketing analysis on different business models
- b2. Apply different strategies for management of new product venture and advertising distribution





Course Specifications (2017 – 2018)

c- Professional and Practical Skills

By the end of the course, the student should be able to:

- c1. Utilize proper marketing strategy for selected product

c- General and Transferable Skills

By the end of the course, the student should be able to:

- d1. Communicate verbally using marketing analysis, orientation to decision making, management of new product venture, advertising distribution, marketing information system.

Contents

Teaching week	TOPIC	No. of lecture hours	No. of Practical hours
1	Introduction and principles of marketing and marketing strategies	1	0
2	Orientation to decision making	1	0
3	Orientation to decision making	1	0
4	Training on decision making	1	0
5	Management of new product venture	1	0
6	Management of new product venture	1	0
7	First periodic exam	1	0
8	Advertising distribution	1	0
9	Training on advertising distribution	1	0
10	Marketing information system	1	0
11	Application of marketing information system	1	0
12	Second periodic exam	1	0
Total no of hours	12		
13	FINAL Exam		

3. Teaching and Learning Methods



Course Specifications (2017 – 2018)

4.1- Lectures (board, data show)

4.2- Assignments

4.3- Class discussion

4. Student Assessment Methods

5.1. Periodic exams to assess knowledge and understanding as well as intellectual skills.

5.2. Written exams to assess all types of skills and mainly general and transferrable skills practice.

Assessment Schedule

Quiz 1	7 th week
Quiz 2	12 th week
Final exam	13 th week; according to semester schedule

Weighting of Assessments

Periodical	10%
Final exam	40%
Total	50%

5. List of References

6.1- Course Notes: Lecture notes in Drug Marketing

6.2- Essential Books (Textbooks)

1. **Pharmaceutical marketing: Practical guide:** Dimitris Dogramatzis

Facilities required for teaching and learning

1. Lecture rooms with data show
2. Procurement of latest edition of the above-mentioned texts and others to update the education process

Course Coordinator: Dr. Ahmed Adel

Head of Department: Prof. Mona Hetta

Date: 07 /01/2018

Course Specifications

**Pharmaceutics-4
(4108)**

**Level 4
Semester 8**

General Pharmacy Program

Course Specification

A-Basic Information	
Course code:	4108
Course name:	Pharmaceutics 4
Credit hours of the course:	Lecture: 2 Practical: -- Total: 2
Pre-requisite of the course:	Pharmaceutics 3
Department teaching the course:	Pharmaceutics
Program for which the course is given:	General Program
Course Co-ordinator:	Dr. Doaa Helal
Head of the Department:	Prof Dr.Mona Hetta
Date of specifications approval:	17/09/2016

B-Professional Information

1- Overall aims of the course:

At the end of the course, the students will be able: Differentiate the types of parental, ophthalmic and blood products, as well as compare their advantages and disadvantages. Understand the principles for calculation and manipulation of parental and ophthalmic preparations. Explain different vaccines types. Understand the quality control testing of pharmaceutical sterile drug products. Recognize the applications of radio materials in nano-drug delivery systems. Understand the formulation and quality control testing of aerosols and inhalation products.

2-intended learning outcomes (ILO'S)

Upon completing the course, the student will be able to dominate the following key elements.

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General Pharmacy Program

A- fundamental knowledge

- A1- Demonstrate understanding of knowledge of parenteral and ophthalmic pharmaceutical dosage forms.
- A2- Combine the principles of fundamental sciences to design, prepare, and assure quality of radio pharmaceutical materials, aerosols and sterile products.
- A3- Gather and critically analyze information about vaccines that may be applicable to pharmaceutical industry and patient care.
- A4- Perform parenteral calculations like determination of the rate of infusion.

B- Professional and ethical practice

- B1- Define the proper quality control testing for different types of dosage forms.
- B2- Adopt the principles of parental pharmaceutical calculations.
- B3- Select proper formulations and applications of radiopharmaceuticals in medical use.

C- Pharmaceutical care

- C1- Gather based information about vaccines and immunological changes.
- C2- Establish public awareness on rational use of vaccines, radiopharmaceuticals to ensure personal safety.

D- Personal practice

- D1- Share decision-making activities with other pharmacy team members and apply effective time management skills.
- D2- Use clear language, pace, tone and non-verbal communication and writing skills when dealing with patients, other health team and communities.
- D4- Practice self-learning to improve professional skills.

3- Course contents:

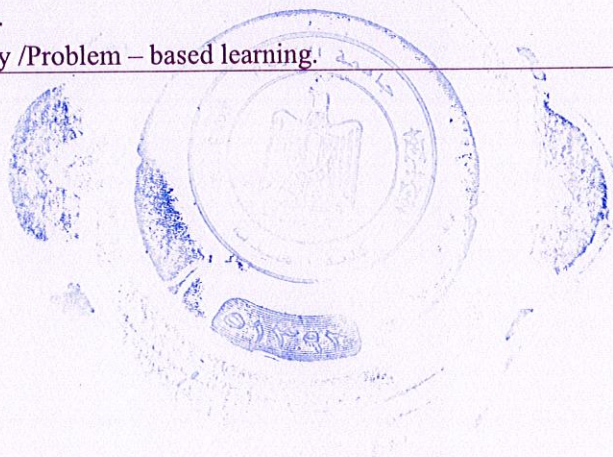
Topic	No. of hours
	Lecture
Formulation and evaluation of parenterals.	2
Principles of parenterals calculations.	2
Eye anatomy, classification of ophthalmic preparations.	2
Formulation and preparation ophthalmic dosage forms.	2

Inhalation products (Formulation and Preparation.	2
Quality control of Inhalation products.	2
Blood products.	2
Blood products applications and vaccines	2
Formulation and quality control of aerosols	2
Introduction about radiation and radiopharmaceutical	2
Total	20

General Pharmacy Program

4- Teaching and Learning Methods (lectures, open discussion, role plays,...etc):

- Computer aided learning: a. Lectures using Data show, power Point presentations b. Distance learning.
- Online learning as recorded video lectures.
- Interactive discussion through Advanced lectures.
- Practical session using chemicals and laboratory equipment.
- Self-learning.
- Class Activity /Problem – based learning.



a- Assessment Methods and Weighing

- Class participation: 10%
- Oral Exam: 20%
- Final Exam: 70%

b- Assessment Schedule:

- Class participation: Quiz 1: Week 4-5
Quiz 2: Week 8-9
Other activities: throughout the semester
- Oral Exam: According to semester timetable
- Final Exam: According to semester timetable

Course Coordinator: Dr. Doaa Helal

Head of Department: Prof. Dr. Mona Hetta

Date: 17/9/2016

