Course specification

2020-2021

Bachelor of Pharmacy

(PharmD)

Course Specification

2020-2021

Level 1 / First Semester

Course Specifications

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (Pharm-D)**
Major or minor element of program	**Major**
Department offering the course	**Pharmaceutical Analytical Chemistry**
Department supervising the course	
Academic Year / Level	**First Year/ First Semester**
Date of specification approval	**9/2020**

A- Basic Information

Title: Pharmaceutical Analytical Chemistry I	**Code : PA 101**
Total contact hours: 4 hours	**Lecture : 2 hour**
Total credit hours: 3 hours	**Practical: 2 hour**

B- Professional Information

1. Overall aims of the course

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

1.1. Understand the basic principles of chemical equilibrium, law of mass action, common-ion effect, Le-Chatelier principle, solubility, solubility product constant and types of chemical bonds.

1.2. Identify and apply different techniques for separation and identification of various anions and cations.

2. Intended Learning Outcomes (ILOs)

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon successful completion of this course, students will be able to integrate knowledge from basic inorganic and analytical chemistry to standardize materials.

This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. Understand the basic principles of chemical equilibrium, law of mass action, common-ion effect, Le-Chatelier principle, solubility, solubility product constant and types of chemical bonds.

1.1.2. Identify physical and chemical characteristics of inorganic salts of various anionic and cationic species, and the methods employed for their identification.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

Upon finishing this course, students will be able to handle and dispose synthetic pharmaceutical materials effectively and safely with respect to relevant laws and legislations.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.1.1. Handle inorganic materials safely to avoid their harm to individuals.

2.1.2. Use effectively laboratory reagents appropriately and safely.

DOMAIN 3: PHARMACEUTICAL CARE

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express leadership, time management, critical thinking, problem solving, independent and team working skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.1.1. Work effectively in team for the aim of identification of various anions and cations.

4.1.2. Develop appropriate scheme for the aim of identification of various anions and cations in the laboratory bearing in mind technical availability and time limitations.

4.1.3. Develop a suitable approach for separation of different cations and anions from mixtures of them.

Course Specifications

3. Contents

Week	Topic	Total contact hours	Lecture	Practical
1	Introduction	4	2	2
2	- Types of chemical bonds. - Law of mass action & common ion effect.	4	2	2
3	- Equilibrium constants, ionic product of water. - Solubility and factors affcting it.	4	2	2
4	- Anions: - Classification of anions into different groups. - Steps for carrying out dry tests and wet tests. - The effect of HCl and H_2SO_4 on different anions.	4	2	2
5	- Specific confirmatory tests of carbonate & bicarbonate salts - Specific confirmatory tests sulfur salts	4	2	2
6	Specific confirmatory tests for nitrate, nitrite and halides	4	2	2
7	**Semester works**			
8	- Cations - Group I (silver group)	4	2	2
9	Group II (A,B)	4	2	2
10	Group II (A,B)	4	2	2
11	GroupIII (A,B)	4	2	2
12	GroupIII (A,B)	4	2	2
13	GroupIV (alkaline earth group)	4	2	2
14	Group V	2	2	Practical exam
15	Group VI	2	2	Practical exam

4. Teaching and learning methods

a. Lectures (√)
b. Practical Training / Laboratory (√)
c. Seminar / Workshop ( )
d. Class Activity (√)
e. E-learning. (√)
f. Smart board (√)

Course Specifications

5. Student assessment methods

Semester work	**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 a systemic approach.**
Written final exam	**To assess**	**The overall outcomes.**

Assessment schedule

Assessment 1	**Semester work**	**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

Semester work	**15**	**%**
Final-Term Examination	**50**	**%**
Oral Examination	**10**	**%**
Practical Examination	**25**	**%**
Other types of assessment		**%**
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-Dash, Dhruba Charan "Analytical Chemistry", second edition (2011).
2- Skoog, Douglas A. ;West, Donald M.; Holler, F. James; Crouch, Stanley R.(2014), "Fundamentals of analytical chemistry".belmot: books/Cole.
3- Svehla, G.(2011). Vogel's qualitative Inorganic Analysis. New Delhi .
4-"Vogel's Textbook of Qualitative Inorganic Analysis", 7 th edition, Longman Singapore (Pte) Ltd (1996).

Course Specifications

Recommended books

Gary D. Christian, "Analytical Chemistry", John Wiley& sons, INC.6th edition (2003).

