

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Pre-pharmacy, first Semester

2016 / 2017

**Kafrelsheikh University, Faculty of Pharmacy
Course Specifications**

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical chemistry
Department supervising the course	
Academic Year / Level	Pre-pharmacy, first Semester
Date of specification approval	9/2016

A- Basic Information

Title :pharmaceutical Organic Chemistry	Code : 1021
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The basic theories and principles of organic chemistry which include atomic structure, hybridization and theories of acids and bases.
- The reaction kinetics and thermodynamics.
- The chemistry of alkanes and alkyl halides.
- The concept of stereochemistry.
- Purification and identification of various organic compounds.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. List different organic functional groups.
- a2. Learn the principles of thermodynamics and kinetics.
- a3. Describe the types of bonds and hybridization state.
- a4. Demonstrate the correlation between structure and physical properties of different organic classes.
- a5. Learn the principles of stereochemistry.
- a6. Explain the mechanisms of different reactions.

b- Intellectual skills

- b1. Carry out a solution for problems of organic synthesis.
 b2. Recognize mechanisms for organic reactions.
 b3. Select appropriate methods for synthesis of alkanes and alkyl halides.
 b4. Illustrate the principles of stereochemistry to different organic reactions.
 b5. Utilize the principles of stereochemistry to explain the relative stabilities of organic compounds and the course of chemical reactions.

c- Professional and practical skills

- c1. Use effectively chemical reagents specially some dangerous chemicals.
 c2. Use effectively basic laboratory equipments.
 c3. Use effectively new techniques for Purification of simple organic compounds.
 c4. Test qualitatively different organic substances.

d- General and transferable skills

- d1. Implement tasks during the preparation of target chemical compound with other students in lab.
 d2. Retrieve ethical and legal chemistry labs safety guidelines.
 d3. Implement writing skills through lab reports.
 d4. Arrange time and put up plans.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction (Hybridization states and bonds-Types)	4	2	2
2	Introduction (types of mechanism of chemical reactions)	4	2	2
3	Introduction (thermodynamics)	4	2	2
4	Thermodynamics	4	2	2
5	Reaction kinetics	4	2	2
6	Stereochemistry (introduction)	4	2	2
7	Mid-term exam			

8	Stereochemistry of chiral molecules	4	2	2
9	Stereochemistry of chiral molecules (cont.)	4	2	2
10	Stereochemistry of chiral molecules (cont.)	4	2	2
11	Stereochemistry of chiral molecules (cont.)	4	2	2
12	Alkanes	4	2	2
13	Cycloalkanes and conformational analysis	4	2	2
14	Alkyl halids	2	2	Practical exam
15	Alkyl halids (cont.)	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach
Written final exam	To assess	The overall outcomes

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14, 15
Assessment 3	Final exam	Week	16, 17
Assessment 4	Oral	Week	16, 17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references**Course notes**

- Notes on Organic chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.
- Lab Manual of Organic chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.

Essential books (text books)

- 1) Volhardt K. P. C.; Schore, N. A. in organic chemistry (structure and function), 6th edition (2010) W. H. Freeman and company. NY.
- 2) McMurry, J. in organic chemistry, 8th ed. (2011), Brooks/Cole, London.
- 3) Solmon's T. W. G. in Organic Chemistry 10th ed. (2010), John Wiley and sons, Inc, NY.
- 4) I. L. Finar Organic Chemistry Volume 1: The Fundamental Principles 5th edition, 1998, Longman Publishing Group.
- 5) I. L. Finar Organic Chemistry Volume 2: Stereochemistry and the chemistry of natural products 5th edition, 1998, Longman Publishing Group.
- 6) Bruice, P. Y. in organic chemistry, 6th edition (2010), Pearson education int. NY.

Recommended books

- 1) Solmon's T. W. G. in Organic Chemistry 10th ed. (2010), John Wiley and sons, Inc, NY.
- 2) I. L. Finar Organic Chemistry Volume 1: The Fundamental Principles 5th edition, 1998, Longman Publishing Group.
- 3) I. L. Finar Organic Chemistry Volume 2: Stereochemistry and the chemistry of natural products 5th edition, 1998, Longman Publishing Group

Websites

<http://www.sciencedirect.com>, www.4shared.com

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities (hot plates, chemical hood, water bath)
- Library.
- Data Show
- Computers. -Internet.

Course coordinator:

Prof.Dr. Tamer Ibrahim

Head of Department:

Prof.Dr. Ramadan El-domany

Date : 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **pharmaceutical Organic Chemistry** Course code: **1021**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction (Hybridization states and bonds Types)	a3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 2	Introduction (types of mechanism of chemical reactions)	a6,b1,b2,c1,c2,c3,d1.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Introduction (thermodynamics)	a2,b2,c1,c2,c4,d1,d2,d3.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Thermodynamics	a2,b2,c1,c2,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 5	Reaction kinetics	a2,b2,c1,c2,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Stereochemistry (introduction)	a5,b4,b5,c1,c2,c4,d1,d2,d3 ,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Stereochemistry of chiral molecules	a5,b4,b5,c1,c2,c4,d1,d2,d3 ,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 9	Stereochemistry of chiral molecules (cont.)	a5,b4,b5,c1,c2,c4,d1,d2,d3 ,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 10	Stereochemistry of chiral molecules (cont.)	a5,b4,b5,c1,c2,c4,d1,d2,d3 ,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 11	Stereochemistry of chiral molecules (cont.)	a5,b4,b5,c1,c2,c4,d1,d2,d3 ,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 12	Alkanes	a1,a3,a4,a6,b1,b2,b3,d1,d2 ,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 13	Cycloalkanes and conformational analysis	a1,a3,a4,a5,a6,b1,b2, b3, b4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 14	Alkyl halids	a1,a3,a4,a5,a6,b1,b2, b3, b4,d1,d2,d3,d4	Lectures, discussion and brain storming	Written and oral exams
Week # 15	Alkyl halids (cont.)	a1,a3,a4,a5,a6,b1,b2, b3, b4,d1,d2,d3,d4	Lectures, discussion and brain storming	Written and oral exams

Course coordinator: Dr. Tamer Ibrahim

Head of department: Prof. Dr. Ramadan El-domany

Date: 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programm on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Pharmaceutical analytical chemistry
Department supervising the course	
Academic Year / Level	Pre-pharmacy, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical Analytical Chemistry	Code : 1012
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Chemical equilibrium, law of mass action, common ion effect, Le-Chatelier principle, solubility, solubility product constant and types of chemical bonds.
- Quantitatively gravimetric method for analysis.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the student should be able to:-

- a1- identify fundamentals of analytical chemistry.
- a2- list qualitative analysis for cations and anions in mixtures of inorganic salts.
- a3- define gravimetric methods for quantitative analysis.

b- Intellectual skills

- b1- Carry out a suitable method for separation of different cations and anions from mixtures of them.
- b2- Recognize the principle of specific confirmatory tests for different cations and anions.
- b3- Select a suitable methodology to solve analytical problems.
- b4- Utilize precipitation gravimetry for quantitative analysis .

c- Professional and practical skills

- c1- Examine different tests for identification of anions.
 c2- Use effectively suitable methods for separation of different cations from mixtures of them.
 c3- demonstrate necessary precautions when using chemicals and different analytical techniques.

d- General and transferable skills

- d1- Communicate in team and apply time management principles effectively.
 d2- Implement continuous and lifelong self learning.
 d3- Demonstrate critical thinking, problem solving and decision making abilities

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	- Introduction - Types of chemical bonds. - Law of mass action & common ion effect.	4	2	2
2	- Equilibrium constants, ionic product of water. - Solubility and factors affecting it.	4	2	2
3	- Anions - Classification of anions into different groups. - Steps for carrying out dry tests and wet tests.	4	2	2
4	- The effect of HCl and H ₂ SO ₄ on different anions. - Specific confirmatory tests of carbonate & bicarbonate salts and sulfur salts.	4	2	2
5	- The effect of HCl and H ₂ SO ₄ on different anions. - Specific confirmatory tests for different anions nitrate, nitrite and halides	4	2	2
6	- Cations	4	2	2

	- Group I (silver group).			
7	Midterm exam			
8	Group II (A,B)	4	2	2
9	GroupIII (A,B)	4	2	2
10	GroupIV (alkaline earth group)	4	2	2
11	Group V(Soluble group)	4	2	2
12	Introduction to gravimetry as a method for quantitative analysis	4	2	2
13	Procedures for precipitation gravimetry	4	2	2
14	Drying & calculations in gravimetry.	2	2	Practical exam
15	Applications of gravimetric analysis for organic and inorganic compounds.	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systemic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references**Course notes**

- Notes on pharmaceutical analytical chemistry for first year students, prepared and distributed by Dept. of Pharmaceutical Analytical Chemistry.
- Lab manual of pharmaceutical analytical chemistry for first year students, prepared and distributed by Dept. of Pharmaceutical Analytical Chemistry.

Essential books (text books)

- 1-Vogel's "Quantitative Inorganic Analysis", 7 th edition, Longman Singapore (Pte) Ltd (1996).
- 2-D. A. Skoog, D. M. west, F. J. holler and S. R. crouch, "fundamentals of analytical chemistry", eighth edition brooks / cole-thomson learning, inc. (2004).

Recommended books

- Gary D. Christian, "analytical chemistry", John Wiley& sons, INC.6th edition (2003).

Websites

<http://ull.chemistry.uakron.edu/analytical/>

7. Facilities required for teaching and learning

- Class rooms.**
- Laboratory facilities(chemicals as reagents for proper lab work and analytical tools as glass rods,test tubes)**
- Library**
- data show**
- Internet**
- Computers**

Course coordinator:

Dr. Ahmed Faried

Head of Department:

Prof.Dr. Ramadan Eldomany

Date : 9 /2016

Course plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment
Course title: Pharmaceutical analytical Chemistry **Course code: 1012**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	- Introduction - Types of chemical bonds. - Law of mass action & common ion effect.	a1	Lecture	Written and oral exams
Week # 2	- Equilibrium constants, ionic product of water. - Solubility and factors affecting it.	a1, d1, d2	Lecture	Written and oral exams
Week # 3	- Anions - Classification of anions into different groups. - Steps for carrying out dry tests and wet tests.	a2,b1,b2,c1, d1,d2	Lecture	Written and oral exams
Week # 4	- The effect of HCl and H ₂ SO ₄ on different anions. - Specific confirmatory tests of carbonate & bicarbonate salts and sulfur salts.	a2,b1,b2,c1, c2,d1,d2	Lecture	Written and oral exams
Week # 5	- The effect of HCl and H ₂ SO ₄ on different anions. - Specific confirmatory tests for different anions nitrate, nitrite and halides	a2,b1,b2,c1, c2,d1,d2	Lecture	Written and oral exams
Week # 6	- Cations - Group I (silver group).	a2,b1,b2,c2, d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 7	Midterm exam			
Week # 8	Group II (A,B)	a2,b1,b2,c2, d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 9	Group III (A,B)	a2,b1,b2,c2, d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 10	Group IV (alkaline earth group)	a2,b1,b2,c2, d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 11	Group V {Soluble group}	a2,b1,b2,c2, d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 12	Introduction to gravimetry as a method for quantitative analysis	a3,b3,b4,c3, d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 13	Procedures for precipitation gravimetry	a3,b3,b4,c3, d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 14	Drying & calculations in gravimetry.	a3,b3,b4,c3, d1,d2,d3	Lecture	Written and oral exams
Week # 15	Applications of gravimetric analysis for organic and inorganic compounds.	a3,b3,b4,c3, d1,d2,d3	Lecture	Written and oral exams

Course coordinator:

Dr. Ahmed Faried

Head of Department:

Prof.Dr. Ramadan Eldomany

Date : 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacognosy
Department supervising the course	
Academic Year / Level	Pre-pharmacy, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Medicinal plants	Code : 1035
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The background information about the discipline of pharmacognosy.
- Identification of morphological, histological characters of different organs of the plant, and metamorphosis of different organs.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Identify different plant organs.
- a2- Record plants according to the morphological characters.
- a3- Learn the methods for detection of different organs of the plant.
- a4- Define the type of metamorphosis of the plant.
- a5- Describe the beginning of the organ formation and the type of maturation, and mutation.

b- Intellectual skills

- b1- Recognize the type of metamorphosis of the plant.
- b2- Predict morphological classification of plants.
- b3- Illustrate methods for collection , drying and protection of drugs from deterioration.

c- Professional and practical skills

- c1- handle the light microscope effectively in laboratory practices .
- c2- Examine different plant elements using the microscope
- c3- Relate description, drawing and identification of different parts of medicinal plants.

d- General and transferable skills

- d1- Retrieve information from a variety of sources, including libraries, databases and internet.
- d2- Create private study, including direct study on specific topics, independent study from textbooks.
- d3- Implement collaboration in the writing of reports.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction of herbs. morphological and histological characters of stem	4	2	2
2	Morphological and histological characters of roots and rhizomes	4	2	2
3	Introduction of leaves. Morphological characters and metamorphosis	4	2	2
4	Leaves: Morphological characters and metamorphosis	4	2	2
5	Leaf histology	3	1	2
6	Introduction of bark morphological and histological characters of bark	4	2	2

7	Mid-term exam			
8	Introduction of bark morphological and histological characters of bark	4	2	2
9	Introduction of flower morphological and histological characters of flower	4	2	2
10	Introduction of flower morphological and histological characters of flower (cont.)	4	2	2
11	Introduction and morphology of different types of inflorescence	3	1	2
12	Seed types and seed germination morphological and histological characters of seeds	4	2	2
13	Seed types and seed germination morphological and histological characters of seeds	4	2	2
14	Introduction, classification and histology of fruits	2	2	Practical exam
15	Introduction, classification and histology of fruits (cont.)	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systemic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on General botany and medicinal plants (Department of Pharmacognosy)

Essential books (text books)

Trease and Evans, Pharmacognosy 14th edition, WB Saunders Company Ltd, 1998.

T.E.Wallis, Text Book of Pharmacognosy , fifth edition, J & A. Churchill Ltd, 1967

Recommended books

R. Darnley Gibbs. Chemotaxonomy of Flowering Plants. Vol III - MC Gill . Queen's University press. Moutral and London , 1974

Vivi Tackholm. Student's Flora of Egypt. Cairo University Cooperative Printing Company Beirut , 1974

B.P. Pandey, College Botany, volume II, S. Chand & Company LTD.,2003.

Websites

www.biomedcentral.com

www.medscape.com

<http://www.sciencedirect.com/>

<http://www.ncbi.nlm.nih.gov/>

7. Facilities required for teaching and learning

-Class rooms.

-Laboratory facilities (Microscopes, flames).

-Library.

- Data Show

-Computers.

-Internet.

Course coordinator:

Prof. Dr. Mona Elaser

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Medicinal plants

Course code: 1035

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction of herbs. Morphological and histological character of stem	a1,	Lectures	Written, practical and oral exams
Week # 2	Morphological and histological character of roots and rhizomes	a2,a5,b1,c2 ,d1	Lectures and practical training	Written, practical and oral exams
Week # 3	Introduction of leaves. Morphological character and metamorphosis	a1,b1,b2,c1 ,c2,d1	Lectures and practical training	Written, practical and oral exams
Week # 4	Leaves. Morphological character and metamorphosis	a2,b1,b2,c1 ,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Leaf histology	a2,b1,b2,c1 ,c2,d1,d2, d3	Lectures and practical training and Activity	Written, practical and oral exams
Week # 6	Introduction of bark morphological and histological characters of bark	a2,b1,b2,c1 ,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Introduction of bark morphological and histological characters of bark	a2,b1,b2,c1 ,c2,d1,d2, d3	Lectures and practical training Activity	Written, practical and oral exams
Week # 9	Introduction of flower,morphological and histological characters of flower	a4,b2,c1,c2 ,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 10	Introduction of flower,morphological and histological characters of flower (cont.)	a4,b1,b2,c1 ,c3,d3	Lectures and practical training	Written, practical and oral exams
Week # 11	Introduction and morphology of different types of inflorescence	a3,a4,a5,b1 ,b2,c2,c3,d 1, d2, 3,	Lectures and practical training Activity	Written, practical and oral exams
Week # 12	Seed types and seed germination morphological and histological characters of seeds	a2,a5,b1,b2 , d3	Lectures and practical training	Written, practical and oral exams
Week # 13	Seed types and seed germination morphological and histological characters of seeds	a2,a5,b2,b3 ,d3	Lectures and practical training	Written, practical and oral exams
Week # 14	Introduction, classification and histology of fruits	a2,a4,b3,d3	Lectures	Written and oral exams
Week # 15	Introduction, classification and histology of fruits (cont.)	a2,a4,b3,d1 , d2, d3	Lectures Activity	Written and oral exams

Course coordinator:

Assist. Prof. Dr. Mona Elaser

Head of department:

Prof. Dr. Ramadan Eldomany

**Kafrelsheikh University, Faculty of Pharmacy
Course Specifications**

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Biochemistry
Department supervising the course	
Academic Year / Level	Pre-pharmacy, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Biology	Code : 1247
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information**1. Overall aims of the course**

Upon successful completion of this course, the students should be able to understand:

- The fundamental aspects of living systems.
- The basic knowledge about biology, nature and function of different cells and organs.
- Outline the principles of cell biology and molecular genetics.
- Use the proper terms of cell biology, cell division, cell cycle and body fluids.
- Differentiate between mitotic and meiosis as well as atrophy and hyperplasia

2. Intended learning outcomes of the course (ILOs)**a- Knowledge and understanding:**

Upon successful completion of this course, the students should be able to:

- | |
|--|
| <p>a1. Identify the principles of cell biology including cell theory and different types of cells.</p> <p>a2. Define the basis of cell structure, membrane, cytoplasm and nucleus,</p> |
|--|

including functions of different cellular organelles.

a3. Demonstrate cellular macromolecules, carbohydrates, lipids and nucleic acid.

a4. Identify biological fluids, solutions, tonicity and their correlation with various disorders.

a5. Discuss cellular process such as cell cycle, apoptosis & Necrosis.

a6. Define stem cells and Homeostasis.

b- Intellectual skills

b1. Utilize learned information in differentiating between tonicity and isotonic solutions.

b2. Illustrate the functional and anatomical features of all types of cellular organelles.

b3. Categorize the role of each cellular organelle in cell growth and phases of proliferation and predict their role in cancer development.

b4. Predict the relation between apoptosis, cellular aging, and cancer & AIDS pathogenesis.

c- Professional and practical skills

c1. Use the proper terms of cell biology, cell division and cell cycle.

c2. Differentiate between different organelles of the cell and between different tissues.

c3. Analyze the effect of isotonicity on cell membrane integrity.

c4. Use effectively laboratory glass-wares and instruments used for identification of the different biomolecules.

c5. Analyze the obtained data and their significance.

d- General and transferable skills

d1. Demonstrate critical thinking in identification of different cellular organelles and roles of body fluids in health and disease.

d2. Interact in a teamwork spirit.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	- Cell theory - Animal cell - Plant cell	4	2	2
2	- Prokaryotic cell - Eukaryotic cell -Structure of cell membrane	4	2	2
3	- Cell organelles.	4	2	2
4	- Nucleus (Chromatin and chromosomes).	4	2	2
5	-Biological significance of Proteins. -Biological significance of Lipids.	4	2	2
6	- Biological significance of Carbohydrates. - Introduction to DNA -Biological fluids, solutions, tonicity	4	2	2
7	Mid-term exam			
8	Cell growth & Proliferation (Cell Cycle & Regulation of the Cell Cycle)	4	2	2
9	Protien transport, Vesicular Traffic – Exocytosis & Endocytosis	4	2	2
10	Apoptosis, Cancer, AIDS and organ transplant	4	2	2
11	Cell adhesion & Cell Motility	4	2	2
12	Membrane Function and Signal Transduction	4	2	2
13	Cell Signalling & Quram sensing	4	2	2
14	Stem Cells and Tissue	2	2	Practical exam
15	Homeostasis	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (discussion/ brain storming) (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighing or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references**Course notes**

Student book of Cell Biology approved by department

Essential books (text books)

Molecular Cell Biology (fourth edition); Harvey Lodish, Arnold Berk, S Lawrence Zipursky, Paul Matsudaira, David Baltimore, and James Darnell. New York: W. H. Freeman (2000).

Websites

<http://www.freescience.info/Biology.php>
www.pubmed.com & www.biomed.net

<http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookTOC.html>

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities including instruments and tools necessary for practical work e.g. glass wares, water baths, Flames, pH meters , electrophoretic apparatus, centrifuge, spectrophotometers, session rooms –Library.
- Data show
- Computers. –Internet.

Course coordinator:

Prof. Dr. Nabil mohie

Head of Department:

Prof. Dr. Ramadan Eldomany

Date: 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Biology**Course code: **1247**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	- Cell theory - Animal cell - Plant cell	a1, c1	Lectures and practical	Written, practical exam
Week # 2	- Prokaryotic cell - Eukaryotic cell - Structure of cell membrane	a1, a2, b2, c1, d2	Lectures and practical	Written, practical exam
Week # 3	- Cell organelles.	a2, b2, c2, d1, d2	Lectures and practical	Written, practical exam
Week # 4	- Nucleus (Chromatin and chromosomes).	a2, b2, c2, d1, d2	Lectures and practical	Written, practical exam
Week # 5	Biological significance of Proteins. Biological significance of Lipids.	a3, c4, c5, d2	Lectures, practical, brain storming and discussion	Written, practical exam
Week # 6	- Biological significance of Carbohydrates Introduction to DNA - Biological fluids, solutions, tonicity	a3, a4, b1, c4, c5, d1, d2	Lectures, practical, brain storming and discussion	Written, practical exam
Week # 7	Mid-term exam			
Week # 8	Cell growth & Proliferation (Cell Cycle & Regulation of the Cell Cycle)	a5, b3, c1, d1	Lectures and practical	Written, practical exam
Week # 9	Protein transport, Vesicular Traffic – Exocytosis & Endocytosis	a5, b3, c1, d1	Lectures and practical	Written, practical exam
Week # 10	Apoptosis, Cancer, AIDS and organ transplant	a5, b4, c1, d1	Lectures and practical	Written, practical exam
Week # 11	Cell adhesion & Cell Motility	a2, b2, b3, c1, d1	Lectures and practical	Written, practical exam
Week # 12	Membrane Function and Signal Transduction	a2, b2, b3, c1, d1	Lectures and practical	Written, practical exam
Week # 13	Cell Signalling & Quorum sensing	a2, b2, b3, c1, d1	Lectures and practical	Written, practical exam
Week # 14	Stem Cells and Tissue	a2, a6, b2, b3, c1, d1	Lectures	Written exam
Week # 15	Homeostasis	a2, a6, b2, b3, c1, d1	Lectures	Written exam

Course coordinator: Prof. Dr. Nabil Mohie**Head of department: Prof. Dr. Ramadan Eldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in Pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacology & Toxicology
Department supervising the course	
Academic Year / Level	Pre-pharmacy, first Semester
Date of specification approval	9/2016

A- Basic Information

Title :Biostatistics	Code :1067
Total contact Hours: 2hrs.	Lecture: 2 hrs.

B- Professional Information

- **Overall aims of the course**

Upon successful completion of this course, the students should be able to understand:

- | |
|---|
| <ul style="list-style-type: none"> - Decisions in the face of uncertainty. - Numerical data; design, obtain, present and describe. - Analysis of numerical data. |
|---|

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- | |
|---|
| <ul style="list-style-type: none"> a1. Remember the basic principles of biostatistics a2. Aware of the different basic principles of data presentation. a3. Learn the different statistical analysis of data. a4. Explain and describe the basic statistics, graphical and tabular presentation of data as well as determination of the data significance |
|---|

b- Intellectual skills

- | |
|---|
| <ul style="list-style-type: none"> b1. Utilize knowledge and critical understanding of essential facts, concepts, principles and theories relating to the subject areas identified under knowledge and understanding. b2. Recognize the significance of groups of data. b3. Assess the validity of results of different experiments. |
|---|

c-Professional and practical skills

- c1. Use effectively computer programs for calculation of basic statistics.
- c2. Use effectively library search, retrieval of information, carry out private study as well as analyze and interpret experimental results.
- c3. Perform data analyses in the form of graphs, figures or tables.
- c4. Assess the validity of experiments.

d- General and transferable skills

- d1. Retrieve information from a variety of sources, including libraries, databases and internet.
- d2. Work effectively as a part of team in different pharmaceutical fields.
- d3. Demonstrate essential skills pertinent to any domain including pharmaceutical sciences and pharmacy practice.

3. Contents

Week	Topic	Total contact hours	Lecture
1	Introduction	2	2
2	Presentation of data	2	2
3	Descriptive statistics	2	2
4	Descriptive statistics (cont.)	2	2
5	Descriptive statistics (cont.)	2	2
6	Descriptive statistics (cont.)	2	2
7	Mid-term exam		
8	Test of validity	2	2
9	Coefficient of variation	2	2
10	Confidence limit	2	2
11	Tests of significance	2	2
12	Tests of significance (cont.)	2	2
13	λ -2 test	2	2
14	Analysis of variance	2	2
15	Regression analysis and correlation coefficient	2	2

4. Teaching and learning methods

- a. Lectures ()
- b. Practical training / laboratory ()
- c. Seminar / Workshop ()
- d. Class Activity ()

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17

Weighting or assessments

Mid-Term Examination	40	%
Final-Term Examination	60	%
Total	100	%

6. List of references

Course notes

Notes on Biostatistics (Department of Pharm&Tox)

Essential books (text books)

Fundamentals of Biostatistics (2010). Bernard Rosner. 7th edition.
Cenage learning. USA

Recommended books

- Basic and clinical biostatistics (2004) .Beth Dawson Robert G, Trapp RobertT. 4th edition. McGraw-Hill Medical.
- Encyclopedia of Biostatistics (2010)Theodore Cotton, Peter Armitage.2nd edition. John Wiley and Sons, Inc.
- Introductory Biostatistics (2003).Chap T Len. Wiley-Interscience.

Websites

www.Statpages.org/javasta.htm

7. Facilities required for teaching and learning

- **Class room.**
- **Library.**
- **Data Show.**
- **Computers.**
- **Internet.**

Course coordinator:

Prof. Dr. Nageh El-Mahdy- Dr. Shady Allam

Head of Department:

Prof.Dr. Ramadan El. Domany

Date: 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Biostatistics**Course code: **1067**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction	a1, c2,d1	Lectures and practical training	Written, and practical exams
Week # 2	Presentation of data	a2,a4,b1,c3, d2	Lectures and practical training	Written, and practical exams
Week # 3	Descriptive statistics	a3,b1 ,c1,c2 ,d3	Lectures and practical training	Written, and practical exams
Week # 4	Descriptive statistics (cont.)	a3,b1,c1,c2,d1	Lectures and practical training	Written, and practical exams
Week # 5	Descriptive statistics (cont.)	a3,b1,c1,c2,d1	Lectures and practical training	Written, and practical exams
Week # 6	Descriptive statistics (cont.)	a3,b2,b3,c4 ,d3	Lectures and practical training	Written, and practical exams
Week # 7	Mid-term exam			
Week # 8	Test of validity	a3,b2,b3,c4,d2, d3	Lectures and practical training	Written, and practical exams
Week # 9	Coefficient of variation	a3 ,b3,c4,d1,d2	Lectures and practical training	Written, and practical exams
Week # 10	Confidence limit	a3,b2,b3,c4,d1	Lectures and practical training	Written, and practical exams
Week # 11	Tests of significance	a3,b2,b3,c4,d1, d2,d3	Lectures and practical training	Written, and practical exams
Week # 12	Tests of significance (cont.)	a3,b2,b3,c4,d1, d2,d3	Lectures and practical training	Written, and practical exams
Week # 13	λ -2 test	a3,b2,b3,c4,d1, d2,d3	Lectures and practical training	Written, and practical exams
Week # 14	Analysis of variance	a3,b2,b3,c4,d1, d2,d3	Lectures	Written exam
Week # 15	Regression analysis and correlation coefficient	a3,b2,b3,c4,d1, d2,d3	Lectures	Written exam

Course coordinator:

Prof. Dr. Nageh El-Mahdy Dr. Shady Allam

Head of Department:

Prof.Dr. Ramadan El. Domany

Date: 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Clinical Pharmacy
Department supervising the course	
Academic Year / Level	Pre-pharmacy, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmacy Orientation	Code : 1078
Total contact hours: 1 hr.	Lecture: 1 hr.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Issues related to pharmacy including the college departments, the classes they will study & the different degrees offered.
- Pharmacy as a profession & the different career opportunities after graduation and the role of the pharmacist in the health team & some services provided by the clinical pharmacist .

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the graduate should be able to:

- a1- Demonstrate the career options for the pharmacist.
- a2- Understand different the pharmaceutical dosage forms.
- a3- Describ the different pharmaceutical organization.

b- Intellectual skills

- b1-Utilize different roles of pharmaceutical organization.

c- Professional and practical skills

- c1- Assess the outcome of therapy in relation to cost.
 c2- Use effectively drug nomenclature principles for different drugs.
 c3- Examine the shape and characteristics of different drug dosage Forms.
 c4- Use pharmacist-patient relationship in keeping good patient Compliance to drug regimen.

d- General and transferable skills

- d1- Retrieve different sources of drug information.
 d2- Construct the best plan to achieve the most benefit from the Use of drugs and the least cost using pharmacoeconomic principle.
 d3- Develop ways to collect drug information.
 d4- Demonstrate creativity and time management skills.
 d5- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Genral introductions/definitions	1	1	
2	pharmacy education, programs, departments	1	1	
3	Drug definition, sources and discovery	1	1	
4	dosage forms of Drugs	1	1	
5	Pharmacy role in health care	1	1	
6	The pharmacy Profession and ethics	1	1	
7	Mid-term exam			
8	pharmacist professional relationship.	1	1	
9	pharmacist professional relationship (cont.)	1	1	
10	Pharmacy Careers	1	1	
11	Pharmacy Careers (cont.)	1	1	
12	Clinical pharmacy: the future of pharmacy	1	1	
13	Clinical pharmacy: the future of pharmacy (cont.)	1	1	
14	Pharmacy organizations.	1	1	
15	Pharmacy organizations (cont.)	1	1	

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training/laboratory ()
 c. Seminar/workshop ()
 d. Class activity (discussion, brain storm, case study) (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Oral exam	To assess	The ability of students in expressing presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17
Assessment 3	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on pharmacy orientation prepared by the department staff members.

Essential books (text books)

Drug information: A guide for Pharmacists(2006). Malone PM (Ed).
Appleton and Lange. 3rd Edition.

Recommended books

Websites

www.Statpages.org/javasta.htm

7. Facilities required for teaching and learning

- | | |
|--------------------------------|-------------------|
| -Class rooms. | |
| -Laboratory facilities. | -Library. |
| - Data show. | |
| -Computers. | -Internet. |

Course coordinator:**Dr. khaled sobhy****Head of Department: Dr/ Ramadan El-Domany****Date : 9/2016**

Course plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **pharmacy oreintaion**Course code: **1078**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Genral introductions/definitions	a1,a2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 2	pharmacy education, programs, departments	a2, c4	Lectures, discussion and brain storm	Written and oral exams
Week # 3	Drug definition, sources and discovery	a2,b1,c1,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 4	dosage forms of Drugs	a1,a2,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 5	Pharmacy role in health care	a2,a3,c2,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 6	The pharmacy Profession and ethics	a2,a3,c3	Lectures, discussion and brain storm	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	pharmacist professional relationship.	a1 ,b1,c4,d4,d5	Lectures, discussion and brain storm	Written and oral exams
Week # 9	pharmacist professional relationship (cont.)	a1,b1,c4,d4,d5	Lectures, discussion and brain storm	Written and oral exams
Week # 10	Pharmacy Careers	a1,a2,d1,d4	Lectures, discussion and brain storm	Written and oral exams
Week # 11	Pharmacy Careers (cont.)	a1,a2,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 12	Clinical pharmacy: the future of pharmacy	a1,a2,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 13	Clinical pharmacy: the future of pharmacy (cont.)	a1,a2,d1,d4,d5	Lectures, discussion and brain storm	Written and oral exams
Week # 14	Pharmacy organizations.	a1,a2,d1,d4,d5	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Pharmacy organizations (cont.)	a1,a2,d1,d4,d5	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr. khaled sobhy**Head of Department: **Dr/ Ramadan El-Domany**Date : **9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Minor
Department offering the course	English Dept., Faculty of Arts
Department supervising the course	Pharmacognosy
Academic Year / Level	Pre-pharmacy, first semester
Date of specification approval	9/2016

A- Basic Information

Title : English	Code : 1255
Total contact hours: 2 hrs.	Lecture: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Various scientific and medical reading comprehension topics.
- Common terms in the fields of science, medicine and also enables students to write compositions or paragraphs on topics related to those fields, thus enhancing their professional self-expression abilities.
- Approach English grammar with special emphasis on basic word-building and sentence-building rules. Basic English idioms are taught with the view of improving students competence especially with regard to oral self-expression.

2. Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

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

- a1- Reading skills.
- a2- Listening skills.
- a3- Speaking skills.

a4- Professional writing skills.

b- Intellectual skills

b1- Utilize the ability to think in English.

b2- Utilize the ability to construct correct sentences.

b3- Utilize the ability to communicate in English.

c- Professional and practical skills

c1- use effectively pharmaceutical information in English.

c2- Use effectively professional self-expression in English.

c3- Use effectively Professional exchange of information in English.

d- General and transferable skills

d1- Communicate effectively in order to participate in pharmaceutical and medical events worldwide.

d2- Develop skills needed to avoid the health risks resulting from possible mistranslation of pharmaceutical leaflets.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Reading Comprehension Passages	2	2	
2	Reading Comprehension Passages (cont.)	2	2	
3	Reading Comprehension Passages (cont.)	2	2	
4	Reading Comprehension Passages(cont.)	2	2	
5	Reading Comprehension Passages (cont.)	2	2	
6	Reading	2	2	

	Comprehension Passages (cont.)			
7	Mid-term exam			
8	English Grammar	2	2	
9	English Grammar(cont.)	2	2	
10	English Grammar(cont.)	2	2	
11	English Grammar (cont.)	2	2	
12	English Idioms	2	2	
13	English Idioms(cont.)	2	2	
14	English Idioms(cont.)	2	2	
15	Audio-visual Medical Dialogues in English	2	2	

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory ()
- c. Seminar / Workshop ()
- d. Class Activity ()

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Written final exam	To assess	The overall outcomes.
Oral exam	To assess	The ability of students in expressing presenting their knowledge clearly and in systematic approach.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	
Total	100	%

6. List of references

Course notes

English for Prepharmacy Students, an anthology comprising medical and pharmaceutical reading comprehension passages with comprehension questions, basic grammatical rules with graded exercises, and common English idioms.

Essential books (text books)

Recommended books

- University English Grammar, A Concise Dictionary of English Idioms
-Oxford Advanced Learners' Dictionary.

Websites

7. Facilities required for teaching and learning

-Class rooms.

-Laboratory facilities (Audio-Visual Laboratory).

-Library.

- Projectors (Overhead, video projector)

-Computers.

-Internet.

Course coordinator:

Dr: Amir Hamdy

Head of Department:

Dr/ Ramadan El-Domany

Date : 9/2016

Course plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **English**Course code: **1255**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Reading Comprehension Passages	a1,b1,c1	Lectures	Written & oral exams
Week # 2	Reading Comprehension Passages (cont.)	a1,b1,c1	Lectures	Written & oral exams
Week # 3	Reading Comprehension Passages (cont.)	a2,b1,b2,c1,c2,d1	Lectures	Written & oral exams
Week # 4	Reading Comprehension Passages(cont.)	a1,b2,b3,c1,d1	Lectures	Written & oral exams
Week # 5	Reading Comprehension Passages (cont.)	a2,b2,b3,c1,d1	Lectures	Written & oral exams
Week # 6	Reading Comprehension Passages (cont.)	a2, b2,b3,c1,d1	Lectures	Written & oral exams
Week # 7	Mid-term exam			
Week # 8	English Grammar	a4,b2,b3,c2,d1,d2	Lectures	Written & oral exams
Week # 9	English Grammar(cont.)	a4,b2,b3,c2,d1,d2	Lectures	Written & oral exams
Week # 10	English Grammar(cont.)	a4,b2,b3,c2,d1,d2	Lectures	Written & oral exams
Week # 11	English Grammar (cont.)	a4,b1,b2,b3,c2,d2	Lectures	Written & oral exams
Week # 12	English Idioms	a1,a2,b1,b2,b3,c2,d1,d2	Lectures	Written & oral exams
Week # 13	English Idioms(cont.)	a2,a3,b1,b2,b3,c3,d1	Lectures	Written & oral exams
Week # 14	English Idioms(cont.)	a2,a3,b1,b2,b3,c3,d1,d2	Lectures	Written & oral exams
Week # 15	Audio-visual Medical Dialogues in English	a2,a3,b1,b3,c3,d1,d2	Lectures	Written & oral exams

Course coordinator: **Dr: Amir Hamdy**Head of department: **Dr/ Ramadan El-Domany**Date : **9/2016**

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Pre-pharmacy, Second Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Pharmaceutical chemistry
Department supervising the course	
Academic Year / Level	Pre-pharmacy, second Semester
Date of specification approval	9/2016

A- Basic Information

Title : Organic Chemistry	Code : 1121
Total contact hours: 6 hrs.	Lecture: 4 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The chemistry of alcohols, alkenes, alkynes, carbonyl compounds and aromatic compounds.
- The mechanisms of different organic reactions.
- IUPAC rules for nomenclature of different organic compounds.
- Various organic compounds.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

Upon successful completion of this course, the students should be able to:

- a1. Repeat nomenclature of organic compounds.
- a2. Explain mechanisms of different reactions.
- a3. Demonstrate relationship between the structure and physical and chemical properties
- a4. Learn the importance of organic chemistry in biology and health, environment and economy.
- a5. Learn the principles of the chemistry of carbonyl compounds.
- a6. Record the chemistry of aromatic compounds.

b- Intellectual skills

- b1. Select a successful retrosynthetic analysis for solving problems of multi-step synthesis.
- b2. Recognize mechanisms for unknown reactions.
- b3. Utilize the principles of stereochemistry to explain the relative stabilities of organic compounds and the course of chemical reactions.
- b4. Recognize appropriate methods for the synthesis of carbonyl compounds.

c- Professional and practical skills

- c1. Demonstrate chemical reagents.
- c2. Examine laboratory equipments.
- c3. Use safety measures in laboratory work.
- c4. Assess qualitatively different organic substances.

d- General and transferable skills

- d1. Work effeciently in a team.
- d2. Design ethical and legal chemistry labs safety guidelines.
- d3. Implement writing skills through lab reports.
- d4. Arrange time and put up plans.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction of Alcohols Alkenes	6	4	2
2	Alcohols Alkenes	6	4	2
3	Alkenes (cont.) Aromaticity	6	4	2
4	Electrophilic substitution reaction alkynes	6	4	2
5	Electrophilic substitution reaction conjugated dienes	6	4	2
6	Aryl halides ethers and epoxides	6	4	2
7	Mid-term exam			
8	Aldehydes and Ketones	6	4	2

	Carboxylic acids			
9	Aldehydes and Ketones (cont.) Carboxylic acids (cont.)	6	4	2
10	Aldehydes and Ketones (cont.) Carboxylic acids (cont.)	6	4	2
11	Aldehydes and Ketones (cont.) Carboxylic acids (cont.)	6	4	2
12	Aldehydes and Ketones (cont.) Carboxylic acid derivatives	6	4	2
13	Aldehydes and Ketones (cont.) Carboxylic acids derivatives (cont.)	6	4	2
14	β -dicarbonyl compounds Carboxylic acids derivatives (cont.)	4	4	Practical exam
15	β -dicarbonyl compounds (cont.) Carboxylic acids derivatives (cont.)	4	4	Practical exam

4. Teaching and learning methods

- a. Lectures ()
 b. Practical training / laboratory ()
 c. Seminar / Workshop ()
 d. Class Activity ()

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.

Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-tem exam	Week	7
Assessment 2	Practical exam	Week	14, 15
Assessment 3	Final exam	Week	16, 17
Assessment 4	Oral	Week	16, 17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on Organic chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry, Faculty of Pharmacy.
- Lab Manual of Organic chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.

Essential books (text books)

- 1) Volhardt K. P. C.; Schore, N. A. in organic chemistry (structure and function), 6th edition (2010) W. H. Freeman and company. NY.
- 2) McMurry, J. in organic chemistry, 8th ed. (2011), Brooks/Cole, London.
- 3) Solmon's T. W. G. in Organic Chemistry 10th ed. (2010), John Wiley and sons, Inc, NY.
- 4) I. L. Finar Organic Chemistry Volume 1: The Fundamental Principles 5th edition, 1998, Longman Publishing Group.
- 5) I. L. Finar Organic Chemistry Volume 2: Stereochemistry and the chemistry of natural products 5th edition, 1998, Longman Publishing Group.
- 6) Bruice, P. Y. in organic chemistry, 6th edition (2010), Pearson education int. NY.

Recommended books

- 1) Solmon's T. W. G. in Organic Chemistry 10th ed. (2010), John Wiley and sons, Inc, NY.
- 2) I. L. Finar Organic Chemistry Volume 1: The Fundamental Principles 5th edition, 1998, Longman Publishing Group.
- 3) I. L. Finar Organic Chemistry Volume 2: Stereochemistry and the chemistry of natural products 5th edition, 1998, Longman Publishing Group

Web sites

<http://www.sciencedirect.com>, www.4shared.com

7. Facilities required for teaching and learning

- Class rooms.**
- Laboratory facilities (hot plates, chemical hood, water bath)**
- Library.**
- Data Show**
- Computers.**
- Internet.**

Course coordinator:

Dr. Wagdy El-dehna

Head of Department:

Prof.Dr. Ramadan El-domany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Organic chemistry**Course code: **1121**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction of Alcohols Alkenes	a1,a2,a3.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 2	Alcohols Alkenes	a2,a4,b1,b2,b3,c1,c2,c3,d1,d2.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Alkenes (cont.) Aromaticity	a1,a2,a6,b2,b3,c3,c4,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Electrophilic substitution reaction alkynes	a1,a2,a6,b2,b3,b4,c2,c3,c4,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 5	Electrophilic substitution reaction conjugated dienes	a1,a2,a6,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Aryl halides ethers and epoxides	a1,a2,a6,b1,b2,b4,c1,c2,c3,c4,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Aldehydes and Ketones Carboxylic acids	a1,a2,a5,b1,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 9	Aldehydes and Ketones (cont.) Carboxylic acids (cont.)	a1,a2,a3,a5,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 10	Aldehydes and Ketones (cont.) Carboxylic acids (cont.)	a2,a3,a5,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 11	Aldehydes and Ketones (cont.) Carboxylic acids (cont.)	a2,a3,a5,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 12	Aldehydes and Ketones (cont.) Carboxylic acid derivatives	a2,a3,a5,b1,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 13	Aldehydes and Ketones (cont.) Carboxylic acids derivatives (cont.)	a2,a3,a5,b1,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 14	β -dicarbonyl compounds Carboxylic acids derivatives (cont.)	a1,a2,a3,a5,b1,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4	Lectures, discussion and brain storming	Written and oral exams
Week # 15	β -dicarbonyl compounds (cont.) Carboxylic acids derivatives (cont.)	a2,a3,a4,b1,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4.	Lectures, discussion and brain storming	Written and oral exams

Course coordinator: Dr. Wagdy El-dehna

Head of department: Prof.Dr. Ramadan El-domany

Date : 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical analytical chemistry
Department supervising the course	
Academic Year / Level	Pre-Pharmacy, second semester
Date of specification approval	9/2016

A- Basic Information

Title: Analytical Chemistry	Code : 1112
Total contact hours : 4 hours	Lecture :2 hours
	Practical :2 hours

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Quantitative analysis of different chemical compounds such as acids and bases.
- Various quantitative analytical techniques including titration reactions (in aqueous and non-aqueous media), precipitation reactions, complex and redox titration.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the student should be able to:-

- a1- Identify Fundamentals of analytical chemistry: ionization theory, concepts of acids and bases.
- a2-list Classical methods of analysis (titrimetry) : types of reaction in titrimetry.
- a3-Identify Acid base titrations in aqueous and non aqueous media.
- a4- State Precipitate forming titration(Mohr, Fajans and Volhard methods).
- a5-Identify Complexometric titration: chelating agents, different types of titration with EDTA and metallochrome indicators.
- a6-Define Redox titration.

b- Intellectual skills

- b1- Assess mass balance and charge balance for different equilibria.
- b2- Calculate different physical constants (pK_w, pK_a, pK_b...etc) to solve analytical problems.
- b3- Interpret equilibrium problems e.g. calculation of pH of strong and weak

acids, strong and weak bases, different salts, etc.

c- Professional and practical skills

c1-Use effectively the suitable titrimetric method for analysis of different mixtures.
c2- Utilize safely chemicals and volumetric equipments; pipettes, burettes...etc.
c3- Use the suitable indicator for the titration.

d- General and transferable skills

d1- Work in team and apply time management principles effectively.
d2- Demonstrate problem solving and decision-making abilities.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	- Introduction - Types of analytical techniques. - Ionization theory - Concepts of acids & bases pH, pOH, pK _w , etc	4	2	2
2	- Titrimetry: Standard - Solutions and methods of expressing concentration. - Types of titrimetric reactions calculation of pH of different species. - Buffer systems and Henderson-Hasselbalch Equation.	4	2	2
3	- Acid-Base titration in Aqueous medium - Acid –Base indicators - Acid-Base titration curves	4	2	2
4	Application of acid –base titration in aqueous medium	4	2	2
5	- Acid-Base titration in Non-aqueous media - Types of non-aqueous solvents - Titration of weak acid & base - Indicators to detect end points	4	2	2
6	- Application of Acid-Base titration in non aqueous media	4	2	2
7	Mid-term exam			
8	- Precipitation titrations: - Factors affecting solubility - Solubility product constant. - Titration curves of precipitation titration	4	2	2
9	- Argentometric methods. - Mohr, Fajan & Volhard methods	4	2	2
10	- Complex-Formation titration - Classification of chelating agents	4	2	2

11	- Factors affecting the stability of complex ions. - EDTA titrations - Cyanometric titrations	4	2	2
12	- Redox titration - Equivalency in Redox titrations - Nernst equation - Redox indicators - Standard oxidation potential	4	2	2
13	Redox titration curves Permanganate titrations	4	2	2
14	- Potassium dichromate as oxidizing agent - Cerimetric titration	2	2	Practical exam
15	Iodine- iodide system	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course note

-Notes on pharmaceutical analytical chemistry for pre-pharmacy students, prepared

and distributed by Dept. of Pharmaceutical Analytical Chemistry.

- Lab manual of pharmaceutical analytical chemistry for pre-pharmacy students, prepared and distributed by Dept. of Pharmaceutical Analytical Chemistry.

Essential books (text books)

1- R. A. Day, Jr and A. L. Underwood, "quantitative analysis", 6th edition, Prentice-Hall International Inc. (1991).

2- D. A. Skoog, D. M. West, F. J. Holler and S. R. Crouch, "fundamentals of analytical chemistry", eighth edition Brooks/Cole-Thomson Learning, Inc. (2004).

3- Gary D. Christian, "analytical chemistry", John Wiley & Sons, Inc. (1994).

Recommended books

1- Vogel's "Quantitative Inorganic Analysis", 7th edition, Longman Singapore (Pte) Ltd (1996).

2- D. A. Skoog, D. M. West, F. J. Holler and S. R. Crouch, "fundamentals of analytical chemistry", eighth edition Brooks/Cole-Thomson Learning, Inc. (2004).

Websites

<http://ull.chemistry.uakron.edu/analytical/>

7. Facilities required for teaching and learning

-Class rooms.

-Laboratory facilities (chemicals as reagents and indicators for proper lab work and analytical tools as burettes, pipettes and flasks)

-Library

-Data show

-Internet

-Computers

Course coordinator:

Prof.Dr. Fathalla Belal

Dr. Ahmed Faried

Head of Department:

Prof.Dr. Ramadan Eldomany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title:- **Analytical chemistry** Course code: **1112**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	- Introduction - Types of analytical techniques. - Ionization theory - Concepts of acids & bases _ pH, pOH, pK _w , etc	a1,b2	Lecture	Written and oral exams
Week # 2	- Titrimetry: Standard - Solutions and methods of expressing concentration. - Types of titrimetric reactions calculation of pH of different species. - Buffer systems and Henderson-Hasselbalch Equation.	a1,a2,b1,b2,b3,c1	Lecture , practical	Written oral exams
Week # 3	- Acid-Base titration in Aqueous medium - Acid –Base indicators - Acid-Base titration curves	a3,b1,b2,b3,c1,c2,c3,d1,d2	Lecture and practical training	Written, practical and oral exams
Week # 4	Application of acid –base titration in aqueous medium	a3,b2,b3,c1,c2,c3,d1,d2	Lectures ,practical training, brain storming	Written, practical and oral exams
Week # 5	- Acid-Base titration in Non-aqueous media - Types of non-aqueous solvents - Titration of weak acid & base - Indicators to detect end points	a3,b1,b2,b3,c1,c2,c3,d1,d2	Lectures ,practical training, brain storming	Written, practical and oral exams
Week # 6	Application of Acid-Base titration in non aqueous media	a3,b2,b3,c1,c2,c3,d1,d2	Lectures ,practical training, brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	- Precipitation titrations: - Factors affecting solubility - Solubility product constant. -Titration curves of precipitation titration	a4,b2,b3,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 9	- Argentometric methods. -Mohr, Fajan & Volhard methods	a4,b2,b3,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 10	- Complex-Formation titration -Classification of chelating agents	a5,b1,b2,b3,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 11	- Factors affecting the stability of complex ions. - EDTA titrations - Cyanometric titrations	a5,b1,b2,b3,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 12	- Redox titration - Equivalency in Redox titrations - Nernst equation - Redox indicators-- Standard oxidation potential	a6,b1,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Redox titration curves Permanganate titrations	a6,b1,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 14	- Potassium dichromate as oxidizing agent - Cerimetric titration	a6,b1,c1	Lecture	Practical exam
Week # 15	Iodine- iodide system	a6,b1,c1,c3	Lecture	Practical exam

Course coordinator:

Prof.Dr. Fathalla Belal- Dr. Ahmed Faried

Head of Department:

Prof.Dr. Ramadan Eldomany

Date : 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacognosy
Department supervising the course	
Academic Year / Level	Pre-pharmacy, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Medicinal plants	Code : 1135
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- the background information about crude drugs.
- Practical approach to the cultivation, collection and preparation of medicinal plants, plant cell contents, surgical dressing from natural sources.
- The taxonomy of medicinal plants and medicinal plants families emphasizing on their active constituents, uses and origin.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Describe the origin and preparation of crude drugs.
- a2- Report surces of drug deterioration.
- a3- Identify adulteration of medicinal plants.
- a4- Define the cell contents and powders of natural origin.
- a5- List different parts of the flower and whole inflorescence.

b- Intellectual skills

- b1- Illustrate how to prepare the drugs for commercial uses.
- b2- Detect the adulteration in the crude drugs.
- b3- Recognize the active constituents and uses of different plants belonging to different classes.

c- Professional and practical skills

- c1- Demonstrate examples for different plants according to their taxonomical characters.
- c2- Examine different plant elements using the microscope.
- c3- Sketch different parts of medicinal plant.
- c4- Analyze independently and in team.

d- General and transferable skills

- d1 - Retrieve information and perform library search.
- d2- Work effectively in private studies, including direct study on specific topics and independent study from textbooks.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction, preparation of crude drugs for commercial uses	4	2	2
2	Introduction, preparation of crude drugs for commercial uses (cont.)	4	2	2
3	Cell contents	4	2	2
4	Powders of natural origin	4	2	2
5	Powders of natural origin (cont.)	4	2	2
6	Plant classification: Thallophytae Bryophytae, Pteridophytae	4	2	2
7	Mid-term exam			
8	Gymnospermae	4	2	2
9	Angiospermae: Monocotyledons	4	2	2
10	Dicotyledons	4	2	2
11	Dicotyledons (cont.)	4	2	2
12	Dicotyledons (cont.)	4	2	2
13	Dicotyledons (cont.)	4	2	2
14	Dicotyledons (cont.)	2	2	Practical exam
15	Revision	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on medicinal plants Prepared in the form of a book authorized by the department

Essential books (text books)

Trease and Evans, Pharmacognosy 14th edition, WB Saunders Company Ltd, 1998.
 T.E.Wallis, Text Book of Pharmacognosy , fifth edition, J & A. Churchill Ltd, 1967

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Medicinal plants

Course code: 1135

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction, preparation of crude drugs for commercial uses	a1	Lectures	Written and oral exams
Week # 2	Introduction, preparation of crude drugs for commercial uses	a2,a3,b1,c1, d1	Lectures and practical training	Written, practical and oral exams
Week # 3	Cell contents	a4,b1,b2,c1, d1,d2	Lectures and practical training Activity	Written, practical and oral exams
Week # 4	Powders of natural origin	a4,b1,b2,c1, c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Powders of natural origin (cont.)	a4,b1,b2,c1, c2,d1,d2	Lectures and practical training, class activity	Written, practical and oral exams
Week # 6	Plant classification: Thallophytae, Bryophytae, Pteridophytae	a5,b1,b2,c1, c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Gymnospermae	a5,b2,b3,c1, c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 9	Angiospermae: Monocotyledons	a5,b3,c1,c2, d1	Lectures and practical training	Written, practical and oral exams
Week # 10	Dicotyledons	a5,b3,c1,c2, d1,d2	Lectures and practical training, class activity	Written, practical and oral exams
Week # 11	Dicotyledons (cont.)	a5,b3,c1,c3, d2	Lectures and practical training	Written, practical and oral exams
Week # 12	Dicotyledons (cont.)	a5,b3,c3,c4, d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Dicotyledons (cont.)	a5,b3,c3,c4, d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Dicotyledons (cont.)	a5,b3,c3,c4, d1,d2	Lectures	Written and oral exams
Week # 15	Revision	a1,a2,a3,a4, a5,b1,b2,b3, c3,c4,d1,d2	Lectures	Written and oral exams

Course coordinator: Prof. Dr. Saleh Elsharkawy

Head of department: Prof. Dr. Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

programme on which the course is given	BSc in Pharmacy
Major or minor element of programme	Major
Department offering the course	Anatomy dep., Faculty of Medicine
Department supervising the course	Pharmacology
Academic Year / Level	Pre-pharmacy, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Anatomy	Code : 1367
Total contact hours:4 hrs	Lecture :2 hrs
	Practical :2 hrs

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Fundamentals of anatomy of human system including skin, skeletal system, respiratory system, cardiovascular system, lymphatics, digestive system, genital system and central nervous system.
- Different organs of the body.
- Efficiently handling of anatomical models.

2. Intended learning outcomes of the course (ILOs)

Knowledge and understanding:

On successful completion of the course, the graduate should be able to:

- a1. Explain fundamental aspects of anatomy of different organs of the body.
- a2. Demonstrate anatomical difference between organs.
- a3. Explain normal and abnormal body function.

b- Intellectual skills

- b1. Demonstrate complete differentiation of the anatomy of body organs studied.
- b2- Utilize different anatomical terminology.

c- Professional and practical skills

- c1. Demonstrate differentiation between the anatomy of body organs studied.
- c2. Use effectively the common anatomical models used.
- c3. Use library search, information, private study as well as analyze experimental results.

d- General and transferable skills

- d1. Communicate actively with his colleagues as well as the employees and staff members.
- d2. Retrieve information from variety of sources.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction & anatomical terminology	4	2	2
2	Anatomy of the skin & muscular system	4	2	2
3	Anatomy of the skin & muscular system (cont.)	4	2	2
4	Joints	4	2	2
5	Respiratory system	4	2	2
6	Respiratory system (cont.)	4	2	2
7	Mid- term exam			
8	Cardiovascular system	4	2	2
9	Cardiovascular system (cont.)	4	2	2
10	Lymphatic system	4	2	2
11	Digestive system	4	2	2
12	Urinary system	4	2	2
13	Male and female genital system	4	2	2
14	Endocrine system	2	2	Practical exam
15	Central nervous system	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop ()
 d. Class Activity (✓)

5. Student assessment methods

Written midterm exam	To assess	the ability of students to follow-up the course subjects.
Written final exam	To assess	the overall outcomes.
Oral exam	To assess	the ability of students in expressing and presenting their knowledge clearly and in systemic approach.
Practical exam	To assess	The gained experience in laboratory methods and techniques.

Assessment schedule

Written midterm exam	Week	7
Practical exam	Week	14,15
Oral exam	Week	16,17
Final exam	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes of General Anatomy, prepared and distributed by Dept. of Anatomy, faculty of Medicine, Kafrelsheikh University.

Lab manual of General Anatomy, prepared and distributed by Dept. of Anatomy, faculty of Medicine, Kafrelsheikh University.

Essential books (text books)

- Gray's Anatomy of the Human Body (2000). 20th edition ,Gray

Henry. Philadelphia: Lea & Febiger, New York.

Recommended books

-Atlas of Human anatomy (Carl Ernest Bock. Translated by Ronald A. Bergman and Adel K. Afifi.). www.anatomyatlases.org.

- Atlas of Human Anatomy in cross sections (Ronald A. Bergman, Adel K. Afifi, Jean J. Jew, Paul C. Reimann). www.anatomyatlases.org

Websites

<http://www.innerbody.com/htm/body.html>

<http://www.nlm.nih.gov/medlineplus/anatomy.html>

<http://www.kumc.edu/instruction/medicine/anatomy/histoweb/>

7. Facilities required for teaching and learning

-Class rooms

-library

-Computer

-internet

-Projectors (overhead, video projector)

-Laboratory facilities (human parts). The practical part of the course includes identification of the anatomy of several parts of human body

Course coordinator:

Dr. Manal Al Baramawy

Head of Department:

Prof. Dr. Ramadan Eldomany

Date: / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Anatomy

Course code: 1367

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction & anatomical terminology	a1,b2,c1	Lectures and practical training	Written, practical and oral exams
Week # 2	Anatomy of the skin & muscular system	a1,a2, b1,c1	Lectures and practical training	Written, practical and oral exams
Week # 3	Anatomy of the skin & muscular system (cont.)	a2,a3,b1,b2,c1,d1	Lectures and practical training	Written, practical and oral exams
Week # 4	joints	a3, b2,c1,c2,d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Respiratory system	a2, b1,b2, c2,d1	Lectures and practical training and class activity	Written, practical and oral exams
Week # 6	Respiratory system (cont.)	a3,b1,b2,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid- term exam			
Week # 8	Cardiovascular system	a3,b1,b2,c1,c2,d2	Lectures and practical training and class activity	Written, practical and oral exams
Week # 9	Cardiovascular system (cont.)	a2,a3,b1,b2,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 10	Lymphatic system	a3,b1,b2,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 11	Digestive system	a3,b1,b2,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 12	Urinary system	a3,b1,b2,c3,d1,d2	Lectures and practical training and class activity	Written, practical and oral exams
Week # 13	Male and female genital system	a3,b1,b2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Endocrine system	a3,b1,b2,c3,d1,d2	Lectures	Written and oral exams
Week # 15	Central nervous system	a3,b1,b2,c3,d1,d2	Lectures	Written and oral exams

Course coordinator: Prof.Dr. Dr. Manal Al Baramawy

Head of department: Prof. Dr. Ramadan Eldomany

Date: 9/2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Minor
Department offering the course	English dep., Faculty of Arts
Department supervising the course	Pharmacognosy
Academic Year / Level	Pre-pharmacy, second semester
Date of specification approval	9/2016

A- Basic Information

Title : English language	Code : 1355
Credit Hours: 2 hrs.	Lecture: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Various scientific and medical reading comprehension topics.
- Common terms in the fields of science, medicine and also enables students to write compositions or paragraphs on topics related to those fields, thus enhancing their professional self-expression abilities.
- Approach English grammar with special emphasis on basic word-building and sentence-building rules. Basic English idioms are taught with the view of improving students competence especially with regard to oral self-expression.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

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

- a1- Reading skills.
- a2- Listening skills.
- a3- Speaking skills.
- a4- Professional writing skills.

b- Intellectual skills

- b1- Utilize the ability to think in English.

b2- Utilize the ability to construct correct sentences.

b3- Utilize the ability to communicate in English.

c- Professional and practical skills

c1- Assess pharmaceutical information in English.

c2- Use professional self-expression in English.

c3- Use Professional exchange of information in English.

d- General and transferable skills

d1- Communicate effectively in order to participate in pharmaceutical and medical events worldwide.

d2- Develop skills needed to avoid the health risks resulting from possible mistranslation of pharmaceutical leaflets.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Reading Comprehension Passages	2	2	
2	Reading Comprehension Passages (cont.)	2	2	
3	Reading Comprehension Passages (cont.)	2	2	
4	Reading Comprehension Passages (cont.)	2	2	
5	Reading Comprehension Passages (cont.)	2	2	
6	Reading Comprehension Passages (cont.)	2	2	
7	Mid-term exam			
8	English Grammar	2	2	
9	English Grammar (cont.)	2	2	
10	English Grammar (cont.)	2	2	
11	English Grammar (cont.)	2	2	
12	English Idioms	2	2	
13	English Idioms (cont.)	2	2	
14	English Idioms (cont.)	2	2	
15	Audio-visual Medical Dialogues in English	2	2	

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory ()
 c. Seminar / Workshop ()
 d. Class Activity ()

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

English for Prepharmacy Students, an anthology comprising medical and pharmaceutical reading comprehension passages with comprehension questions, basic grammatical rules with graded exercises, and common English idioms

Essential books (text books)

Recommended books

- University English Grammar, A Concise Dictionary of English Idioms
- Oxford Advanced Learners' Dictionary

Websites

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities (Audio-Visual Laboratory).
- Library.

- Projectors (Overhead, video projector)

-Computers.

-Internet.

Course coordinator:

Dr. Amir Hamdy

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **English**Course code: **1355**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Reading Comprehension Passages	a1,b1,c1	Lectures	Written and oral exams
Week # 2	Reading Comprehension Passages (cont.)	a1,b1,c1	Lectures	Written and oral exams
Week # 3	Reading Comprehension Passages (cont.)	a2,b1,b2,c1,c2,d1	Lectures	Written and oral exams
Week # 4	Reading Comprehension Passages (cont.)	a1,b2,b3,c1,d1	Lectures	Written and oral exams
Week # 5	Reading Comprehension Passages (cont.)	a2,b2,b3,c1,d1	Lectures	Written and oral exams
Week # 6	Reading Comprehension Passages (cont.)	a2, b2,b3,c1,d1	Lectures	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	English Grammar	a4,b2,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 9	English Grammar (cont.)	a4,b2,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 10	English Grammar (cont.)	a4,b2,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 11	English Grammar (cont.)	a4,b1,b2,b3,c2,d2	Lectures	Written and oral exams
Week # 12	English Idioms	a1,a2,b1,b2,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 13	English Idioms (cont.)	a2,a3,b1,b2,b3,c3,d1	Lectures	Written and oral exams
Week # 14	English Idioms (cont.)	a2,a3,b1,b2,b3,c3,d1,d2	Lectures	Written and oral exams
Week # 15	Audio-visual Medical Dialogues in English	a2,a3,b1,b3,c3,d1,d2	Lectures	Written and oral exams

Course coordinator:

Dr. Amir Hamdy

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : / 9 /2016

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

First year, First Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Pharmaceutical Chemistry
Department supervising the course	
Academic Year / Level	First year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Organic Chemistry	Code : 2011
Total contact hours: 6 hrs.	Lecture: 4 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The chemistry of amines, phenols, nitric compounds, heterocyclic compounds, carbohydrates and biomolecules.
- The mechanisms of different organic reactions.
- IUPAC rules for nomenclature of different organic compounds.
- Practically identify various organic compounds

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. Learn the chemistry of phenols, amines, nitro compounds and carbohydrates.
- a2. Explain the mechanisms of different organic reactions.
- a3. Demonstrate correlation between the structure and physical and chemical properties.
- a4. List the importance of organic chemistry in biology, health, environment and economy.
- a5. Learn the chemistry of heterocyclic compounds and biomolecules.
- a6. Discuss different synthetic routes of some polymers.

b- Intellectual skills

- b1. Carry out a successful retrosynthetic analysis for solving

problems of multistep synthesis.
 b2. Recognize the relative reactivities of organic compounds to mechanisms of chemical reactions.
 b3. Recognize the mechanisms for unknown reactions.

c- Professional and practical skills

c1. Use effectively chemical reagents specially some dangerous chemicals.
 c2. Safely Use basic laboratory equipments.
 c3. Test qualitatively different organic substances.

d- General and transferable skills

The student must be able to:
 d1. Interact effeciently in a team.
 d2. Retrieve ethical and legal chemistry labs safety guidelines.
 d3. Implement writing skills through Lab reports.
 d4. Arrange time and put up plans.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction of Amines	6	4	2
2	Amines Phenols	6	4	2
3	Phenols nitrocompounds	6	4	2
4	Chemistry of heterocyclic compound	6	4	2
5	Chemistry of heterocyclic compound (cont.)	6	4	2
6	Chemistry of heterocyclic compound (cont.)	6	4	2
7	Mid-term exam			
8	Chemistry of heterocyclic compounds	6	4	2
9	Chemistry of heterocyclic compounds (cont.)	6	4	2
10	Carbohydrates	6	4	2
11	Carbohydrates Amino acids	6	4	2
12	Amino acids	6	4	2

13	Amino acids protein structure	6	4	2
14	nucleic acids & protein synthesis	4	4	Practical exam
15	Synthetic polymers	4	4	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14, 15
Assessment 3	Final exam	Week	16, 17
Assessment 4	Oral	Week	16, 17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on Organic chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.
- Lab Manual of Organic chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.

Essential books (text books)

- 1) Volhardt K. P. C.; Schore, N. A. in organic chemistry (structure and function), 6th edition (2010) W. H. Freeman and company. NY.

- 2) McMurry, J. in organic chemistry, 8th ed. (2011), Brooks/Cole, London.
- 3) Solmon's T. W. G. in Organic Chemistry 10th ed. (2010), John Wiley and sons, Inc, NY.
- 4) I. L. Finar Organic Chemistry Volume 1: The Fundamental Principles 5th edition, 1998, Longman Publishing Group.
- 5) I. L. Finar Organic Chemistry Volume 2: Stereochemistry and the chemistry of natural products 5th edition, 1998, Longman Publishing Group.
- 6) Bruice, P. Y. in organic chemistry, 6th edition (2010), Pearson education int. NY.

Recommended books

- 1) Solmon's T. W. G. in Organic Chemistry 10th ed. (2010), John Wiley and sons, Inc, NY.
- 2) I. L. Finar Organic Chemistry Volume 1: The Fundamental Principles 5th edition, 1998, Longman Publishing Group.
- 3) I. L. Finar Organic Chemistry Volume 2: Stereochemistry and the chemistry of natural products 5th edition, 1998, Longman Publishing Group

Websites

www.4shared.com

7. Facilities required for teaching and learning

- **Class rooms.**
- **Laboratory facilities (hot plates, chemical hood, water bath)**
- **Library.**
- **Data Show**
- **Computers.**
- **Internet.**

Course coordinator:

Dr. Wagdy El-dehna

Head of Department:

Prof. Dr. Ramadan El-domany

Date : / 9 / 2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Organic chemistry**Course code: **2011**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction of Amines	a1,a2,a3.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 2	Amines Phenols	a1,a2,a3,b1,c1,c2,d1.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Phenols nitrocompounds	a1,a2,a3,b1,b2,c1,c2,d1,d2.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Chemistry of heterocyclic compound	a2,a4,a5,b1,b2,b3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 5	Chemistry of heterocyclic compound (cont.)	a2,a4,a5,b1,b2,b3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Chemistry of heterocyclic compound (cont.)	a2,a4,a5,b1,b2,b3,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Chemistry of heterocyclic compounds	a2,a4,a5,b1,b2,b3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 9	Chemistry of heterocyclic compounds (cont.)	a2,a4,a5,b1,b2,b3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 10	Carbohydrates	a1,a2,a4,b1,b2,b3,c1,c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 11	Carbohydrates Amino acids	a1,a2,a4,b1,b2,b3,c1,c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 12	Amino acids	a1,a2,a3,a5,b1,b2,b3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 13	Amino acids protein structure	a1,a2,a3,a5,b1,b2,b3,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 14	nucleic acids & protein synthesis	a3,a5,b1,b2,b3,d1,b2,d3,d4.	Lectures, discussion and brain storming	Written and oral exams
Week # 15	Synthetic polymers	a3,a6,b1,b2,b3,d4.	Lectures, discussion and brain storming	Written and oral exams

Course coordinator: Dr. Wagdy El-dehna

Head of department: Prof.Dr. **Ramadan El-domany**Date : **9 /2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacognosy
Department supervising the course	
Academic Year / Level	First year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmacognosy	Code : 2065
Total contact hours:4 hrs.	Lecture :2 hrs.
	Practical :2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Identification of important plant (bark, wood, galls, leaves, herb and flowers) macroscopical and microscopical.
- Different chemical tests for identification of active constituents.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Explain the idea of pharmacognosy.
- a2-State a monograph concerning pharmacognosy.
- a3-Define the aspects of drugs of natural origin.

b- Intellectual skills:

- b1- Categorize medicinal leaves, herbs and flowers.
- b2- Carry out chemical tests for active constituents of the target organ.
- b3-Illustrate the secondary metabolites of the medicinal plants.
- b4-Recognizes the active constituents and uses of different plants /different organs.

c- Professional and practical skills

- c1- Assess authentication of any of the studied plants (whole plant or in a powder form)
- c2- Differentiate medicinal leaves, herbs, barks and flowers.
- c3-Debate the rational use of leaves, herbs, barks and flowers.

c4-Asses the social hazards of using leaves, herbs barks and flowers.

d- General and transferable skills

d1-Evaluate information concern medicinal leaves, herbs, barks and flower.

d2- Communicate with other practitioners in the field of pharmacognosy.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Leaves	4	2	2
2	Leaves (cont.)	4	2	2
3	Leaves (cont.)	4	2	2
4	Herbs	4	2	2
5	Herbs (cont.)	4	2	2
6	Barks	4	2	2
7	Mid-term exam			
8	Barks	4	2	2
9	Wood& galls	4	2	2
10	Wood& galls (cont.)	4	2	2
11	Flowers	4	2	2
12	Flowers(cont.)	4	2	2
13	Flowers (cont.)	4	2	2
14	Active constituents	2	2	Practical exam
15	Active constituents (cont.)	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop ()
 d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on pharmacognosy, Prepared in the form of a book authorized by the department

Essential books (text books)

- Trease and Evans, Pharmacognosy 14th edition, WB Saunders Company Ltd, 1998.
- T.E.Wallis, Text Book of Pharmacognosy, fifth edition, J&A. Churchill Ltd, 1967

Recommended books

- Bruneton, Pharmacognosy-Pyhtochemistry-Medicinal Plants, 2nd edition, Technique Documentation, 2001.

Websites

www.biomedcentral.com
www.medscape.com
<http://www.sciencedirect.com/>
<http://www.ncbi.nlm.nih.gov/>

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities provided with microscopes and essential facility to perform the practical lessons..
- Data show and white board.
- Computers.
- Library.
- Internet.

Course coordinator:

Prof. Dr. Saleh Elsharkawy

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmacognosy**Course code: **2065**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Leaves	a1	Lectures	Written and oral exams
Week # 2	Leaves (cont.)	a1,b1,c1, c2, d1	Lectures and practical training	Written, practical and oral exams
Week # 3	Leaves (cont.)	a1,a2,b1,b2,c1, c2, c4, d1	Lectures and practical training	Written, practical and oral exams
Week # 4	Herbs	a1,b1,b2,c1,c2	Lectures and practical training	Written, practical and oral exams
Week # 5	Herbs (cont.)	a1,a2,b1,b2,c1,c2, c4, d2	Lectures and practical training , class activity	Written, practical and oral exams
Week # 6	Barks	a1,b1,b2,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Barks	a1,a2, a3, b1,b2,c1,c2,d2, d1	Lectures and practical training	Written, practical and oral exams
Week # 9	Wood& galls	a1,b1,b2,c1,d1,d2	Lectures and practical training , class activity	Written, practical and oral exams
Week # 10	Wood& galls (cont.)	a1,a2,b1,b2,c1,d2	Lectures and practical training , class activity	Written, practical and oral exams
Week # 11	Flowers	a2, a3, b1, b2, b3,c1,c2, d1, d2	Lectures and practical training , class activity	Written, practical and oral exams
Week # 12	Flowers (cont.)	a1,b1,b2, b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Flowers (cont.)	a1,a2,b1,b3,c1,c2, c4, d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Active constituent	a2, b1, b2,b3,b4, c3,d2	Lectures	Written and oral exams
Week # 15	Active constituents (cont.)	a2,b1,b2,b3, b4, c3, c4, d2	Lectures	Written and oral exams

Course coordinator: Prof Dr: Saleh Elsharkawy

Head of department: Prof. Dr. Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical Technology
Department supervising the course	
Academic Year / Level	First year, First Semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutics	Code : 2024
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Different routes of drug administration.
- The principles of compounding and dispensing.
- The different prescription orders.
- Good laboratory practice in compounding of simple dosage forms.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

Upon successful completion of the course, the graduate should be able to:

- a1- Identify different routes of drug administration.
- a2- Identify different types of dosage forms.
- a3- Identify different types of prescriptions and their components.
- a4- List the components and importance of patient medication record.
- a5- Discuss different types of incompatibilities.
- a6- Describe different types of galenical formulations.
- a7- Explain knowledge of different categories of OTC drugs.

b- Intellectual skills:

- b1-Carry out the necessary calculations of each ingredient and doses to respond to prescription.
- b2- Predict possible incompatibility in prescription order.
- b3- Interpret the physician's instruction into doses, dosage form and label.
- b4- Select the proper additives and container necessary for preparation of stable dosage form.
- b5- Adjust the proper storage conditions for dosage forms.

c- Professional and practical skill:

- c1- Safely Use differet ingredients.
- c2- Accurately calculate the weight and measure of different ingredients.
- c3- Analyse effective and stable dosage forms.
- c4- Examine the label based on physician`s instructions.
- c5- Demonstrate to the patient the safe use and storage of the prescribed medicine.

d- General and transferable skills:

- d1- Work in groups.
- d2- Retrieve and evaluate information from different sources.

3. Contents:

Week	Topic	Total contact hours	Lecture	Practical
1	Classification of dosage forms and route of administration.	4	2	2
2	Definition of different dosage forms.	4	2	2
3	The prescription; definition, types and forms.	4	2	2
4	Pharmaceutical calculation and abbreviations.	4	2	2
5	Weights and measures.	4	2	2
6	Calculation of doses.	4	2	2
7	Mid-term exam			
8	Mixtures; simple and compound.	4	2	2
9	Liquids as dosage forms, oral solution, elixirs and linctuses.	4	2	2
10	Solutions.	4	2	2
11	Topical liquid; ear drop, nasal drops and lotion.	4	2	2
12	Powders; bulk and divided powders.	4	2	2
13	Incompatibilities; therapeutic, physical and chemical.	4	2	2
14	OTC drugs	2	2	Practical exam
15	Galenical formulations.	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

- Course notes:

Notes on pharmaceutics prepared by the department staff.

- Essential books (text books):

M.E. Aulton, K. Taylor, Pharmaceutics: the science of dosage form design, Second Edition, Elsevier, 2001.

- Recommended books:

[Joseph P. Remington](#), Remington's Pharmaceutical Science, 17th edn., Mack Publishing company, 1985.

- Websites:

www.pubmed.com

7. Facilities required for teaching and learning

- | | |
|--|---|
| <ul style="list-style-type: none"> • Class rooms. • Laboratory facilities. • Data show. | <ul style="list-style-type: none"> • Computers. • Internet. |
|--|---|

Course coordinator:

Dr/ Abd El -aziz El-said

Head of Department:

Prof. Dr. Ramadan Eldomany

Date: / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Pharmaceutics

Course code: 2024

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Classification of dosage forms and route of administration.	a1,a2,d2	Lectures	Written and oral exams
Week # 2	Definition of different dosage forms.	a2, b4, b5, d2	Lectures ,practical training	Written and oral exams
Week # 3	The prescription; definition, types and forms.	a3 ,a4, b3, d2	Lectures ,practical training	Written and oral exams
Week # 4	Pharmaceutical calculation and abbreviations.	b1, b3, c4, c5,d1, d2	Lectures,practical training and class activity	Written, practical and oral exams
Week # 5	Weights and measures.	a2, b1, c1, c2, d1	Lectures,practical training	Written, practical and oral exams
Week # 6	Calculation of doses.	a2, b1, b3, c1, c3, d2	Lectures,practical training and case study	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Mixtures; simple and compound.	a2, c3, d1	Lectures and practical training	Written, practical and oral exams
Week # 9	Liquids as dosage forms, oral solution, elixirs and linctuses.	a2, c3, d1	Lectures,practical training and class activity	Written, practical and oral exams
Week # 10	Solutions.	a2, c3, d1	Lectures and practical training	Written, practical and oral exams
Week # 11	Topical liquid; ear drop, nasal drops and lotion.	a2, c3, d1	Lectures and practical training	Written, practical and oral exams
Week # 12	Powders; bulk and divided powders.	a2, c3, d1	Lectures and practical training	Written, practical and oral exams
Week # 13	Incompatibilities; therapeutic, physical and chemical.	a5, b2, b4, b5	Lectures	Written and oral exams
Week # 14	OTC drugs	a7, d1	Lectures	Written and oral exams
Week # 15	Galenical formulations.	a6, d2	Lectures	Written and oral exams

Course coordinator:

Dr/ Abd El -aziz El-said

Head of department:

Prof. Dr. Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

programme on which the course is given	BSc in Pharmaceutical sciences
Major or minor element of programme	Major
Department offering the course	Histology Dep., Faculty of Medicine
Department supervising the course	Pharmacology
Academic Year / Level	First year, First term
Date of specification approval	9/2016

A- Basic Information

Title : Histology	Code : 2247
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of course

Upon successful completion of this course, the students should be able to understand:

- The basis histological structure and ultra structure of the eukaryotic cell with correlation to biological cellular activities.
- The normal histological structure of different tissues of human body in addition to some of its systems.
- Different tissues under the microscope, with functional and clinical correlation whenever possible.
- The historical structure of various organs and systems of the body and to correlate between the structure and function with relevant clinical notes whenever possible.

2. Intended learning outcomes of course (ILOs)

Knowledge and understanding:

On successful completion of the course, the graduate should be able to:

- a1. Know the structure and functions of the cytoplasmic components.
- a2. Identify the subunits of each nuclear component and their role in its function
- a3. Know the structural characteristics of the four basic tissue types
- a4. Differentiate the functional capabilities of each tissues type and their structure.
- a5. Identify the different blood elements and their development.

- a6. Understand the basic histological structure of some systems (vascular & lymphatic).
- a7. Understand the normal histological structure of various body systems (respiratory, digestive, endocrine, urinary, male & female reproductive, eye, ear, and central nervous system).
- a8. Distinguish structural features of organs, regions and cell types present in each system and relate the structural variations to differences in organ function.
- a9. Know ultrastructure and function of different cell types in different organs of the body.

b- Intellectual skills

- b1. Recognize the composition of each tissues type to its specific functions.
- b2. Select appropriate methods to reveal specific microscopic features of cells and tissues.
- b3. Utilize information to predict the intracellular or tissue type components likely to be involved in a functional deficit.
- b4. Use information to correlate between histological structural and function of different organs of all studied systems.
- b5. Recognize the pathology of cells, tissues and organs in his study during next years, based on enough knowledge of their normal structure.

c- Professional and practical skills

- c1. Use the microscope efficiently
- c2. Use effectively the histological glass slides and examine them using the maximum microscopic facilities.
- c3. Assess different cellular and intracellular components in electron Photomicrographs
- c4. Differentiate between types of cells and tissues in histological slides.
- c5. Analyze drawing and labeling the structures they have seen in electron photomicrographs and under light microscope during practical classes.

d- General and transferable skills

- d1. Communicate actively with his colleagues as well as the employees and staff members.
- d2. Retrieve the sources of biomedical information available to remain current with advance in knowledge and practice

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Cytology	4	2	2
2	Cytology (cont.)	4	2	2
3	Epithelium+nucleus	4	2	2
4	Connective tissue	4	2	2
5	Cartilage+bone	4	2	2
6	Blood & muscle tissue	4	2	2
7	Mid term exam			
8	Nerve tissue & lymphatics	4	2	2
9	Cardiovascular system	4	2	2
10	Histology of respiratory system	4	2	2
11	Histology of digestive glands	4	2	2
12	Urinary system	4	2	2
13	male reproductive system	4	2	2
14	female reproductive system	2	2	Practical exam
15	Skin & endocrine	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop ()
 d. Class Activity (✓)

5. Student assessment methods

Written midterm exam	To assess	the ability of students to follow-up the course subjects
Written final exam	To assess	the overall outcomes
Oral exam	To assess	
Practical exam	To assess	the gained experience in laboratory methods and techniques

Assessment schedule

Written midterm exam	Week	7
Practical exam	Week	14,15
Oral exam		16,17
Final exam		16,17

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Histology**Course code: **2247**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Cytology	a1,b1,c1,d1	Lectures and practical training	Written , practical and oral exams
Week # 2	Cytology (cont.)	a1,a2,b2,b3 ,c2, d2	Lectures and practical training	Written , practical and oral exams
Week # 3	Epithelium+nucleus	a3,a4,b1,c4,c5,d1	Lectures and practical training	Written , practical and oral exams
Week # 4	Connective tissue	a4,b1, b3,c5,d1,d2	Lectures and practical training	Written , practical and oral exams
Week # 5	Cartilage+bone	a6, b3,c1,c3,c4,c5	Lectures and practical training, class activity	Written , practical and oral exams
Week # 6	Blood & muscle tissue	a8,a9, b3 ,c4,c5,d1,d2	Lectures and practical training	Written , practical and oral exams
Week # 7	Mid term exam			
Week # 8	Nerve tissue & lymphatics	a6,a7,a8,a9,b4,c2,c3,c4,d1,d2	Lectures and practical training	Written , practical and oral exams
Week # 9	Cardiovascular system	a6,a7,a8,a9,b4,c4,c5,d1	Lectures and practical training, class activity	Written , practical and oral exams
Week # 10	Histology of respiratory system	a8,a9,b4,c1,c2,d1,d2	Lectures and practical training, class activity	Written , practical and oral exams
Week # 11	Histology of digestive glands	a7,a9,b4,c2,c3,d1,d2	Lectures and practical training, class activity	Written , practical and oral exams
Week # 12	Urinary system	a6,a9,b4,c3,c4,c5,d2	Lectures and practical training	Written , practical and oral exams
Week # 13	male reproductive system	a6,a7,a8,a9,b4,c1,c2,c3,c4,c5,d1,d2	Lectures and practical training	Written , practical and oral exams
Week # 14	female reproductive system	a6,a7,a8,a9,b4,c1,c2,c3,c4,c5,d1,d2	Lectures	Written final and oral exams
Week # 15	Skin & endocrine	a6,a7,a8,a9,b4,c1,c2,c3,c4,c5,d1,d2	Lectures	Written final and oral exams

Course coordinator:Dr. Maha Abo Gazia**Head of Department:** Prof. Dr. Ramadan Eldomany**Date :** / 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

programme on which the course is given	BSc in Pharmacy
Major or minor element of programme	major
Department offering the course	Physiology
Department supervising the course	Pharmacology
Academic Year / Level	First year, First semester
Date of specification approval	9/2016

A- Basic Information

Title : Physiology	Code : 2237
Total contact hours:5 hrs.	Lecture :3 hrs.
	Practical :2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The normal physiological functions of respiratory system, autonomic nervous system, digestive system and blood.
- The abnormal pathophysiological conditions affecting respiratory system, autonomic nervous system, digestive system and blood.
- Some physiological parameters such as ESR, Respiratory rate, ...etc.