Websites

http://www.chemguide.co.uk/index.html#top

7. Facilities required for teaching and learning

Class rooms
E-learning
Smart board
Laboratory facilities(test tubes, reagents)
Library
Data show
Internet
Computers

Course coordinator:

Dr. Ahmed Faried

Head of Department:

Asst. Prof. Dr. Ahmed M. Abdel-Megied

Date of approval: 9 /2020

Course Specifications

Course Plan

Week	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	Introduction	1.1.1	Lecture, brain storming, discussion	Written and oral exams
2	- Types of chemical bonds. - Law of mass action & common ion effect.	1.1.1	Lecture, brain storming, discussion	Written and oral exams
3	- Equilibrium constants, ionic product of water. - Solubility and factors affcting it.	1.1.1	Lecture and discussion	Written and oral exams
4	- Anions: - Classification of anions into different groups. - Steps for carrying out dry tests and wet tests. - The effect of HCl and H2SO4 on different anions.	1.1.1, 4.1.1	Lecture and practical training	Written, practical and oral exams
5	- Specific confirmatory tests of carbonate & bicarbonate salts - Specific confirmatory tests sulfur salts	1.1.2,2.1.1, 2.1.2,4.1.3,4.1.1	Lecture and practical training	Written, practical and oral exams
6	Specific confirmatory tests for nitrate, nitrite and halides	1.1.2, 4.1.3,4.1.1	Lectures and practical training	Written, practical and oral exams
7	**Mid-term exam**			
8	- Cations - Group I (silver group)	1.1.2,4.1.2,2.1.1, 2.1.2.4.1.1	Lectures and practical training	Written, practical and oral exams
9	Group II (A,B)	1.1.2,4.1.2,4.1.1	Lectures and practical training	Written, practical and oral exams
10	Group II (A,B)	1.1.2,4.1.3,4.1.1	Lectures and practical training	Written, practical and oral exams
11	GroupIII (A,B)	1.1.2,4.1.2 ,4.1.3,4.1.1	Lectures and practical training	Written, practical and oral exams
12	GroupIII (A,B)	1.1.2,4.1.2 ,4.1.3,4.1.1	Lectures and practical training	Written, practical and oral exams
13	GroupIV (alkaline earth group)	1.1.2,4.1.2 ,4.1.3,4.1.1	Lectures and practical training	Written, practical and oral exams
14	Group V	1.1.2,4.1.2 ,4.1.3,4.1.1	Lecture, brain storming	Written and oral exams

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15	Group VI	1.1.2,4.1.2 ,4.1.3,4.1.1	Lecture, brain storming	Written and oral exams

Course coordinator:

Dr. Ahmed Faried

Head of Department:

Asst. Prof. Dr. Ahmed M. Abdel-Megied

Date: 9/2020

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Programme on which the course is given	**Bachelor of Pharmacy (Pharm-D)**
Major or minor element of programme	**Major**
Department offering the course	**Pharmaceutical technology**
Department supervising the course	**Pharmaceutical technology**
Academic Year / Level	**First level/ first Semester**
Date of specification approval	**9/2020**

A- Basic Information

Title: pharmacy orientation	**Code: PT 101**
Total credit Hours :1	**Lecture: 1**
	Practical :-----

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- The importance of pharmacy and the role of pharmacist.
- Different routes of drug administrations and different dosage forms.
- Medical terminology and pharmaceutical terminology.
- Rational use of drugs.
- Ethics of pharmacy, Self-care and Self-medications.
- The history of pharmacy and a focus about Pharmacy in the Pharaonic age, role of Arabs in pharmacy.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate knowledge from basic pharmaceutical sciences to formulate and manufacture different dosage form, and deliver population and patient-centered care.
This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. Identify pharmacy, drug and classification of drugs.

1.1.2. Demonstrate understanding of the basic principles of pharmacy profession and prescription parts 1.1.3. *Demonstrate understanding* of patient services, drug services, and the prescription. 1.1.4 *Identify* different types of pharmaceutical dosage forms, the routes of drug administration and factors affecting them. 1.1.5. Demonstrate in depth knowledge in the history of pharmacy. 1.1.6. Utilize common the proper pharmaceutical and medical terms, abbreviations and symbols

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

Upon finishing this course, students will be able to work collaboratively as a member of an inter professional health care team to improve the quality of life of individuals and communities, and respect patients' rights.
This competency will be developed via the following key elements:

KEY ELEMENTS

2.1.1. Adopt pharmaceutical law and legislation. 2.1.2. Comply with various roles &ethics of pharmacy

2-2- COMPETENCY

2-2- COMPETENCY
Upon finishing this course, students will be able to standardize pharmaceutical materials, formulate and manufacture pharmaceutical products, and participate in systems for dispensing, storage, and distribution of medicines.
This competency will be developed via the following key elements:

KEY ELEMENTS

2.2.1. Recognize the different pharmaceutical dosage including novel drug delivery systems. 2.2.2. Calculate and adjust proper dosages for different individuals with different Patients profiles. 2.2.3. Integrate pharmaceutical knowledge in formulation of safe and effective different dosage forms.

DOMAIN 3: PHARMACEUTICAL CARE

3-1- COMPETENCY

Upon finishing this course, students will be able to apply the principles of body functions to participate in improving health care services using evidence-based data.

This competency will be developed via the following key elements:

KEY ELEMENTS

3.1.1. Utilize pharmaceutical knowledge in the formulation of safe and effective medicines as well as in dealing with new drug delivery systems. 3.1.2. Apply pharmaceutical knowledge about prescriptions and how to prepare them in proper way.

3-2- COMPETENCY

Upon finishing this course, students will be able to provide counseling and education services to patients and communities about safe and rational use of medicines and medical devices.

This competency will be developed via the following key elements:

KEY ELEMENTS

3.2.1.Correlate between information from other health professionals, medical records, pharmacy records and appropriate medical literature to use this information to provide safe and proper use of medicines. 3.2.2.Conduct patient counseling to teach the patients about their medications.

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express leadership, time management, critical thinking, problem solving, independent and team working skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.1.1. Demonstrate effective communication and leadership skills among students and staff.
4.1.2. Work effectively as part of a team to collect data and/or produce reports and presentations

3. Contents

weeks	Topic	Total credit hours	Lecture	Practical/Tutorial
1,2	Scope of pharmacy, the functions of pharmacist and Drug information resources	2	2	-----
3,4	Routes of drug administration Dosage forms.	4	4	-----
5,6	Rational use of drugs, Pharmaceutical care, self-care and self-medications.	2	2	-----
7	**Mid-term exam**			
8,9	Ethics in pharmacy Standards of practice	2	2	-----
10,11	Prescriptions	2	2	-----
12,13	Different types of incompatibilities, and how can we solve them	2	2	-----

4. Teaching and learning methods

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

5. Student assessment methods

Written mid-term exam	**To assess**	**The ability of students to follow-up The course subjects.**
Seminar / Workshop	**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	**Class participation (Mid-term exam, Seminar / Workshop)**	**Week**	**7**
Assessment 2	**Final exam**	**Week**	**16,17**
Assessment 3	**Oral**	**Week**	

Weighting or assessments

Class participation	**15**	**%**
Final-Term Examination	**85**	**%**
Oral Examination		**%**
Practical Examination		**%**
Total	**100**	**%**

6. List of references

Course notes

- Notes on Notes on pharmacy orientation prepared by the department staff.

Essential books (text books)

- Pharmacy: An Introduction to the Profession, L. Michael Posey,3rd Edition, 2016

Recommended books

- Pharmaceutics, the design and manufacture of medicines, M.E.Aulton, 2017.
- Ansel's pharmaceutical dosage forms and drug delivery systems, L.V. Allen, N.G. Popovich, H.C. Ansel, 2017.

Websites

J.Pharm.Sci., Int.J.Pharm., J.Pharm.Pharmacol., Ind.Pharm., Pharmazie, Drug Devel. Ind.Pharm., E- book

7. Facilities required for teaching and learning

-Class rooms.
- Data show
- Computers.
–Library.
–Internet.

Course coordinator:

Prof.Dr. abdelaziz elsayad

Head of Department:

Prof.Dr. abdelaziz elsayad

Date: 9/2020

Course Specifications

Course Plan

week	topics	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1,2	Scope of pharmacy, the functions of pharmacist and Drug information resources	1.1.1,1.1.2,1.1.3, 1.1.4,1.1.5, 3.2.1, 3.2.2	Lectures	Written exams
3,4	Routes of drug administrations	1.1.3, 1.1.4, 1.1.6, 2.2.1, 2.2.2, 2.2.3	Lectures	Written exams
	Dosage forms.	1.1.3,1.1.4,1.1.5, 2.2.1, 2.2.2, 2.2.3, 3.1.1,3.1.2	Lectures	Written exams
5,6	Rational use of drugs, Pharmaceutical care, self-care and self-medications.	1.1.1,1.1.2,1.1.3,1.1.4 , 3.2.1, 3.2.2,4.1.1	Lectures	Written exams
7	**Mid-term exam**			Written exams
8,9	Ethics in pharmacy	1.1.1,1.1.2,1.1.3,1.1.5, 1.1.6,2.1.1,2.1.2, 3.2.1, 3.2.2 ,4.1.2	Lectures	Written exams
	Standards of practice	1.1.1,1.1.2,1.1.3, 1.1.4,1.1.5,2.1.2, 3.1.1,3.1.2,4.1.1	Lectures	Written exams
10,11	Prescriptions	1.1.1,1.1.2,1.1.3, 1.1.4, 1.1.6, 3.1.1,3.1.2,4.1.1	Lectures	Written exams
12,13	Different types of incompatibilities, and how can we solve them	1.1.1,1.1.2,1.1.3, 1.1.6, 2.2.1, 2.2.2, 2.2.3, 3.1.1,3.1.2,4.1.2	Lectures	Written exams
14	**Revision**			