2. Intended learning outcomes of the course (ILOs)

Knowledge and understanding:

On successful completion of the course, the graduate should be able to:

- a1. Know physiological aspects of different body systems including respiratory system, autonomic nervous system and blood.
- a2. Understand normal and abnormal body function.
- a3. Know the basic epidemiology and pathophysiology of diseases of the different body systems.
- a4- Identify different physiological parameters.

b- Intellectual skills

- b1. Recognize complete differentiation of the physiology of body systems studied.
- b2. Utilize different physiological terminology.
- b3. Utilize knowledge and critical understanding of essential facts, concepts, principles and theories relating to the subject areas identified under knowledge and understanding.

c- Professional and practical skills

- c1. Assess the difference between physiology of body systems studied.
- c2. Test some common physiological tests e.g. blood group testing and ESR.
- c3. Use effectively library search, retrieval of information, carry out private study as well as analyze and interpret experimental results.

d- General and transferable skills

- d1. Retrieve information from a variety of sources, including libraries, databases and internet.
- d2. Interact independently or as a part of team in different pharmaceutical fields.
- d3. Demonstrate creativity and time management skills.
- d4. Implementing presentation, writing reports and interviewing skills.
- d5- Retrieve information about fundamentals of physiology of different body systems including respiratory system, autonomic nervous system and blood.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Respiratory system, Blood, Autonomic Nervous System	5	3	2
2	Respiratory system, Blood, Autonomic Nervous System (cont.)	5	3	2
3	Respiratory system, Blood, Autonomic Nervous System (cont.)	5	3	2

4	Respiratory system, Blood, Autonomic Nervous System (cont.)	5	3	2
5	Respiratory system, Blood, Autonomic Nervous System (cont.)	5	3	2
6	Respiratory system, Blood, Autonomic Nervous System (cont.)	5	3	2
7	Mid-term exam			
8	Respiratory system, Blood, Autonomic Nervous System (cont.)	5	3	2
9	Respiratory system, Blood, Autonomic Nervous System (cont.)	5	3	2
10	Blood, Digestion, Respiratory system	5	3	2
11	Digestion, Respiratory system	5	3	2
12	Digestion, Respiratory system (cont.)	5	3	2
13	Digestion, Respiratory system (cont.)	3	3	
14	Digestion, Respiratory system (cont.)	3	3	Practical exam
15	Digestion, Respiratory system (cont.)	3	3	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop ()
 d. Class Activity (✓)

5. Student assessment methods

Written midterm exam	To assess	the ability of students to follow-up the course subjects.
Written final exam	To assess	the overall outcomes.
Oral exam	To assess	the ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Practical exam	To assess	the gained experience in laboratory methods and techniques.

Assessment schedule

Written midterm exam	Week	7
Practical exam	Week	14,15
Oral exam	Week	16,17
Final exam		16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes of Human Physiology prepared and distributed by Dept.of Physiology, faculty of Medicine.
- Lab manual of General Physiology, prepared and distributed by Dept. of Physiology, faculty of Medicine.

Essential books (text books)

Textbook in Medical Physiology and Pathophysiology(2000). Poul-Erik Paulev. 2nd edition . Copenhagen Medical Publishers

Recommended books

Websites

<http://physiologyonline.physiology.org/>
<http://arjournals.annualreviews.org/loi/physiol>

7. Facilities required for teaching and learning

- Class rooms**
- Computer**
- Projectors (overhead, video projector)**
- Laboratory facilities , The practical part of this course includes application of some common physiological test e.g. blood group testing and ESR**
- library**
- internet**

Course coordinator:

Dr. Sanad Elkholy

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Physiology**Course code: **2237**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Respiratory system, Blood, Autonomic Nervous System	a1, b1, c1,d1, d3	Lectures and practical training	Written, practical and oral exams
Week # 2	Respiratory system, Blood, Autonomic Nervous System (cont.)	a1,a4,b2,c3, d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Respiratory system, Blood, Autonomic Nervous System (cont.)	a3,a4,b1,b2,c1,c3,d2,d3	Lectures , practical training and class activity	Written, practical and oral exams
Week # 4	Respiratory system, Blood, Autonomic Nervous System (cont.)	a2,a4,b1,b2,c3,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 5	Respiratory system, Blood, Autonomic Nervous System (cont.)	a1, a3,b1,b2,c1,c3,d1	Lectures , practical training and class activity	Written, practical and oral exams
Week # 6	Respiratory system, Blood, Autonomic Nervous System (cont.)	a1,a2,a3,a4,b1,c3,d3	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Respiratory system, Blood, Autonomic Nervous System (cont.)	a4,b1,b2,c1,c3,d4,d5	Lectures and practical training	Written, practical and oral exams
Week # 9	Respiratory system, Blood, Autonomic Nervous System	a1,a4,b1,b2,c1,c3,d1,d2,d3, d4,d5	Lectures , practical training and class activity	Written, practical and oral exams
Week # 10	Blood,Digestion, Respiratory system	a1,a2,a3,a4,b1,b2,c1,c3,d1,d2,d3, d4,d5	Lectures , practical training and class activity	Written, practical and oral exams
Week # 11	Digestion, Respiratory system	a1,a2,a3,a4,b1,b2,b3,c2,d1,d2,d3	Lectures , practical training and class activity	Written, practical and oral exams
Week # 12	Digestion, Respiratory system (cont.)	a1,a2,a3,a4,b1,b2,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 13	Digestion, Respiratory system (cont.)	a1,a2,a3,a4,b1,b2,b3,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 14	Digestion, Respiratory system (cont.)	a1,a2,a3,a4,b1,b2,c2,d1,d2,d3	Lectures	Written and oral exams
Week # 15	Digestion, Respiratory system (cont.)	a1,a2,a3,a4,b1,b2,b3,c2,d1,d2,d3, d4,d5	Lectures	Written and oral exams

Course coordinator :

Dr. Sanad Elkholy

Head of Department :

Prof. Dr. Ramadan Eldomany

Date : / 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Minor
Department offering the course	Sociology
Department supervising the course	Clinical Pharmacy
Academic Year / Level	First year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Sociology	Code : 2258
Total contact hours :2 hrs.	Lecture :2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The fundamentals of sociology.
- The Dealing with social problems.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the graduate should be able to:

- a1- know the social and behavioral sciences relevant to pharmacy.
- a2- Understand positive interaction.

b- Intellectual skills

- b1- Recognize how to diagnose social problems.
- b2- Assess how to find solutions for such problems.

c- Professional and practical skills

- c1-Use clinical data, patient assessment and appropriate medical literatures to optimize therapeutic drug regimens.
- c2-Assess information from other health professionals, medical records and pharmacy records and use this information on behalf of the patient to identify, assess, solve and prevent drug related problems.
- c3-Use effectively patient counseling to teach the patients about their medications.
- c4- Use effectively the principle of patient communication to gain

trust from the patient.

d- General and transferable skills

- d1-Develop the ability to solve problems.
- d2- Demonstrate oral and written communication skills.
- d3- Develop good selling, financial, stock management and negotiation skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Approach	2	2	
2	Approach (cont.)	2	2	
3	Methods	2	2	
4	Methods (cont.)	2	2	
5	Theories	2	2	
6	Theories (cont.)	2	2	
7	Mid-term exam			
8	Theories	2	2	
9	Theories (cont.)	2	2	
10	MFAP	2	2	
11	MFAP (cont.)	2	2	
12	Systems in Society	2	2	
13	Systems in Society (cont.)	2	2	
14	Technology of social Interaction	2	2	
15	Technology of social Interaction (cont.)	2	2	

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training / laboratory ()
- c. Seminar / Workshop ()
- d. Class Activity ()

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Written final exam	To assess	The overall outcomes.
Oral exam	To assess	the ability of students in expressing and presenting their knowledge clearly and in systematic approach.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17
Assessment 3	Oral exam	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on Sociology approved by the department

Essential books (text books)

Communication skills

Recommended books

Websites

7. Facilities required for teaching and learning

-Class rooms.	
-Laboratory facilities.	-Library.
- Projectors (Overhead, video projector)	
-Computers.	-Internet.

Course coordinator:

Dr. Ales ascender

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Sociology**Course code: **2258**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Approach	a1 ,a2 ,b2 ,d1	Lectures	Written and oral exams
Week # 2	Approach (cont.)	a1 ,a2 ,b2 ,d1	Lectures	Written and oral exams
Week # 3	Methods	a2,a3	Lectures	Written and oral exams
Week # 4	Methods (cont.)	a2,a3	Lectures	Written and oral exams
Week # 5	Theories	a1 ,a3, d1	Lectures	Written and oral exams
Week # 6	Theories (cont.)	a1 , ,a3, d1	Lectures	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Theories	a1,a3 ,d1	Lectures	Written and oral exams
Week # 9	Theories (cont.)	a1,a3 ,d1	Lectures	Written and oral exams
Week # 10	MFAP	a3,b1	Lectures	Written and oral exams
Week # 11	MFAP (cont.)	a3, b1	Lectures	Written and oral exams
Week # 12	Systems in Society	a1,a3 , a2	Lectures	Written and oral exams
Week # 13	Systems in Society (cont.)	a1,a3 , a2	Lectures	Written and oral exams
Week # 14	Technology of social Interaction	a2 , b2 , c1,c2,d1	Lectures	Written and oral exams
Week # 15	Technology of social Interaction (cont.)	a2 , b2 , c1, c3,d2	Lectures	Written and oral exams

Course coordinator:

Dr. Ales ascender

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : / 9 /2016

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

First year, Second Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical analytical chemistry
Department supervising the course	
Academic Year / Level	First year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Analytical chemistry	Code : 2112
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The basic principles and theoretical aspects of different electrochemical and chromatographic methods of analysis
- Different electrochemical techniques including potentiometry, conductimetric, polarographic and amperometric titrations.
- Different techniques used in chromatographic methods of analysis such as HPLC and GC.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the student should be able to:-

- a1-identify Classification, identification and advantages of instrumental methods of analysis.
- a2- list Potentiometric method of analysis.
- a3- demonstrate Conductimetry titration and voltammetric (mainly polarographic)
- a4-define Amperometric titration.
- a5-identify chromatography method of analysis.

b- Intellectual skills

- b1- Recognize different electrochemical and chromatographic methods to quantify different drugs.
- b2- categorize different types of chromatography and theory of separation.
- b3- Recognize different types of stationary phases and mobile phases and different types of detectors.
- b4- Select the suitable detector according to the nature and concentration of the target

analyte.

c- Professional and practical skills

c1- Use the basic components of instruments, their structures and functions.
c2- Analyze the outcomes of different instruments e.g. polarograms, chromatograms.

d- General and transferable skills

d1- Work in team and apply time management principles effectively.
d2- Demonstrate problem solving and decision-making abilities.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to instrumental methods of analysis.	4	2	2
2	Electrochemical methods: Potentiometry	4	2	2
3	Ion selective electrodes.	4	2	2
4	Voltammetry	4	2	2
5	Polarographic measurements	4	2	2
6	Amperometric titration	4	2	2
7	Mid-term exam			
8	Types of chromatography	4	2	2
9	Techniques of column development	4	2	2
10	Theory of chromatography	4	2	2
11	Techniques of chromatography	4	2	2
12	HPLC: systems for drug analysis	4	2	2
13	Detectors in HPLC	4	2	2
14	Gas chromatography and detectors for gas chromatography	2	2	Practical exam
15	Applications of chromatography	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Pharmaceutical Analytical chemistry (Electrochemistry & Chromatography) for First year pharmacy students .Dept. of Pharmaceutical Analytical chemistry.
- Lab manual on Pharmaceutical Analytical chemistry (Electrochemistry & Chromatography) for First year pharmacy students .Dept. of Pharmaceutical Analytical chemistry.

Essential books (text books)

1. D.A.skoog, D.M.west ,F.J holler and S.R. crouch , "Fundamentals of analytical chemistry", 8 th edition , book/cole-thomson learning, inc.(2004).
2. G. D. Christian and J. E. Oreilly, "Instrumental analysis",Ally and Bacon ,inc.
3. H. H. Willard, L. L. Merritt, Jr, Dean and F. A. Settle, "Instrumental methods of

analysis ", Princeton, N. J. Van Nostrand.

Recommended books

H. H. Willard, L. L. Merritt, Jr, Dean and F. A. Settle, "Instrumental methods of analysis " latest edition , Princeton, N. J. Van Nostrand.

Websites

<http://ull.chemistry.uakron.edu/analytical/>

7. Facilities required for teaching and learning

- Class rooms.**
- Laboratory facilities(pH meter , conductimeters ,HPLC)**
- Library**
- Data show**
- Internet**
- Computers**

Course coordinators:

Dr. Ahmed Faried

Dr. Ahmed Abdel Magied

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: analytical chemistry Course code: 2112

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction to instrumental methods of analysis.	a1	Lecture, brain storming and discussion	Written and oral exams
Week # 2	Electrochemical methods: Potentiometry	a2,b1.c1.c2.d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Ion selective electrodes.	a2,b1.c1.c2.d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 4	Voltammetry	a3,b1.c1.c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Polarographic measurements	a3,b1.c1.c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 6	Amperometric titration	a4,b1.c1.c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Types of chromatography	a5,b1,b2,c1,c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 9	Techniques of column development	a5,b1,b2.c1.c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 10	Theory of chromatography	a5,b1,b2,b3.c1.c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 11	Techniques of chromatography	a5,b1,b2,c1.c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 12	HPLC: systems for drug analysis	a5,b1,b2.c1.c2.d1.d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Detectors in HPLC	a5,b1,b2,b4, c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Gas chromatography and detectors for gas chromatography	a5,b1.b2,b3,b4,c1,c2,d1,d2	Lectures	Written and oral exams
Week # 15	Applications of chromatography	a5,b1,b2,b3,b4,c1,c2,d1,d2	Lectures	Written and oral exams

Course coordinators:

Dr. Ahmed Faried

Dr. Ahmed Abdel Magied

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacognosy
Department supervising the course	
Academic Year / Level	First year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmacognosy	Code : 2135
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Identification of important plants (seeds, fruits, subterranean organs and unorganized drugs) macroscopical and microscopical.
- Chemical tests for identification of active constituents.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Explain the idea of pharmacognosy.
- a2-State amonograph concerning apharmacognosy.
- a3-Define the aspects of drugs of natural origin.

b- Intellectual skills

- b1- Demonstrate a medicinal fruits, seeds and subterranean organs.
- b2- Carry out chemical tests for the active constituents of the target organ.
- b3-Illustrate the secondary metabolites of the medicinal plants.
- b4-Recognizes the active constituents and uses of different plants /different organs. .

c- Professional and practical skills

- c1- Assess authentication of any of the studied plants (whole plant or in a powder form)
- c2- Defferntiate medicinal fruits, seeds and subterranean organs.
- c3- Debate the rational use of fruits, seeds and subterranean organ.
- c4- Asses the social hazards of using fruits, seeds and subterranean organs.

d- General and transferable skills

- d1- Evaluate information concern medicinal fruits, seeds and subterranean organs .
- d2- Communicate with other practitoners in the field of pharmacognosy.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Seeds	4	2	2
2	Seeds (cont.)	4	2	2
3	Seeds (cont.)	4	2	2
4	Fruits	4	2	2
5	Fruits (cont.)	4	2	2
6	Fruits (cont.)	4	2	2
7	Mid-term exam			
8	Subterranean (roots)	4	2	2
9	Subterranean (roots) (cont.)	4	2	2
10	Subterranean (roots) (cont.)	4	2	2
11	Subterranean (rhizomes)	4	2	2
12	Subterranean (rhizomes) (cont.)	4	2	2
13	Subterranean (rhizomes) (cont.)	4	2	2
14	Animals drugs	2	2	Practical exam
15	Unorganized drugs	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training / laboratory (✓)
- c. Seminar / Workshop ()
- d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on pharmacognosy prepared in the form of a book authorized by the department

Essential books (text books)

-Trease and Evans, Pharmacognosy 14th edition, WB Saunders Company Ltd, 1998.
- T.E.Wallis, Text Book of Pharmacognosy, fifth edition, J&A. Churchill Ltd, 1967.

Recommended books

- Bruneton, Pharmacognosy-Pyhtochemistry-Medicinal Plants, 2nd edition, Technique Documentation, 2001.

Websites

www.biomedcentral.com
www.medscape.com
<http://www.sciencedirect.com/>
<http://www.ncbi.nlm.nih.gov/>

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmacognosy**Course code: **2135**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Seeds	a1	Lectures	Written, practical and oral exams
Week # 2	Seeds (cont.)	a1,b1,c1,d1	Lectures and practical training	Written, practical and oral exams
Week # 3	Seeds (cont.)	a1,a2,b1,c1,c2, c4, d1	Lectures and practical training	Written, practical and oral exams
Week # 4	Fruits	a1,a2,b1, b4, c1,d1	Lectures and practical training	Written, practical and oral exams
Week # 5	Fruits (cont.)	a1,a3,b1,c1,c2,d1	Lectures and practical training	Written, practical and oral exams
Week # 6	Fruits (cont.)	a1,a3,b1,c1,c2, c4, d1, d2	Lectures and practical training Activity	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Subterranean (roots)	a1,a3,b2, b4, c1,c3,d2	Lectures and practical training	Written, practical and oral exams
Week # 9	Subterranean (roots) (cont.)	a1,a3 ,b2,b3,c1,c3, d2	Lectures and practical training	Written, practical and oral exams
Week # 10	Subterranean (roots) (cont.)	a1,a3, b2,c1,c3,d2	Lectures and practical training	Written, practical and oral exams
Week # 11	Subterranean (rhizomes)	a1,a3, b2 ,c1,c3,d2	Lectures and practical training	Written, practical and oral exams
Week # 12	Subterranean (rhizomes) (cont.)	a1,a3, b2,c1,c3,d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Subterranean (rhizomes) (cont.)	a1,a3, b2,c1,c3,c4, d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Unorganized drugs	b3, b4, c1,c3,d2	Lectures	Written and oral exams
Week # 15	Unorganized drugs (cont.)	b3,c1,c3,d1, d2	Lectures Activity	Written and oral exams

Course coordinator:

Prof. Dr. Saleh Elsharkawy

Head of department:

Prof. Dr. Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	First year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Physical Pharmacy	Code : 2124
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The fundamental aspects of physical pharmacy.
- The principles of solubility, surface and interfacial phenomena, rheology, adsorption and complexation.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

Upon successful completion of the course, the graduate should be able to:

- a1- Know buffers, colloids and complexes clearly.
- a2- Define the solubility and solubilization.
- a3- Describe the interfacial phenomena and surface active agents.
- a4- Describe different types of flow.
- a5- Identify adsorption/desorption phenomena.
- a6- Identify the reaction kinetics and drug degradation pathways.

b- Intellectual skills:

- b1 - Calculate the buffer capacity and isotonicity.
- b2 - Recognize the order of reaction.
- b3 - Utilize the fundamental basics of physical pharmacy in dosage form.

c- Professional and practical skills:

- c1 – Calculate the surface tension and critical micelle concentration.
- c2 – Calculate the viscosity, solubility and partition coefficient.
- c3- Examine the proper storage conditions based on drug degradation pathway.
- c4- Calculate the expiration date of drugs.

d- General and transferable skills:

- d1- Work independently and in groups.
- d2- Retrieve and evaluate information from different sources.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Colloids, types, uses, preparation and characters.	4	2	2
2	Rheology, classification and use.	4	2	2
3	Surface and interfacial tensions.	4	2	2
4	Adsorption at solid interface.	4	2	2
5	Adsorption at liquid interface.	4	2	2
6	Surface active agents.	4	2	2
7	Mid-term exam			
8	Solubility phenomena.	4	2	2
9	Solubilization; methods and use.	4	2	2
10	Complexes; classification and use.	4	2	2
11	Analysis of complexes.	4	2	2
12	Kinetics of drug reactions.	4	2	2
13	Drug stability.	4	2	2
14	Buffer systems.	2	2	Practical exam
15	Isotonic solutions.	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes:

Notes on Physical Pharmacy prepared by the department staff.

Essential books (text books):

[Alexander T. Florence](#) , [David Attwood](#) : Physicochemical principles of pharmacy, 4th edition, Pharmaceutical Press, 2006.

Recommended books:

[Martin's Physical Pharmacy & Pharmaceutical Sciences](#), 5th edition, Lippincott Williams & Wilkins, 2006.

Websites

www.pubmed.com

7. Facilities required for teaching and learning

- | | |
|---|---|
| <ul style="list-style-type: none"> • Class rooms. • Laboratory facilities (digital balance ,viscometer and stalagmometer) • Data show. | <ul style="list-style-type: none"> • Computers. • Internet. |
|---|---|

Course coordinator:

Professor Dr. Mohamed naser

Head of Department:

Professor Dr. Ramadan Aldomany

Date: / 9 /2016

Course Plan

Kafrelsheikh University, Faculty of Pharmacy

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Physical Pharmacy**Course code: **2124**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Colloids, types, uses, preparation and characters.	a1, b3	Lectures	Written, practical and oral exams
Week # 2	Rheology, classification and use.	a4, b3, c2, d1	Lectures, class activity and practical training	Written, practical and oral exams
Week # 3	Surface and interfacial tensions.	a3, b3, c1, d1	Lectures, class activity and practical training	Written, practical and oral exams
Week # 4	Adsorption at solid interface.	a5, b3,d2	Lectures, class activity and practical training	Written, practical and oral exams
Week # 5	Adsorption at liquid interface.	a5, b3,d2	Lectures, class activity and practical training	Written, practical and oral exams
Week # 6	Surface active agents.	a3, b3, d1	Lectures, class activity and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Solubility phenomena.	a2, b3, c1, d1	Lectures and practical training	Written, practical and oral exams
Week # 9	Solubilization; methods and use.	a2, b3	Lectures, class activity and practical training	Written, practical and oral exams
Week # 10	Complexes; classification and use.	a1, b3	Lectures and class activity	Written, practical and oral exams
Week # 11	Analysis of complexes.	a1	Lectures, class activity and practical training	Written, practical and oral exams
Week # 12	Kinetics of drug reactions.	a6,b2, c3, d1	Lectures, class activity and practical training	Written, practical and oral exams
Week # 13	Drug stability.	a6, b2, c3, c4	Lectures, class activity and practical training	Written, practical and oral exams
Week # 14	Buffer systems.	a1, b1	Lectures and class activity	Written and oral exams
Week # 15	Isotonic solutions.	a1,b1	Lectures	Written and oral exams

Course coordinator:

Head of department:

Professor Dr. Mohamed Naser

Professor Dr. Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in Pharmacy
Major or minor element of program	Major
Department offering the course	Physiology
Department supervising the course	Pharmacology
Academic Year / Level	First year, second term
Date of specification approval	9/2016

A- Basic Information

Title : Physiology	Code : 2347
Total contact hours: 5 hrs.	Lecture: 3 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The normal physiological aspects of cardiovascular system, central nervous system and endocrine system.
- The abnormal pathophysiological conditions affecting cardiovascular system, central nervous system and endocrine system
- Some of physiological parameters such as BP, HR,....etc.

2. Intended learning outcomes of the course (ILOs)

Knowledge and understanding:

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

- a1. The normal physiological aspects
- a2. Fundamental physiological functions of different body systems including digestive system, cardiovascular system, nervous system and endocrine system
- a3. The epidemiology and pathophysiology of diseases of the different body systems.
- a4- Different physiological parameters.

b- Intellectual skills

- b1. Demonstrate complete differentiation of the physiology of body systems studied.
- b2. Utilize different physiological terminology.

- b3. Utilize knowledge and critical understanding of essential facts, concepts, principles and theories relating to the subject areas identified under knowledge and understanding.

c- Professional and practical skills

- c1. Assess the difference between physiology of the body systems studied.
- c2. Use some common physiological tests e.g. blood group testing and ESR.
- c3. Use library search, information, private study, and analyze experimental results.

d- General and transferable skills

- d1. Retrieve information from a variety of sources, including libraries, databases and internet.
- d2. Work independently or as a part of team in different pharmaceutical fields.
- d3. Demonstrate creativity and time management skills.
- d4. Implementing presentation, writing reports and interviewing skills.
- d5- Retrieve information about fundamentals of physiology of different body systems including cardiovascular system, central nervous system and endocrine system.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Cardiovascular System, central nervous system, endocrine	5	3	2
2	Cardiovascular System, central nervous system, endocrine (cont.)	5	3	2
3	Cardiovascular System, central nervous system, endocrine (cont.)	5	3	2
4	Cardiovascular System, central nervous system, endocrine (cont.)	5	3	2
5	Cardiovascular System,	5	3	2

	central nervous system, endocrine (cont.)			
6	Cardiovascular System, central nervous system, endocrine (cont.)	5	3	2
7	Mid-term exam			
8	Cardiovascular System, central nervous system, endocrine (cont.)	5	3	2
9	Cardiovascular System,endocrine	5	3	2
10	Cardiovascular System,endocrine (cont.)	5	3	2
11	Cardiovascular System,endocrine (cont.)	5	3	2
12	Cardiovascular System,endocrine (cont.)	5	3	2
13	Cardiovascular System,endocrine (cont.)	5	3	2
14	Cardiovascular System,endocrine (cont.)	3	3	Practical exam
15	Cardiovascular System,endocrine (cont.)	3	3	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop ()
 d. Class Activity (✓)

5. Student assessment methods

Written midterm exam	To assess	the ability of students to follow-up the course subjects
Written final exam	To assess	The overall outcomes
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Practical exam	To assess	The gained experience in laboratory methods and techniques.

Assessment schedule

Written midterm exam	Week	7
Practical exam	Week	14,15
Oral exam	Week	16,17
Final exam	Week	16,17

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Physiology**Course code: **2347**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Cardiovascular System, central nervous system, endocrine	a1, b1, c1,d1, d3	Lectures and practical training	Written, practical and oral exams
Week # 2	Cardiovascular System, central nervous system, endocrine (cont.)	a1,a4,b2,c3, d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Cardiovascular System, central nervous system, endocrine (cont.)	a3,a4,b1,b2,c1,c3,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 4	Cardiovascular System, central nervous system, endocrine (cont.)	a2,a4,b1,b2,c3,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 5	Cardiovascular System, central nervous system, endocrine (cont.)	a1, a3,b1,b2,c1,c3,d1	Lectures and practical training	Written, practical and oral exams
Week # 6	Cardiovascular System, central nervous system, endocrine (cont.)	a1,a2,a3,a4,b1,c3,d3	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Cardiovascular System, central nervous system, endocrine (cont.)	a4,b1,b2,c1,c3,d4,d5	Lectures and practical training	Written, practical and oral exams
Week # 9	Cardiovascular System,endocrine	a1,a4,b1,b2,c1,c3,d1,d2,d3, d4,d5	Lectures and practical training	Written, practical and oral exams
Week # 10	Cardiovascular System,endocrine	a1,a2,a3,a4,b1,b2,c1,c3,d1,d2,d3, d4,d5	Lectures and practical training	Written, practical and oral exams
Week # 11	Cardiovascular System,endocrine (cont.)	a1,a2,a3,a4,b1,b2,b3,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 12	Cardiovascular System,endocrine (cont.)	a1,a2,a3,a4,b1,b2,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 13	Cardiovascular System,endocrine (cont.)	a1,a2,a3,a4,b1,b2,b3,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 14	Cardiovascular System,endocrine (cont.)	a1,a2,a3,a4,b1,b2,c2,d1,d2,d3	Lectures	Written and oral exams
Week # 15	Cardiovascular System,endocrine (cont.)	a1,a2,a3,a4,b1,b2,b3,c2,d1,d2,d3, d4,d5	Lectures	Written and oral exams

Course coordinator:

Dr. Sanad Elkholy

Head of Department:

Dr. Sanad Elkholy.

Date : / 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical microbiology
Department supervising the course	
Academic Year / Level	First year, second Semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical microbiology	Code : 2156
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- different types of microorganisms, microbial growth and metabolism
- bases of bacterial genetics.
- the microbial classification and taxonomy
- Efficiently perform cultivation & reproduction of bacteria.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the student should be able to:

- a1. Know the microbial diversity and taxonomy.
- a2. Know the general characteristics and methods of classification of microorganisms.
- a3. Illustrate The methods of cultivation and reproduction of different microbes.
- A4. Define the viral and fungal structures and their modes of replication.
- A5. Describe the microbial genetic, mutation and DNA transfer.

b- Intellectual skills

B1- Interpret experimental results for differentiation between different microorganisms

B2- illustrate the optimum conditions of growth of different microorganisms

c- Professional and practical skills

- c1. Use effectively the microscope and examine microscopic observations
- c2. Use aseptic techniques for transferring and handling of microorganisms and instruments.
- C3. Monitor the microbial growth and growth conditions on different types of common culture media
- C4. predict of DNA transfer

d- General and transferable skills

- D1. Use a bright field microscope to view slide.
- D2. Perform online computer search in writing reports
- D3. Work effectively as a member of a team

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction and microbial diversity.	4	2	2
2	Characterization, classification and identification of bacteria.	4	2	2
3	Morphology and fine structures of prokaryotes.	4	2	2
4	Cell wall of bacteria	4	2	2
5	Structure internal to cell wall	4	2	2
6	Transport of solutes across cell membrane	4	2	2
7	Mid-term exam			
8	Cultivation and classification of bacteria	4	2	2
9	Bacterial physiology	4	2	2
10	Reproduction and growth of bacteria	4	2	2
11	Macromolecular biosynthesis in bacteria	4	2	2
12	Structure and classification of fungi	4	2	2
13	Ultrastructure and classification of viruses	4	2	2
14	Nucleic acid structure	2	2	Practical exam
15	Bacterial genetic	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmaceutical microbiology** Course code: **2156**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction and microbial diversity.	a1	Lectures and practical training	Written, practical and oral exams
Week # 2	Characterization, classification and identification of bacteria.	A2,c2,d3	Lectures and practical training	Written, practical and oral exams
Week # 3	Morphology and fine structures of prokaryotes.	A2,b1,c1,d2	Lectures and practical training	Written, practical and oral exams
Week # 4	Cell wall of bacteria	A2,b1,c1,d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Structure internal to cell wall	A2,b1,c1,d2	Lectures , practical training and class activity	Written, practical and oral exams
Week # 6	Transport of solutes across cell membrane	A2,b1,c1,d2	Lectures , practical training and class activity	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Cultivation and classification of bacteria	A3,b1,b2,c2,d1,d3,d4	Lectures , practical training and class activity	Written, practical and oral exams
Week # 9	Bacterial physiology	A2,b1,c1,d2	Lectures , practical training and class activity	Written, practical and oral exams
Week # 10	Reproduction and growth of bacteria	A3,b1,b2,c2,d1,d3,d4	Lectures , practical training and class activity	Written, practical and oral exams
Week # 11	Macromolecular biosynthesis in bacteria	A3,b2,c2,d3	Lectures , practical training and class activity	Written, practical and oral exams
Week # 12	Structure and classification of fungi	A4,b1,b2,c1,c2,d1,d2	Lectures , practical training and class activity	Written, practical and oral exams
Week # 13	Ultrastructure and classification of viruses	A4,b1,b2,d3,d4	Lectures , practical training and class activity	Written, practical and oral exams
Week # 14	Nucleic acid structure	A5,c4,d3	Lectures	Written and oral exams
Week # 15	Bacterial genetic	A5,c4,d3	Lectures	Written and oral exams

Course coordinator: **Professor Dr Ramadan Ahmed Aldomany**Head of department: **Professor Dr. Ramadan Ahmed Aldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Clinical Pharmacy
Department supervising the course	
Academic Year / Level	First year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Medical & Pharmaceutical Terminology	Code : 2168
Total contact hours:1 hr.	Lecture :1 hr.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The word structure of each body organ or system.
- The medical terms to their basic components, so help him/her to predict the meaning of unfamiliar medical terms.
- Improving his/her spelling and pronunciation skills.
- The medical record and prescription abbreviations.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the graduate should be able to:

- a1- Understand the basic components of medical terms.
- a2- Understand the meaning of unfamiliar medical terms.
- a3- Demonstrate the spelling & pronunciation skills.
- a4- Understand rules for building a medical word.

b- Intellectual skills

- b1-Recognize the word structure.
- b2 Recognize Medical jargon & prescription abbreviations.
- b3-Utilize general rules in handling the unfamiliar medical terms.

c- Professional and practical skills

- c1-Use a general protocol in splitting the word and predict the meaning .
- c2-Use the spelling & pronunciation skills.

d- General and transferable skills

- d1- Evaluate the spelling and pronunciation .
- d2- Retrieve information from a variety of sources, including libraries, databases and internet.
- d3- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction Medical record/ prescription abbreviations	1	1	
2	level of organization	1	1	
3	The digestive system	1	1	
4	Blood	1	1	
5	The endocrine system	1	1	
6	The urinary system	1	1	
7	Mid-term exam			
8	The cardiovascular system	1	1	
9	The nervous system	1	1	
10	The anatomical position	1	1	
11	The respiratory system	1	1	
12	The eye &The ear	1	1	
13	The skin	1	1	
14	The nose & the mouth.	1	1	
15	The male &female reproductive system	1	1	

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training/laboratory ()
- c. Seminar/workshop ()
- d. Class activity (discussion, brain storm, case study) (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17
Assessment 3	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes in Medical Terminology for 1st year pharmacy students

Essential books (text books)

Medical terminology simplified .3rd Ed. Davis company. 2005. Babara Gylys, Regina Masters.

Recommended books

Medical Terminology by [Marjorie C. Willis](#)

Quick and easy medical terminology by Bruce Wingerd

Websites

www.corexcel.com/.../online.medical.terminology.ht...

7. Facilities required for teaching and learning

-Class rooms.	
-Laboratory facilities.	-Library.
- Data show.	
-Computers.	-Internet.

Course coordinator:

Dr. Gamal El-Azab

Head of Department: Dr/ Ramadan El-Domany

Date : 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Medical & Pharmaceutical Terminology**Course code: **2168**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction Medical record/ prescription abbreviations	a1,a2,a3,a4,b1,b2,b3	Lectures, discussion and brain storm	Written and oral exams
Week # 2	level of organization	a1,a2,a3,a4,b1,b3,c1,c2,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 3	The digestive system	a1,a2,a3,a4b2,b3,c1,c2,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 4	Blood	a1,a2,a3,a4,b1,b2,c2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 5	The endocrine system	a1,a2,a3,a4,b1,b3,c1,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 6	The urinary system	a1,a2,a3,a4,b2,b3,c1,c2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	The cardiovascular system	a1,a2,a3,a4,b1,b2,b3,c2,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 9	The nervous system	a1,a2,a3,a4,b1,b2,b3,c1,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 10	The anatomical position	a1,a2,a3,a4,b1,b2,b3,c2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 11	The respiratory system	a1,a2,a3,a4,b1,b2,b3,c1,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 12	The eye & The ear	a1,a2,a3,a4,b1,b2,b3,c2,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 13	The skin	a1,a2,a3,a4,b1,b2,b3,c1,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 14	The nose & mouth	a1,a2,a3,a4,b1,b2,b3,c2,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 15	The male & female reproductive system	a1,a2,a3,a4,b1,b2,b3,c1,d3	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr. Gamal El-Azab**Head of Department: **Dr/ Ramadan El-Domany**Date : **9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Minor
Department offering the course	Psychology
Department supervising the course	Clinical Pharmacy
Academic Year / Level	First year, second term
Date of specification approval	9/2016

A- Basic Information

Title : Psychology	Code : 2378
Credit Hours: 2 hrs.	Lecture: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The scientific interpretations of behaviour.
- Improvement communication skills in work and life situations.
- Self control and self adjustment skills.
- Some applications of psychology in pharmacy.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

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

- a1- Conditions, memory and intelligence.
- a2- Pharmacists contribution to public health, which sometimes termed pharmaceutical public health.
- a3-The social and behavioral sciences related to pharmacy.

b- Intellectual skills

- b1-Recognize thinking and decision making skills.
- b2-Predict" How to improve your money".
- b3-utilize knowledge and critical understanding of essential facts,concepts, principles and theories relating to the subject areas

c- Professional and practical skills

- c1- Demonstrate the role of the pharmacist in public health education, regarding vaccination, drug abuse and misuse.

d- General and transferable skills

- d1- Develop problem solving skills.
- d2- Demonstrate self protection skills.
- d3- Developing good selling, financial, stock management and negotiation skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction and terminology Psychology of learning	2	2	
2	Memory and intelligence	2	2	
3	Emotions in norm and pathology	2	2	
4	Psychology of communication skills	2	2	
5	Psychological bases of crisis management	2	2	
6	Psychological of personality	2	2	
7	Mid-term exam			
8	Psycho-therapy	2	2	
9	Interests, attitudes and values	2	2	
10	Group dynamics	2	2	
11	Thinking skills	2	2	
12	An introduction to pharmacological psychology	2	2	
13	Consciousness in norm and pathology	2	2	
14	Psychological causes of drug abuse and addiction	2	2	
15	Psychology of negotiation skills	2	2	

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory ()
 c. Seminar / Workshop ()
 d. Class Activity ()

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17
Assessment 3	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

Notes in psychology approved by the department

Essential books (text books)

Recommended books

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities.
- Projectors (Overhead, video projector)
- Computers.
- Library.
- Internet.

Course coordinator:

Prof. Dr. Dr. Sayed saker

Head of Department:

Prof. Dr. Dr. Sayed saker

Date : 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Psychology**Course code: **2378**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction and terminology Psychology of learning	a1 , a2 , b1	Lectures	Written and oral exams
Week # 2	Memory and intelligence	a1 , a2 , b1	Lectures	Written and oral exams
Week # 3	Emotions in norm and pathology	a1,d2	Lectures	Written and oral exams
Week # 4	Psychology of communication skills	a3	Lectures	Written and oral exams
Week # 5	Psychological bases of crisis management	a3 , b3 , d1	Lectures	Written and oral exams
Week # 6	Psychological of personality	a3 , b2 ,d2	Lectures	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Psycho therapy	a3 , c1,d1 , d2	Lectures	Written and oral exams
Week # 9	Interests, attitudes and values	a1 , a3 , d2	Lectures	Written and oral exams
Week # 10	Group dynamics	a1 , a3	Lectures	Written and oral exams
Week # 11	Thinking skills	a1 , b3	Lectures	Written and oral exams
Week # 12	An introduction to pharmacological psychology	a3,c1	Lectures	Written and oral exams
Week # 13	Consciousness in norm and pathology	d1 , d2	Lectures	Written and oral exams
Week # 14	Psychological causes of drug abuse and addiction	d2	Lectures	Written and oral exams
Week # 15	Psychology of negotiation skills	a1 ,a3,d3	Lectures	Written and oral exams

Course coordinator:**Prof. Dr. Dr. Sayed saker****Head of Department:****Prof. Dr. Dr. Sayed saker****Date : 9/2016**

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Second year, First Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacognosy
Department supervising the course	
Academic Year / Level	Second year, first term
Date of specification approval	9/2016

A- Basic Information

Title : Chemistry of crude drugs	Code : 3055
Total contact hours: 7 hrs.	Lecture: 3 hrs.
	Practical: 4 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The chemistry and biological activity of two major groups of natural products, namely alkaloids and volatile oils.
- The chemistry and biological activity of semi-synthetic derivatives and synthetic analogues based on natural product templates of these groups are covered.
- Practical testing and quantification of selected groups of alkaloids and volatile oils.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Identify the several groups of alkaloids and volatile oils.
- a2- Describe the botanical occurrence, extraction, isolation, identification and determination procedures.
- a3- Report the biosynthesis and the therapeutic effects of different alkaloids and volatile oils.

b- Intellectual skills

- b1-Recognize the chemical structures and uses of different groups of alkaloids and volatile oils.
- b2- Sketch the possible leads to new drugs depending on natural product templates
- b3- Categorize the different methods used for quantitative and qualitative determination of different groups of alkaloids and volatile oils.

c- Professional and practical skills

- c1- Assess the practical phyto-chemical procedures.
- c2- Demonstrate examples of the different groups of alkaloids and volatile oils in terms of their uses, chemical group and origin.
- c3- Test different groups of alkaloids and volatile oil.
- c4- Analyze different groups of alkaloids and volatile oil.

d- General and transferable skills

- d1- Construct search and retrieval of information.
- d2- Communicate in laboratory work.
- d3- Interact in team for writing reports.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Volatile oils, Introduction	7	3	4
2	Methods of extraction	7	3	4
3	Hydrocarbons	7	3	4
4	Alcohols	7	3	4
5	Phenols, Esters	7	3	4
6	Aldehydes, Ketons and N- and S- containing compounds	7	3	4
7	Mid-term exam			
8	Introduction of alkaloids	7	3	4
9	Non-heterocyclic alkaloids, Pyridine alkaloids	7	3	4
10	Piperidine alkaloids, Tropane group alkaloids	7	3	4
11	Quinoline alkaloids, Purine alkaloids	7	3	4
12	Isoquinoline alkaloids	7	3	4
13	Indole alkaloids	7	3	4
14	Imidazole alkaloids Steroidal alkaloids Tropolone alkaloids	3	3	Practical exam
15	Revision	3	3	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop (√)
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on phytochemistry prepared in the form of a book authorized by the department staff.

Essential books (text books)

- Evans, William C., Trease & Evans' Pharmacognosy, 14th Ed., London: Saunders, 1998.
- Dewick, P. M. Medicinal Natural Products, A biosynthetic approach. 2002
- Balbaa, S.; Hilal, S. and Zaki, A. Medicinal Plant Constituents. 1976.

Recommended books

- Bruneton. J. Pharmacognosy Phytochemistry Medicinal plants 1999
- Pharmacobiotechnology. 1996.

Websites

www.biomedcentral.com

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Chemistry of crude drugs**Course code: **3055**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Volatile oils, Introduction	a1	Lectures	Written and oral exams
Week # 2	Methods of extraction	b1,c1,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Hydrocarbons	a1,a3,b1,b2,c1,c3, d1	Lectures and practical training	Written, practical and oral exams
Week # 4	Alcohols	a2,a3,b1,b2,c1,c3, d1	Lectures and practical training	Written, practical and oral exams
Week # 5	Phenols, Esters	a1, a2, a3,b1,b2,c1,c3,d1	Lectures and practical training	Written, practical and oral exams
Week # 6	Aldehydes, Ketons and N- and S- containing compounds	a2,a3,b1,b2,c1,c3, c4, d1, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Introduction of alkaloids	a1,a3,b1,b3,c1,c3, d1	Lectures and practical training	Written, practical and oral exams
Week # 9	Non-heterocyclic alkaloids, Pyridine alkaloids	a2,a3,b1,b2, b3,c1,c2, c3, c4, d1	Lectures and practical training	Written, practical and oral exams
Week # 10	Piperidine alkaloids, Tropane group alkaloids	a2,a3,b1,b2, b3,c1,c2, c3, c4, d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 11	Quinoline alkaloids, Purine alkaloids	a2,a3,b1,b2, b3,c1,c2, c3, c4, d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 12	Isoquinoline alkaloids	a2,a3,b1,b2,b3,c1, c2, c3, c4, d3	Lectures and practical training	Written, practical and oral exams
Week # 13	Indole alkaloids	a2,a3,b1,b2,b3,c1, c2, c3, c4, d3	Lectures and practical training	Written, practical and oral exams
Week # 14	Imidazole alkaloids Steroidal alkaloids Tropolone alkaloids	a2,a3,b1,b2,b3,c1, c2, c3, c4, d3	Lectures	Written and oral exams
Week # 15	Revision	a2,a3,b1,b2,b3,c1, c3,d1,d2, d3	Lectures Activity Presentation	Written and oral exams

Course coordinator: **Prof. Dr: Saleh Elsharkawy**Head of department: **Prof. Dr: Ramadan Eldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in Pharmacy
Major or minor element of program	Major
Department offering the course	Biochemistry
Department supervising the course	
Academic Year / Level	Second year, First semester
Date of specification approval	9/2016

A- Basic Information

Title : Biochemistry	Code : 3043
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course: upon successful completion of this course, the students should be able to understand:

- The fundamental aspects of Biochemistry to function of living system.
- The structure and function of living matter in molecular terms.
- The relationship between metabolism of different food stuffs and correlate to some diseases.
- The daily energy requirements needed to choose healthy food, thus avoiding many chronic diseases including obesity.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: upon successful completion of this course, the students should be able to:

- a1. Explain the general structures and functions of enzymes, carbohydrates, and lipids.
- a2. State how enzymes lower the activation energy of reactions and enzyme kinetics and inhibition, and how its specificity and function can be a target for therapy.
- a3. Describe how food molecules are digested, absorbed, stored and mobilized.
- a4. Demonstrate the effect of glucose and lipid oxidation on biological process.
- a5. Explain how metabolic disorders can result in diseases.
- a6. State specific metabolic steps that can be target for therapy.

b- Intellectual skills

- b1. Utilize biochemical basis for elucidation of some genetic diseases as diabetes.
- b2. Recognize interrelationships between biochemistry and medicine.
- b3. Assess some clinical disorders and food-related diseases.
- b4. Utilize knowledge and critical understanding of glucose and lipid metabolism abnormalities in diagnosis of different diseases.

c- Professional and practical skills

- c1. Use effectively laboratory glass-wares and instruments used for determination of the different components in the biological fluids.
- c2. Test the molecules found in biological fluids.
- c3. Assess the concentration of some metabolic and biological compounds present in urine and in blood samples.
- c4. Analyze the obtained data and their diagnostic significance by comparing with their reference values.
- c5. Use effectively chemical reagents especially some dangerous materials.

d- General and transferable skills

- d1. Communicate with others to avoid nutrition-related diseases such as obesity.
- d2. Assess biochemical investigations in relation to diseases to find out their causes and suggest rational treatment.
- d3. Develop life-style and adequate balanced nutrition.
- d4. Interact in a teamwork spirit.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Enzymes	4	2	2
2	Enzymes (cont.)	4	2	2
3	Classification of carbohydrates	4	2	2
4	Glycolysis and krebs cycle	4	2	2
5	Regulation of blood glucose level	4	2	2
6	Glycogen synthesis and glycogen storage diseases	4	2	2
7	Mid-term exam			
8	Diabetes mellitus	4	2	2
9	Metabolic defects related to hexoses, glycosaminoglycans.	4	2	2
10	Classification of lipids	4	2	2
11	Clinical aspects in the metabolism of unsaturated fatty acids	4	2	2
12	Lipid transport, storage and the role of liver	4	2	2
13	Digestion and absorption of lipids	4	2	2
14	Lipid metabolism	2	2	Practical exam
15	Cholesterol structure, metabolism, related diseases.	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written Mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-Term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes in Biochemistry by staff members of Department of Biochemistry.
- Lab Notes in Clinical Biocemistry by staff members of Department of Biochemistry.

Essential books (text books)

- 1-Biochemistry: Harvey RA, Champe PC and Ferrier DR (2005), 3rd ed, Lippincott Williams and Wilkins, Baltimore.
- 2-Harper's illustrated Biochemistry by Murray RK, Bender DA, Botham KM, Kennelly PJ, Rodwell VW, P. Anthony Weil PA (2009), 28th Edition, McGraw Hill.

Recommended books

- 1-Biochemistry, LubertStryer (2006), 6th Edition, WH Freeman.
- 2-Essential Biochemistry: Pratt CW and Cornely K (2004), John Wiley & Sons Inc., USA.

Websites

www.highwire.com, www.google.com, www.pubmed.com & www.biomed.net

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities including instruments and tools necessary for practical work e.g. glass wares, water baths, Flames, pH meters, electrophoretic .apparatus, centrifuge, spectrophotometers.
- Library.
- Data show
- Computers. -Internet.

Course coordinator:

Prof : Nabil Mohie

Head of Department:

Prof: Ramadan Eldomany

Date: 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Biochemistry**Course code: **3043**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Enzymes	a1, a2, c1, c2.	Lectures and practical training	Written, practical and oral exams
Week # 2	Enzymes (cont.)	a1, a2,,b1,c1,c2,c3,d2, d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Classification of carbohydrates	a1, a3 , c1, c2, c3, d4	Lectures and practical training	Written, practical and oral exams
Week # 4	Glycolysis and krebs cycle	a3 , a4, c1, c2, c3, d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 5	Regulation of blood glucose level	a3 , a4, c1, c2, c3, c4, c5, d4	Lectures and practical training	Written, practical and oral exams
Week # 6	Glycogen synthesis and glycogen storage diseases	a3 , b2, b3, c2, c3, c4, d2, d4	Lectures and practical training, discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Diabetes mellitus	a5, b1, b2, b3, b4, c1, c2, c3, c4, d1, d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 9	Metabolic defects related to hexoses, glycosaminoglycans	a5, a6, b2, b3, c1, c2, c3, c4, d1, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 10	Classification of lipids	a3, a4, c1, c2, c3, d4	Lectures and practical training	Written, practical and oral exams
Week # 11	Clinical aspects in the metabolism of unsaturated fatty acids	a4, a5, b3, c1, c2, c3, c4, d4	Lectures and practical training	Written, practical and oral exams
Week # 12	Lipid transport, storage and the role of liver	a1, a3, c1, c2, c3, c4, d4	Lectures and practical training	Written, practical and oral exams
Week # 13	Digestion and absorption of lipids	a3, b2, b3, c1, c2, c4, d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Lipid metabolism	a4, a5, b3,c4, d4	Lectures	Written and oral exams
Week # 15	Cholesterol structure, metabolism, related diseases.	a5, a6, b2, b3, b4, c4, d2, d3, d4	Lectures	Written and oral exams

Course coordinator: Prof. Dr. Nabil Mohie**Head of department: Prof. Dr. Ramadan Eldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical Analytical chemistry
Department supervising the course	
Academic Year / Level	Second year, first semester
Date of specification approval	9 /2016

A- Basic Information

Title : Instrumental analysis	Code : 3012
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The basic principles and theoretical aspects of different spectrometric methods of analysis.
- Interpretation analytical data obtained from different spectroscopic techniques.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the student should be able to:-

- a1- identify Principles of different methods of instrumental analysis.
- a2-demonstrate Molecular absorption spectrometry (UV,VIS,IR,NMR spectrometry)
- a3-list Luminescence spectrometry mainly spectrofluorimetry.
- a4- identify Atomic spectrometry based on flame(AAS,AES).
- a5- define Mass spectrometry(MS).

b- Intellectual skills

- b1- Interpret different spectral data to quantify different drugs.
- b2- Utilize integrated spectral data to deduce chemical structure of compounds

c- Professional and practical skills

- c1- Effectively Use different spectrometric instruments.
- c2-Analyze the outcomes of different instruments e.g. electronic absorption spectra.

d- General and transferable skills

d1-Communicate in team and apply time management principles effectively.
 d2-Implement continuous and lifelong self learning.
 d3-Demonstrate oral and written communication skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to instrumental methods.	4	2	2
2	Introduction to spectroscopy	4	2	2
3	(UV/VIS) spectroscopy	4	2	2
4	Applications of UV/VIS spectroscopy	4	2	2
5	Infrared spectroscopy	4	2	2
6	IR spectra interpretation	4	2	2
7	Mid-term exam			
8	Spectrofluorimetry	4	2	2
9	Nuclear magnetic resonance spectrometry(NMR) instrumentation	4	2	2
10	NMR (Cont.): Factors affect chemical shift	4	2	2
11	Atomic Emission Spectrometry (AES)	4	2	2
12	-Atomic Absorption Spectrometry (AAS)	4	2	2
13	Mass Spectrometry Instrumentation	4	2	2
14	Mass spectra interpretation	2	2	Practical exam
15	Deduce Chemical structure from integrated spectral data	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on instrumental analysis for second year pharmacy students, prepared and distributed by Dept. of Pharmaceutical Analytical Chemistry.
- Lab manual of instrumental analysis for for second year pharmacy students, prepared and distributed by Dept. of Pharmaceutical Analytical Chemistry.

Essential books (text books)

1. D.A.skoog,D.M.west ,F.J holler and S.R. crouch ,"fundamentals of analytical chemistry", eight edition , book/cole-thomson learning, inc.(2004)
2. G. D. Christian and J. E. Oreilly, "instrumental analysis ",latest edition ,Ally n and Bacon ,inc.

Recommended books

- H. H. Willard, L. L. Merritt, Jr, Dean and F. A. Settle, "instrumental methods of

analysis " latest edition , Princeton, N. J. Van nostrand

Websites

<http://ull.chemistry.uakron.edu/analytical/>

7. Facilities required for teaching and learning

- Class rooms.**
- Laboratory facilities(UV/visible spectrophotometer)**
- Library**
- Data show**
- Internet**
- Computers**

Course coordinator:

Prof. dr. Fathallah Belal
Dr. Ahmed Faried

Head of Department:

Dr. Ramadan Eldomany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Instrumental analysis
Course code: 3012

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction to instrumental methods.	a1,c1,d1,d2	Lecture, brain storming and discussion	Written and oral exams
Week # 2	Introduction to spectroscopy	a2,c2,d1,d2	Lecture, brain storming and discussion	Written and oral exams
Week # 3	(UV/VIS) spectroscopy	a2,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 4	Applications of UV/VIS spectroscopy	a2,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 5	Infrared spectroscopy	a2,b2,c1,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 6	IR spectra interpretation	a2,b2,c1,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Spectrofluorimetry	a3,b1,c1,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 9	- Nuclear magnetic resonance spectrometry(NMR) - Instrumentation	a2,b1,c1,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 10	NMR (Cont.): Factors affect chemical shift	a2,b1,c1,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 11	Atomic Emission Spectrometry (AES)	a2,a4,b2,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 12	Atomic Absorption Spectrometry (AAS)	a2,a4,b2,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Mass Spectrometry Instrumentation	a5,b1,b2,c1,c2,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 14	Mass spectra interpretation	a5,b2,d1,d2,d3	Lectures	Written and oral exams
Week # 15	Deduce Chemical structure from integrated spectral data	a2,a3,a4,a5,b1,b2,d1,d2,d3	Lectures	Written and oral exams

Course coordinator:

Prof. dr. Fathallah Belal Dr. Ahmed Faried

Head of Department:

Dr. Ramadan Eldomany

Date : 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical microbiology
Department supervising the course	
Academic Year / Level	Second year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Parasitology	Code : 3066
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- the essential knowledge and information about important medical parasites which are pathogenic to human.
- morphological characters of the parasites, laboratory diagnosis, pathogenicity, life cycle, treatment ,prevention and control.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

On successful completion of the course, the student should be able to:

- a1- know Sources and modes of infection of the important medical helminthology and protozoology.
- a2- know The specific diseases caused by each class of medical parasites.
- a3- describe The specific diagnosis for each parasite either microscopically or serologically.
- a4- state The methods of prevention,control and treatment of pathogenic parasites to human.

b- Intellectual skills

- b1- Recognize how parasites infect human.
- b2- Select the drug of choice for treatment of each parasite and the proper dose.
- b3- Utilize specific preventive and control measures to prevent infections spread in the community.

c- Professional and practical skills

- c1- Use of microscopical skills in identifying various parasites.
c2- Use effectively different clinical specimens to diagnose various parasites.

d- General and transferable skills

- d1- Work in groups.
d2- Implement writing and presentation skills about different parasitic diseases

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to parasitology	4	2	2
2	Phylum protozoa (class Rhizopoda (Entamoeba histolytica), class ciliat (Balantidium coli, sporozoa (Plasmodiae).	4	2	2
3	Toxoplasma gondii, class zoomastigophora (intestinal flagellates (Giardia lamblia and Trichomonas vaginalis). Haemoflagellates (Genus Leishmania and Trypanosoma).	4	2	2
4	Class trematoda: liver flukes (Faciola spp.)	4	2	2
5	Schistosoma (blood fluke)	4	2	2
6	Class cestodea: Taenia spp. and Hymenolepis spp.)	4	2	2
7	Mid term exam			
8	Echinococcus granulosus and hydatid disease	4	2	2
9	Diphyllobothrium latum and spaganosis	4	2	2
10	Class nematoda (Trichenella spiralis and Trichurius trichura.	4	2	2
11	Hook worms (Ancylostoma duodenal and Necator americanus	4	2	2
12	Cutaneous larva migrans Strongyloides stercoralis	4	2	2
13	Ascaris lumbricoides, Enterobius vermicularis and visceral larva migrans.	4	2	2
14	Blood and tissue nematodes.	2	2	Practical exam
15	Onchocerca volvulus, Loa loa, Mansonella ozzardi.	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on Medical parasitology
- Laboratory manual of medical parasitology

Essential books (text books)

Recommended books

- Lynne,S.G, 2004, Diagnostic medical parasitology, American Society of Microbiology.
- Markell, E. K; John, D. T; Krotoski, W.A, 2004, Markell & Voges's medical parasitology.

Websites

- www. parasitology-online.com
- www.cup.cam.ac.jk/journals/par.
- www.med.sc.edu:85/book/parasit-sta.htm.

7. Facilities required for teaching and learning

-Class rooms.	
-Laboratory facilities(microscopes).	-Library.
- Data show	
-Computers.	-Internet.

Course coordinator:

Prof Dr: Ramadan Ahmed Aldomany

Head of Department:

Prof Dr: Ramadan Ahmed Aldomany

Date : /9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **parasitology**Course code: **3066**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction to parasitology	A1	Lectures and practical training	Written, practical and oral exams
Week # 2	Phylum protozoa (class Rhizopoda (Entamoeba histolytica), class ciliat (Balantidium coli, sporozoa (Plasmodiae).	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Toxoplasma gondii, class zoomastigophora (intestinal flagellates (Giardia lamblia and Trichomonas vaginalis). Haemoflagellates (Genus Leishmania and Trypanosoma).	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 4	Class trematoda: liver flukes (Faciola spp.)	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Schistosoma (blood fluke)	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training and class activity	Written, practical and oral exams
Week # 6	Class cestodea: Taenia spp. and Hymenolepis spp.)	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training and class activity	Written, practical and oral exams
Week # 7	Mid term exam			
Week # 8	Echinococcus granulosus and hydatid disease	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 9	Diphyllobothrium latum and spaganosis	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training and class activity	Written, practical and oral exams
Week # 10	Class nematoda (Trichenella spiralis and Trichurius trichura.	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training and class activity	Written, practical and oral exams
Week # 11	Hook worms (Ancylostoma duodenal and Necator americanus	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 12	Cutaneous larva migrans Strongyloides stercoralis	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Ascaris lumbricoides, Enterobius vermicularis and visceral larva migrans.	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Blood and tissue nematodes.	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures	Written and oral exams
Week # 15	Onchocerca volvulus, Loa loa, Mansonella ozzardi.	A1,a2,a3,a4,b1,b2,b3,c1,c2,d1,d2	Lectures	Written and oral exams

Course coordinator: **Prof Dr: Ramadan Ahmed Aldomany**Head of department: **Prof Dr: Ramadan Ahmed Aldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Second year, First Semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical Formulations	Code : 3034
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Liquid dosage forms such as solutions and disperse systems.
- Sterile products such injectable and ocular preparations.
- The specification of radiopharmaceutical products.
- The factors affecting formulation design.
- The role of formulation design and additives in maintaining the stability of the dosage forms and the bioavailability of drug.
- The quality attributes of the selected products.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

Upon successful completion of the course, the graduate should be able to:

- a1- Know the specifications of ideal solution, suspension, emulsion and aerosol.
- a2- List the specifications of parenteral and ophthalmic products.
- a3- Discuss the factors affecting stability of pharmaceutical solutions, suspensions and emulsions.
- a4- Explain knowledge of radiopharmaceutical formulations.
- a5- List different types of aerosol formulations.

b- Intellectual skills

- b1- Select the best liquid form for a given drug.
- b2- Select the best additives to enhance the stability of pharmaceutical solutions, suspensions and other disperse systems.
- b3- Predict instability problems in selected products and suggest solutions for these problems.
- b4- Adjust the quality attributes of sterile pharmaceuticals

c- Professional and practical skills

- c1- Analyze stable effective liquid dosage form.

c2-Examine the best method for sterilization of different pharmaceutical products.
 c3-Assess the quality attributes of liquid dosage forms.
 c4- Examine the necessary quality control tests of parenterals and other sterile products.

d- General and transferable skills

d1-Work independently and in groups
 d2-Retrieve and evaluate information from different sources.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical(contact hours)
1	Introduction – Definitions, Solutions	4	2	2
2	Solutions (cont.)	6	2	2
3	Suspensions	6	2	2
4	Suspensions (cont.)	6	2	2
5	Emulsions	8	2	2
6	Emulsion (cont.)	6	2	2
7	Mid-term exam			
8	Parenterals	4	2	2
9	Parenterals	2	2	2
10	parenterals(cont.)	2	2	2
11	Aerosols	2	2	2
12	Aerosols (cont.)	2	2	2
13	Ophthalmic solutions and suspensions	2	2	2
14	Contact lenses and ocuserts	2	2	Practical exam
15	Radiopharmaceuticals	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop (√)
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-tem exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on pharmaceutical formulations prepared by the department staff.

Essential books (text books)

Aulton, M.E, Pharmaceutics: The Science of Dosage Form Design. 4th edition, 2010.

Recommended books

[Herbert A. Lieberman](#), Martin M. Reiger, GeilbertS.Banker :Pharmaceutical Dosage Forms, Vol. 3 (Pharmaceutical Dosage Forms-Disperse), Third Edition, 2010.

Websites

www.pubmed.com

7. Facilities required for teaching and learning

- | | |
|---|---|
| <ul style="list-style-type: none"> • Class rooms. • Data Show. • Laboratory facilities (Digital balance and Liquid filling machine) | <ul style="list-style-type: none"> • Computers. • Internet. |
|---|---|

Course coordinator:

Dr.Abdelaziz Elashmawy

Head of Department:

Prof. Dr/ Ramadan Eldomany

Date: / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Pharmaceutical Formulations

Course code: 3034

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction – Definitions, Solutions	a1, a3, d2	Lectures	Written and oral exams
Week # 2	Solutions (cont.)	a1, a3, b1, b2, b3, c1, c3, d1, d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Suspensions	a1, a3, b1, b2, b3, c1, c3, d1, d2	Lectures and practical training	Written, practical and oral exams
Week # 4	Suspensions (cont.)	a1, a3, b1, b2, b3, c1, c3, d1, d2	Lectures, practical training and class activity	Written, practical and oral exams
Week # 15	Radiopharmaceuticals	a4, d2, b3	Lectures and seminar.	Written and oral exams
Week # 13	Ophthalmic solutions and suspensions	a2, b3, b4, c2, c4, d2, b1, b2	Lectures	Written and oral exams
Week # 7	Mid-term exam			
Week # 14	Contact lenses and ocuserts	a2, b4, d2	Lectures and seminar.	Written and oral exams
Week # 5	Emulsions	a1, a3, b1, b2, b3, c1, c3, d1	Lectures	Written, practical and oral exams
Week # 6	Emulsion (cont.)	a1, a3, b1, b2, b3, c1, c3, d1, d2	Lectures, practical training and seminar	Written, practical and oral exams
Week # 8	Parenterals	a2, b3, b4, c2, c4, d2	Lectures and practical training	Written and oral exams
Week # 9	Parenterals	a2, b3, b4, b1, b2, d2	Lectures	Written and oral exams
Week # 10	parenterals(cont.)	a2, b3, b4, b1, b2, d2	Lectures	Written and oral exams
Week # 11	Aerosols	a1, a5, d2	Lectures	Written and oral exams
Week # 12	Aerosols (cont.)	a1, a5, d2	Lectures	Written and oral exams

Course coordinator:

Head of department:

Dr/ Abd El -aziz El-said

Dr/ Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical microbiology
Department supervising the course	
Academic Year / Level	Second year, first term
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical Microbiology	Code : 3026
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

Classification of antibiotics and non-antibiotic antimicrobial agents; mechanisms of action, resistance and uses in addition to different sources of microbial contamination and sterilization process.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. Understand classification of antibiotics mechanisms of action, resistance and uses
- a2. Discuss the non-antibiotic antimicrobial agents and methods of preservation
- a3. Know the sources of different microbial contamination and spoilage of different pharmaceutical dosage forms
- a4. Define different sterilization methods
- a5. Define the production of pharmaceuticals through microorganisms

b- Intellectual skills

- b1. Predict the most suitable antibiotic for treatment of certain infection.
- b2. Recognize techniques in evaluation of antimicrobial agents.
- b3. Predict different causes of microbial spoilage of different dosage forms
- b4. Recognize the suitable method for sterilization of certain dosage form
- b5. Recognize suitable organism for production of pharmaceuticals

c- Professional and practical skills

- c1. Test for the susceptibility of the microorganisms (sensitivity) to different

antimicrobial agents.
 c2. Use effectively the best preservative, disinfectant or antiseptic.
 c3. Assess the potency of antimicrobial agents by various assay methods.
 c4. Test the sterility of various sterile products.
 c5. Examine how to maintain a sterile area for manufacturing or testing sterile products.
 c6. Validation of sterilization technique

d- General and transferable skills

d1. Construct the proper method for sterilization of different materials.
 d2. Retrieve the general laboratory safety and aseptic techniques protocols.
 d3. Assess different antimicrobial agents based on the results obtained in the laboratory.
 d4. Work effectively in a team

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction & Classification types of Antibiotics .	4	2	2
2	Mode of action of Antibiotics.	4	2	2
3	Bacterial resistance to antibiotics & clinical use of a antibiotics.	4	2	2
4	Non antibiotic antimicrobial agents & it's classification, mode of action & Resistance.	4	2	2
5	Applications of non antibiotic antimicrobial agents & Evaluation.	4	2	2
6	Microbial spoilage types, kinetics of microbial death.	4	2	2
7	Mid-term exam			
8	Sterilization techniques Heat Sterilization Cold Sterilization.	4	2	2
9	Validation of Sterilization process , sterility test.	4	2	2
10	Principles of Biotechnology (methods of fermentation & production of antibiotics).	4	2	2
11	Microorganisms in food & pharmaceutical products.	4	2	2
12	Human growth hormone, insulin production.	4	2	2
13	Antibiotic improvement of plant through biotechnology.	4	2	2
14	Revision			Practical exam
15	Revision			Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop (√)
 d. Class activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

1. Course Notes:	Pharmaceutical microbiology & immunology For third year students
2. Essential Books (Text Books):	Madigam, Martinko, Dunlap, Clark, Thomas Brock "Brock biology of microorganisms" Edition 9, 2009.
3. Recommended Books:	Buron, Fingold V.D, Hugow B, Russell A.d "Pharmaceutical microbiology" Edition9 2000
4. Periodicals, Web Sites:	www.Pubmed.com

7. Facilities required for teaching and learning

-Class rooms.	
-Laboratory facilities (Autoclave, Laminar-flow hood).	-Library.
-Data show	
-Computers.	-Internet.

Course coordinator:

Prof Dr: Ramadan Ahmed Aldomany

Head of Department:

Prof Dr: Ramadan Ahmed Aldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmaceutical microbiology** Course code: **3026**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction & Classification types of Antibiotics .	A1	Lectures and practical training	Written, practical and oral exams
Week # 2	Mode of action of Antibiotics.	A1	Lectures and practical training	Written, practical and oral exams
Week # 3	Bacterial resistance to antibiotics & clinical use of a antibiotics.	A1,b1,c1,d3,d4	Lectures and practical training	Written, practical and oral exams
Week # 4	Non antibiotic antimicrobial agents & it's classification, mode of action & Resistance.	A2,c2,c3,d3,d4	Lectures and practical training,seminar, class activity	Written, practical and oral exams
Week # 5	Applications of non antibiotic antimicrobial agents &Evaluation.	B2,c3,d3,d4	Lectures and practical training	Written, practical and oral exams
Week # 6	Microbial spoilage types, kinetics of microbial death.	A3,b3	Lectures and practical training,seminar, class activity	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Sterilization techniques Heat Sterilization Cold Sterilization.	A4,b4,d1	Lectures and practical training,seminar, class activity	Written, practical and oral exams
Week # 9	Validation of Sterilization process , sterility test.	C4,c5,c6,d2	Lectures and practical training,seminar, class activity	Written, practical and oral exams
Week # 10	Principles of Biotechnology (methods of fermentation & production of antibiotics).	A5,b5	Lectures and practical training	Written, practical and oral exams
Week # 11	Microorganisms in food & pharmaceutical products.	A5,b5	Lectures and practical training	Written, practical and oral exams
Week # 12	Human growth hormone,insulin production.	A5,b5	Lectures	Written, practical and oral exams
Week # 13	Antibiotic improvement of plant through biotechnology..	A5,b5	Lectures	Written, practical and oral exams
Week # 14	Revision		Lectures	Written and oral exams
Week # 15	Revision		Lectures	Written and oral exams

Course coordinator: **Prof Dr: Ramadan Ahmed Aldomany**Head of department: **Prof Dr: Ramadan Ahmed Aldomany**

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Second year, Second Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacognosy
Department supervising the course	
Academic Year / Level	Second year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Chemistry of crude drugs	Code : 3145
Total contact hours: 7hrs.	Lecture: 3 hrs.
	Practical: 4 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The chemistry and biological activity of carbohydrates, glycosides, bitter principles and tannins.
- The chemistry and biological activity of part of vitamins, enzymes and hormones was recently included.
- An introductory knowledge about chromatography and acquaints the student with the topic of microbial biotransformation and plant cell culture.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Identify the chemistry of carbohydrates, glycosides, bitter principles and tannins
- a2- Describe botanical occurrence, extraction, isolation, identification and determination procedures.
- a3- Know the different chromatographic techniques and types.
- a4- Define the therapeutic effects of different phytochemical classes.
- a5- List different types of vitamins, hormones, and enzymes.
- a6- Record therapeutic uses of vitamins.

b- Intellectual skills

- b1-Assess the chemical structures and uses of different groups of phytochemical classes.
- b2- Demonstrate the possible leads to new drugs depending on natural product templates.
- b3- Analyze the different methods used for quantitative and qualitative determination of different groups of phytochemical classes.

c- Professional and practical skills

- c1- Examine the practical phytochemical procedures.
- c2- Analyze examples of the different groups of natural products e.g carbohydrates, glycosides, bitter principles and tannins.
- c3- Analyze different groups of natural products e.g carbohydrates, glycosides, bitter principles and tannins.
- c4- Analyse different groups of natural products e.g carbohydrates, glycosides, bitter principles and tannins.
- c5- Examine examples for vitamins, enzymes and hormones used now in therapy as well as biotechnology topics.

d- General and transferable skills

- d1- Design search and retrieve information.
- d2- Communicate in laboratory work.
- d3- Interact in the writing of reports.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Chromatography: -Introduction and column chromatography and electrophoresis.	7	3	4
2	-Paper chromatography	7	3	4
3	-Thin layer chromatography	7	3	4
4	Carbohydrates: Introduction, classification, sugars,	7	3	4
5	Carbohydrates: polysaccharides: Starch, cellulose, agar..... (cont.)	7	3	4
6	Glycosides: Introduction and classification	7	3	4
7	Mid-term exam			

8	Anthraquinone, Cardiac, Saponin, Cyanogenic glycosides, Flavonoids and Thioglycoside	7	3	4
9	Anthraquinone, Cardiac, Saponin, Cyanogenic glycosides, Flavonoids and Thioglycoside	7	3	4
10	Anthraquinone, Cardiac, Saponin, Cyanogenic glycosides, Flavonoids and Thioglycoside (cont.)	7	3	4
11	Bitter principles: phenolic, ether, sesquiterpene lacton, isoflavone, furanochromones and furanocoumarins	7	3	4
12	Tannins, microbial biotransformation and plant cell culture.	7	3	4
13	Vitamins : water soluble, Biologically active terpenoids	7	3	4
14	Hormones: - non peptide - peptide	3	3	Practical exam
15	Enzymes: colony stimulating factors and immuno-modulators	3	3	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop (✓)
 d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Chemistry of crude drugs**Course code: **3145**

	Course Contents	ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Chromatography: Introduction, column chromatography and electrophoresis.	a3	Lectures	Written, practical and oral exams
Week # 2	-Thin layer chromatography	a3,b1,b2,c1, d1	Lectures and practical training	Written, practical and oral exams
Week # 3	-Paper chromatography	a3, b1, b2,c1,d1, d2, d3	Lectures and practical training Activity	Written, practical and oral exams
Week # 4	Carbohydrates: Introduction, classification, sugars.	a1,a2,b1,b2, c1,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Carbohydrates: polysaccharides: Starch, cellulose, agar..... (cont.)	a1,a2,b1,b2, b3,c1,c2,d1	Lectures and practical training	Written, practical and oral exams
Week # 6	Glycosides: Introduction and classification	a1,a2,b1,b2, b3,c1,c3,d1	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Anthraquinone, Cardiac, Saponin, Cyanogenic glycosides, Flavonoids and Thioglycoside	a1,a2,b1,b2, c1,c3,d1	Lectures and practical training	Written, practical and oral exams
Week # 9	Anthraquinone, Cardiac, Saponin, Cyanogenic glycosides, Flavonoids and Thioglycoside	a2,b1,b2,b3, c1,c3,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 10	Anthraquinone, Cardiac, Saponin, Cyanogenic glycosides, Flavonoids and Thioglycoside	a4,b1,b2,b3, c3,c4,d1	Lectures and practical training	Written, practical and oral exams
Week # 11	Bitter principles: phenolic, ether, sesquiterpene lacton, isoflavone, furanochromones and furanocoumarins	a4,b1,b2,b3, c3,c4,d1, d2, d3	Lectures and practical training Activity/ Presentation	Written, practical and oral exams
Week # 12	Tannins, microbial biotransformation and plant cell culture.	a4,b1,b2,b3, c3,c4,d1	Lectures and practical training	Written, practical and oral exams
Week # 13	Vitamins : water soluble, Biologically active terpenoids	a5,a6,b3,c5, d1	Lectures and practical training	Written, practical and oral exams
Week # 14	Hormones: - non peptide - peptide	a5,a6,b1,b2, b3,c5,d2	Lectures	Written and oral exams
Week # 15	Enzymes: colony stimulating factors and immuno-modulators	a5,a6,b1,b2, b3,c5,d2	Lectures	Written and oral exams

Course coordinator: **Prof. Dr. Saleh Elsharkawy**Head of department: **Prof. Dr. Ramadan Eldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in Pharmacy
Major or minor element of program	Major
Department offering the course	Biochemistry
Department supervising the course	
Academic Year / Level	Second year, Second semester
Date of specification approval	9/2016

A- Basic Information

Title : Biochemistry	Code :3133
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course:
2. upon successful completion of this course, the students should be able to understand:

- The fundamental aspects of Biochemistry to the function of living system.
- The structure and function of living matter in molecular terms.
- The relationship between defective protein mechanisms, DNA and their correlation to some diseases.
- The laboratory analytical data and analyze it to detect different clinical disorders.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: upon successful completion of this course, the students should be able to:

- a1. Demonstrate the chemistry of amino acids.
- a2. Discuss the relationship between amino acid metabolism and diseases
- a3. Explain inborn errors and how to manage it
- a4. Define protein structure and functions.
- a5. Describe Heme metabolism
- a6. Explain protein synthesis.
- a7. Identify DNA and RNA structure and replication.
- a8. Define mutations.
- a9. List the different PCR techniques and applications.

b- Intellectual skills

- b1. Assess biochemical basis for elucidation of some metabolic diseases.
- b2. Recognize interrelationships between biochemistry and medicine.
- b3. Calculate the energy production from metabolism.

b4. Assess some clinical disorders and protective guidelines.

c- Professional and practical skills

- c1. Examine laboratory glass-wares and instruments used for determination of the different components in the biological fluids.
- c2. Assess the safety guidelines for lab work
- c3. Analyze the molecules found in biological fluids
- c4. Assess the concentration of some metabolic and biological compounds present in urine and in blood samples.
- c5. Demonstrate the obtained data and their diagnostic significance compared with their reference values.
- c6. Analyze and interpret PCR reports.
- c7. Analyze chemical reagents especially some dangerous materials.

d- General and transferable skills

- d1. Communicate with others to avoid metabolic-related diseases.
- d2. Assess biochemical investigations to diseases and suggest their causes.
- d3. Develop health by means of life-style and adequate balanced nutrition.
- d4. Work effectively in a team work .

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Amino acid chemistry	4	2	2
2	Amino acid metabolism	4	2	2
3	Inborn errors of amino acids	4	2	2
4	Protein chemistry and functions	4	2	2
5	Physical structures of proteins	4	2	2
6	Heme metabolism	4	2	2
7	Mid-term exam			
8	DNA, nucleotides and base pairing	4	2	2
9	DNA, replication and errors.	4	2	2
10	DNA and RNAs and polymerases	4	2	2
11	Protein synthesis and Central dogma of molecular biology	4	2	2
12	PCR and applications	4	2	2
13	Types and causes of mutations	4	2	2
14	Metabolic interrelationships	2	2	Practical exam
15	Catabolism of DNA	2	2	Practical exam

4. Teaching and learning methods

a. Lectures	(√)
b. Practical training / laboratory	(√)
c. Seminar / Workshop	()
d. Class Activity	(√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes in Biochemistry by staff-members of department of Biochemistry.
- Lab. Notes in Clinical Biochemistry by staff-members of department of Biochemistry.

Essential books (text books)

- 1-Biochemistry: Harvey RA, Champe PC and Ferrier DR (2005), 3rd ed, Lippincott Williams and Wilkins, Baltimore.
- 2-Harper's illustrated Biochemistry by Murray RK, Bender DA, Botham KM, Kennelly PJ, Rodwell VW, P. Anthony Weil PA (2009), 28th Edition, McGraw Hill.

Recommended books

- 1-Biochemistry, Lubert Stryer (2006), 6th Edition, WH Freeman.
- 2-Essential Biochemistry: Pratt CW and Cornely K (2004), John Wiley & Sons Inc., USA.
- 3-Biochemistry and Clinical Correlations: Devlin TM (1997), 4th ed, Wiley-Liss INC, USA.

Websites

www.highwire.com, www.google.com, www.pubmed.com & www.biomed.net

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities including instruments and tools necessary for practical work e.g. glass wares, water baths, Flames, pH meters , electrophoretic apparatus, .centrifuge, spectrophotometers, session rooms
- Library.
- Data show.
- Computers. –Internet.

Course coordinator:**Prof: Nabil Mohie****Head of Department:****Prof: Ramadan Eldomany****Date : 9/2016**

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Biochemistry**Course code: **PB 3133**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Amino acid chemistry	a1, c1, c2, c7, d4	Lectures and practical training	Written, practical and oral exams
Week # 2	Amino acid metabolism	a2, b3, c1, c2, c3, d4	Lectures and practical training	Written, practical and oral exams
Week # 3	Inborn errors of amino acids	a3, b1, b2, b4, c1, c5, d2, d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Protein chemistry	a1, a4, c1, c2, c7, d4	Lectures and practical training	Written, practical and oral exams
Week # 5	Physical structures of proteins	a1, a4, c1, c2, c7, d4	Lectures and practical training	Written, practical and oral exams
Week # 6	Heme metabolism	a5, b1, b2, b4, c1, c3, c4, c5	Lectures, practical training discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	DNA, nucleotides and base pairing	a7, c1, c2, c3, d4	Lectures and practical training	Written, practical and oral exams
Week # 9	DNA, Replication and errors.	a7, c1, c2, c3, d4	Lectures and practical training	Written, practical and oral exams
Week # 10	RNAs and polymerases	a7, c1, c2, c3, d4	Lectures and practical training	Written, practical and oral exams
Week # 11	Protein synthesis and Central dogma of molecular biology	a6, c1, c2, c3, d4	Lectures and practical training	Written, practical and oral exams
Week # 12	PCR and applications	a9, b2, c5, c6, d2, d4	Lectures, practical training discussion and brain storming	Written, practical and oral exams
Week # 13	Types and causes of mutations	a8, b1, b2, b4, c3, c6	Lectures and practical training	Written, practical and oral exams
Week # 14	Metabolic interrelationships	a2, b1, b3, c1, c4, d1, d4	Lectures	Written and oral exams
Week # 15	Catabolism of DNA	a7, c1, c2, c3, d4	Lectures	Written and oral exams

Course coordinator: Prof: Nabil Mohie

Head of department: Prof: Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical Technology
Department supervising the course	
Academic Year / Level	Second year, Second Semester
Date of specification approval	9/2016

A- Basic Information

Title : Biopharmaceutics	Code : 3154
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The factors affecting oral drug bioavailability.
- The absorption mechanisms and the factors affecting them.
- The role of food and formulation design in modifying the drug absorption, distribution and elimination.
- The factors affecting drug distribution, metabolism and elimination.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of the course, the graduate should be able to:

- a1- Describe the mechanisms of gastrointestinal absorption of drugs.
- a2- Discuss the factors affecting gastrointestinal absorption of drugs.
- a3- Identify the role of dosage form on drug bioavailability.
- a4- Identify the factors affecting drug absorption, distribution and elimination.
- a5- Identify bioavailability and bioequivalence.

b- Intellectual skills

- b1- Assess the dosage regimen.
- b2- Demonstrate the biopharmaceutical considerations in drug product design.
- b3- Recognize the relationship between product design and the drug absorption, distribution and elimination.
- b4- Predict the effect of excipients and food on drug absorption, distribution and elimination.

c- Professional and practical skills

- c1- Analyze the results of the *in-vitro* and *in-vivo* studies.
- c2-Assess physicochemical characteristics of drug substances as a factor affecting drug absorption.
- c3- Analyze bioavailability and bioequivalence studies.
- c4- Examine the biopharmaceutical consideration in dosage form design.

d- General and transferable skills

- d1- Work independently and in groups.
- d2- Retrieve and evaluate information from different sources.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction – Definitions, ADME-system, Biological membrane	4	2	2
2	Absorption mechanisms	4	2	2
3	Physicochemical factors affecting oral drug bioavailability	4	2	2
4	Dissolution rate of drug products and factors affecting it.	4	2	2
5	Physiological factors affecting oral drug bioavailability	4	2	2
6	Influence of food and dosage forms on the oral drug bioavailability	4	2	2
7	Mid-term exam			
8	Bioavailability and bioequivalence studies.	4	2	2
9	Drug distribution	4	2	2
10	Modification of drug distribution and targeted drug delivery.	4	2	2
11	Drug excretion	4	2	2
12	Drug biotransformation	4	2	2
13	Biliary excretion	4	2	2
14	Modified release drug product	2	2	Practical exam
15	Targeted drug delivery systems	2	2	Practical exam

4. Teaching and learning methods

- | | |
|------------------------------------|-------|
| a. Lectures | (√) |
| b. Practical training / laboratory | (√) |
| c. Seminar / Workshop | (√) |
| d. Class Activity | (√) |

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Biopharmaceutics prepared by the department staff.

Essential books (text books)

Shargel, [Applied Biopharmaceutics & Pharmacokinetics](#), Susanna Wu-Pong and Andrew Yu, [Fifth Edition](#), 2004.

-Block, L.H., Collins, C.C., Biopharmaceutics and drug delivery systems, 1997.

Recommended books

, [Biopharmaceutics and Clinical Pharmacokinetics](#) , 2005. [Milo Gibaldi](#)

Websites

www.pubmed.com

7. Facilities required for teaching and learning

- | | |
|----------------|--------------|
| • Class rooms. | • Computers. |
|----------------|--------------|

- Laboratory facilities (equipment of the factory)
- Data show.
- Internet.