Course coordinator:

Prof.Dr. abdelaziz elsayad

Head of Department:

Prof.Dr. abdelaziz elsayad

Date: 9/2020

Course Specifications

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (Pharm-D)**
Major or minor element of program	**Major**
Department offering the course	**Pharmacognosy**
Department supervising the course	**Pharmacognosy**
Academic year / Level	**First year, semester (1)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Medicinal plants	**Code: PG 101**
Total credit Hours :3	Lecture: 2
	Practical :1

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- The different plant tissues, cells and their contents.
- The macro- and micro- characters of the different plant parts.
- The general taxonomy of the different plant families.
- Importance and preparation of natural products and different secondary metabolites.
- The pharmacologically active substances in certain official medicinal leafy plants according to their WHO monographs.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate knowledge from basic medicinal plant sciences to identify, validate and authenticate natural products.

This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. *Demonstrate understanding* of the different plant cells, contents and organs .
1.1.2. *Identify* the different natural drugs and their productions.
1.1.3. *Utilize* information of plant taxonomy in classification of the plant Kingdom.
1.1.4. *Retrieve information* about morphological and histological characters.
1.1.5. *Articulate knowledge* about adulteration of different medicinal leaves.
1.1.6. *Critically analyze* different active constituents and uses of medicinal plants.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

Upon finishing this course, students will be able to prepare and standardize natural products, and contribute in systems for dispensing, storage, and distribution of medicinal plants.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.1.1. Predict plant families as source of drugs, and recognize the appropriate methods for identification of bioactive natural products as well as standardization of medicinal plants.
2.1.2. Recognize special properties and differences between different plant cells, drugs in entire and powdered forms using proper laboratory techniques such as microscopy.
2.1.3. Select and implement appropriate analytical methods to confirm specifications of raw natural products and active constituents according to WHO monographs.
2.1.4. Employ guidelines of GMP and QC in preparation, standardization distribution and storage of medicinal plants.
2.1.5. Apply the basis of herbal medicine to determinate medicinal uses and safety of herbal products according to WHO monographs.

2-2- COMPETENCY

Upon finishing this course, students will be able to Handle and dispose natural pharmaceutical materials/products effectively and safely with respect to relevant laws and legislations.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.2.1. Fullfil GLP and safety guidelines in the lab.
2.2.2. Handle and dispose natural products/ materials used in their examination to avoid harm to individuals/environment.
2.2.3. Use effectively microscopes and laboratory reagents in appropriate and safe manner.

DOMAIN 3: PHARMACEUTICAL CARE

3-1- COMPETENCY

Upon finishing this course, students will be able to apply the principles of body functions to participate in improving health care services using evidence-based data.

This competency will be developed via the following key elements:

KEY ELEMENTS

3.1.1.	Relate etiology and features of certain diseases (e.g., cancer and acute hypersensitivities) to diet and lifestyle in addition to toxicity of some medicinal and ornamental plants according to WHO monographs.

3-2- COMPETENCY

Upon finishing this course, students will be able to provide counseling and education services to community about safe and rational use of medicinal plants as non-prescription drugs.

This competency will be developed via the following key elements:

KEY ELEMENTS

3.2.1	Educate community about truthful and effective use of medicinal plants as non-prescription drugs in management of different diseases according to WHO monographs.

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express critical thinking and problem-solving skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.1.1.	Retrieve and analyze information from WHO monographs to solve complementary medicine problems.

4-2- Competency

Upon finishing this course, student will be able to communicate effectively with individuals and colleagues.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.2.1	Present and simplify a WHO monograph for a selected plant using data-show technology in an interesting and scientific manner.