Course coordinator:

Professor Dr. Gamal Elmaghraby

Head of Department:

Professor Dr. Ramadan Aldomany

Date: 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Biopharmaceutics

Course code: 3154

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction – Definitions, LADME-system, Biological membrane	a1	Lectures	Written and oral exams
Week # 2	Absorption mechanisms	a1, a2, c1, c4, d1, d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Physicochemical factors affecting oral drug bioavailability	a3,a4, b2,b4, c1, c2, d1	Lectures and practical training	Written, practical and oral exams
Week # 4	Dissolution rate of drug products and factors affecting it.	a4, b2, b3, c1, d1,b4	Lectures, practical training and seminar.	Written, practical and oral exams
Week # 5	Physiological factors affecting oral drug bioavailability	a4, b2	Lectures and seminar.	Written, practical and oral exams
Week # 6	Influence of food and dosage forms on the oral drug bioavailability.	a4, b4	Lectures and seminar.	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Bioavailability and bioequivalence studies.	a3, a5, c1, c3, d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 9	Drug distribution	a4, d2,b3,b4	Lectures and seminar.	Written, practical and oral exams
Week # 10	Modification of drug distribution and targeted drug delivery.	a4, b1, b2, b3, c4	Lectures and seminar.	Written, practical and oral exams
Week # 11	Drug excretion.	a4, d2,b3,b4	Lectures class and activity seminar.	Written, practical and oral exams
Week # 12	Drug biotransformation.	a4, d2,b3,b4	Lectures class and activity seminar.	Written, practical and oral exams
Week # 13	Biliary excretion.	a4, d2,b4	Lectures class and activity seminar.	Written, practical and oral exams
Week # 14	Modified release drug product.	a3,a2, b1, b2, b3, c4, d2,b4	Lectures	Written and oral exams
Week # 15	Targeted drug delivery systems.	a3, b1, b2, b3, c4, d2	Lectures	Written and oral exams

Course coordinator:

Head of department:

Professor Dr. Gamal Elmaghraby

Professor Dr. Ramadan Aldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Clinical Pharmacy
Department supervising the course	
Academic Year / Level	Second year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmacokinetics	Code : 3168
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The factors which govern the time course of drug concentration in the body.
- The rates of the transfer processes associated with absorption, distribution, metabolism, and excretion of a drug in the intact subject.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: On successful completion of the course, the graduate should be able to:

- a1- Understand bioequivalence studies.
- a2- Understand the features of one & two compartment model.
- a3- Demonstrate the proper dose when shift form iv to oral.
- a4- Demonstrate the proper dose in liver and kidney disorders.
- a5- Discuss dose selection for narrow therapeutic drugs.
- a6- Understand rates and orders of reactions.
- a7- Understand nonlinear pk.

b- Intellectual skills

- b1- Conduct protocols for the pharmacological testing of new drugs.
- b2- Predict the chronic toxicity of new drugs.
- b3- Predict the common pharmacokinetic parameters which can affect the drug plasma concentration time profile.

c- Professional and practical skills

- c1- Use effectively the model of drug kinetic.
- c2- Assess the difference between one & two compartment.
- c3- Assess dose adjustment, calculation, and recommendation.
- c4- Demonstrate bioequivalence studies
- c5- Assess the difference between linear & nonlinear PK.
- c6- Demonstrate the dosing regimen for patients based on the conditions of each individual patient.

d- General and transferable skills

- d1- Implement presentation, writing reports and interviewing skills
- d2- Retrieve information from a variety of sources, including libraries, databases and internet.
- d3- Work effectively in a team and demonstrate time management skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction (basic pharmacokinetics, rates and orders)	4	2	2
2	Rate of kinetics process	4	2	2
3	Drug kinetic following single IV dose	4	2	2
4	Drug kinetic following single oral dose	4	2	2
5	Steady state during constant rate infusion	4	2	2
6	Multiple dosing and dosage regimen	4	2	2
7	Mid-term exam			
8	Bioavailability and bioequivalence	4	2	2
9	Bioavailability and bioequivalence (cont.)	4	2	2
10	Two compartment pharmacokinetic model	4	2	2

11	Metabolites and urinary excretion	4	2	2
12	Distribution and drug binding	4	2	2
13	Dose adjustment in renal disorder	4	2	2
14	Intermittent IV dose	2	2	Practical exam
15	Non-linear PK Dosage regimen, age, and diseases state	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training/laboratory (✓)
 c. Seminar/workshop ()
 d. Class activity (discussion, brain storm, case study) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Lecture notes in Clinical Pharmacokinetics for 2nd year students.
- Practical notes in Clinical Pharmacokinetics for 2nd year students.

Essential books (text books)

Basic clinical pharmacokinetics (2012) Hedaya M (2nd). Applied Therapeutics. 3th Edition.

Recommended books

-Basic pharmacokinetics barker 2011 3rd edition

Websites

www.rxKinetics.com

www.pharmpress.com

7. Facilities required for teaching and learning

-Class rooms.

-Laboratory facilities.

- Data show.

-Computers.

-Library.

-Internet.

Course coordinator:

Dr. Khaled Sobhy

Head of Department:

Dr/ Ramadan El-Domany

Date : 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmacokinetics**Course code: **3168**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction (basic pharmacokinetics, rates and orders)	a6,c1,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 2	Rate of kinetics process	a2,b3,c2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 3	Drug kinetic following single IV dose	a7,b3,c2,c5	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 4	Drug kinetic following single oral dose	a2,b1,b3,c2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 5	Steady state during constant rate infusion	a3,b1,b3,c3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 6	Multiple dosing and dosage regimen	a3,b1,b3,c3,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Bioavailability and bioequivalence	a1,b1,b3,c4,d3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 9	Bioavailability and bioequivalence (cont.)	a1,b1,b3,c4,d2,d3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 10	Two compartment pharmacokinetic model	a4,a5,c3,c6,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 11	Metabolites and urinary excretion	a6,b2,c6,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 12	Distribution and drug binding	a4,a5,b1,b2,b3,c3,c6,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 13	Dose adjustment in renal disorder	a4,a5,b1,b2,b3,c3,c6,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 14	Intermittent IV dose	a4,a5,c6,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Non-linear PK Dosage regimen, age, and diseases state	a4,a5,b3,c3,c6,d1,d2	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr.Khaled Sobhy**Head of Department: **Dr/ Ramadan El-Domany**Date : **9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical microbiology
Department supervising the course	
Academic Year / Level	Second year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Microbiology of diseases	Code : 3126
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The complex interaction between microorganism and the human host ; including outcome of infection.
- Microbial infection process including virulence factors,pathogenesis , clinical pictures for different microbial diseases.
- Different diagnostic procedures, treatment of different microbial infections including bacterial and fungal infection .
- The principles of immunology.
- Serological laboratory tests for diagnosis of different diseases

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: On successful completion of the course, the student should be able to:

- a1 .State the principles of immunology including natural and acquired immunity and antigen–antibody reactions
- a2 Identify the functions of immune system in health state and during disease state
- a3- Identify the laboratory diagnosis of immunological diseases
- a4. Define the terms of infection , pathogen , commensal, opportunistic infection and nosocomial infection.
- a.5 Know the clinical symptoms and treatment of different microbial diseases
- a.6 Know the virulence factors and pathogenesis of different microbial diseases

b- Intellectual skills

- b1- Analyze experimental results of serological reactions
- b2- interpret different immunological responses
- b3. Recognize the clinical symptoms of microbial infections.
- b4. Predict the mechanism of different microbial diseases.
- b5. predict treatment of these microbial infections.
- b6. Utilize specific preventive and control measures to prevent infections spread in the community.

c- Professional and practical skills

- c1. Use effectively clinical samples in aseptic way.
- c2. Use microbiological laboratory tests in order to isolate and identify different pathogens in some clinical sample.
- c3. Select the drug of choice and preventive methodes for different microbial and immunological infections.
- c4. Use effectively serological tests for diagnosis of different diseases.

d- General and transferable skills

- d1. Communicate effectively with the medical staff in different hospital setting
- d2. Demonstrate in writing and orally for analysis of specialized or general issue of microbial infection.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Host parasit relationship-structure of immune system	4	2	2
2	Innate immune system & Non specific immune response	4	2	2
3	Aquired immune system, antigen antibody, structure, biological functions and genetics of immunoglobulin	4	2	2
4	hypersensitivity reactions	4	2	2
5	Autoimmunity & autoimmune diseases	4	2	2
6	Gram positive cocci	4	2	2
7	Mid-term exam			
8	Gram positive bacilli	4	2	2
9	Gram negative cocci	4	2	2
10	Spirochetes	4	2	2
11	Gram negative bacilli	4	2	2
12	Gram negative bacilli (cont.)	4	2	2
13	Gram negative bacilli (cont.)	4	2	2
14	Mycobacteria	2	2	Practical exam
15	Chylamydiae and rickettsiae	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training / laboratory (✓)
- c. Seminar / Workshop ()
- d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Immunology and bacteriology .. approved by department

Essential books (text books)

Jwartz ,E.et al. Medical Microbiology 22th ed . Appton & Lange.

Recommended books

Roitt et al ,immunology 6th ed ,pp7.,113-114 ,144-145

Murray et al ,Medical microbiology 4th ed ., 91- 92

Websites

www.med.sc.edu

www.themicrobe.com

www.themicrobiologyplace.com

7. Facilities required for teaching and learning

-Class rooms.

-Laboratory facilities. -Library.

- Projectors (Overhead, video projector)

-Computers.

-Internet.

Course coordinator:

Professor Dr. Ramadan Ahmed Aldomany

Head of Department:

Professor Dr. Ramadan Ahmed Aldomany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Microbiology of diseases** Course code: **3126**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Host parasit relationship-structure of immune system	a1,	Lectures and practical training	Written, practical and oral exams
Week # 2	Innate immune system & Non specific immune response	A1	Lectures and practical training	Written, practical and oral exams
Week # 3	Acquired immune system, antigen antibody, structure, biological functions and genetics of immunoglobulin	A1,c4,a2	Lectures and practical training	Written, practical and oral exams
Week # 4	hypersensitivity reactions	A2,a3,b1,b2,c1,c3,c4,d2	Lectures, class activity and practical training	Written, practical and oral exams
Week # 5	Autoimmunity & autoimmune diseases	A3,b2,c3,d1,d2	Lectures, class activity and practical training	Written, practical and oral exams
Week # 6	gram positive cocci	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	gram positive bacilli	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures, class activity and practical training	Written, practical and oral exams
Week # 9	gram negative cocci	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures, class activity and practical training	Written, practical and oral exams
Week # 10	Spirochetes	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 11	gram negative bacilli	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 12	gram negative bacilli (cont.)	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 13	gram negative bacilli (cont.)	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures	Written, practical and oral exams
Week # 14	Mycobacteria	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures	Written and oral exams
Week # 15	chlamydiae and rickettsiae	A4,a5,a6,b3,b4,b5,b6,c1,c2,c3,d1,d2	Lectures	Written and oral exams

Course coordinator: **Professor Dr. Ramadan Ahmed Aldomany**Head of department: **Professor Dr. Ramadan Ahmed Aldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical Technology
Department supervising the course	
Academic Year / Level	Second year, Second Semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical Formulations	Code : 3114
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The factors affecting percutaneous and rectal absorption of drugs.
- Different strategies to enhance percutaneous absorption.
- Transdermal therapeutic systems.
- Formulation ointments, creams and suppositories.
- The specifications of selected cosmetic formulations.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: On successful completion of the course, the graduate should be able to:

- a1- Discuss the factors affecting percutaneous and rectal absorption of drugs
- a2- Know different methods of enhancing percutaneous absorption of drugs.
- a3- Describe the transdermal therapeutic systems.
- a4- Identify different bases used in formulation of ointments, suppositories and other topical formulations.
- a5- Identify the methods of preparation of suppositories, ointments and other topical formulations.

b- Intellectual skills:

- b1- Select the best enhancer for a given transdermal therapeutic system.
- b2- Predict drug interaction with different bases.
- b3- Select the best topical formulation based on the disease state of the patient and the required effect.

c- Professional and practical skills:

- c1- Formulate topical formulations for local and transdermal effects.
- c2- Design rectal and topical formulations.

- c3- Prepare ointments, suppositories and other topical formulations.
- c4- Analyze the quality of topical formulations and suppositories.

d- General and transferable skills

- d1-Retrieve and evaluate information on pharmaceutical formulation.
- d2-Demonstrate critical thinking, problem solving and decision making abilities.
- d3-Demonstrate leadership and team working abilities.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction – Structure and function of the skin- Target area of treatment after topical application to skin	4	2	2
2	Basic principles of diffusion through membranes and factors affecting percutaneous absorption	4	2	2
3	Enhancement of skin penetration	4	2	2
4	Transdermal Drug Delivery Systems (TDDS)	4	2	2
5	Traditional dermatological formulations	4	2	2
6	Classification of ointment bases	4	2	2
7	Mid-term exam			
8	Preparation of topical formulation including ointments	4	2	2
9	Creams	4	2	2
10	Other topical formulations.	4	2	2
11	Suppositories and pessaries- factors affecting rectal absorption	4	2	2
12	Suppository vehicles	4	2	2
13	Vaginal inserts -Preparation of suppositories - displacement values in suppository bases	4	2	2
14	Specific problems in formulation of suppositories- Quality control tests for suppositories	2	2	Practical exam
15	Revision	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Pharmaceutical formulations prepared by the department staff.

Essential books (text books)

[Michael E. Aulton](#), Aulton's Pharmaceutics: The Design and Manufacture of Medicines, [Kevin Taylor](#), Fifth Edition, 2007.

Recommended books

[Yvonne Perrie](#), [Thomas Rades](#), FASTtrack: Pharmaceutics - Drug Delivery and Targeting, Second edition, Pharmaceutical Press, 2009.

Websites

www.pubmed.com

www.sciencedirect.com

7. Facilities required for teaching and learning

- | | |
|---|---|
| <ul style="list-style-type: none"> • Class rooms. • Laboratory facilities (water bath ,digital balance and semisolid filling machine) • Data show. | <ul style="list-style-type: none"> • Computers. • Internet. |
|---|---|

Course coordinator:

Professor Dr. Maged Elsayahly

Head of Department:

Professor Dr. Ramadan Aldomany

Date: / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Pharmaceutical Formulations Course code: 3114

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction – Structure and function of the skin- Target area of treatment after topical application to skin	a1, b3	Lectures and class activity	Written and oral exams
Week # 2	Basic principles of diffusion through membranes and factors affecting percutaneous absorption	a1,d2	Lectures and class activity	Written, practical and oral exams
Week # 3	Enhancement of skin penetration	a2, b1, d2	Lectures, class activity and practical training	Written, practical and oral exams
Week # 4	Transdermal Drug Delivery Systems (TDDS)	a3, b1, c1, d1, d2, d3,c2,c4	Lectures, class activity and practical training	Written, practical and oral exams
Week # 5	Traditional dermatological formulations	a4, b2, b3, c1, d1, d3,c2,c4	Lectures and practical training	Written, practical and oral exams
Week # 6	Classification of ointment bases	a5, b2, c1, c3, c4, d3c2,b3	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Preparation of topical formulation including ointments	a1, d1, d2,c3,a5,b2,b3 ,c1,c4	Lectures, class activity and practical training	Written, practical and oral exams
Week # 9	Creams	a1,a5,b2,b3,c1 ,c2,c4	Lectures, class activity and practical training	Written, practical and oral exams
Week # 10	Other topical formulations.	a5, c1, c2, c3, d3,b2,b3,c4	Lectures and practical training	Written, practical and oral exams
Week # 11	Suppositories and pessaries- factors affecting rectal absorption	a5, c2, c4, d2, d3,a1,c4	Lectures and practical training	Written, practical and oral exams
Week # 12	Suppository vehicles	a5, a4, c1, c3, c4, d3,b2	Lectures and practical training	Written, practical and oral exams
Week # 13	Vaginal inserts -Preparation of suppositories - displacement values in suppository bases	a4, a5,b2,b3,c2,c4	Lectures, class activity and practical training	Written, practical and oral exams
Week # 14	Specific problems in formulation of suppositories- Quality control tests for suppositories	a4, a5,d2	Lectures	Written and oral exams
Week # 15	Revision	a1,a2,a3,a4, a5,d1,d2	Lectures	Written and oral exams

Course coordinator:
Professor Dr. Maged Elsayhly

Head of department:
Professor Dr. Ramadan Aldomany

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Third year, First Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacology & Toxicology
Department supervising the course	
Academic Year / Level	Third year, first semester
Date of specification approval	09/2016

A- Basic Information

Title : Pharmacology	Code : 4027
Total contact hours: 5 hrs.	Lecture: 3 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- General informations about pharmacology including the pharmacokinetics and pharmacodynamics of drugs
- The mechanism of action of different drugs affecting the autonomic nervous system, cardiovascular system and renal system.
- Uses and the side effects of such drugs.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. State general principles of pharmacology and define the concepts of pharmacokinetics, pharmacodynamics and pharmacotherapeutics
- a2. List the different categories of parasympathetic- and sympathetic-acting drugs
- a3. Define hypertension and drug therapy.
- a4. Demonstrate the different types of cardiac diseases, such as arrhythmia and congestive heart failure, and list the different types of drugs used in management of this disorder.
- a5. Discuss the drug categories to treat renal failure.

b- Intellectual skills

- b1. Demonstrate the in vitro experiments on isolated organs from laboratory animals.
- b2. Carry out the dose-response relationship of the different drug preparations.
- b3. Predict the dose-response relationship of the different drug preparations depending on simulation of an in vitro experiment on the PCCAL package.

- b4. Recognize the site of action of unknown drug using in vitro preparation of rabbit intestine muscle.
- b5. Interpret the potency of a drug preparation using in vitro experiments on isolated organs from laboratory animals

c- Professional and practical skills

- c1. Demonstrate the receptor theory and compare between, agonists and antagonists, compare between sympathetic and parasympathetic nervous systems, explain the different categories of parasympathomimetics and parasympatholytics with respect to their pharmacological, effects on various organ systems, side effects and drug interaction, and discuss the sympathomimetics and sympatholytics with respect to their general properties, metabolism, pharmacological effects and toxicity.
- c2. Differentiate between the different categories of anti- hypertension as well as anti-arrhythmic.
- c3. Compare the different pharmacologic interventions used to manage CHF especially cardiac glycosides and illustrate the nature of angina pectoris and different types of drugs that used to manage it.
- c4. Differentiate between different types of diuretics.

d- General and transferable skills

- d1. Implement appropriate computer program-packages, analyze the data and solve exercises on pharmacology.
- d2. Appraise interpersonal skills; the ability to interact effectively with patients, the public and health care professionals; including communication, both written and oral.
- d3. Communicate clearly by verbal means and appreciate the joint effort in teamwork
- d4. Retrieve and evaluate information from different sources.
- d5. Demonstrate critical-thinking abilities.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	General pharmacology	5	3	2
2	General pharmacology	5	3	2

3	Pharmacological actions of drugs acting on autonomic nervous system	5	3	2
4	Pharmacological actions of drugs acting on autonomic nervous system (cont.)	5	3	2
5	Pharmacological actions of drugs acting on autonomic nervous system(cont.)	5	3	2
6	Pharmacological actions of drugs acting on autonomic nervous system (cont.)	5	3	2
7	Mid-term exam	5	3	2
8	Pharmacological actions of drugs acting on autonomic nervous system (cont.)	5	3	2
9	Pharmacological actions of drugs acting on cardiovascular system	5	3	2
10	Pharmacological actions of drugs acting on cardiovascular system (cont.)	5	3	2
11	Pharmacological actions of drugs acting on cardiovascular system(cont.)	5	3	2
12	Pharmacological actions of drugs acting on cardiovascular system (cont.)	5	3	2
13	Pharmacological actions of drugs acting on cardiovascular system (cont.)	5	3	2
14	Pharmacological actions of drugs acting on kidney	3	3	Practical exam
15	Pharmacological actions of drugs acting on kidney	3	3	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on pharmacology (Department of Pharm./Tox.

Essential books (text books)

The Pharmacological Basis of Therapeutics (2008). Goodman & Gilman's. 12th edition.
The McGraw-Hill Companies

Recommended books

-Basic & Clinical Pharmacology (2003). G. Katzung. 9th ed. Lavoisier S.A.S.
-Pharmacology (2007). Rang H.P. & Dale M. 7th Edition. Churchill Livingstone
London
-Lippincott Modern Pharmacology (2009). C. Champe, A. Harvey and Denise R.
(illustrated pharmacology Review). 6th ed. Lippincott Williams & Wilkins

Websites

-www.biomedcentral.com
-www.Pubmed.com
-www.medscape.com

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities (isolated organs, kymographs).
- The practical part of this course includes identification of the pharmacological effects of some neurotransmitters on isolated organs)
- PCCAL package.
- Library.
- Data show
- Computers.
- Internet.

Course coordinator:**Prof. Dr. Nageh El- Mahdy****Dr. Ramy Ammar****Dr. Shady Allam****Head of Department:****Prof.Dr. Ramadan Eldomany****Date : / 9/2016**

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmacology**Course code: **4027**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Basic principles of drug actions	a1, b1, c1, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 2	Pharmacological actions of drugs acting on autonomic nervous system	a1, b1, c1, d2, d3, d4	Lectures and practical training, discussion	Written, practical and oral exams
Week # 3	Pharmacological actions of drugs acting on autonomic nervous system (cont.)	a1, b1, c1, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 4	Pharmacological actions of drugs acting on autonomic nervous system(cont.)	a2, a5, b1, c1, d2, d3, d4	Lectures and practical training, discussion	Written, practical and oral exams
Week # 5	Pharmacological actions of drugs acting on autonomic nervous system (cont.)	a2, a3, b1, b4, c1, d2, d3, d4, d5	Lectures and practical training	Written, practical and oral exams
Week # 6	Pharmacological actions of drugs acting on autonomic nervous system (cont.)	a2, a3, b1, b4, c2, d2, d3, d4, d5	Lectures and practical training, e-learning, discussion	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Pharmacological actions of drugs acting on autonomic nervous system (cont.)	a2, a3, b1, c2, d2, d3, d4, d5	Lectures and practical training, e-learning	Written, practical and oral exams
Week # 9	Pharmacological actions of drugs acting on cardiovascular system	a4, a5, b2, c2, d2, d3, d4	Lectures and practical training, brain storming	Written, practical and oral exams
Week # 10	Pharmacological actions of drugs acting on cardiovascular system(cont.)	a4, a5, b2, c2, d2, d3, d4	Lectures and practical training, brain storming	Written, practical and oral exams
Week # 11	Pharmacological actions of drugs acting on cardiovascular system (cont.)	a4, a5, b2, c2, c3, d2, d3, d4	Lectures and practical training, brain storming	Written, practical and oral exams
Week # 12	Pharmacological actions of drugs acting on cardiovascular system(cont.)	a4, a5, b2, c2, c3, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 13	Pharmacological actions of drugs acting on cardiovascular system (cont.)	a4, a5, b2, c2, c3, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 14	Pharmacological actions of drugs acting on gastrointestinal tract	a5, b3, b4, c4, d2, d3, d4, d5	Lectures, brain storming	Written and oral exams
Week # 15	Pharmacological actions of drugs acting on gastrointestinal tract (cont.)	a5, b3, b4, c4, d2, d3, d4, d5	Lectures	Written and oral exams

Course coordinator:**Prof. Dr. Nageh El- Mahdy****Dr. Ramy Ammar****Dr. Shady Allam****Head of Department: Dr. Ramadan Eldomany****Date : / 9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Pharmaceutical chemistry
Department supervising the course	
Academic Year / Level	Third year, first Semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical Chemistry	Code : 4061
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The fundamentals of medicinal chemistry.
- Study the chemistry of chemotherapeutic agents, antihistaminics, diagnostics, radiopharmaceuticals, GIT drugs and local anesthesia.
- Studing SAR (Structure-activity relationship) of different classes of drugs.
- IUPAC rules for naming different drugs.
- Quantitatively analyze drugs in different dosage forms using pharmacopeial methods of assay.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: On successful completion of the course, the graduate should be able to:

- a1. Discuss the concept of medicinal chemistry.
- a2. Describe the SAR of different drug classes.
- a3. Name the nomenclature and classification of healthcare products.
- a4. Define uses of different drug classes (chemotherapeutic agents, antihistaminics, diagnostics and local anathetics).
- a5. Demonstrate different synthetic pathways.
- a6. Report mode of action of mentioned drugs.

b- Intellectual skills

- b1. Utilize SAR to interpret the pharmacological activity of certain drugs.
- b2. Recognize IUPAC names and structural formulae of drugs.
- b3. Recognize the generic names of drugs and deduce the therapeutic utility for each class.
- b4. Assess the structural feature of a compound to physicochemical properties which may affect its biological response or influence its formulation / administration.

c- Professional and practical skills

- c1. Use effectively GLP-compliant analytical tools for efficacy and QA testing of healthcare products.
- c2. Assess qualitative and quantitative methodology of analysis of drugs.
- c3. Safely use basic laboratory equipments and chemicals.
- c4. Test impurities of active substances in samples.

d- General and transferable skills

- The student must be able to:
- d1. Communicate therapeutic knowledge gained to other members of the healthcare team.
 - d2. Retrieve information from variety of sources.
 - d3. Work in a team with students.
 - d4. Create reports and present it.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to Chemotherapeutic Agents.	4	2	2
2	Chemotherapeutic Agents(cont.)	4	2	2
3	Chemotherapeutic Agents(cont.)	4	2	2
4	Chemotherapeutic Agents(cont.)	4	2	2
5	Chemotherapeutic Agents(cont.)	4	2	2
6	Chemotherapeutic Agents(cont.)	4	2	2
7	Mid-term exam			
8	Chemotherapeutic	4	2	2

	Agents(cont.)			
9	Chemotherapeutic Agents (cont.)	4	2	2
10	Chemotherapeutic Agents (cont.)	4	2	2
11	Antihistaminic Agents	4	2	2
12	Diagnostics and Radiopharmaceuticals	4	2	2
13	GIT Drugs	4	2	2
14	GIT Drugs (cont.)	2	2	Practical exam
15	Local anesthetics.	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14, 15
Assessment 3	Final exam	Week	16, 17
Assessment 4	Oral	Week	16, 17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on pharmaceutical chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.
- Lab Manual of pharmaceutical chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.

Essential books (text books)

- 1) Wilson and Gisvold's " Textbook of Organic and Pharmaceutical Chemistry", 12th Ed., Jaime N. Delgado, J.B. Lippincot Co., 2010.
- 2)William O. Foye, " Principle of Medicinal Chemistry" 5th edition (2002), Williams & Wilkins, London.
- 3) M.E.Wolff Burger's " Medicinal Chemistry and Drug Discovery ", 7th edition (2010), Wiley-interscience Publication, New York, USA.
- 4) Gennaro (Editor), " Remington's Pharmaceutical Sciences ", 21th edition (2005), Lippincott Williams & Wilkins, Maryland, USA.

Recommended books

Wilson and Gisvold's " Textbook of Organic and Pharmaceutical Chemistry", 12th Ed., Jaime N. Delgado, J.B. Lippincot Co., 2010.

Websites

www.fda.gov , www.moHP.gov , www.emea.org , www.who.int.

7. Facilities required for teaching and learning

- Class rooms.**
- Laboratory facilities (hot plates, chemical hood, water bath)**
- Library.**
- **Data Show**
- Computers.** -**Internet.**

Course coordinator: Dr. Wagdy El-dehna

Head of department: Prof.Dr. **Ramadan El-domany**

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmaceutical chemistry**Course code: **4061**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction of Chemotherapeutic Agents.	a1,a4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 2	Chemotherapeutic Agents (cont.)	a1,a2,a3,b1,b2,c1,c2,c3,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Chemotherapeutic Agents (cont.)	a4,a5,a6,b1,b3,b4,c2,c3,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Chemotherapeutic Agents (cont.)	a3,a4,a5,a6,b1,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 5	Chemotherapeutic Agents(cont.)	a2,a3,a4,a5,a6,b1,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Chemotherapeutic Agents(cont.)	a2,a3,a4,a5,a6,b1,b2,b3,b4,c1,c2,c3,c4,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Chemotherapeutic Agents(cont.)	a2,a3,a4,a5,a6,b1,b2,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 9	Chemotherapeutic Agents (cont.)	a2,a3,a4,a5,a6,b1,b2,b3,b4,c1,c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 10	Chemotherapeutic Agents (cont.)	a2,a3,a4,a5,a6,b1,b2,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 11	Antihistaminic Agents	a1,a2,a3,a4,a5,a6,b1,b2,b3,b4,d1,d2,d3,d4	Lectures, practical training,	Written, practical and oral exams
Week # 12	Diagnostics and Radiopharmaceuticals	a1,a2,a3,a4,b1,b2,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 13	GIT Drugs	a1,a2,a3,a4,a5,a6,b1,b2,b3,b4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 14	GIT Drugs (cont.)	a1,a2,a3,a4,a5,a6,b1,b2,b3,b4,d1,d2.	Lectures, training, discussion and brain storming	Written and oral exams
Week # 15	Local anesthetics.	a1,a2,a3,a4,a5,a6,b1,b2,b3,b4,d1,d2.	Lectures, training, discussion and brain storming	Written and oral exams

Course coordinator: Dr. Tamer Ibrahim

Head of department: Prof.Dr. **Ramadan El-domany**Date : **9 /2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Third year, First Semester
Date of specification approval	9/2016

A- Basic Information

Title : Industrial Pharmacy	Code : 4054
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The design and mechanism of action of the instruments included in the unit operation in pharmaceutical practice.
- The principles of heat transfer, evaporation, drying, crystallization and mixing.
- The use and application of heat transfer, evaporation, drying, crystallization and mixing and transportation in pharmaceutical industry.
- The best equipment for a given operation based on specification of the materials and the required product as well as the principle of equipment operation.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of the course, the graduate should be able to:

- a1- Identify the mechanisms of heat transfer.
- a2- List the factors affecting heat transfer and evaporation rates.
- a3- Describe the theory of cooling and crystallization.
- a4- Describe the equipments of heating, evaporation, drying, crystallization and mixing.
- a5- Demonstrate the inter and intraplant transportation processes

b- Intellectual skills

- b1-Select the best equipment for conducting heating, concentration, crystallization or drying a given product.
- b2- Select the best equipment and/or operational line to perform mixing

operation.

- b3-Recognize and solve problems associated with unit operations.
- b4-Assess the relationship between equipment design and product characteristics.

c- Professional and practical skills

- c1-Examine and crystalize pharmaceutical ingredient.
- c2-Use effectively proper drying operation.
- c3- Assess the proper storage conditions for raw materials and finished pharmaceutical products.
- c4- Use effectively mixing operation irrespective of the nature of the materials

d- General and transferable skills

- d1-Retrieve and evaluate information from different sources.
- d2- Work in groups and independently.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction – Heat transfer	4	2	2
2	Design of heating equipment	4	2	2
3	Steam as a heating medium	4	2	2
4	Evaporation	4	2	2
5	Drying: Dryers for dilute solutions and suspensions	4	2	2
6	Dryers for solid materials	4	2	2
7	Mid-term exam			
8	Cooling	4	2	2
9	Theory of crystallization	4	2	2
10	Crystallization equipments	4	2	2
11	Liquid- liquid mixing	4	2	2
12	Solid- liquid mixing	4	2	2
13	Semisolid mixing	4	2	2
14	Intra-planet transportation	2	2	Practical exam
15	Storage	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training / laboratory (✓)
- c. Seminar / Workshop ()
- d. Class Activity(Brain storming, discussion) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Industrial Pharmacy prepared by the department staff.

Essential books (text books)

[Sudhakara Reddy Pondugula](#), [M. Gopal Rao](#), [Govinda Rajan Gudala](#), [R. Vamsi Krishna](#), Pharmaceutical Engineering: Practical Manual (Unit Operations), Bsp, 2007.

Recommended books

M.M Gupta, Dr. N .E S. Wesley, Text Book of Pharmaceutical Engineering including unit operations, Vardhaman Publisher and Distributors, Jaipur, Volume 1, Number 1, Jaipur, India, 2008

Websites

www.pubmed.com

www.sciencedirect.com

7. Facilities required for teaching and learning

- | | |
|---|---|
| <ul style="list-style-type: none"> • Class rooms. • Laboratory facilities (equipment of Educational factory) • Data show | <ul style="list-style-type: none"> • Computers. • Internet. |
|---|---|

Course coordinator:

Dr/ Ahmed donia

Head of Department:

Dr/ Ramadan Aldomany

Date: / 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Industrial Pharmacy

Course code: 4054

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction – Heat transfer	a1, d1	Lectures and practical training	Written, practical and oral exams
Week # 2	Design of heating equipment	a2, a4, b1, b4, d2	Lectures, practical training and class activity	Written, practical and oral exams
Week # 3	Steam as a heating medium	a2, a4, b1, b3, d1	Lectures and practical training	Written, practical and oral exams
Week # 4	Evaporation	a2, a4, b1, b3, c1, d1	Lectures and practical training	Written, practical and oral exams
Week # 5	Drying: Dryers for dilute solutions and suspensions	a2, a4, b1, b4, c2, d2	Lectures and practical training	Written, practical and oral exams
Week # 6	Dryers for solid materials	a2, a4, b1, b4, c2, d2	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Cooling	a3, b3, d1	Lectures and practical training	Written, practical and oral exams
Week # 9	Theory of crystallization	a3, b1, b3, b4, c1, d1	Lectures, practical training and class activity	Written, practical and oral exams
Week # 10	Crystallization equipments	a3, a4, b1, b4, c1, d2	Lectures and practical training	Written, practical and oral exams
Week # 11	Liquid- liquid mixing	a4, b2, b3, b4, c4, d2	Lectures, practical training and class activity	Written, practical and oral exams
Week # 12	Solid- liquid mixing	a4, b2, b3, b4, c4, d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Semisolid mixing	a4, b2, b3, b4, c4, d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Intra-planet transportation	a5	Lectures	Written and oral exams
Week # 15	Storage	a5, c3	Lectures	Written and oral exams

Course coordinator:

Head of department:

Dr/ Abd El -aziz El-said

Dr/ Ramadan Aldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Pathology dep., Faculty of Medicine
Department supervising the course	Microbiology
Academic Year / Level	Third year, first term
Date of specification approval	9/2016

A- Basic Information

Title : Pathology of diseases	Code :4236
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The causes and mechanisms of diseases and the associated alterations of structure and function.
- Skills of observation, interpretation and integration needed to analyse human disease .
- Participation in clinical rounds to prepare them for their subsequent clinical careers.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding:

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

- a1- The different disease processes encountered, their causes (etiology), and how the disease develops in response to the etiologic agents (pathogenesis).
- a2- The characteristic gross and microscopic pictures of different pathologic lesions within specific organ system and the associated functional disturbances .
- a3- The fate and complications of different disease processes.

b- Intellectual skills

- b1 - Assess various gross and microscopic pathologic data and stimulate creative thinking for problem identification and solving.
- b2- interpret a pathological report.

c- Professional and practical skills

- c1- Use effectively different diagnostic pathological tools.
- c2- Assess the different laboratory techniques for handling pathological samples.
- c3-Use effectively the pathologic pictures of different disorders based on gross and microscopic pictures aiming at reaching a correct diagnosis.

d- General and transferable skills

- d1-Develop freely and adequately themselves by improving descriptive capabilities and communication skills .
- d2-Plan and respond properly when solving problems.
- d3-Interact appropriately according to the seriousness of pathologic diagnosis in acceptable human manner.
- d4-Communicate to Maintain a suitable image in manner, dress, speech and relationships that is consistent with the medical profession.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction & inflammation	4	2	2
2	Inflammation & repair	4	2	2
3	Degeneration	4	2	2
4	Disturbance of pigment ,necrosis & apoptosis	4	2	2
5	Circulatory disturbances	4	2	2
6	Circulatory disturbances& gangrene	4	2	2
7	Mid-term exam			
8	Granulomas	4	2	2
9	Granulomas &mycotic infections	4	2	2
10	Viral & Protozoal diseases	4	2	2
11	Genetic disorders & ionizing radiation	4	2	2

12	Growth disturbances	4	2	2
13	Neoplasia	4	2	2
14	Cardiovascular & respiratory systems	2	2	Practical exam
15	Gastrointestinal & Urinary systems	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop ()
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students to follow-up the course subjects.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

-Notes on Pathology
 -Practical note on Pathology for pharmacy students.

Essential books (text books)

Kumar, Cotran & Robbins, Basic Pathology

Recommended books

Walter & Israel General pathology

Websites

[http:// www. PATHMAX . com](http://www.PATHMAX.com)

www.cms.nelc.edu.eg

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities.
- Projectors (Overhead, video projector)
- Computers.
- Library.
- Internet.

Course coordinator: Dr. Eman Said

Head of Department: Dr. Eman Said

Date : / 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pathology of diseases**Course code: **4236**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	introduction&inflammation	a1,d1,d2	Lectures and practical training	Written and practical exams
Week # 2	Inflammation & repair	a1,c1,c2.d1,d2	Lectures and practical training	Written and practical exams
Week # 3	degeneration	a1,a2,b1,c1,c2.d1,d2	Lectures and practical training	Written and practical exams
Week # 4	Disturbance of pigment ,necrosis&apoptosis	a1,a2,a3,b1,c1,c2.d1,d2	Lectures and practical training	Written and practical exams
Week # 5	Circulatory disturbances	a1,a2,a3.b1,c1,c2.d1,d2	Lectures and practical training	Written and practical exams
Week # 6	Circulatory disturbances& gangrene	a1,a2,a3.b1,c1,c2.d1,d2	Lectures and practical training	Written and practical exams
Week # 7	Mid-term exam			
Week # 8	Granulomas	a1,a2,a3,b1,b2,c1,c2.d1,d2,d3,d4	Lectures and practical training	Written and practical exams
Week # 9	Granulomas &mycotic infections	a1,a2,a3,b1,b2,c1,c2.d1,d2,d3,d4	Lectures and practical training	Written and practical exams
Week # 10	Viral&Protozoal diseases	a1,a2,a3,b1,b2,c1,c2,c3.d1,d2,d3,d4	Lectures and practical training	Written and practical exams
Week # 11	Genetic disorders& ionizing radiation	a1,a2,a3,b1,b2,c1,c2,c3.d1,d2,d3,d4	Lectures and practical training	Written and practical exams
Week # 12	Growth disturbances	a1,a2,a3,b1,b2,c1,c2,c3.d1,d2,d3,d4	Lectures and practical training	Written and practical exams
Week # 13	Neoplasia	a1,a2,a3,b1,b2,c1,c2,c3.d1,d2,d3,d4	Lectures and practical training	Written and practical exams
Week # 14	Cardiovascular&Respiratory systems	a1,a3,b1,b2,c1,c2,c3.d1,d2,d3,d4	Lectures	Written exam
Week # 15	Gastrointestinal&Urinary systems	a1,a3, b1,b2,c1,c2,c3.d1,d2,d3,d4	Lectures	Written exam

Course coordinator: **Dr. Eman Said**Head of department: **Dr. Eman Said**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical Technology
Department supervising the course	
Academic Year / Level	Third year, First Semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical Formulations	Code : 4014
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Different types of tablets.
- The factors affecting the design of tablet and capsule formulations.
- Formulation various types of tablets and capsules.
- Preparation of tablets and capsules.
- The problems encountered in production tablet and capsule.
- The quality of tablets and capsules.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of the course, the graduate should be able to:

- a1- List different types of tablets.
- a2- Explain the advantages of tablets and capsules as unit dose formulations
- a3- Know the nature and application of various tablet and capsule excipients.
- a4- List the difference between hard and soft gelatin capsules.
- a5- Describe the methods of tablet and capsule manufacture.
- a6- Identify the problems associated with tablet and capsule manufacture.

b- Intellectual skills

- b1 – Predict the drug excipient interaction.
- b2 – Detect the problems associated with tablet and capsule manufacture.
- b3 – Select the best excipients for tablet and capsule formulations based on the type of the formulation
- b4 – Assess the quality control data of the finished product.

c- Professional and practical skills

- c1 – Use effectively excipients for designing various tablet and capsule formulations.
- c2 – Use effectively methods for manufacture of various types of tablets and capsules.
- c3 – Examine the quality control tests for tablets and capsules.

d- General and transferable skills

- d1- Retrieve and evaluate information from different sources.
- d2 – Work independently and in groups.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical (contact hours)
1	Introduction – Tablets: Types of tablets	4	2	2
2	Tablet additives	4	2	2
3	Methods of tablet manufacture	4	2	2
4	Methods of tablet manufacture (cont.)	4	2	2
5	Processing problems in tablet manufacture	4	2	2
6	Tablet evaluation	4	2	2
7	Mid-term exam			
8	Tablet coating – sugar, film, and functional coating	4	2	2
9	Modified release tablets	4	2	2
10	Introduction to capsules	4	2	2
11	Shell manufacture	4	2	2
12	General considerations in the design of hard capsules.	4	2	2
13	Soft gelatin capsules	4	2	2
14	Storage and packing of capsules	2	2	Practical exam
15	Quality control tests for capsules	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (Brain storming -discussion) (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Pharmaceutical Formulations prepared by the department staff.

Essential books (text books)

[Herbert A. Lieberman](#), Martin M. Reiger, Geilbert S.Banker :Pharmaceutical Dosage Forms, Vol. 2 (Pharmaceutical Dosage Forms-Disperse), Second Edition, 1996.

Recommended books

[Michael E. Aulton](#), Aulton's Pharmaceutics: The Design and Manufacture of Medicines, [Kevin Taylor](#), Fifth Edition, 2007.

Websites

www.sciencedirect.com [.www.pubmed.com](http://www.pubmed.com)

7. Facilities required for teaching and learning

- | | |
|--|---|
| <ul style="list-style-type: none"> • Class rooms. • Data show • Laboratory facilities (as tablet machine and quality control testers) | <ul style="list-style-type: none"> • Computers. • Internet. |
|--|---|

Course coordinator:
Dr/ Eman Mazyed

Head of department:
Dr/ Ramadan Aldomany

Date: / 9 / 2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmaceutical formulations** Course code: **4014**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction – Tablets: Types of tablets	a1, a2, d1	Lectures	Written and oral exams
Week # 2	Tablet additives	a3, b1, b3, c1, d2	Lectures	Written and oral exams
Week # 3	Methods of tablet manufacture	a5, b2, c1, c2, d2	Lectures and practical training	Written, practical and oral exams
Week # 4	Methods of tablet manufacture (cont.)	a5, b2, c1, c2, d2	Lectures and practical training	Written, practical and oral exams
Week # 5	Processing problems in tablet manufacture	a5, a6, b2, c1, d2	Lectures, practical training and class activity	Written, practical and oral exams
Week # 6	Tablet evaluation	a6, b2, b4, c1, c3, d2	Lectures, practical training and class activity	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Tablet coating – sugar, film, and functional coating	a1, b2, b3, c2, d1	Lectures, practical training and class activity	Written and oral exams
Week # 9	Modified release tablets	a1, a3, b3, c1, d1	Lectures, practical training and class activity	Written and oral exams
Week # 10	Introduction to capsules	a2, a4, d1	Lectures	Written and oral exams
Week # 11	Shell manufacture	a3, a4, a5, b1, c1, c2, b3	Lectures, practical training and class activity	Written and oral exams
Week # 12	General considerations in the design of hard capsules.	a3, a4, a5, b2, b3, c1, c2, d1, d2	Lectures and practical training	Written, practical and oral exams
Week # 13	Soft gelatin capsules	a3, a4, a5, b3, c1, c2, d2	Lectures and practical training	Written, practical and oral exams
Week # 14	Storage and packing of capsules	a6, b1, d1	Lectures and class activity	Written and oral exams
Week # 15	Quality control tests for capsules	a6, b2, b4, c3, d2	Lectures, practical training and class activity	Written and oral exams

Course coordinator:

Dr/ Eman Mazyed

Head of department:

Dr/ Ramadan Aldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical microbiology
Department supervising the course	
Academic Year / Level	Third year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Hygiene	Code : 4046
Total contact hours: 3 hrs.	Lecture: 3 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- the basic information about epidemiology, etiology, risk factors, risk groups, control and prevention
- the basic information about promoting , maintaining health and preventing disease
- The basic information about viral and arthropod diseases.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: On successful completion of the course, the student should be able to:

- a1. Know The epidemiological cycle of infection in the community.
- a2. Know The modes and the patterns of infection spread in the community.
- a3. Discuss The general and specific preventive and control measures of communicable diseases.
- a4. Know different types of viral zoonotic and arthropod borne diseases.

b- Intellectual skills

- b1. Develop appropriate methods for infection control.
- b2. Promote public health awareness.
- b3. Detect the different types of viral, zoonotic , arthropod borne diseases.

c- Professional and practical skills

- c1. Assess the role of the pharmacist in public health education.
- c2. Use effectively information to advise patients by informing and influencing decisions and actions of health and social care professionals.

d- General and transferable skills

- d1.. Communicate with the patient to give advice and counseling on nutrition, vaccination and general health.
- d2. Implement writing and presentation skills

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Basic concept of health and disease.	3	3	----
2	Epidemiology of disease.	3	3	----
3	Hereditary immunity.	3	3	----
4	Clinical and subclinical diseases.	3	3	----
5	Preventive and control measures of infectious diseases	3	3	----
6	Herpes viruses infections	3	3	----
7	Mid-term exam			
8	Adenoviruses infections and paramyxoviruses infections.	3	3	----
9	Common cold and influenza	3	3	----
10	Food-borne diseases.	3	3	----
11	Viral hepatitis.	3	3	----
12	Sexually-transmitted diseases.	3	3	----
13	Zoonoses and contact diseases.	3	3	----
14	Arthropod-borne diseases and mycotic diseases.	3	3	----
15	Oral diseases and hygiene.	3	3	----

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training / laboratory ()
- c. Seminar / Workshop ()
- d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
	To assess	
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17
Assessment 3	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Public health

Essential books (text books)

- Black, J.G.2004, Microbiology principles and applications(6th edition)
- Cedric A. Mims,2004, medical microbiology.

Recommended books

- Gwendolyn R.W.; Burton, Paul G.; Engerl Kirk, 2004, Microbiology for the health sciences (7th edition)

Websites

- <http://www.cpublichealth.co.nz/>
- <http://www.amsa.org/cph/>

7. Facilities required for teaching and learning

- Class rooms.
- Library.
- Data show
- Computers.
- Internet.

Course coordinator: Prof Dr: Ramadan Ahmed Aldomany

Head of Department: Prof Dr: Ramadan Ahmed Aldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Hygiene**Course code: **4046**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Basic concept of health and disease.	A1	Lectures	Written and oral exams
Week # 2	Epidemiology of disease.	a1	Lectures	Written and oral exams
Week # 3	Hereditary immunity.	A2	Lectures	Written and oral exams
Week # 4	Clinical and subclinical diseases.	A2,b2,c1,c2,d1,d2	Lectures,class activity	Written and oral exams
Week # 5	Preventive and control measures of infectious diseases	A3,b1,c1,c2,d1,d2	Lectures,class activity	Written and oral exams
Week # 6	Herpes viruses infections	A4,b3,c2,d1,d2	Lectures,class activity	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Adenoviruses infections and paramyxoviruses infections.	A4,b3,c2,d1,d2	Lectures,class activity	Written and oral exams
Week # 9	Common cold and influenza	A4,b3,c2,d1,d2	Lectures Lectures,class activity	Written and oral exams
Week # 10	Food-borne diseases.	A4,b3,c2,d1,d2	Lectures,class activity	Written and oral exams
Week # 11	Viral hepatitis	A4,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 12	Sexually-transmitted diseases.	A4,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 13	Zoonoses and contact diseases.	A4,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 14	Arthropod-borne diseases and mycotic diseases.	A4,b3,c2,d1,d2	Lectures	Written and oral exams
Week # 15	Oral diseases and hygiene.	A4,b3,c2,d1,d2	Lectures	Written and oral exams

Course coordinator: **Prof Dr: Ramadan Ahmed Aldomany**

Head of department: Prof Dr: Ramadan Ahmed Aldomany

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Third year, Second Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacology & Toxicology
Department supervising the course	
Academic Year / Level	Third year, second semester
Date of specification approval	09/2016

A- Basic Information

Title : Pharmacology	Code : 4137
Total Contact Hours: 5 hrs.	Lecture: 3 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The mechanism of action of different drugs affecting the central nervous system, gastrointestinal system, blood, hyperlipidemia and autacoids
- The uses and the side effects of such drugs.
- Practically screen drugs affecting central nervous system and blood in laboratory animals.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. Recognize information about the basic concepts of central nervous system pharmacology.
- a2. List different classes of CNS acting drugs (like general and local anesthetics, anxiolytics, neuroleptics, anticonvulsants, antidepressants...etc).
- a3. Define the different types of pain pathways and pain killers.
- a4. Discuss the different categories of drugs acting on the gastrointestinal tract and autacoids.
- a5. List different types of anti-coagulants, anti-platelets and thrombolytics including their mechanisms of action.

b- Intellectual skills

- b1. Conduct the different routes of drug administration on laboratory animals.
- b2. Illustrate the different categories of CNS-acting drugs, depending on their effects appear on laboratory animals upon administration (In vivo experiments).
- b3. Carry out a dose response curve on isolated muscle preparations using the kymograph.

- b4. Demonstrate the characteristics of each drug group of CNS-acting drugs as well as autacoids.
- b5. Interpret the therapeutic monitoring of different anti-coagulant using blood tests.

c- Professional and practical skills

- c1. Compare between different types of neurotransmitters and the different types of receptors they interact with within the CNS.
- c2. Relate the different classes of anxiolytics/hypnotics with respect to mechanisms of actions, pharmacological effects, dependence liability, toxicity, adverse effects, and therapeutic uses.
- c3. Correlate between the clinical manifestations in patients treated with antipsychotic drugs and the probable biochemical mechanisms operating at different levels of CNS function.
- c4. Compare between different types of seizures and describe the antiepileptic drug of choice for each seizure type.
- c5. Use effectively drugs acting on blood and autacoids.

d- General and transferable skills

- d1. Appraise soft skills (presentation skills and public speaking)
- d2. Communicate clearly by verbal means and appreciate the joint effort in teamwork
- d3. Retrieve and evaluate information from different sources.
- d4. Demonstrate critical-thinking abilities.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Central Neurotransmission	5	3	2
2	Pharmacological effects of drugs acting on central nervous system	5	3	2
3	Pharmacological effects of drugs acting on central nervous system (cont.)	5	3	2
4	Pharmacological effects of drugs acting on central nervous system (cont.)	5	3	2
5	Pharmacological effects of drugs acting on central nervous system (cont.)	5	3	2
6	Pharmacological effects of drugs acting	5	3	2

	on central nervous system (cont.)			
7	Mid-term exam			
8	Pharmacological effects of drugs acting on central nervous system(cont.)	5	3	2
9	Pharmacological effects of drugs acting on central nervous system (cont.)	5	3	2
10	Pharmacological effects of drugs acting on gastrointestinal system	5	3	2
11	Pharmacological effects of drugs acting on gastrointestinal system (cont.)	5	3	2
12	Autacoids	5	3	2
13	Pharmacological effects of affecting blood	5	3	2
14	Pharmacological effects of drugs used in coagulation disorders	3	3	Practical exam
15	Hyperlipidemia	3	3	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on pharmacology (Department of Pharm./Tox; faculty of Pharmacy)

Essential books (text books)

Goodman & Gilman's : The Pharmacological Basis of Therapeutics

Recommended books

-Basic & Clinical Pharmacology (2003). G. Katzung, 9th ed. Lavoisier S.A.S.- Pharmacology (2007). Rang H.P. & Dale M. 7th Edition. Churchill Livingstone
London-Lippincott Modern Pharmacology (2009). C. Champe, A. Harvey and Denise R.
(illustrated pharmacology Review). 6th ed. Lippincott Williams & Wilkins

Websites

www. biomed central. Com

www. medscape. com

www. Pubmed. Com

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities (laboratory animals, chemicals, kymographs).
- The practical part of the course includes identification of pharmacological effects of some drugs in laboratory animals.
- Library
- Data show
- Computers
- Internet

Course coordinator:**Prof. Dr. Nageh El- Mahdy****Dr. Ramy Ammar Dr. Shady Allam****Head of Department:****Prof. Dr. Ramadan Eldomany****Date : / 9/2016**

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **pharmacology**Course code: **4137**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Central Neurotransmission	a1, a2, a3, b1, c1	Lectures	Written and oral exams
Week # 2	Pharmacological effects of drugs acting on central nervous system(cont.)	a1, a2, a3, b1, b4, c1, d1, d2, d3	Lectures and practical training, discussion	Written, practical and oral exams
Week # 3	Pharmacological effects of drugs acting on central nervous system (cont.)	a1, a2, a3, b1, b4, c1, d1, d2, d3	Lectures and practical training, discussion	Written, practical and oral exams
Week # 4	Pharmacological effects of drugs acting on central nervous system (cont.)	a1, a2, a3, b1, b4, c2, d1, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 5	Pharmacological effects of drugs acting on central nervous system	a1, a2, a3, b1, b4, c2, d1, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 6	Pharmacological effects of drugs acting on central nervous system (cont.)	a1, a2, a3, b1, b4, c2, d2, d3, d4	Lectures and practical training, discussion	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Pharmacological effects of drugs acting on central nervous system (cont.)	a1, a2, a3, b2, b4, c3, d2, d3, d4	Lectures, class activity and practical training, brain storming	Written, practical and oral exams
Week # 9	Pharmacological effects of drugs acting on central nervous system (cont.)	a1, a2, a3, b2, b4, c4, d2, d3, d4	Lectures, class activity and practical training	Written, practical and oral exams
Week # 10	Pharmacological effects of drugs acting on gastrointestinal system	a4, b2, d2, d3, d4	Lectures, class activity and practical training, brain storming	Written, practical and oral exams
Week # 11	Pharmacological effects of drugs acting on gastrointestinal system (cont.)	a4, b3, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 12	Autacoids	a4, b3, b4, c5, d2, d3, d4	Lectures and practical training, brain storming	Written, practical and oral exams
Week # 13	Pharmacological effects of affecting blood	a5, b3, b5, c5, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 14	Pharmacological effects of drugs used in coagulation disorders	a5, b3, b5, c5, d2, d3, d4	Lectures and brain storming	Written and oral exams
Week # 15	Hyperlipidemia	a5, b3, b5, d2, d3, d4	Lectures	Written and oral exams

Course coordinator:**Prof. Dr. Nageh El- Mahdy****Dr. Ramy Ammar****Dr. Shady Allam****Head of Department:****Prof.Dr. Ramadan Eldomany****Date : / 9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacognosy
Department supervising the course	
Academic Year / Level	Third year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmacognosy	Code : 4125
Total Hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The methods and significance of quality control of medicinal plants and methods of isolation and purification of natural products using different chromatographic techniques especially HPLC, GC, ion exchange chromatography and gel filtration.
- The structural elucidation of natural products using advanced spectroscopic techniques, and also must know how medicinal natural products are biosynthesized and how to utilize the healing herbs in alternative medicine.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- State the importance and methods of quality control of medicinal plants.
- a2- Learn the methods of isolation and purification of natural products using different chromatographic techniques .
- a3- Describe the basic ways of biosynthesis and spectroscopic analysis of plant metabolites and how to identify their structures.

b- Intellectual skills

- b1- Interpret data produced in the practical schedules.
- b2- Assess unknown medicinal powdered drugs for the presence of different classes of natural products.

- b3- Predict the suitable methods of quality control depending on the nature of the material to be assessed.
- b4- Utilize the suitable chromatographic method for isolation of compounds depending on their polarity and nature.
- b5- Detect the possible leads to new drugs depending on structural elucidation of isolated compounds.
- b6- Conduct spectral analysis of natural product.
- b7- Recognize the major biosynthetic pathway of natural products for building secondary metabolites by plant.

c- Professional and practical skills

- c1- Debate adulteration and assess quality of medicinal herba drugs.
- c2- Use effectively different chromatographic methods used for isolation of specific class of natural products.
- c3- Correlate chemical structure of some natural products based on their spectral data.

d- General and transferable skills

- d1- Retrieve information and assess an experience in library search.
- d2- Design private study, including direct study on specific topics, independent study of textbooks and lecture notes.
- d3- Interact in writing reports.
- d4- Estimate problems related to spectral analysis and biosynthesis of natural products.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Quality control	4	2	2
2	Gas Chromatography	4	2	2
3	Gas Chromatography (cont.)	4	2	2
4	HPLC	4	2	2
5	Ion exchange chromatography	4	2	2
6	Gel filtration chromatography	4	2	2
7	Mid-term exam			
8	Physical constants & elemental analysis & mass spectroscopy	4	2	2
9	Advances in mass spectroscopy UV, IR	4	2	2
10	Nuclear magnetic resonance	4	2	2
11	Nuclear magnetic resonance (cont.)	4	2	2
12	Complementary medicine	4	2	2
13	Complementary medicine(cont.)	4	2	2

14	Biosynthesis of natural products	2	2	Practical exam
15	Biosynthesis of natural products (cont.)	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. Practical training / laboratory (√)
 c. Seminar / Workshop (√)
 d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Applied pharmacognosy prepared in the form of a book authorized by the department

Essential books (text books)

"Column Chromatography". Karawya M. S, 1st. edition, 1988.
 "Chromatographic methods". 5th edition, A. Braithwaite and F. L. Smith, Kluwer Academic Publishers, 1999.
 "Medicinal Natural Products, Biosynthetic Approach". Paul. M. Dewick, 2002.

"Spectroscopic Identification of Organic Compounds". Silverstein R.M. and Webster F.X., 6th edition, 1998.

Recommended books

"Trease and Evans Pharmacognosy". Evans, William C., 14th edition, 1998.
"Organic Structures from Spectra". 2nd edition, L.D.Field, Strenhell S. and Kalman J.R., 2000.
"Textbook of Complementary and Alternative Medicine" . 2nd edition, C.S.Yuan, E. J. Bieber, Parthenon Publishing Group, 2002.

Websites

www.biomedcentral.com
www.medscape.com
<http://www.sciencedirect.com/>
<http://www.ncbi.nlm.nih.gov/>

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities, including microscopes and essential facility to perform the practical lessons.
- Library.
- Data Show
- Computers.
- Internet access.

Course coordinator:

Prof.Dr :Saleh Elsharkawy

Head of Department:

Prof. Dr. Ramadan Eldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmacognosy**Course code: **4125**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Quality control	a1,	Lectures	Written, practical and oral exams
Week # 2	Gas Chromatography	a2,b2,c1,d1, d2	Lectures and practical training	Written, practical and oral exams
Week # 3	Gas Chromatography (cont.)	a2 ,b3,c1,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 4	HPLC	a2,b1,b2,b3,c1 ,d3	Lectures and practical training	Written, practical and oral exams
Week # 5	Ion exchange chromatography	a2,b4,c2,d1,d2	Lectures and practical training	Written, practical and oral exams
Week # 6	Gel filtration chromatography	a2,b4,c2,d1, d2,d3, d4	Lectures and practical training Activity	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Physical constants & elemental analysis & mass spectroscopy	b4,b5,c2,d2	Lectures and practical training	Written, practical and oral exams
Week # 9	Advances in mass spectroscopy UV, IR	a1, b5,b6,c1, d2,d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 10	Advances in mass spectroscopy UV, IR (cont.)	a1,b5,b6, c3,d2,d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 11	Nuclear magnetic resonance	a1,a2,b5,b6,c2 ,c3,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 12	Nuclear magnetic resonance (cont.)	a1, b5, b6, c3,d3,d4	Lectures and practical training	Written, practical and oral exams
Week # 13	Nuclear magnetic resonance (cont.)	a1, b5,b6, c3,d2,d4	Lectures and practical training Activity	Written, practical and oral exams
Week # 14	Biosynthesis of natural products	a3,b6, b7, c3,d3,d4	Lectures, Posters	Written and oral exams
Week # 15	Biosynthesis of natural products (cont.)	a3,b6, b7, c3,d1, d2, d3,d4	Lectures	Written and oral exams

Course coordinator: Prof.Dr :Saleh Elsharkawy

Head of department: Prof Dr. Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Pharmaceutical chemistry
Department supervising the course	
Academic Year / Level	Third year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Pharmaceutical Chemistry	Code : 4111
Total Hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course;2

Upon successful completion of this course, the students should be able to understand:

- The relationship of chemical structure to biological activity and the general structural features required for the drug action.
- The effect of molecular modifications on the absorption, distribution, metabolism, and target binding of drugs.
- Quantitatively analyze drugs in different dosage forms using pharmacopeial methods of assay

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: On successful completion of the course, the graduate should be able to:

- a1. Report the mode of action of mentioned drugs.
- a2. Describe the SAR of different drug classes
- a3. Name the classification and nomenclature of healthcare products
- a4. Define uses of different drug classes (ANS,CVD,Hormones,CNS and vitamins).
- a5. Demonstrate different synthetic pathways.

b- Intellectual skills

- b1. Utilize SAR to interpret the pharmacological activity of certain drugs.
- b2. Illustrate IUPAC names with structural formulae of drugs.
- b3. Recognize the generic names of drugs and deduce the

therapeutic utility for each class.
 b4. Assess the structural feature of a compound to physicochemical properties which may affect its biological response or influence its formulation / administration.

c- Professional and practical skills

c1. Use GLP-compliant analytical tools for efficacy and QA testing of APIs and their healthcare products.
 c2. Analyze the therapeutic knowledge gained in real life professional practice.
 c3. Use effectively basic laboratory equipments and chemicals safely.
 c4. Assess impurities of active substances in samples.

d- General and transferable skills

The student must be able to:
 d1. Communicate therapeutic knowledge gained to other members of the healthcare team.
 d2. Retrieve information from variety of sources.
 d3. Work in a team with students.
 d4. Estimate reports and present it.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introuction of Chemistry of Autonomic nervous system drugs	4	2	2
2	Chemistry of Autonomic nervous system drugs (cont.)	4	2	2
3	Chemistry of Autonomic nervous system drugs(cont.)	4	2	2
4	Chemistry of Cardiovascular system drugs	4	2	2
5	Chemistry of Cardiovascular system drugs (cont.)	4	2	2
6	Chemistry of Cardiovascular system drugs (cont.)	4	2	2
7	Mid-term exam			
8	Chemistry of	4	2	2

	Cardiovascular system drugs (cont.)			
9	Chemistry of Hormones	4	2	2
10	Chemistry of Hormones (cont.)	4	2	2
11	Chemistry of Hormones (cont.)	4	2	2
12	Chemistry of Central nervous system drugs	4	2	2
13	Chemistry of Central nervous system drugs (cont.)	4	2	2
14	Chemistry of Central nervous system drugs (cont.)	2	2	Practical exam
15	Chemistry of Central nervous system drugs (cont.)	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14, 15
Assessment 3	Final exam	Week	16, 17
Assessment 4	Oral	Week	16, 17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on pharmaceutical chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.
- Lab Manual of pharmaceutical chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.

Essential books (text books)

- 1) Wilson and Gisvold's " Textbook of Organic and Pharmaceutical Chemistry", 12th Ed., Jaime N. Delgado, J.B. Lippincot Co., 2010.
- 2) William O Foye, " Principle of Medicinal Chemistry" 5th edition (2002), Williams & Wilkins, London.
- 3) M.E.Wolff Burger's " Medicinal Chemistry and Drug Discovery ", 7th edition (2010), Wiley-interscience Publication, New York, USA.
- 4) Gennaro (Editor), " Remington's Pharmaceutical Sciences ", 21th edition (2005), Lippincott Williams & Wilkins, Maryland, USA.

Recommended books

Wilson and Gisvold's " Textbook of Organic and Pharmaceutical Chemistry", 12th Ed., Jaime N. Delgado, J.B. Lippincot Co., 2010.

Websites

www.fda.gov , www.moHP.gov , www.emea.org , www.who.int

7. Facilities required for teaching and learning

- Class rooms.**
- Laboratory facilities (hot plates, chemical hood, water bath)**
- Library.**
- **Data Show**
- Computers.** -**Internet.**

Course coordinator:

Dr. Tamer Ibrahim

Head of Department:

Prof.Dr. Ramadan El-domany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Pharmaceutical chemistry**Course code: **4111**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction of Chemistry of Autonomic nervous system drugs	a3,a4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 2	Chemistry of Autonomic nervous system drugs (cont.)	a1,a2,a4,b1,b2,c1,c2,c3,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Chemistry of Autonomic nervous system drugs(cont.)	a2,a4,a5,b1,b3,b4,c2,c3,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Chemistry of Cardiovascular system drugs	a3,a4,b1,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 5	Chemistry of Cardiovascular system drugs (cont.)	a3,a5,a6,b1,b2,b3,b4,c1,c2,c3,c4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Chemistry of Cardiovascular system drugs (cont.)	a3,a5,a6,b1,b2,b3,b4,c1,c2,c3,c4,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Chemistry of Cardiovascular system drugs (cont.)	a3,a4,a5,a6,b1,B2,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 9	Chemistry of Hormones	a2,a4,a5,a6,b1,B2,b3,b4,c1,c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 10	Chemistry of Hormones (cont.)	a4,a5,a6,b1,b2,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 11	Chemistry of Hormones (cont.)	a1,a4,a5,a6,b1,b2,b3,b4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 12	Chemistry of Central nervous system drugs	a1,a2,a3,b1,b2,b3,b4,c1,c2,c3,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 13	Chemistry of Central nervous system drugs (cont.)	a1,a2,a3,a4,b1,b2,b3,b4,d1,d2,d3,d4	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 14	Chemistry of Central nervous system drugs (cont.)	a4,a5,a6,b1,b2,b3,b4,d1,d2.	Lectures, discussion and brain storming	Written and oral exams
Week # 15	Chemistry of Central nervous system drugs (cont.)	a4,a5,a6,b1,b2,b3,b4,d1,d2.	Lectures, discussion and brain storming	Written and oral exams

Course coordinator: Dr. Tamer Ibrahim

Head of department: Prof.Dr. **Ramadan El-domany**Date : **9 /2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSC in Pharmacy
Major or minor element of program	Major
Department offering the course	Biochemistry
Department supervising the course	
Academic Year / Level	Third year, Second semester
Date of specification approval	9/2016

A- Basic Information

Title : Clinical Biochemistry	Code : 4143
Total Hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course:

Upon successful completion of this course, the students should be able to understand:

- The fundamental aspects of clinical chemistry of various diseases such as cancer, liver, heart and kidney.
- The necessary clinical knowledge and skills, correlate the biochemical analyses of a certain disease and its appropriate management.
- The recent specific diagnostic markers of each disease and how they can be analyzed.

2. Intended learning outcomes of the course (ILOs)

a- knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. Demonstrate the methods for proper specimen collection, handling and disposal.
- a2. Identify the enzymes used for clinical diagnosis of certain diseases.
- a3. Explain the diagnostic features with laboratory tests for disorders of plasma, carbohydrates, proteins and lipoproteins.
- a4. State the important biochemical markers and diagnostic laboratory tests of liver, heart, kidney, and gastrointestinal tract diseases.
- a5. Discuss the relation between some disorders of the endocrine systems and metabolic diseases.
- a6. List the different tumor markers and their specificity and measurement.
- a7. List the different techniques for recombinant DNA technology , PCR and their applications in medicine .

b- Intellectual skills

- b1. Assess the biochemical markers to guide clinical decision.
 b2. Recognize interrelationships of clinical chemistry, molecular biology and medicine.
 b3. Utilize biochemical tests in diagnosis, prognosis, monitoring and screening.

c- Professional and practical skills

- c1. Assess samples withdrawn from different biological fluids correctly and safely.
 c2. Use effectively laboratory glass-wares, instruments, reagents & kits used for determination of different components in biological fluids.
 c3. Assess standard laboratory procedures and documentation.
 c4. Examine different biological samples in scientific and correct manner.
 c5. Analyze the scientific way of thinking to suggest the diagnosis of the case based on the determined biochemical data.
 c6. Use effectively chemical reagents especially some dangerous materials.

d- General and transferable skills

- d1. Retrieve information in internet and library.
 d2. Work effectively as a member in a team.
 d3. Evaluate the biochemical investigations in relation to diseases to find out their causes and suggest rational treatment.
 d4. Develop good health by means of life style.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Diabetes mellitus and laboratory tests	4	2	2
2	Liver Functions and laboratory Tests	4	2	2
3	Renal Functions and laboratory tests	4	2	2
4	Urine as a diagnostic tool for diseases	4	2	2
5	Electrolyte balance and imbalance	4	2	2
6	Nutrition and health	4	2	2
7	Mid-term exam			
8	Tumor markers	4	2	2
9	Hormonal disturbances	4	2	2
10	Hormonal disturbances 2	4	2	2
11	Hormonal disturbances 3	4	2	2
12	Plasma proteins	4	2	2
13	Coagulations.	4	2	2
14	Immunoglobulins.	2	2	Practical exam
15	Plasma and non-pasma enzymes.	2	2	Practical exam

4. Teaching and learning methods

- | | |
|------------------------------------|-----|
| a. Lectures | (√) |
| b. Practical training / laboratory | (√) |
| c. Seminar / Workshop | (√) |
| d. Class Activity | (√) |

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- | |
|---|
| - Notes in Clinical Biochemistry by staff-members of department of Biochemistry. |
| - Lab.Notes in Clinical Biocemistry by staff-members of Department of Biochemistry. |

Essential books (text books)

- | |
|--|
| 1- Devlin TM (2010): Textbook of Biochemistry With Clinical Correlations, 7th edition, Wiley-Liss, USA |
|--|

Recommended books

- | |
|--|
| 1- Walker S, Ashby P, Rae P,Beckett G (2010): Lecture Notes Clinical Biochemistry, 8th edition, Blackwell Pub.USA. |
|--|

Websites

www.highwire.com, www.google.com, www.pubmed.com & www.biomed.net

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Clinical biochemistry

Course code: 4143

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Diabetes mellitus and laboratory tests	a1, a2, b1, c1, c6, c2, d1.	Lectures and practical training	Written, practical and oral exams
Week # 2	Liver Functions and laboratory Tests	a1, a2, a3, a7, b1, c1, c2, c3, c6, d1, d2.	Lectures, practical training and case study	Written, practical and oral exams
Week # 3	Renal Functions and laboratory tests	a1, a2, a4, a5, b1, b3, c2, c3, c4, c5, d1, d2.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Urine as a diagnostic tool for diseases	a1, a3, b1, b3, c3, c4, c5, d1, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 5	Electrolyte balance and imbalance	a4, a5, b1, b2, b3, c1, c2, c5, d1, d2, d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Nutrition and health	a1, b1, c1, d1, d2, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Tumor markers	a1, a6, b1, b2, c1, c2, c3, c4, c5, d1, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 9	Hormonal disturbances	a5, a7, c5, d1, d3	Lectures and practical training	Written, practical and oral exams
Week # 10	Hormonal disturbances 2	a5, a7, c5, d1, d3	Lectures and practical training	Written, practical and oral exams
Week # 11	Hormonal disturbances 3	a5, a7, c5, d1, d3	Lectures and practical training	Written, practical and oral exams
Week # 12	Plasma proteins	a2, a3, b1, b2, b3, c1, c2, c3, c4, c5, d3	Lectures and practical training	Written, practical and oral exams
Week # 13	Coagulations.	a1, a3, a4, c1, c2, c3, c6, d1, d2, d3, d4	Lectures, practical training, presentation	Written, practical and oral exams
Week # 14	Immunoglobulins.	a4, b1, b3, c1, c2, d2	Lectures	Written and oral exams
Week # 15	Plasma and non-pasma enzymes.	a2, b1, b3, c1, c2, c5, d2	Lectures	Written and oral exams

Course coordinator: Prof: Nabil mohie

Head of department: Prof: Ramadan Eldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Clinical pharmacy
Department supervising the course	
Academic Year / Level	Third year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Clinical pharmacy	Code : 4168
Total Hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Drugs used in special cardiovascular patient
- The etiology, diagnosis of some cardiovascular disorders
- Practice case study of certain cardiovascular diseases.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: On successful completion of the course, the graduate should be able to:

- a1- Understand normal laboratory values.
- a2- Demonstrate causes, diagnosis and treatment of some cardiovascular disorders
- a3- Understand appropriate methods for managing medicines including dispensing, responding to symptoms, prescribing, provision of medicine and patient information and reporting of adverse reactions to medicines.

b- Intellectual skills

- b1- Utilize SOAP format to case studies .
- b2- Predict appropriate cardiovascular diagnosis .
- b3- Select a good cardiovascular therapy protocol .
- b4- Assess the patient case .

c- Professional and practical skills

- c1- Analyze the best drug :dose ,frequency and duration .

- c2- Assess signs and symptoms and predict the treatment .
- c3- Demonstrate proper diagnosis and best cardiovascular treatment .
- c4- Assess abnormal lab values and physiological disorder .

d- General and transferable skills

- d1- Retrieve information from a variety of sources, including libraries, databases and internet.
- d2- Work independently or as a part of team in different pharmaceutical fields.
- d3- Demonstrate creativity and time management skills.
- d4- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction, Clinical Pharmacy services & activities	4	2	2
2	SOAP	4	2	2
3	Hypertension	4	2	2
4	Hypertension (cont.)	4	2	2
5	Heart failure	4	2	2
6	Myocardial infarction	4	2	2
7	Mid-term exam			
8	Angina	4	2	2
9	Hyperlipidemia	4	2	2
10	Arrhythmia	4	2	2
11	Arrhythmia	4	2	2
12	Coagulation disorders	4	2	2
13	Anemia	4	2	2
14	Anemia (cont.)	2	2	Practical exam
15	Hypovolemic shock	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training/laboratory (✓)
- c. Seminar/workshop ()
- d. Class activity (discussion, brain storm, case study) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes in Clinical Pharmacy for third year students.
- Practical notes in Clinical Pharmacy for third year students.

Essential books (text books)

Textbook of therapeutics, drugs and disease management(2006). Helms R, Quan DJ, Herfindal ET(Ed), Williams and Wilkins, 7th Edition.

Recommended books

Applied Therapeutics, The clinical Use of Drugs(2009) Koda-Kimble MA(Ed). Lippincott Williams and Wilkins, 9th Edition.
Pharmacotherapy(2008). DiPiro JT et al (Ed). McGraw Hill, 7th Edition.

Websites

www.FDA.gov

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities.
- data show.
- Computers.
- Library.
- Internet.

Course coordinator: Dr. Khaled Sobhy

Head of Department: Dr/ Ramadan El-Domany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Clinical pharmacy** Course code: **4168**

	Course Contents	ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction, Clinical Pharmacy services & activities	a1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 2	SOAP	b1,c4,d1.d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 3	Hypertension	a2,b2,b3,b4,c1,c2,c3,c4,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 4	Hypertension (cont.)	a2,b2,b3,b4,c1,c2,c3,c4,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 5	Heart failure	a2,a3,b2,b3,b4,c1,c2,c3,c4,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 6	Myocardial infarction	a2,a3,b2,b3,b4,c1,c2,c3,c4,d3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Angina	a2,a3,b2,b3,b4,c1,c2,c3,c4,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 9	Arrhythmia	a2,a3,b2,b3,b4,c1,c2,c3,c4,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 10	Arrhythmia	a2,a3,b2,b3,b4,c1,c2,c3,c4,d4	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 11	Hyperlipidemia	a1,a2,a3,b2,b3,b4,c1,c2,c3,d4	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 12	Coagulation disorders	a2,a3,b2,b3,b4,c1,c2,c3,c4,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 13	Anemia	a2,a3,b2,b3,b4,c1,c2,c3,c4,d3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 14	Anemia (cont.)	a2,a3,b2,b3,b4,c1,c2,c3,c4,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Hypovolemic shock	a2,a3,b2,b3,b4,c1,c2,c3,c4,d3	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr.Khaled Sobhy**

Head of department:

Dr/ Ramadan El-DomanyDate : **9 /2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacology & Toxicology
Department supervising the course	
Academic Year / Level	Third year, second semester
Date of specification approval	9/2016

A- Basic Information

Title: Toxicology	Code :4157
Total Contact Hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The toxicity profiles of different toxicants.
- The methods for management of poisoning.
- Case studies for several poisons including corrosives, alcohols, aspirin, acetaminophen, insecticides, carbon monoxide and cyanide.
- Qualitatively identify some toxicants in the laboratory by different chemical tests.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. Describe the basic principles of toxicology and clinical toxicology.
- a2. List the major classes of toxins and their mechanism of toxicity.
- a3. Explain the basic principles in management of poisoning.
- a4. Describe the drug and substance misuse.
- a5. Identify the concept of drug and poison information centers, information about medication errors, evidence-based medicine and drug monographs.

b- Intellectual skills

- b1. Illustrate the precise mechanisms through which the different toxicants may produce their hazardous effects.
- b2. Utilize the basic knowledge to minimize toxicity outcomes and protect from further intoxication.
- b3. Interpret the toxic effects of poisons on different organs.

c- Professional and practical skills

- c1. Use effectively the analytical procedures to identify the type of poisoning.
- c2. Use effectively experimental animals required for different toxicity testing.
- c3. Correlate the type of poisoning in different biological samples by performing different analytical procedures and to be able to evaluate the toxic effects of poisons on different organs.
- c4. Compare certain protocols for poison management & hazardous effects of pollutants.

d- General and transferable skills

- d1. Retrieve information to set the minimum exposure limits for different toxic agents.
- d2. Arrange team working for the emergency management of poisoned patients.
- d3. Use library search, retrieval of information, carry out private study as well as analyze and interpret experimental results.
- d4. Demonstrate creativity and ability to manage time

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Spectrum of toxicity	4	2	2
2	Toxicity testing	4	2	2
3	Management of poisoned patients	4	2	2
4	Specific antidotes	4	2	2
5	Aspirin toxicity	4	2	2
6	Paracetamol toxicity	4	2	2
7	Mid-term exam			
8	Organ toxicity	4	2	2
9	Teratogenesis, carcinogenesis and mutagenesis	4	2	2
10	Insecticides	4	2	2
11	Corrosives & solvents	4	2	2
12	Heavy metals	4	2	2
13	Carbon monoxide and cyanide poisoning	4	2	2
14	Alcohol toxicity	2	2	Practical exam
15	Snake envenomation, food poisoning & plastic toxicity	2	2	Practical exam

4. Teaching and learning methods

- | | |
|------------------------------------|------|
| a. Lectures | (√) |
| b. Practical training / laboratory | (√) |
| c. Seminar / Workshop | () |
| d. Class Activity | (√) |

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Toxicology (Department of Pharm.Toxicology, faculty of Pharmacy), Approved by department members

Essential books (text books)

- 1) Medical Toxicology (1988). Ellenhorn, MJ, Barceloux DO. 1st editin. John Wiley & Sons.
- 2)Comparative Review in Toxicology (1989). Bryson PD. 2nd ed. Rockville, MD

Recommended books

A Textbook of Modern Toxicology (2004). Ernest Hodgson .3rd Edition, John Wiley & Sons, Inc.

Websites

- www. Biomed central. com
- www. Medscape. com
- www.pubmed. com

7. Facilities required for teaching and learning

- Class rooms**
- Laboratory facilities**
- Data Show**
- Computers.**
- Library**
- Internet**

Course coordinator:

Dr. Shady Allam

Head of Department:

Dr. Ramadan Eldomany

Date : 9/2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Toxicology**Course code: **4157**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Spectrum of toxicity	a1,c1,d1,d3	Lectures and practical training	Written, practical and oral exams
Week # 2	Toxicity testing	a2,c1,d1,d3	Lectures practical training	Written, practical and oral exams
Week # 3	Management of poisoned patients	a3,b2,c1,d1,d3	Lectures practical training Discussion	Written, practical and oral exams
Week # 4	Specific antidotes	a2,a3,a4,a5,b2,c1,d1,d3	Lectures and practical training	Written, practical and oral exams
Week # 5	Aspirin toxicity	a2,a3,a4,a5,b1,b2,b3,c1,c3,c4,d1,d3	Lectures and practical training	Written, practical and oral exams
Week # 6	Paracetamol toxicity	a2,a3,a4,a5,b1,b2,b3,c1,c3,c4,d1,d3	Lectures practical training and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Organ toxicity	a2,a3,a4,a5,b1,b2,b3,c1,c3,c4,d1,d3	Lectures and practical training	Written, practical and oral exams
Week # 9	Teratogenesis, Carcinogenesis and mutagenesis	a2,a3,a4,a5,b1,b2,b3,c1,c3,c4,d1,d3	Lectures and practical training	Written, practical and oral exams
Week # 10	Insecticides	a2,a3,a4,a5,b1,b2,b3,c1,c3,c4,d1,d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 11	Corrosives & Solvents	a2,a3,a4,a5,b1,b2,b3,c1,c3,c4,d1,d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 12	Heavy metals	a2,a3,a4,a5,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures and practical training	Written, practical and oral exams
Week # 13	carbon monoxide and cyanide poisoning	a2,a3,a4,a5,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 14	alcohol toxicity	a2,a3,a4,a5,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures	Written and oral exams
Week # 15	snake envenomation, Food poisoning & Plastic Toxicity	a2,a3,a4,a5,b1,b2,b3,c1,c3,c4,d1,d3	Lectures and brain storming	Written and oral exams

Course coordinator:**Dr. Shady Allam****Head of Department:****Dr. Ramadan Eldomany**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Third year, Second Semester
Date of specification approval	9/2016

A- Basic Information

Title : History of Pharmacy and Pharmacy Laws	Code : 4174
Total contact hours:1	Lecture :1

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The history of Pharmacy, how the ancient people discovered the medicine and the steps which were followed to obtain the drugs in the recent forms.
- Complete knowledge about the laws that govern their job and other medical jobs.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of the course, the graduate should be able to:

- a1- Know the history of pharmacy.
- a2- Identify the laws which govern his job.

b- Intellectual skills

- b1- Recognize the historical changes in development of the pharmaceutical practice.
- b2- Recognize how the laws applied in the field Pharmacy can control and play a great effect in the behavior of pharmacist and those who work in the medical field.

c- Professional and practical skills

- c1- Demonstrate narcotics ethically and properly according to the regulation.
- c2- Analyze the steps followed for importing or exporting drugs.
- c3- Test the relation with patients and other medical representatives.
- c4- Test the necessary environmental, safety attributes in his pharmacy.
- c5- Demonstrate proper inspection and prepare a report on pharmaceutical institution.

d- General and transferable skills

- d1- Develop critical thinking, problem solving and quick decision making skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Pharmacy and medicine in old Egypt	1	1	----
2	Greek, Indian and Chinese medicine	1	1	----
3	Arabic medicine before and after islam	1	1	----
4	Pharmacy and medicine in Omawi, Abbasi era	1	1	----
5	Physicians and chemists in arab countries	1	1	----
6	Symbol of pharmacists and the relation between them	1	1	----
7	Mid-term exam			
8	Relation between pharmacists and other medicals	1	1	----
9	General rules in the profession	1	1	----
10	Pharmacy rules No. 127, 253, 7 and 61	1	1	----
11	General and special rules for all drug factories and stores	1	1	----
12	General and special pharmacies	1	1	----
13	Official and special formulation	1	1	----
14	Importing and exporting of pharmaceutical preparations as well as medicinal plants	1	1	----
15	Pharmaceutical tables	1	1	----

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory ()
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	----
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on History of Pharmacy and Pharmacy Legislations prepared by the department staff

7. Facilities required for teaching and learning

- | | |
|--|---|
| <ul style="list-style-type: none"> • Class rooms. • Library. • Data show. | <ul style="list-style-type: none"> • Computers. • Internet. |
|--|---|

Course coordinator:

Prof. Dr/ Abdelaziz Elsayed

Head of Department:

Prof. Dr. Abdelaziz Elsayed

Date: / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment
 Course title: History of Pharmacy and Pharmacy Laws Course code: 4174

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Pharmacy and medicine in old Egypt	a1, b1	Lectures	Written and oral exams
Week # 2	Greek, Indian and Chinese medicine	a1, b1	Lectures	Written and oral exams
Week # 3	Arabic medicine before and after Islam	a1, b1	Lectures	Written and oral exams
Week # 4	Pharmacy and medicine in Omawi, Abbasi era	a1, b1	Lectures	Written and oral exams
Week # 5	Physicians and chemists in Arab countries	a1, b1	Lectures	Written and oral exams
Week # 6	Symbol of pharmacists and the relation between them	a1, b1	Lectures	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Relation between pharmacists and other medicals	a2, b2, c3,d1	Lectures	Written and oral exams
Week # 9	General rules in the profession	a2, b2, c3, c5	Lectures	Written and oral exams
Week # 10	Pharmacy rules No. 127, 253, 7 and 61	a2, b2, c4	Lectures	Written and oral exams
Week # 11	General and special rules for all drug factories and stores	a2, b2, c5	Lectures	Written and oral exams
Week # 12	General and special pharmacies	a2, b2, c4, c5,d1	Lectures	Written and oral exams
Week # 13	Official and special formulation	a2, b2	Lectures	Written and oral exams
Week # 14	Importing and exporting of pharmaceutical preparations as well as medicinal plants	a2, b2, c2	Lectures	Written and oral exams
Week # 15	Pharmaceutical tables	a2, b2, c1	Lectures	Written and oral exams

Course coordinator:
 Professor Dr. Abdelaziz Elsayed

Head of department:
 Professor Dr. Ramadan Aldomany

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Fourth year, First Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Clinical pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Clinical Pharmacy	Code : 5018
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The drugs used in special patient populations,
- Etiology, diagnosis and pharmacotherapy of some disorders
- Case studies of certain diseases.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Understand normal laboratory values.
- a2- Understand causes, diagnosis and treatment of some disorders.
- a3- demonstrate the different methods for managing medicines including dispensing, responding to symptoms, prescribing, provision of medicine and patient information and reporting of adverse reactions to medicines.

b- Intellectual skills

- b1- Apply SOAP principle on all case studies.
- b2- Predict the diagnostic symptoms of each disease or disorder.
- b3- Select the most appropriate therapy protocol.

c- Professional and practical skills

- c1- Use abnormal laboratory values in diagnosis.
- c2- Calculate the exact and most appropriate dose.
- c3- Demonstrate the drug of choice (Dose, Frequency & duration)
- c4- Analyze the laboratory values during treatment course.
- c5- Assess the therapeutic plan.

d- General and transferable skills

- d1- Retrieve information from a variety of sources, including libraries, databases and internet.
- d2- Work independently or as a part of team in different pharmaceutical fields.
- d3- Demonstrate creativity and time management skills.
- d4- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction	4	2	2
2	Asthma	4	2	2
3	COPD	4	2	2
4	Viral hepatitis, liver cirrhosis	4	2	2
5	Diabetes mellitus	4	2	2
6	Thyroid disorders	4	2	2
7	Mid-term exam			
8	Inflammatory bowel disease	4	2	2
9	Acute pancreatitis	4	2	2
10	Chronic pancreatitis	4	2	2
11	Gout & hyperuricemia	4	2	2
12	Rheumatic arthritis	4	2	2
13	Nausea & vomiting	4	2	2
14	Osteoarthritis	2	2	Practical exam
15	Osteoporosis	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training/laboratory (✓)
- c. Seminar/workshop ()
- d. Class activity (discussion, brain storm, case study) (✓)

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **clinical pharmacy**Course code: **5018**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction	a1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 2	Asthma	a1-a2-a3-b1-b2-b3-c1-c3-c4-c5-d1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 3	COPD	a1-a2-a3-b1-b2-b3-C1-c4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 4	Viral hepatitis, liver cirrhosis	a1-a2-a3-b2-b3-C1-c4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 5	Diabetes - mellitus	a1-a2-a3-b1-b2-C1-c2-c3-c4-c5-d2	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 6	Thyroid disorders	a1-a2-a3-b2-b3-C1-c3-c4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Inflammatory bowel disease	a1-a2-a3-b2-b3-C1-c4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 9	Acute pancreatitis	a1-a2-a3-b2-b3-C1-c4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 10	Chronic pancreatitis	a1-a2-a3-b1-b2-b3-C1-c4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 11	Gout & hyperuricemia	a1-a2-a3-b1-b2-b3-C1-c3-c4-c5	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 12	Rheumatic arthritis	a1-a2-a3-b1-b2-b3-C1-c4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 13	Nausea & vomiting	a2-a3-b3-c4-d1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 14	Osteoarthritis	a1-a2-a3-b1-b2-b3-C1-c3-c4-c5-d3	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Osteoporosis	a1-a2-a3-b1-b2-b3-C1-c3-c4-d4	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr. khaled sobhy**Head of Department: **Dr/ Ramadan El-Domany**Date : **9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Clinical pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Professional pharmacy & Drug Interactions	Code : 5028
Total contact hours: 3 hrs.	Lecture: 1 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Different types of drug interactions.
- The mechanisms of different drug interactions
- Specific recommendations in each case.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Understand mechanism of action of different drug classes.
- a2- Understand mechanism of drug- drug interaction and pharmacokinetics.
- a3- Demonstrate appropriate recommendation to avoid or minimize the drug-drug interactions.
- a4- Describe pharmaceutical knowledge in predicting and understanding any drug interaction.

b- Intellectual skills

- b1- Detect the net result of the interaction based on pharmacokinetic or pharmacodynamic considerations and make a plan to minimize this interaction.
- b2- Predict the possible outcome of interaction between two drugs when taken concurrently.

c- Professional and practical skills

- c1- Assess the best plan to select the drug of choice according to drug-drug interactions.
- c2- Use drug interaction principles in case studies.
- c3- Analyze any possible drug interaction in multi-drug regimen

d- General and transferable skills

- d1- Develop the best plan to achieve the most benefit from the use of drugs and the least adverse reactions on using more than one drug together.
- d2- Develop the way to identify the drug of choice with the least side effects due to drug-drug interactions.
- d3- Demonstrate creativity and time management skills.
- d4- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	General introductions to drug interactions - Pharmacokinetic D.I - Pharmacodynamic D.I	3	1	2
2	General introductions to drug interactions - Pharmacokinetic D.I - Pharmacodynamic D.I (cont.)	3	1	2
3	General introductions to drug interactions - Pharmacokinetic D.I - Pharmacodynamic D.I (cont.)	3	1	2
4	General mechanisms of D.I - Evaluation of the drug interaction outcome - Avoidance of drug interactions	3	1	2
5	General mechanisms of D.I - Evaluation of the drug interaction outcome - Avoidance of drug interactions (cont.)	3	1	2
6	Anticonvulsant drug-drug	3	1	2

	interactions			
7	Mid-term exam			
8	Anticonvulsant drug-drug interactions	3	1	2
9	Analgesic, antipyretic, antiinflammatory drug-drug interactions	3	1	2
10	Analgesic, antipyretic, antiinflammatory drug-drug interactions (cont.)	3	1	2
11	antineoplastic drug interactions	3	1	2
12	β - blocker-drug interactions	3	1	2
13	β - blocker-drug interactions (cont.)	3	1	2
14	Antihypertensive-drug interactions	1	1	Practical exam
15	Antihypertensive-drug interactions (cont.)	1	1	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training/laboratory (✓)
 c. Seminar/workshop ()
 d. Class activity (discussion, brain storm, case study) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in applying drug interaction principles in case studies.
Oral exam	To assess	The ability of students in expressing presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Professional pharmacy & Drug Interactions prepared by department staff member (approved by the council department)

Essential books (text books)

Recommended books

Stockley's Drug Interactions(2002). Stockley HI(Ed) . Pharmaceutical Press.6th edition.

Websites

7. Facilities required for teaching and learning**-Class rooms.****-Laboratory facilities.****- Data show.****-Computers.****-Library.****-Internet.****Course coordinator:**

Dr/ Dalia Afify

Head of Department: Dr/ Ramadan El-Domany**Date : 9/2016**

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Professional pharmacy & Drug Interactions**Course code: **5028**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	General introductions to drug interactions - Pharmacokinetic D.I - Pharmacodynamic D.I	a1,a2,a4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 2	General introductions to drug interactions - Pharmacokinetic D.I - Pharmacodynamic D.I (cont.)	a1, a2,a4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 3	General introductions to drug interactions - Pharmacokinetic D.I - Pharmacodynamic D.I (cont.)	a1, a2, a3,a4	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 4	General mechanisms of D.I - Evaluation of the drug interaction outcome - Avoidance of drug interactions	a1,a3,a4, b1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 5	General mechanisms of D.I - Evaluation of the drug interaction outcome - Avoidance of drug interactions (cont.)	a1,a2,a4, b1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 6	Anticonvulsant drug-drug interactions	a1,a2,a3,b1, b2,c1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Anticonvulsant drug-drug interactions	a1,a2,a3,b1, b2,c1,d1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 9	Analgesic, antipyretic, antiinflammatory drug-drug interactions	a1,a2,a4,b1, b2,c1	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 10	Analgesic, antipyretic, antiinflammatory drug-drug interactions (cont.)	a1,a2,a3,b1, b2,c1,c2,d1, d3	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 11	antineoplastic drug interactions	a1,a2,a3,b1, b2,c1,c2,d2, d3	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 12	β - blocker-drug interactions	a1,a2,a4,b1, b2,c1,c2,d1, d3	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 13	β - blocker-drug interactions (cont.)	a1,a2,a3,b1, c2,c1,c2,d1, d2,d3	Lectures, practical, discussion, brain storm and case study	Written, practical and oral exams
Week # 14	antihypertensive-drug interactions	a1,a2,b1,b2, c1,c2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 15	antihypertensive-drug interactions (cont.)	a1,a2,a3,b1, b2,c1,c2,d1, d2	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr/ Dalia Afify**Head of Department: **Dr/ Ramadan El-Domany**Date : **9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmacology & Toxicology
Department supervising the course	
Academic Year / Level	Fourth year, First Semester
Date of specification approval	09/2016

A- Basic Information

Title : Bioassays	Code : 5037
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The pharmacological activity of new agents isolated from plant, animal or chemically-derived.
- Quantitative determination of potency and toxicity.
- Bioassay of some neurotransmitters and screen some drugs in lab. animals.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. Learn the actions of medicines within living systems: molecular, cellular, biological and physical aspects
- a2. Describe Principles and techniques of biological assays that can be used in determination of the potency of many classes of drugs.
- a3. Name the techniques of biological screening of different classes of drug activities.
- a4. Describe the presented data

b- Intellectual skills

- b1. Recognize the difference between efficacy of different drugs
- b2. Interpret the proper biological methods to screen and evaluate the pharmacological activity of new drugs.
- b3. Illustrate and interpret essential facts, concepts, principles and theories relating to the subject areas identified under knowledge and understanding.

b4. Integrate the data with different statistical methods

c- Professional and practical skills

- c1. Use effectively different techniques for determination of the efficacy and toxic effects of different compounds.
 c2. Demonstrate the handling of experimental animals used for screening and biological evaluations of drugs.
 c3. Compare the potency of different agents that cannot be assayed chemically.
 c4. Use effectively library search, retrieval of information, carry out private study as well as analyze and interpret experimental results.
 C5. Test experiments for biological assays
 C6. Correlate statistical analyses for different types of data

d- General and transferable skills

- d1. Work effectively in a health care team being described as the drug expert.
 d2. Judge the most suitable method for determination of efficacy and toxicity of different drugs
 d3. Demonstrate oral and written communication skills.
 d4. Implement different methods to screen the pharmacological activity of new agents or mixture of drugs.
 d5. Retrieve data using a modern statistical analysis programs

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	General introduction	4	2	2
2	Screening of parasymathomimetic & parasympathomimetic activity	4	2	2
3	Screening of muscarinic receptor blockers and neuromuscular blockers	4	2	2
4	Screening and bioassay of histamine, serotonin and antihistaminics	4	2	2
5	Screening and bioassay of cardiac glycosides	4	2	2
6	Screening and bioassay of antihypertensive drugs	4	2	2
7	Mid Term exam			
8	Screening and bioassay of analgesics & anti-inflammatory drugs	4	2	2
9	Screening and bioassay	4	2	2

	of tranquilizers and anticonvulsant			
10	Screening and bioassay of local anesthetics and anti-bilharzial drugs	4	2	2
11	Screening and bioassay of drugs acting on gastrointestinal tract	4	2	2
12	Pharmacology of hormones	4	2	2
13	Bioassay of hormones	4	2	2
14	Biostatistics	2	2	Practical exam
15	Biostatistics (cont.)	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop ()
 d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	10	%
Practical Examination	30	%
Total	100	%

6. List of references

Course notes

Notes on Bioassay (Department of pharm./Tox., faculty of Pharmacy, Kafrelshiekh Univ.)

Essential books (text books)

Vogel GH (2002) . Drug discovery and evaluation:
Pharmacological Assays, 2nd Edition, Springer – Verlag, Berlin.

Recommended books

-British Pharmacopaea.
-United state Pharmacopaea.

Websites

-www. biomed central com.
-www. Pubmed. Com.
-www. medscape. Com.

7. Facilities required for teaching and learning

- **Class rooms.**
- **Laboratory.**
- **Library.**
- **Data Show.**
- **Computers.**
- **Internet**

Course co-coordinator:

Dr. Ramy Ammar

Head of Department:

Dr. Ramadan Eldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Bioassays**Course code: **5037**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	General introduction	a1,b1,c2,d3	Lectures and practical training	Written , practical and oral exams
Week # 2	Screening of symathomimetic & parasympathomimetic activity	a1,a2,b2,c1, c5, d2	Lectures and practical training	Written , practical and oral exams
Week # 3	Screening of muscarinic receptor blockers and neuromuscular blockers	a1,a2,b3,c3, c5, d1,d3	Lectures practical training Discussion	Written , practical and oral exams
Week # 4	Screening and bioassay of histamine, serotonin and antihistaminics	a2,a3,b1,c1, c3, c5, d3	Lectures practical training Discussion	Written , practical and oral exams
Week # 5	Screening and bioassay of cardiac glycosides	a1, a3, b2,b3,c3,c5, d4	Lectures and practical training	Written , practical and oral exams
Week # 6	Screening and bioassay of antihypertensive drugs	a3,b1,b3,c3, c4,c5,d4	Lectures and practical training	Written , practical and oral exams
Week # 7	Mid Term exam			
Week # 8	Screening and bioassay of analgesics & anti-inflammatory drugs	a2,a3,b2, c1,c2,c5,d3	Lectures and practical training brain storming	Written , practical and oral exams
Week # 9	Screening and bioassay of tranquillizers and anticonvulsant	a2,a3,b2,b3, c1,c2,c5,d1, d4	Lectures and practical training	Written , practical and oral exams
Week # 10	Screening and bioassay of local anesthetics and anti-bilharzial drugs	a1,a2,a3,b1, b2,b3,c1,c2, c3,c5,d1,d3	Lectures and practical training	Written , practical and oral exams
Week # 11	Screening and bioassay of drugs acting on gastrointestinal tract	a1,a2,a3,b1, c1,c2,c4,c5, d1,d3,d4	Lectures and practical training brain storming	Written , practical and oral exams
Week # 12	Pharmacology of hormones	a1,a2,a3, b3,c1,d1,d2, d3,d4	Lectures and practical training	Written , practical and oral exams
Week # 13	Bioassay of hormones	a1,a2,a3, b3,c3, d1,d4	Lectures and practical training brain storming	Written , practical and oral exams
Week # 14	Biostatistics	a4,b4,c6,d5	Lectures	Written and oral exams
Week # 15	Biostatistics (cont.)	a4,b4,c6,d5	Lectures	Written and oral exams

Course coordinator: **Dr. Ramy Ammar**Head of department: **Dr. Ramadan Eldomany****9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Clinical Pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, first semester
Date of specification approval	9/2016

A- Basic Information

Title : Therapeutics	Code : 5048
Total contact hours: 3 hrs.	Lecture: 3 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The basic principles of cancer therapeutics including tumor growth, diagnosis, staging, chemotherapy, systematic approach of selection of antimicrobials and their pharmacology.
- Principles of some infections including the pathophysiology, clinical picture, diagnosis & pharmacotherapy.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Understand principles of tumor growth, diagnosis and staging.
- a2- Discuss principle of chemotherapy.
- a3- Understand systematic approach of selection of antimicrobials and their pharmacology .
- a4- Discuss the principle of some infections.
- a5- Discuss selection of the most appropriate drug for each individual case.

b- Intellectual skills

- b1- Recognize methods for tumor and infection detection.
- b2- Select a therapeutic plan for tumor treatment based on its stage.
- b3- Assess response of patient to antimicrobial drugs.

c- Professional and practical skills

- c1- Use the most appropriate antimicrobial agent based on its activity, side effects & contraindications.
- c2- Assess the efficacy of chemotherapy.
- c3- Compare between different cancer types, their etiology, complications and prognosis.
- c4- Demonstrate the most suitable treatment regimen for specific patient condition.

d- General and transferable skills

- d1- Work in a team or independently in different pharmaceutical fields.
- d2- Demonstrate creativity and time management skills.
- d3- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction of cancer	3	3	-----
2	Principles of tumor growth, diagnosis and staging	3	3	-----
3	Principles of chemotherapy & general supportive care issues	3	3	-----
4	Breast cancer	3	3	-----
5	Malignant lymphoma	3	3	-----
6	Prostate cancer	3	3	-----
7	Mid-term exam			
8	Systemic approach for selection of antimicrobial agents	3	3	-----
9	Pharmacology of antimicrobial agents	3	3	-----
10	Therapy of urinary tract infection	3	3	-----
11	Therapy of respiratory tract infection	3	3	-----
12	Therapy of GIT infections	3	3	-----
13	Pharmacotherapeutic considerations in pediatric	3	3	-----
14	Pharmacotherapeutic considerations in geriatrics	3	3	-----
15	Pharmacotherapeutic considerations in pregnancy and lactation	3	3	-----

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Therapeutics**Course code: **5048**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction of cancer	a1-b1	Lectures, discussion and brain storm	Written and oral exams
Week # 2	principles of tumor growth, diagnosis and staging	a1-b1-c2-c3-d1-d2-d3	Lectures, discussion and brain storm	Written and oral exams
Week # 3	principles of chemotherapy & general supportive care issues	a2- b2-c2 -d1	Lectures, discussion and brain storm	Written and oral exams
Week # 4	breast cancer	a1 -b1-b2-c2-c3-d2	Lectures, discussion and brain storm	Written and oral exams
Week # 5	malignant lymphoma	a1 -b1-b2-c2-c3-d1	Lectures, discussion and brain storm	Written and oral exams
Week # 6	prostate cancer	a1 -b1-b2-c2-c3-d3	Lectures, discussion and brain storm	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	systemic approach for selection of antimicrobial agents	a3-b3-c1-d2	Lectures, discussion and brain storm	Written and oral exams
Week # 9	pharmacology of antimicrobial agents	a3-b3-c1-d2	Lectures, discussion and brain storm	Written and oral exams
Week # 10	therapy of urinary tract infection	a3-a4-a5-b1-b3-d1-d2	Lectures, discussion and brain storm	Written and oral exams
Week # 11	therapy of respiratory tract infection	a3-a4-a5-b1-b3-d1-d2	Lectures, discussion and brain storm	Written and oral exams
Week # 12	therapy of GIT infections	a3-a4-a5-b1-b3-d1	Lectures, discussion and brain storm	Written and oral exams
Week # 13	pharmacotherapeutic considerations in pediatric	a4-a5-c1-c4	Lectures, discussion and brain storm	Written and oral exams
Week # 14	pharmacotherapeutic considerations in geriatrics	a4-a5-c1-c4	Lectures, discussion and brain storm	Written and oral exams
Week # 15	pharmacotherapeutic considerations in pregnancy and lactation	a4-a5-c1-c4	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr. Ahmed Amine**Head of Department: **Dr/ Ramadan El-Domany**Date : **9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Fourth year, First Semester
Date of specification approval	9/2016

A- Basic Information

Title : Industrial Pharmacy	Code : 5054
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- | |
|--|
| <ul style="list-style-type: none"> - The design and mechanism of action of the instruments included in selected unit operation in pharmaceutical practice. - The principles of size reduction, size enlargement, supercritical fluid technology, filtration and centrifugation. - The use and application of supercritical fluid technology, size reduction, size enlargement, size classification, filtration and centrifugation in pharmaceutical industry. - Selection the best equipment for a given operation based on specification of the materials and the required product as well as the principle of equipment operation. |
|--|

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- | |
|---|
| <ul style="list-style-type: none"> • a1- Describe the mechanisms of size reduction and granulation. • a2- Identify the factors affecting size reduction process. • a3- Identify the factors affecting filtration rate. • a4- Describe the equipments of filtration, centrifugation, size reduction, size enlargement and size classification. • a5- Identify the principles of size separation and supercritical fluid technology and its advantages. • a6- Demonstrate the importance of industrial gases and water conditioning in pharmacy . |
|---|

b- Intellectual skills

- b1-Select the best equipment for preparation of granules or pellets.
- b2- Select the best equipment and/or operational line to perform size reduction process.
- b3-Recognize problems associated with unit operations.
- b4-Assess the relationship between equipment design and product characteristics.
- b5- select the best supercritical fluid technique to extract active ingredient or to prepare particle.

c- Professional and practical skills

- c1- Analyze solid-liquid and liquid- liquid separation process.
- c2- Analyze size reduction operation.
- c3- Test granules and pellets.
- c4- Examine drug particles based on their particle size
- c5- Analyze filtration operation.

d- General and transferable skills

- d1- Retrieve analyze and utilize information from different sources.
- d2- Work effectively in a team.
- d3- Develop critical thinking and problem solving ability in the industrial pharmacy field.
- d4- Demonstrate continuous self learning ability.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction – Theory of filtration	4	2	2
2	Design of filtration equipments	4	2	2
3	Centrifugal filtration	4	2	2
4	Particle size reduction, objectives-theory and mechanisms	4	2	2
5	Equipment for particle size reduction	4	2	2
6	Granulation; methods and mechanisms of granule formation	4	2	2
7	Mid-term exam			
8	Pharmaceutical granulation equipment and pelletizers	4	2	2
9	Introduction to supercritical fluid technology and its application in drug extraction and particle design	4	2	2
10	Objectives of size separation	4	2	2
11	Methods of size separation	4	2	2
12	Derived properties of powder	4	2	2
13	Introduction to Industrial gases	4	2	2
14	Water conditioning	2	2	Practical exam
15	Industrial waste waters	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory/ field visit (✓)
 c. Seminar / Workshop ()
 d. Class Activity (Brain storming/discussion) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Industrial Pharmacy prepared by the department staff.

Essential books (text books)

[Sudhakara Reddy Pondugula](#), [M. Gopal Rao](#), [Govinda Rajan Gudala](#), [R. Vamsi Krishna](#), Pharmaceutical Engineering: Practical Manual (Unit Operations), Bsp, 2007.

Recommended books

M.M Gupta, Dr. N .E S. Wesley, Text Book of Pharmaceutical Engineering including unit operations, Vardhaman Publisher and Distributors, Jaipur, Volume 1, Number 1, Jaipur, India, 2008

Websites

www.pubmed.com

www.sciencedirect.com

7. Facilities required for teaching and learning

- | | |
|--|--|
| <ul style="list-style-type: none">• Class rooms.• Laboratory facilities(Equipment of Educational factory)• Data show | <ul style="list-style-type: none">• Computers.• Internet. |
|--|--|

Course coordinator:

Dr/ Maged Elsayahly

Head of Department:

Dr/ Ramadan Aldomany

Date: 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Industrial Pharmacy

Course code: 5054

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction – Theory of filtration	a3, d1, d4	Lectures and practical training	Written, practical and oral exams
Week # 2	Design of filtration equipments	a3, a4, b3, b4, c5, d1, d3, d4	Lectures and practical training	Written, practical and oral exams
Week # 3	Centrifugal filtration	a3, a4, c5, d1, d4	Lectures and practical training	Written, practical and oral exams
Week # 4	Particle size reduction, objectives- theory and mechanisms	a1, a2, b2, c4, c2 d1, d4	Lectures and field visit.	Written, practical and oral exams
Week # 5	Equipment for particle size reduction	a1, a2, a4, b2, b3, b4, c2, d3	Lectures and practical training	Written, practical and oral exams
Week # 6	Granulation; methods and mechanisms of granule formation	a1, b1, c3, d1, d2, d4	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Pharmaceutical granulation equipment and pelletizers	a1, a4, b1, b3, b4, c3, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 9	Introduction to supercritical fluid technology and its application in drug extraction and particle design	a5, b5, d1, d4	Lectures and class activity.	Written, practical and oral exams
Week # 10	Objectives of size separation	a5,c1, d1, d4	Lectures	Written, practical and oral exams
Week # 11	Methods of size separation	a4, a5, b3, b4, c1, c4, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 12	Derived properties of powder	a1, b4, c4, d1, d2, d3	Lectures and practical training	Written, practical and oral exams
Week # 13	Introduction to Industrial gases	a6, d1, d4	Lectures and field visit.	Written and oral exams
Week # 14	Water conditioning	a6, d1, d4	Lectures	Written and oral exams
Week # 15	Industrial waste waters	a6, d1, d4	Lectures	Written and oral exams

Course coordinator:

Head of department:

Dr/ Gamal Elmaghraby

Dr/ Ramadan Aldomany

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical chemistry
Department supervising the course	
Academic Year / Level	Fourth year, First semester
Date of specification approval	9/2016

A- Basic Information

Title: Forensic Chemistry.	Code : 5061
Total contact hours: 3 hrs.	Lecture: 1 hrs.
	Practical: 2hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The principles of forensic chemistry, analytical toxicology and forensic Toxicology.
- Effectively take samples and analyze them using suitable analytical techniques.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Learn the principles of forensic chemistry and analytical toxicology.
- a2- List Medicolegal aspects and troubleshooting of forensic issues.
- a3- Discuss various ways and means of separation, identification and quantitative analysis of drugs of abuse poisons, doping substances in sports and chemical warfare agents.
- a4- Record proper method for screening urine, blood, and other biological samples for xenobiotics as well as quantify them.
- a5- Discuss applications of DNA fingerprinting.

b- Intellectual skills

- b1. Apply preliminary tests for toxicological screening.
- b2. Predict different drugs from their spectra (HPLC, GC and GC-MS etc.)
- b3. Determine the type of the poison through certain analytical and toxicological data which does not include a specific test for the poison.

c- Professional and practical skills

- c1. Use cGLP-compliant analytical tools for efficacy and quality assurance testing of APIs and their healthcare products.
- c2. Apply the therapeutic knowledge gained in real life professional practice.
- c3. Handle basic laboratory equipments and chemicals safely.
- c4. Identify impurities of active substances in samples.

d- General and transferable skills

- The student must be able to:
- d1. Communicate therapeutic knowledge gained with other members of the healthcare team.
- d2. Demonstrate possible side effects, development of drug resistance, drug interactions and participate in developing rational algorithms for resolving plausible problems.
- d3. Work in team and apply time management principles effectively

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Scope and introduction to forensic chemistry	3	1	2
2	-Scientific principles, instrumentation and equipment. -Early analytical techniques (dry and wet chemistry). -Color tests used in forensic chemistry	3	1	2
3	Forensic toxicology Hospital toxicology	3	1	2
4	Poisons (classification, isolation, screening and quantitative analysis)	3	1	2
5	Poisons (classification, isolation, screening and quantitative analysis) (cont.)	3	1	2
6	Poisons (classification, isolation, screening and quantitative analysis) (cont.)	3	1	2
7	Mid-term exam			
8	Drugs of abuse (screening and analysis) Analysis of seized drugs	3	1	2
9	Drugs of abuse	3	1	2

	(screening and analysis) Analysis of seized drugs (cont.)			
10	Drugs of abuse (screening and analysis) Analysis of seized drugs (cont.)	3	1	2
11	Doping substances in sports	3	1	2
12	Doping substances in sports (cont.)	3	1	2
13	Chemical warfare agents (classification and analysis) DNA fingerprinting	3	1	2
14	Chemical warfare agents (classification and analysis) DNA fingerprinting (cont.)	1	1	Practical exam
15	Chemical warfare agents (classification and analysis) DNA fingerprinting (cont.)	1	1	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training / laboratory (✓)
- c. Seminar / Workshop ()
- d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14, 15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on Forensic Chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.
- Lab Manual of Forensic Chemistry prepared and distributed by Dept. of Pharmaceutical Chemistry.

Essential books (text books)

- 1) Clark E. G. C. , Isolation and Identification of drugs, second edition (1986), Rittenhouse book Distribution.
- 2) Roger M. Smith, Handbook of analytical separation in forensic chemistry, 2nd edition (2008) Elsevier.
- 3) Suzanne Belle, Drugs and poisons in forensic chemistry, 1st edition, (2005), Facts On File.
- 4) David E. Newton, forensic chemistry, 1st edition, (2008), Facts On File, Inc.

Recommended books

Roger M. Smith, Handbook of analytical separation in forensic chemistry, 2nd edition (2008) Elsevier.

Websites

www.fda.org

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities (hot plates, chemical hood, water bath)
- Library.
- Data Show
- Computers. -Internet.

Course coordinator:

Dr. Tamer Ibrahim

Head of Department:

Prof.Dr. Ramadan El-domany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title **Forensic chemistry** Course code: **5061**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Scope and introduction to forensic chemistry	a1	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 2	Scientific principles, instrumentation and equipment Early analytical techniques (dry and wet chemistry) Color tests used in forensic chemistry	a1,a2,a3,a4,a5,b1,b2,b3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Forensic toxicology Hospital toxicology	a1,a2,a3,a4,a5,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Poisons (classification, isolation, screening and quantitative analysis)	a1,a2,a3,a4,a5,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 5	Poisons (classification, isolation, screening and quantitative analysis) (cont.)	a1,a2,a3,a4,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Poisons (classification, isolation, screening and quantitative analysis) (cont.)	a1,a2,a3,a4,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Drugs of abuse (screening and analysis) Analysis of seized drugs	a1,a2,a3,a4,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 9	Drugs of abuse (screening and analysis) Analysis of seized drugs (cont.)	a1,a2,a3,a4,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 10	Drugs of abuse (screening and analysis) Analysis of seized drugs	a1,a2,a3,a4,b1,b2,b3,c1,c2,c3,c4,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 11	Doping substances in sports	a1,a2,a3,a4,b1,b2,b3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 12	Doping substances in sports (cont.)	a1,a2,a3,a4,b1,b2,b3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 13	Chemical warfare agents (classification and analysis) DNA fingerprinting	a1,a2,a3,a4,a5,b1,b2,b3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 14	Chemical warfare agents (classification and analysis) DNA fingerprinting (cont.)	a1,a2,a3,a4,a5,b1,b2,b3,d1,d2,d3	Lectures, discussion and brain storming	Written and oral exams
Week # 15	Chemical warfare agents (classification and analysis) DNA fingerprinting (cont.)	a1,a2,a3,a4,a5,b1,b2,b3,d1,d2,d3	Lectures, discussion and brain storming	Written and oral exams

Course coordinator: Dr. Tamer Ibrahim

Head of department: Prof.Dr. **Ramadan El-domany**Date : **9 /2016**

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Fourth year, Second Semester

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Clinical pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Clinical Pharmacy	Code : 5118
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Drugs used in special patient populations.
- The etiology and diagnosis.
- Pharmacotherapy of neuropsychiatric and dermatological disorders and cases involving certain diseases.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

:

- a1- Understand normal laboratory values.
- a2- Discuss causes, diagnosis and treatment of some psychiatric and dermatologic disorders
- a3- Demonstrate different methods for managing medicines including dispensing, responding to symptoms, prescribing, provision of medicine and patient information and reporting of adverse reactions to medicines.

b- Intellectual skills

- b1- Apply SOAP of cases study .
- b2- Demonstrate the prognosis of the disease .
- b3- Select the suitable therapy protocol .

c- Professional and practical skills

- c1- Use the relation between abnormal laboratory values and physiologic disorders.
- c2- Demonstrate the signs & symptoms and use the suitable treatment.
- c3- Assess the best drug: dose, frequency & duration.
- c4- Demonstrate how to diagnose and how to treat.
- c5- Use OTC drug suitable for patient taking in consideration the history of patient.

d- General and transferable skills

- d1- Retrieve information from a variety of sources, including libraries, databases and internet.
- d2- Work independently or as a part of team in different pharmaceutical fields.
- d3- Demonstrate creativity and time management skills.
- d4- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction	4	2	2
2	Bacterial, fungal skin infections	4	2	2
3	Viral skin infections	4	2	2
4	Psoriasis	4	2	2
5	Vetiligo	4	2	2
6	Scabies	4	2	2
7	Mid-term exam			
8	Urticaria,acne	4	2	2
9	Epilepsy	4	2	2
10	Epilepsy (cont.)	4	2	2
11	Mania	4	2	2
12	Mania (cont.)	4	2	2
13	Schizophrenia	4	2	2
14	Schizophrenia (cont.)	2	2	Practical exam
15	Drugs of abuse	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training/laboratory (✓)
- c. Seminar/workshop ()
- d. Class activity (discussion, brain storm, case study) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes in Clinical Pharmacy 4th year students (2nd term)
- Practical notes in Clinical Pharmacy 4th year students (2nd term)

Essential books (text books)

Recommended books

Pharmacotherapy. A Pathophysiologic Approach(2005) Dipro JT,McGraw-Hill. 6th edition

Websites

[www. Guidelines.org](http://www.Guidelines.org)

7. Facilities required for teaching and learning

-Class rooms.	-Library.
-Laboratory facilities.	
- Data show.	
-Computers.	-Internet.

Course coordinator:

Dr. Ahmed Amine

Head of Department:

Dr/ Ramadan El-Domany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **clinical pharmacy** Course code: **5118**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction	a1,a3,b1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 2	Bacterial, fungal skin infections	a1,a2,b2,c1,c2 ,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 3	Viral skin infections	a1,a2,b2,b3,c1,c2,c3,c4,d3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 4	Psoriasis	a2,b1,b2,b3,c1,c2,c3,c4,d4	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 5	Vetiligo	a2,b1,b2,b3,c1,c2,c3,c4,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 6	Scabies	a1,a2,b1,b2,c1,c2,c5,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Urticaria,acne	a1,a2,b1,b2,b3,c1,c2,c3,c4, c5,d1,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 9	Epilepsy	a2,b1,b2,c1,c2,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 10	Epilepsy (cont.)	a2,b1,b2,b3,c1,c2,c3,c4,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 11	Mania (cont.)	a2,b1,b2,c1,c2,d2,d3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 12	Mania (cont.)	a2,b1,b2,b3,c1,c2,c3,c4,d2, d3	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 13	Schizophrenia	a2,b1,b2,c1,c2,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 14	Schizophrenia (cont.)	a2,b1,b2,b3,c1,c2,c3,c4,d2, d3	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Drugs of abuse	a1,a2,b1,b2,b3,c1,c2,c3,c4, d1,d2,d3	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr. Ahmed Amine**Head of department: **Dr/ Ramadan El-Domany**Date : **9 /2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Clinical pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Professional Pharmacy and Drug Interaction	Code : 5128
Total contact hours: 3 hrs.	Lecture: 1 hr.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The different types of drug-drug interactions
- The different types of drug-food interactions, drug diseases interactions and the specific recommendations in each case

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Understand mechanism of action of the drugs, its kinetics and adverse effects.
- a2- Discuss mechanism of drug-drug interactions.
- a3- Demonstrate recommendations to avoid or minimize the drug-drug interactions.

b- Intellectual skills

- b1- Demonstrate the net result of the interaction based on pharmacokinetic or pharmacodynamic considerations and make a plan to minimize this interaction.
- b2- Predict the possible outcome of interaction between two drugs when taken concurrently.

c- Professional and practical skills

- c1- Assess the best plan to achieve the drug of choice according to drug-drug interactions.
- c2- Use library search, assess information, use private study as well as analyze and solve experimental results.

d- General and transferable skills

- d1- Design the best plan to achieve the most benefit from the use of drugs and the least adverse reactions on using more than one drug together.
- d2- Develop the way to identify the drug of choice with the least side effects due to drug-drug interactions.
- d3- Demonstrate creativity and time management skills.
- d4- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Anti-diabetic drug-drug interactions	3	1	2
2	Anti-diabetic drug-drug interactions (cont.)	3	1	2
3	Anti-infectious agents drug-drug interactions	3	1	2
4	Anti-infectious agents drug-drug interactions (cont.)	3	1	2
5	Xanthines drug-drug interactions	3	1	2
6	Vitamins	3	1	2
7	Mid-term exam			
8	Cardiac glycoside drug-drug interactions	3	1	2
9	Cardiac glycoside drug-drug interactions (cont.)	3	1	2
10	Cardiac glycoside drug-drug interactions (cont.)	3	1	2
11	antidepressant drug-drug interactions	3	1	2
12	antidepressant drug-drug interactions (cont.)	3	1	2
13	antidepressant drug-drug interactions (cont.)	3	1	2
14	Antipsychotic drug- drug interactions	1	1	Practical exam
15	Oral contraceptives drug-drug interactions	1	1	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training/laboratory (✓)
 c. Seminar/workshop ()
 d. Class activity (discussion, brain storm, case study) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

-Notes in drug Interaction for fourth year pharmacy students 2nd term
 -Practical notes in drug interaction for fourth year pharmacy students 2nd term

Essential books (text books)

Recommended books

Stockley's Drug Interactions,
 Ivan H Stockley, 6th edition, Pharmaceutical Press, 2002.

Websites

7. Facilities required for teaching and learning

-Class rooms.

-Laboratory facilities.	-Library.
- Data show.	
-Computers.	-Internet.

Course coordinator:

Dr. Tarek Mostafa

Head of Department:Dr/Ramadan El-Domany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Professional pharmacy and Drug Interaction** Course code: **5128**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Anti-diabetic drug-drug interactions	a1,a2,b1,c1,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 2	Anti-diabetic drug-drug interactions (cont.)	a2,a3,b2,c2,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 3	Anti-infectious agents drug-drug interactions	a1,a2,b1,c1,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 4	Anti-infectious agents drug-drug interactions (cont.)	a2,a3,b2,c2,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 5	Xanthines drug-drug interactions	a1,a2,a3,b1,b2,c1,c2,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 6	Vitamins	a1,a2,a3,b1,b2,c1,c2,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Cardiac glycoside drug-drug interactions	a1,a2,b1,c1,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 9	Cardiac glycoside drug-drug interactions (cont.)	a2,a3,b2,c2,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 10	Cardiac glycoside drug-drug interactions (cont.)	a2,a3,b2,c2,d3,d4	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 11	antidepressant drug-drug interactions	a1,a2,b1,c1,d1	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 12	antidepressant drug-drug interactions (cont.)	a2,a3,b2,c2,d2	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 13	antidepressant drug-drug interactions (cont.)	a2,a3,b2,c2,d3,d4	Lectures , practical, discussion and brain storm	Written, practical and oral exams
Week # 14	Antipsychotic drug- drug interactions	a1,a2,a3,b1,b2,c1,c2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Oral contraceptives drug-drug interactions	a1,a2,a3,b1,b2,c1,c2,d2	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr. Tarek Mostafa**Head of Department: **Dr/Ramadan El-Domany**Date: **9/2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical chemistry
Department supervising the course	
Academic Year / Level	Fourth year, second Semester
Date of specification approval	9/2016

A- Basic Information

Title : Drug Design	Code : 5131
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The basic principles, theoretical basis and practical experience of different methods of drug design.
- Application of different approaches in the field of design to introduce safe, effective and quality drugs with an affordable price.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1. Learn how drugs bind with receptors of various kinds, including enzymes and DNA.
- a2. Explain physicochemical approaches relevant to drug design & drug development.
- a3. Learn chemistry of drug action.
- a4. Repeat hydrophobic, electronic & steric properties.
- a5. Discuss combinatorial synthesis of drugs.
- a6. Discuss different drug delivery systems.
- a7. Describe modern techniques in the field of drug design such as computer based methods of QSAR, molecular graphics basis of drug design combinatorial chemistry and high throughput screening.

b- Intellectual skills

- b1. Conduct methods of separation of different drugs according to their pKa value.
- b2. Interpret Hansch Equation to predict the pharmaceutical

- activity of certain compounds according to their physicochemical properties.
- b3. Recognize the application of different molecular modeling programs in the design of effective lead to a new target according to the available data about that target.
- b4. Calculate data from pKa practical class.
- b5. Utilize computer -aided tools in drug design.

c- Professional and practical skills

- c1. Use laboratory skills in the study of physicochemical properties of certain drugs.
- c2. Apply a research study and analyze the results.
- c3. Handle the protein tertiary structure by certain computer programs and view a demonstration of some important enzymes as drug targets.

d- General and transferable skills

The student must be able to:

- d1. Retrieve information and carry out private study.
- d2. Work effectively in a team work.
- d3. Apply numeracy and pharmaceutical calculations.
- d4. Practice library search.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction of Different approaches for discovering new drugs	4	2	2
2	Bioisosterism, stereochemistry and biological activity	4	2	2
3	Combinatorial chemistry	4	2	2
4	Drug Metabolism	4	2	2
5	Quantitative Structure Activity Relationship (QSAR)	4	2	2
6	Prodrugs	4	2	2
7	Mid-term exam			
8	Drug Targets (Receptor, Enzymes, Nucleic acids)	4	2	2
9	Drug Targets (Receptor, Enzymes, Nucleic acids) (cont.)	4	2	2
10	Biotechnology derived drugs	4	2	2

11	Molecular Modelling	4	2	2
12	Molecular Modelling (cont.)	4	2	2
13	Molecular Modelling (cont.)	4	2	2
14	New Drug Targets	2	2	Practical exam
15	New Drug Targets (cont.)	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training / laboratory (✓)
 c. Seminar / Workshop ()
 d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14, 15
Assessment 3	Final exam	Week	16, 17
Assessment 4	Oral	Week	16, 17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Notes on Drug Design prepared and distributed by Dept. of Pharmaceutical Chemistry.
- Lab Manual of Drug Design prepared and distributed by Dept. of

Pharmaceutical Chemistry.

Essential books (text books)

- 1) Kenneth M. Merz, Charles H. Reynolds, "Drug Design: Structure- and Ligand-Based Approaches" 1st edition ,2010, Cambridge University Press
- 2) E.Kerns," Drug-like Properties: Concepts, Structure Design and Methods: from ADME to Toxicity Optimization",1st edition,2008, Academic Press
- 3)D. C. Young," Computational Drug Design: A Guide for Computational and Medicinal Chemists ",5th edition,2009, Wiley-Interscience

Recommended books

D.C.Young," Computational Drug Design: A Guide for Computational and Medicinal Chemists ",5th edition,2009, Wiley-Interscience.

Websites

www.fda.gov , www.moHP.gov , www.emea.org , www.who.int , www.pdb.org

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities (hot plates, chemical hood, water bath)
- Library.
- Data Show
- Computers. -Internet.

Course coordinator:

Dr. Tamer Ibrahim

Head of Department:

Prof. Dr. Ramadan El-domany

Date: /9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Drug design**Course code: **5131**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction of Different approaches for discovering new drugs	a2	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 2	Different approaches for discovering new drugs	a2,a3,a4, a5, a7,b5,c1,c2,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 3	Drug Development	a1,a2,a4,a7,b1,b5,c1,c2,c3, d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 4	Drug Metabolism	a1,a2,a3,a7,b1,b5,c1,c2,c3, d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written and oral exams
Week # 5	Quantitative Structure Activity Relationship (QSAR)	a1,a2,a4,a7,b2,b3,b4,b5,c1, c2,c3,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 6	Prodrugs	a2,a4,a6,b1,c2,c3,d1,d2,d3, d4.	Lectures, practical training, discussion and brain storming	Written oral exams
Week # 7	Mid-term exam			
Week # 8	Drug Targets (Receptor, Enzymes, Nucleic acids)	a1,b5, c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 9	Drug Targets (Receptor, Enzymes, Nucleic acids) (cont.)	a1,b5, c2,c3,d1,d2,d3,d4.	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 10	Biotechnology derived drugs	a1,a2,a3,a5,a6,b1, c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written and oral exams
Week # 11	Molecular Modelling	a4, a7,b3,b5,c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 12	Molecular Modelling (cont.)	a4, a7,b3,b5,c2,c3,d1,d2,d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 13	Molecular Modeling (cont.)	a4,a7,b3,b5,c1,c2,c3,d1,d2, d3	Lectures, practical training, discussion and brain storming	Written, practical and oral exams
Week # 14	New Drug Targets	a1,a3,a6,b3,b5,c2,d1.	Lectures, discussion and brain storming	Written and oral exams
Week # 15	New Drug Targets (cont.)	a1,a3,a6,b3,b5,c2,d1.	Lectures, discussion and brain storming	Written and oral exams

Course coordinator: **Dr. Tamer Ibrahim**Head of department: **Prof. Dr. Ramadan El-domany**Date: **9 /2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Programme on which the course is given	BSc in pharmacy
Major or minor element of programme	Major
Department offering the course	Clinical pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Health Care Administration	Code : 5168
Total contact hours: 2 hrs.	Lecture: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The fundamental aspects of pharmacy practice, pharmaceutical care, adverse drug reactions, pharmacovigilance.
- The concepts of self care pharmacotherapy, therapeutic drug monitoring, medication errors and total parenteral nutrition.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Describ the concepts of pharmaceutical care, comprehensive geriatric assessment, professional communication, pharmacovigilance and self care pharmacotherapy.
- a2- Describ the different types of adverse drug reactions and the variables that affect their incidence and severity.
- a3- Understand the use of therapeutic drug monitoring and its advantage.
- a4- Demonstrate principles, methods and application of pharmacoeconomics.
- a5- Describ the total parenteral nutrition including guidelines for monitoring, formulation and potential complications.
- a6- Describ the intravenous admixture service : rationale, development, stability and the preparation of IV fluids under aseptic conditions.
- a7- Understand the different types medication errors in hospital and the recommendation for its prevention, also studying how to monitor & manage the medication errors.

b- Intellectual skills

- b1- Utilize the different sources of pharmaceutical information.
- b2- Integrate knowledge and making judgments about the method of pharmacoeconomics.

c- Professional and practical skills

c1- Use a protocol for the formulation of a suitable total parenteral nutrition solution.

d- General and transferable skills

d1- Retrieve information from a variety of sources, including libraries, databases and internet.

d2- Work independently or as a part of team in different pharmaceutical fields.

d3- Demonstrate creativity and time management skills.

d4- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Pharmacy practice	2	2	-----
2	Pharmaceutical care	2	2	-----
3	Comprehensive geriatric assessment	2	2	-----
4	Professional communication	2	2	-----
5	Adverse drug reactions	2	2	-----
6	Pharmacovigilance	2	2	-----
7	Mid-term exam			
8	Self care pharmacotherapy	2	2	-----
9	Pharmaceutical care and disease state management	2	2	-----
10	Therapeutic drug monitoring	2	2	-----
11	Total parenteral nutrition	2	2	-----
12	Medication errors in hospitals	2	2	-----
13	Patient communications	2	2	-----
14	Drug formularies	2	2	-----
15	Intravenous admixture service	2	2	-----

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training/laboratory ()
 c. Seminar/workshop ()
 d. Class activity (discussion, brain storm, case study) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17
Assessment 3	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

Notes in Health Care Administration for fourth year students

Essential books (text books)

Recommended books

Applied Therapeutics, The clinical Use of Drugs (2009) Koda-Kimble MA(Ed). Lippincott Williams and Wilkins, 9th Edition.
 Pharmacotherapy (2008). DiPiro JT et al (Ed). McGraw Hill, 7th Edition.

Websites

www. ASHP.org

The website for the American Society of Health System Pharmacist.

7. Facilities required for teaching and learning

-Class rooms.	
-Laboratory facilities.	-Library.
- Data show.	
-Computers.	-Internet.

Course coordinator:

Dr/ Gamal El-Azab

Head of Department:

Dr/ Ramadan El-Domany

Date : 9 /2016

Course Plan
Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Health Care Administration**Course code: **5168**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Pharmacy practice	a1,a4,b1,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 2	Pharmaceutical care	a1,a4,b1,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 3	Comprehensive geriatric assessment	a1,a4,b1,b2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 4	Professional communication	a1,a4,b1,b2,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 5	Adverse drug reactions	a 2,b1,d1,d2,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 6	Pharmacovigilance	a1,a4,b1,d4	Lectures, discussion and brain storm	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Self care pharmacotherapy	a1,a4,b1,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 9	Pharmaceutical care and disease state management	a1,a4,b1,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 10	Therapeutic drug monitoring	a3, b1,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 11	Total parenteral nutrition	a5,b1,b2,c1,d3	Lectures, discussion and brain storm	Written and oral exams
Week # 12	Medication errors in hospitals	a 7, b1,d1 d2,d4	Lectures, discussion and brain storm	Written and oral exams
Week # 13	Patient communications	a4,b1,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 14	Drug formularies	a3,b1,b2,d1	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Intravenous admixture service	a6, b1,b2,d3	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr/ Gamal El-Azab**

Head of department:

Dr/ Ramadan El-DomanyDate : **9 /2016**

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Fourth year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Industrial Pharmacy (GMP)	Code : 5144
Total contact hours: 3 hrs.	Lecture: 1 hr.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The general guides for current good manufacture practice (CGMP) to ensure the quality of the pharmaceutical product.
- The concept of quality assurance appropriate to pharmaceutical product.
- Different types of process validation.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Identify the relationship between quality control, GMP and quality assurance.
- a2- Identify the role of quality assurance in pharmaceutical industry.
- a3- Identify the responsibilities of key persons in pharmaceutical industry.
- a4- Describe different types of validation.
- a5- Discuss the environmental measures and necessary hygien for different areas of pharmaceutical plants.

b- Intellectual skills

- b1- Sketch batch records and in process control data.
- b2- Detect reasons of non-compliance of product and suggest necessary action.
- b3- Illustrate a complaint on pharmaceutical product.
- b4- Demonstrate the critical steps in production process.

c- Professional and practical skills

- c1- Assess a master formula and design master production document.
- c2- Test the validation plan.
- c3- Use effectively a flow chart for production operation.
- c5- Analyze area clearance checks
- c6- Assess self inspection for the building and facilities.

d- General and transferable skills

- d1- Retrieve and evaluate information on current GMP.
- d2- Demonstrate critical thinking, problem solving and decision making abilities.
- d3- Demonstrate leadership and team working abilities and communicate clearly by verbal and written means.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to current good manufacture practice (CGMP), quality control and quality assurance	3	1	2
2	Provisions of GMP regarding starting materials	3	1	2
3	Provision of GMP regarding personnel	3	1	2
4	Provision of GMP regarding Building and facilities	3	1	2
5	GMP provisions regarding complaints and product recalls	3	1	2
6	GMP provisions regarding packaging and labeling operations	3	1	2
7	Mid-term exam			
8	Documentations	3	1	2
9	Self inspection and quality audits	3	1	2
10	Quality assurance and quality control	3	1	2
11	Good practice in quality assurance	3	1	2
12	Introduction to validation of manufacturing process	3	1	2
13	Types of process validation	3	1	2
14	Validation of sterile products; equipment qualification	1	1	Practical exam
15	Validation of sterile product; Process validation	1	1	Practical exam

4. Teaching and learning methods

- a. Lectures (✓)
- b. Practical training / laboratory (✓)
- c. Seminar / Workshop ()
- d. Class Activity (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Industrial pharmacy (GMP) prepared by the department staff.

Essential books (text books)

John Lee Cook., Standard Operating Procedures and Guidelines, PennWell Books, 1998.

Recommended books

Carlton F.J, [Agalloco](#) J.P., Validation of Pharmaceutical Process, Third Edition, Taylor & Francis, 2007.

Websites

www.pubmed.com

www.sciencedirect.com

7. Facilities required for teaching and learning

- | | |
|--|---|
| <ul style="list-style-type: none"> • Class rooms. • Laboratory facilities (Equipments of factory). • Data show. | <ul style="list-style-type: none"> • Computers. • Internet. |
|--|---|

Course coordinator:

prof/ Gamal Elmaghraby

Head of Department:

Professor/ Ramadan Aldomany

Date: 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment
 Course title: Industrial Pharmacy (GMP) Course code: 5144

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction to current good manufacture practice (CGMP)	a1	Lectures	Written, and oral exams
Week # 2	Provisions of GMP regarding starting materials	a5, b4, c3, d3	Lectures and practical training	Written, practical and oral exams
Week # 3	Provision of GMP regarding personnel	a3, a5, b4, c3, d3	Lectures and practical training	Written, practical and oral exams
Week # 4	Provision of GMP regarding Building and facilities	a5, b4, c3, c5, d3	Lectures and practical training	Written, practical and oral exams
Week # 5	GMP provisions regarding complaints and product recalls	a5,b2, b3, d2	Lectures and practical training	Written, practical and oral exams
Week # 6	GMP provisions regarding packaging and labeling operations	a5, b4, c3, d3	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Documentations	a2, b1, c1, d1	Lectures and practical training	Written, practical and oral exams
Week # 9	Self inspection and quality audits	a1, c5, c6, d1	Lectures and practical training	Written, practical and oral exams
Week # 10	Quality assurance and quality control	a1, a2, c5, d1	Lectures and practical training	Written, practical and oral exams
Week # 11	Good practice in quality assurance	a1, a2	Lectures and practical training	Written, practical and oral exams
Week # 12	Introduction to validation of manufacturing process	a4, c2, d1	Lectures and practical training	Written, practical and oral exams
Week # 13	Types of process validation	a4,c2, d1	Lectures and practical training	Written, practical and oral exams
Week # 14	Validation of sterile products; equipment qualification	a4, c2	Lectures	Written and oral exams
Week # 15	Validation of sterile product; Process validation	a4, c2	Lectures	Written and oral exams

Course coordinator:

Prof Dr. Gamal Elmaghraby

Head of department:

Professor Dr. Ramadan Aldomany

**Kafrelsheikh University, Faculty of Pharmacy
Course Specifications**

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical analytical chemistry
Department supervising the course	
Academic Year / Level	Fourth year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Drug control	Code : 5152
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- Principles and theoretical aspects of quality control & quality assurance of drugs (raw materials & drug products).
- Different analytical techniques for quantitative determination of active constituents of drugs.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- list Ultimate goals of drug product quality control / quality assurance (QC / QA).
- a2- identify Sources of quality specification of drugs.
- a3- describe Organization & administration of QC lab.
- a4- list Classical & Physico-chemical methods used in quality control.
- a5- identify Validating analytical methods.
- a6- identify Stability Indicating Assay Methods (SIAMs)

b- Intellectual skills

- b1- Recognize different sampling techniques.
- b2- Recognize different types of errors.
- b3- Select suitable methods of analysis of drugs as raw material, in dosage forms or in biological fluids.
- b4- Recognize validation parameters.

c- Professional and practical skills

- c1- Use validation scheme for different analytical techniques.

c2-Analyze classical & instrumental methods of drug analysis.

d- General and transferable skills

d1- Work in team and apply time management principles effectively.

d2- Implement continuous and lifelong self learning.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	- Introductory background definition of QC / QA, cGMP, IPCetc.	4	2	2
2	- Sources of quality specifications of drugs. - Ultimate goals of QC / QA	4	2	2
3	- QC Lab, development, organization and administration - Problems & constraints	4	2	2
4	-QA principles for Analytical QC Lab: QA plan , QA model and QA protocol	4	2	2
5	- Analytical methodologies - Sampling as a critical control point	4	2	2
6	-Analysis of raw materials and finished products using standards	4	2	2
7	Mid-term exam			
8	Pharmacoelal methods of stability	4	2	2
9	Stability testing of drugs	4	2	2
10	Measurements for drug performance	4	2	2
11	Overview on different methods and their instrumentations required for pharmaceutical analysis	4	2	2
12	Calibration of instruments used in pharmaceutical analysis	4	2	2
13	Validation of analytical methods, Proficiency testing and QC charts	4	2	2
14	- Stability Testing of Drugs - Chemical degradation routes	2	2	Practical exam
15	Stability Indicating Assay Methods (SIAMs).	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop ()
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Drug quality control chemical aspects for fourth year pharmacy students, prepared and distributed by Dept. of Pharmaceutical Analytical Chemistry.
- Drug quality control for fourth year pharmacy students (lab manual), prepared and distributed by Dept. of Pharmaceutical Analytical Chemistry.

Essential books (text books)

- Remingtons
- Gary D. Christian, "analytical chemistry", John Wiley & Sons, Inc. (1994).

Recommended books

Lena Ohannesian, Antony J. Streeter, "Handbook of Pharmaceutical Analysis", Marcel Dekker, Inc. (2002)

Websites

<http://ull.chemistry.uakron.edu/analytical/>

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities like pH meters, conductimeters, UV/VIS spectrophotometer, HPLC, Chemicals as reagents and indicators for proper lab work and analytical tools as burettes, pipettes and flasks.
- Library
- data show
- Computers
- Internet

Course coordinators:

Prof.dr. Fathalla Belal
Dr. Ahmed Abd el Magied

Head of Department: Prof.dr. Ramadan Eldomany

Date : 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Drug control
Course code: 5152

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week #1	- Introductory background & definition of QC / QA, cGMP, IPC.....etc.	a1,c1	Lecture, brain storming and discussion	Written oral exams
Week #2	- Sources of quality specifications of drugs - Ultimate goals of QC / QA	a1,a2,c1,d2	Lecture, brain storming and discussion	Written and oral exams
Week #3	QC Lab, development, organization, administration problems & constraints	a3,b1,b2,d2	Lectures and practical training	Written, practical and oral exams
Week #4	QA principles for Analytical QC Lab : QA plan , QA model & QA protocol	a3,b1,b2,b3 ,d2	Lectures and practical training	Written, practical and oral exams
Week #5	- Analytical methodologies - Sampling as a critical control point.	a3,b1,b2,c2 ,d1,d2	Lectures and practical training	Written, practical and oral exams
Week #6	Analysis of raw materials and finished products using standards	a4,b3,c2,d1 ,d2	Lectures and practical training	Written, practical and oral exams
Week #7	Mid-term exam			
Week #8	Pharmacoel methods of stability	a4,b3,c2,d1 ,d2	Lectures and practical training	Written, practical and oral exams
Week #9	Stability testing of drugs	a4,a6,b3,c2 ,d1,d2	Lectures and practical training	Written, practical and oral exams
Week #10	Measurements for drug performance	a4,b3,c2,d1 ,d2	Lectures and practical training	Written, practical and oral exams
Week #11	Overview on different methods and their instrumentations required for pharmaceutical analysis	a4,b3,c2,d1 ,d2	Lectures and practical training	Written, practical and oral exams
Week #12	Calibration of instruments used in pharmaceutical analysis	a5,b4,c1,c2, d1,d2	Lectures and practical training	Written, practical and oral exams
Week #13	Validation of analytical methods, Proficiency testing & QC charts	a5,b4,c1,c2, d1,d2	Lectures and practical training	Written, practical and oral exams
Week #14	- Stability Testing of Drugs - Chemical degradation routes	a6,d2	Lectures	Written and oral exams
Week #15	Stability Indicating Assay Methods (SIAMs)	a6, d2	Lectures	Written and oral exams

Course coordinators:

Prof.dr. Fathalla Belal Dr. Ahmed Abd el Magied
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Head of Department: Prof.dr. Ramadan Eldomany
Date : 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Clinical Pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, second semester
Date of specification approval	9/2016

A- Basic Information

Title : Drug Information	Code : 5178
Total contact hours: 2 hrs.	Lecture: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to understand:

- The concepts of drug information retrieval & analysis and be aware of the functions of drug information services.
- Skills in receiving and classifying a request in a logical order, obtaining additional information from the inquirer in a professional and tactful manner, and determining actual needs of the inquirer.
- Evaluation information sources with respect to time obsolescence, authors, references, scope of coverage, use of information and updating frequency.
- Formulating retrieved information into a suitable format for verbal or written communication.

2. Intended learning outcomes of the course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Understand the fundamental aspects of drug information service .
- a2- Demonstrate different sources of drug information .
- a3- Describ the most suitable components of drug literature.
- a4- Understand the basis of poison control including diagnosis, first aid/home management
- a5- Understand the basis of advanced poisoning treatment and life support.

a6- Describe the role of some antidotes in poisoning with specific approaches in some poisoned cases.

a7- Understand the first aid in treatment of many conditions.

b- Intellectual skills

b1- Utilize a search strategy to find the information needed.

b2- Apply a systematic mechanism for answering drug information requests.

b3- Utilize various types of electronic medical information databases.

b4- Utilize a strategy to search for drug information from internet or locally installed database.

b5- Utilize the desired drug information from the drug monograph.

c- Professional and practical skills

c1. Use the various types of electronic medical information databases.

c2. Demonstrate dosage, food regimen, side effects of the drugs and drug interaction for the patients.

c3- Use the available drug information sources in answering drug information request.

c4- Demonstrate and analyze decisions and action of health and social care professionals.

c5- Use the most appropriate treatment for each patient.

d- General and transferable skills

d1- Evaluate information from a variety of sources.

d2- Assess appropriateness of each section of a published report & how it contributes to fulfill the study objectives.

d3- Demonstrate time management.

d4- Communicate with internet.

d5- Implement presentation skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to the concept of medication information	2	2	-----
2	Systematic Approach to Answering Questions	2	2	-----
3	Drug Information Resources	2	2	-----
4	Drug Information Resources	2	2	-----
5	Communicating the response	2	2	-----
6	Electronic Information Management:	2	2	-----
7	Mid-term exam			
8	Telephone protocol for handling a poison call	2	2	-----
9	Evaluating clinical trials (True Experiments)	2	2	-----
10	Literature Evaluation II: Beyond the Basics:	2	2	-----
11	Pharmacoeconomic studies	2	2	-----
12	General pattern of scientific literature	2	2	-----
13	Clinical application of statistical analysis	2	2	-----
14	Professional writing	2	2	-----
15	Emergency first aid	2	2	-----

4. Teaching and learning methods

- a. Lectures (✓)
 b. Practical training/laboratory (✓)
 c. Seminar/workshop ()
 d. Class activity (discussion, brain storm, case study) (✓)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up the course subjects.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Mid-term exam	Week	7
Assessment 2	Final exam	Week	16,17
Assessment 3	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	20	%
Final-Term Examination	60	%
Oral Examination	20	%
Total	100	%

6. List of references

Course notes

- Drug Information notes for 4th year students.

Essential books (text books)

Drug information: A guide for Pharmacists(2006). Malone PM (Ed).
Appleton and Lange. 3rd Edition.

Recommended books

-Drug information: A guide for Pharmacists(2006).Malone PM (Ed).
Appleton and Lange. 3rd Edition.

Websites

www.Statpages.org/javasta.htm**7. Facilities required for teaching and learning**

-Class rooms.	-Library.
-Data show.	-Computers.
-Internet.	

Course coordinator:**Dr. Ahmed Amine****Head of Department:****Dr/Ramadan El-Domany****Date : 9 /2016**

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Drug Information**Course code: **5178**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction to the Concept of Medication Information	a1,a2	Lectures, discussion and brain storm	Written and oral exams
Week # 2	Systematic Approach to Answering Questions	a1, b1,b2, C2,c3	Lectures, discussion and brain storm	Written and oral exams
Week # 3	Drug Information Resources	a2,b3,b4,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 4	Drug Information Resources	a2,b2,c3,d2,d4	Lectures, discussion and brain storm	Written and oral exams
Week # 5	Communicating the response	a2,b3,c2,c3	Lectures, discussion and brain storm	Written and oral exams
Week # 6	Electronic Information Management:	a2,b3,b4,b5,c1,d1,d2,d4	Lectures, discussion and brain storm	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Telephone Protocol for Handling a poison Call	a4,a5,a6	Lectures, discussion and brain storm	Written and oral exams
Week # 9	Evaluating Clinical Trials (True Experiments)	a4,a5,a6	Lectures, discussion and brain storm	Written and oral exams
Week # 10	Literature Evaluation II: Beyond the Basics:	a3,b5,d1,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 11	Pharmacoeconomic Studies	a3,c4,c5	Lectures, discussion and brain storm	Written and oral exams
Week # 12	General Pattern of Scientific Literature	a3, b3,d2	Lectures, discussion and brain storm	Written and oral exams
Week # 13	Clinical Application of Statistical Analysis	a3,b1,b5	Lectures, discussion and brain storm	Written and oral exams
Week # 14	Professional Writing	d3,d5	Lectures, discussion and brain storm	Written and oral exams
Week # 15	Emergency First aid	a4,a6,a7	Lectures, discussion and brain storm	Written and oral exams

Course coordinator: **Dr. Ahmed Amine**Head of Department: **Dr/Ramadan El-Domany**Date : **9 /2016**

COURSE SPECIFICATIONS

Faculty of Pharmacy

(BSc in Pharmacy Program)

Elective Courses

2016 / 2017

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Fourth year, elective course
Date of specification approval	9/2016

A- Basic Information

Title : Cosmetics	Code : 5434
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of course

Upon successful completion of this course, the students should be able to understand:

- The fundamental aspects of cosmetic formulations, which include all formulations intended for cleansing and/or beautifying the human body.
- The factors affecting formulation design.
- The role of formulation design and additives in modifying the elegance and appearance of the cosmetic preparation.
- The specifications of good cosmetic products.

2. Intended learning outcomes of course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Know the nature of different cosmetic formulation.
- a2- Know the formulation procedure and formulation additives of different cosmetic formulation.
- a3- Report the specifications of healthy skin and hair, and how to maintain this healthy state.
- a4- Identify the principles of controlling the body smell.
- a5- Learn the basics of dental problems and how to maintain dental and oral health and appearance.
- a6- Know the design and formulation of colored makeup.
- a7- Describe the quality measures of different cosmetic

formulations.

b- Intellectual skills

- b1-Recognize the concepts of cosmetic product design.
- b2-Select the proper pharmaceutical form for a given cosmetic function.
- b3-Recognize the advanced formulation methods in cosmetic preparations.

c- Professional and practical skills

- c1- Assess different cosmetic products by quality control tests.
- c2-Compound ,prepare and design different cosmetic formulations.
- c3- Compare between the characters of different cosmetic products.

d- General and transferable skills

- d1-Communicate clearly by verbal and written means
- d2- Retrieve and evaluate information in the field of pharmaceutical formulation.
- d3-Demonstrate critical thinking, problem solving, decision making abilities, leadership and team working abilities.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to cosmetics	4	2	2
2	Creams	4	2	2
3	Face preparations	4	2	2
4	Face and eye make-up	4	2	2
5	Shaving preparation	4	2	2
6	Sunscreen products	4	2	2
7	Mid-term exam			
8	Nails and nail products	4	2	2
9	Deodorants and anti Perspirats.	4	2	2
10	Hair preparation-shampoos and	4	2	2

	conditioners			
11	Hair preparation-tonics and colorents	4	2	2
12	Dandruff and its control	4	2	2
13	The tooth and oral health - Dentifrices	4	2	2
14	Quality control of cosmetic products	2	2	Practical exam
15	Revision	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop (√)
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical exam	To assess	The gained experience in laboratory methods and techniques.
Oral exam	To assess	The ability of students in expressing presenting their knowledge clearly and in systemic approach
Written final exam	To assess	The overall outcomes

Assessment schedule

Assessment 1	Mid-tem exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Cosmetics prepared by the department staff.

Essential books (text books)

Harry`s cosmeticology.

Recommended books

Cosmeceuticals and active cosmetics drugs versus cosmetics

Web sites

www.pubmed.com

www.sciencedirect.com

7. Facilities required for teaching and learning

-Class rooms.

-Laboratory facilities (water bath , digital balance)

-Library.

- Data show

-Computers.

-Internet.

Course coordinator:

Dr/ Eman mazyed

Head of Department:

Dr/ Abd El -aziz El-said

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment
 Course title: **Cosmetics** Course code: **5434**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction to cosmetics	A1	Lectures.	Written, and oral exams
Week # 2	Creams	A2,A3,B2,C2,C3,D2,D3	Lectures , practical training and seminar.	Written, practical and oral exams
Week # 3	Face preparations	A2,A3,A6,B2,C2,C3,D3	Lectures , practical training and seminar.	Written, practical and oral exams
Week # 4	Face and eye make-up	A2,A3,A6,B2,C2,C3,D2, D3	Lectures and practical training	Written, practical and oral exams
Week # 5	Shaving preparation	A2,A3,B2,B3,C2,C3,D3	Lectures , practical training and seminar.	Written, practical and oral exams
Week # 6	Sunscreen products	A2,A3,B2,B3,C2,C3,D3	Lectures and practical training	Written, practical and oral exams
Week # 7	Mid-term exam			
Week # 8	Nails and nail products	A2,B2,B3,C2,C3,D2,D3	Lectures , practical training and seminar.	Written, practical and oral exams
Week # 9	Deodorants and anti Perspirats.	A4,B2,C2,C3,D3	Lectures and practical training	Written, practical and oral exams
Week # 10	Hair preparation-shampoos and conditioners	A2,B2,C2,C3,D3	Lectures , practical training and seminar.	Written, practical and oral exams
Week # 11	Hair preparation-tonics and colorents	A2,B2,B3,C2,C3,D1,D3	Lectures , practical training and seminar.	Written, practical and oral exams
Week # 12	Dandruff and its control	A1,A2,B2,B3,C2,C3,D3	Lectures and practical training	Written, practical and oral exams
Week # 13	The tooth and oral health - Dentifrices	A2,A5,B2,C2,C3,D2,D3	Lectures , practical training and seminar.	Written, practical and oral exams
Week # 14	Quality control of cosmetic products	A7,B2,C1,C2,C3,D2,D3	Lectures and class activity.	Written and oral exams
Week # 15	Revision	A1,A7,B3,C1,C3,D1	Lectures	Written and oral exams

Course coordinator: Dr/ Eman mazyed

Head of department: Dr/ Abd El -aziz El-said

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Fourth year, elective course
Date of specification approval	9/2016

A- Basic Information

Title : Planning and Marketing of Medicines	Code : 5444
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of course

Upon successful completion of this course, the students should be able to understand:

- Understand the fundamental aspects of marketing and promotional activities in the healthcare sector.
- Point out the relationship between marketing and finance.
- Understand the fundamental aspects of pharmacy management.
- Develop good selling and negotiation skills.

2. Intended learning outcomes of course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the students should be able to:

- a1- Learn the importance of marketing in business.
- a2- Know the importance of promotional activities in healthcare.
- a3- Identify different types of marketing analysis.
- a4- Describe the balance sheet and operating income management.
- a5- Report different types of marketing analysis.

b- Intellectual skills

- b1 - Illustrate market needs.
- b2 - Recognize and control pharmacy business.
- b3 - Manage the relationship with customers.

c- Professional and practical skills

- c1 - Handle of balance sheet and operating income management.
- c2 - Analyze product life cycle.
- c3 - Assess Marketing plan and planning.
- c4 - Assess Stock management skills.
- c5 - Employ good selling and negotiation skills.

d- General and transferable skills

- d1 - Retrieve curriculum vitae.
- d2 - Develop good relationships with the customers.
- d3 - Arrange Presentation and interviewing skills.

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction to pharmaceutical market in Egypt	4	2	2
2	Marketing definition and importance	4	2	2
3	Marketing promotional mix and promotional activities in the healthcare sector	4	2	2
4	Element of marketing plan and planning	4	2	2
5	Marketing analysis	4	2	2
6	Management of product life cycle	4	2	2
7	Mid-term exam			
8	Finance and accounting – relationship between marketing and finance	4	2	2
9	Managing profitability of business/brand	4	2	2
10	Balance sheet and operating income	4	2	2

	management			
11	Pharmacy management- category management	4	2	2
12	Merchandizing and stock management	4	2	2
13	Skills development- selling and negotiation skills	4	2	2
14	Interviewing skills	4	2	Practical exam
15	Writing Curriculum Vitae	4	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory (√)
- c. Seminar / Workshop (√)
- d. Class Activity (√)

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Semester work	To assess	The ability of students to make Marketing plan and maintain Stock management skills.
Oral exam	To assess	The ability of students in expressing presenting their knowledge clearly and in systemic approach
Written final exam	To assess	The overall outcomes

Assessment schedule

Assessment 1	Mid-tem exam	Week	7
Assessment 2	Semester work	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Weighting or assessments

	%	
Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

Notes on Marketing prepared by the department staff.
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Essential books (text books)

Recommended books

Web sites

7. Facilities required for teaching and learning**-Class rooms.****-Library.****- Data show****-Computers.****-Internet.****Course coordinator:**

Dr, Magdy Thabet

Head of Department:

Dr. Ramadan Eldomany

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment
 Course title **Planning and Marketing of Medicines** Course code: **5444**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction to pharmaceutical market in Egypt	a1, b1	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 2	Marketing definition and importance	a3, b1,a2	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 3	Marketing promotional mix and promotional activities in the healthcare sector	a2	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 4	Element of marketing plan and planning	b1, c3	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 5	Marketing analysis	a3, a5	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 6	Management of product life cycle	c2	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 7	Mid-term exam			Written, practical and oral exams
Week # 8	Finance and accounting – relationship between marketing and finance	b1, b2	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 9	Managing profitability of business/brand	b2	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 10	Balance sheet and operating income management	a4, c1	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 11	Pharmacy management- category management	c2, c5	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 12	Merchandizing and stock management	b2, c4	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 13	Skills development- selling and negotiation skills	b3, c5,d2,d3	Lectures, Practical training, Seminars, Workshops, Class Activities.	Written, practical and oral exams
Week # 14	Interviewing skills	b3, b2, b3	Lectures	Written, practical and oral exams
Week # 15	Writing Curriculum Vitae	d1	Lectures	Written, practical and oral exams

Course coordinator:

Dr, Magdy Thabet

Head of Department:

Dr. Ramadan Eldomany

Date : / 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Clinical Pharmacy
Department supervising the course	
Academic Year / Level	Fourth year- Elective course
Date of specification approval	9/2016

A- Basic Information

Title : Hospital pharmacy	Code : 5440
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students should be able to Understand:

- The concepts and structure of a hospital and hospital pharmacy department, information about I.V. admixtures, *pharmacy and therapeutic* committee and manufacturing units in hospitals, hospital formulary, radio-pharmaceuticals and nuclear pharmacy, skills in receiving and classifying a request in a logical order, obtaining additional information from the inquirer in a professional and tactful manner, and determining actual needs of the inquirer, in-patients, out-patients and ambulatory patients with respect to filling prescriptions, counseling and rational patient-oriented drug use.
- Surgical dressing and sutures, plasma substitute, central sterile supply unit and its management, manufacture of sterile and non-sterile products.

2. Intended learning outcomes of the course (ILOs)

L2a- Knowledge and understanding:

On successful completion of the course, the students should be able to:

- a1. Describe the fundamental aspects of hospital pharmacy service.
- a2. Define the basis of IV admixture and sterile product preparation.
- a3. Identify the rule of pharmacy and therapeutic committee and drug formulary
- a4. Demonstrate how to handle cytotoxic drugs and radioisotops. of medicine and patient information and reporting of adverse

reactions to medicines.

b- Intellectual skills

- b1- interpret a systematic procedure for managing cytotoxic and radioisotope medications.
- b2- Select various types of rounds with the rest of health care team.
- b3- interpret patient profile and medication histories for in-patients and out-patients.
- b4- analyze and solve problems with respect to drug compatibilities and IV admixtures..

c- Professional and practical skills

- c1. demonstrate and design the most appropriate form of drug formulary and essential drug list.
- c2. assess separation of narcotic and controlled drugs from other drugs.
- c3- analyze the rationale and patient-oriented drug use.

d- General and transferable skills

- d1-evaluate information from a variety of sources, including libraries, databases and internet.
- d2- assess independently or as a part of medical team in different hospital settings.
- d3- Demonstrate creativity and time management skills.
- d4- Implement presentation, writing reports and interviewing skills.

3. Contents

Week	Topic	Total credit hours	Lecture	Practical
1	Responsibilities of hospital staff	4	2	2
2	Hospital and its organization	4	2	2
3	Pharmacy and therapeutic committee	4	2	2
4	Hospital formulary	4	2	2
5	In-patient pharmacy	4	2	2

6	Out-patient pharmacy	4	2	2
7	Midterm Exam	4		2
8	Iv admixture	4	2	2
9	Handling of Cytotoxic Drugs	4	2	2
10	Handling of Cytotoxic Drugs	4	2	2
11	Pharmacist and radioisotopes	4	2	2
12	Drug incompatibility	4	2	2
13	Bed round of the clinical pharmacist	4	2	2
14	Revision	2	2	Practical exam
15	Revision	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
 b. practical (√)
 c. Case study (√)
 d. Class Activity (discussion, brain storm) (√)

5. Student assessment methods

Written periodical exam	To assess	The ability of students to follow-up the course subjects.
Oral exam	To assess	The ability of students in expressing and presenting their knowledge clearly and in systematic approach.
Practical exam	To assess	The gained experience in case management.
Written final exam	To assess	The overall outcomes.

Assessment schedule

Assessment 1	Periodical exam	Week	7
Assessment 2	Practical exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral	Week	16,17

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment
 Course title: **hospital pharmacy** Course code: **5440**

	Course content	ILOs	Teaching and Learning Methods	Student Assessment Methods
Week#1	Responsibilities of hospital staff	a1, a3, b2, b3, b4	Lectures and class activity (discussion, brain storm)	Written, practical and oral exams
Week # 2	Hospital and its organization	a1	Lectures and class activity (discussion, brain storm)	Written, practical and oral exams
Week # 3	Pharmacy and therapeutic committee	a3	Lectures and practical (case study) , class activity	Written, practical and oral exams
Week # 4	Hospital formulary	a3, c1	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 5	In-patient pharmacy	b2, b3, c3	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 6	Out-patient pharmacy	b2, b3	Lectures and practical (case study) , class activity	Written, practical and oral exams
Week # 7	Midterm Exam			
Week # 8	Iv admixture	a1, a3, b2, b3, b4	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 9	Handling of Cytotoxic Drugs	a1	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 10	Handling of Cytotoxic Drugs	a3	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 11	Pharmacist and radioisotopes	a3, c1	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 12	Drug incompatibility	b2, b3, c3	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 13	Bed round of the clinical pharmacist	b2, b3	Lectures and practical (case study) , class activity (discussion, brain storm)	Written, practical and oral exams
Week # 14	Responsibilities of hospital staff	a1, a3	Lectures and class activity (discussion, brain storm)	Written, practical and oral exams
Week # 15	Hospital and its organization	a1, a3, b2, b3	Lectures and class activity (discussion, brain storm)	Written, practical and oral exams

Course coordinator:

Dr.khaled sobhy

Head of Department:

Dr Ramadan ELdomany

Date : / 9 /2016

Kafrelsheikh University, Faculty of Pharmacy Course Specifications

Program on which the course is given	BSc in pharmacy
Major or minor element of program	Major
Department offering the course	Clinical Pharmacy
Department supervising the course	
Academic Year / Level	Fourth year, elective course
Date of specification approval	9/2016

A- Basic Information

Title : Radiopharmaceuticals	Code : 5420
Total contact hours: 4 hrs.	Lecture: 2 hrs.
	Practical: 2 hrs.

B- Professional Information

1. Overall aims of course

Upon successful completion of this course, the students should be able to understand:

The fundamental aspects of nuclear pharmacy, properties of radiopharmaceuticals, their preparation and clinical applications.

2. Intended learning outcomes of course (ILOs)

a- Knowledge and understanding: Upon successful completion of this course, the student must be able to understand:

a1- Nuclear pharmacy, radiopharmaceuticals, their properties and types.

a2- The basis of radiopharmaceuticals preparation, handling, calculation and dispensing of their doses.

a3- The diagnostic and therapeutic radiopharmaceuticals and their clinical applications .

b- Intellectual skills

b1- Recognize ideal and optimal radiopharmaceuticals.

b2- Utilize a strategy for preparation, handling, and dispensing of radiopharmaceuticals.

c- Professional and practical skills

c1. Handle with various types of radiopharmaceuticals with optimal personnel and patient safety.

c2. Utilize and selection of labeling kit.

d- General and transferable skills

d1. Retrieve information from a variety of sources, including the most reputable internet medical information sources

d2- Demonstrate each section of a published report assessing its appropriateness & how it contributes to fulfill the study objectives

d3- Practice extraction the desired drug information from the drug monograph.

3. Contents

Week	Topic	No. of hours	Lecture	Practical
1	Introduction to the Concept of nuclear pharmacy, radiopharmaceuticals	4	2	2
2	Introduction to the Concept of nuclear pharmacy, radiopharmaceuticals	4	2	2
3	Applications of radiopharmaceuticals	4	2	2
4	Official radiopharmaceuticals	4	2	2
5	Radiopharmaceuticals preparation	4	2	2
6	Radiopharmaceuticals preparation	4	2	2
7	Mid-term exam			
8	Radiopharmaceuticals preparation	4	2	2
9	Diagnostic radiopharmaceuticals	4	2	2
10	Diagnostic radiopharmaceuticals	4	2	2

11	Therapeutic radiopharmaceuticals	4	2	2
12	Therapeutic radiopharmaceuticals	4	2	2
13	Preclinical studies of radiopharmaceuticals	4	2	2
14	Radiopharmaceuticals in heart disorders	2	2	Practical exam
15	Radiopharmaceuticals in heart disorders	2	2	Practical exam

4. Teaching and learning methods

- a. Lectures (√)
- b. Practical training / laboratory ()
- c. Seminar / Workshop ()
- d. Class Activity ()

5. Student assessment methods

Written mid-term exam	To assess	The ability of students to follow-up The course subjects.
Practical Examination	To assess	The ability of students to apply The course subjects.
Oral exam	To assess	The ability of students in expressing presenting their knowledge clearly and in systemic approach
Written final exam	To assess	The overall outcomes

Assessment schedule

Assessment 1	Mid-tem exam	Week	7
Assessment 2	Practical Exam	Week	14,15
Assessment 3	Final exam	Week	16,17
Assessment 4	Oral exam	Week	16,17

Weighting or assessments

Mid-Term Examination	10	%
Final-Term Examination	50	%
Oral Examination	20	%
Practical Examination	20	%
Total	100	%

6. List of references

Course notes

- Radiopharmaceuticals notes for students.

Essential books (text books)

Radiopharmaceuticals in nuclear pharmacy and medicine (2011). Richard J Kowalsky and Steven W. Falen.

Recommended books

Handbook of Radiopharmaceuticals (2002). Micheal J Welch and Carol S Redvanly.

Web sites

7. Facilities required for teaching and learning

- Class rooms.
- Laboratory facilities.
- Projectors (Overhead, video projector)
- Computers.
- Library.
- Internet.

Course coordinator:

Dr. khaled sobhy

Head of Department:

Prof. Dr. Gamal Elazb

Date : / 9 /2016

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Radiopharmaceuticals**Course code: **5420**

Course content		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week #1	Introduction to the Concept of nuclear pharmacy, radiopharmaceuticals	a1, a3, b2	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 2	Introduction to the Concept of nuclear pharmacy, radiopharmaceuticals	a1	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 3	Applications of radiopharmaceuticals	a3	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 4	Official radiopharmaceuticals	a3, c1	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 5	Radiopharmaceuticals preparation	a2, b2, b3, c2	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 6	Radiopharmaceuticals preparation	a2, b2, b3, c2	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 7	Mid-term exam			
Week # 8	Radiopharmaceuticals preparation	a1, a2, b2	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 9	Diagnostic radiopharmaceuticals	a3	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 10	Diagnostic radiopharmaceuticals	a3	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 11	Therapeutic radiopharmaceuticals	a3, c1	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 12	Therapeutic radiopharmaceuticals	a3, b2, b3, c2	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 13	Preclinical studies of radiopharmaceuticals	a1, b2, b3	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 14	Radiopharmaceuticals in heart disorders	a1, a3, b2	Lectures and class activity (discussion, brain storm)	Written and oral exams
Week # 15	Radiopharmaceuticals in heart disorders	a1, a3, b2	Lectures and class activity (discussion, brain storm)	Written and oral exams

Course coordinator:**Dr.khaled sobhy****Head of Department:**

Dr Ramadan ELdomany

Date : / 9 /2016