3. Contents

Week	Topic	Total credit hours	Lecture	Practical /Tutorial
1	Introduction for the course and giving the students the possible needed references, web sites, text books.	3	2	1
2	Cell structure including types of cell walls and types of cells (parenchyma, collenchyma, stone cells, fibers, xylem, phloem and secretory tissues).	3	2	1
3	Study of cultivation, collection and preparation	3	2	1
4	Study of drying, packing and adulteration of plant drugs.	3	2	1
5	Study of the constituents of plant drugs (alkaloids, glycosides, steroids, volatile oil, resins, tannins and proteins)	3	2	1
6	Study of constituents of plant drugs including carbohydrates, starches, and coloring matter.	3	2	1
7	**Mid-term exam**	3	2	1
8	Introduction for taxonomy of plants	3	2	1
9	Taxonomical study for some important families	3	2	1
10	General introduction for medicinal leaf and WHO monographs.			
11	Study, evaluation and critical analysis of WHO monographs for Hyoscyamus and datura medicinal plants.	3	2	1
12	Study, evaluation and critical analysis of WHO monographs for belladonna and digitalis medicinal leafy plants.	3	2	1
13	Study, evaluation and critical analysis of WHO monographs for squill and buchu medicinal leafy plants.	3	2	1
14	Study, evaluation and critical analysis of WHO monographs for tea, eucalyptus and some leafy medicinal plants.	3	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

- **Discussion** (√)
- **Brain storming** (√)

e. E-learning (√)

f. Smart board (√)

5. Student assessment methods

Written periodical 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.**
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	**periodical 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

Written periodical Examination	**15**	**%**
Practical Examination	**25**	**%**
Final Term Examination	**50**	**%**
Oral Examination	**10**	**%**
Other types of assessment		**%**
Total	**100**	**%**

6. List of references

Course notes

Notes on botany and medicinal plants (PG101) and lab manuals: Prepared in the form of a book authorized by the department.

Essential books (text books)

- WHO Monographs on Medicinal Plants Commonly Used in the Newly Independent States (NIS), (2010).
- Trease and Evans, Pharmacognosy, 15t" Ed., Nottingham,U.K., Willium Charles Evans (2003).
- The Cambridge Illustrated Glossary of Botanical Terms, M. Hickey and C. King, (2000).

- Plant Systematic, Judd, W.; Kellogg, E.; Stevens P. and Campbell, C. , Sinauer Associates' Inc. (2000).
- Plant Anatomy, Fahan, A. , Pergamon Press (2002).
- Natural products as sources of new drugs over the last 25 years. Newman D.J and Cragg, G.M., Journal of Natural Products 70, 461-477 (2007).
- Chinese Herbal Medicine: Dan Bensky, Steven Clavey, Erich Stoger and Andrew Gamble Materia Medica, Third Edition (2004).

Recommended books

"Encyclopedia of Common Natural Used in Food, Drugs and Cosmetics", Leung A.Y. and Faster.

Websites

https://apps.who.int/medicinedocs/en/m/abstract/Js14213e/
www.biomedcentral.com
www.medscape.com
http://www.sciencedirect.com/
http://www.ncbi.nlm.nih.gov/

7. Facilities required for teaching and learning

-Class room.
- Laboratory facilities (Microscopes, flames) –Library .
-Data show - Computers. –Internet. -E-learning
-Smart board

Course coordinator:

Assist. Prof. Dr. Ahmed Ashour

Head of Department:

Prof.Dr. Ramadan Eldomany

Date: 9/2020

Course Specifications

Course Plan

Wk.	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	Introduction for the course and giving the students the possible references, web sites, text books.	1.1.1, 2.2.1, 2.2.2	Lectures, and brain storming	Written, and oral exams
2	Cell structure including types of cell walls and types of cells (parenchyma, collenchyma, stone cells, fibers, xylem, phloem and secretory tissues).	1.1.1, 1.1.4, 2.1.2 2.2.1, 2.2.3	Lectures and practical training	Written, practical and oral exams
3	Study of cultivation, collection and preparation	1.1.2, 1.1.3, 1.1.4, 2.1.3, 2.1.4	Lectures and practical training	Written, practical and oral exams
4	Study of drying, packing and adulteration of plant drugs.	1.1.2, 1.1.3, 1.1.4, 1.1.5, 2.1.2, 2.1.3, 2.1.4, 2.2.2, 2.2.3	Lectures and practical training	Written, practical and oral exams
5	Study of constituents of plant drugs (alkaloids, glycosides, steroids, volatile oil, resins, tannins and proteins)	1.1.6, 2.1.1, 2.1.3, 2.2.1, 2.2.2	Lectures , practical training and brain storming	Written, practical and oral exams
6	Study of constituents of plant drugs including carbohydrates, starches, and coloring matter.	1.1.6, 2.1.1, 2.1.3, 2.2.1, 2.2.2	Lectures , practical training and brain storming	Written, practical and oral exams
7	**Mid-term exam**			
8	Introduction for taxonomy of plants	1.1.3, 2.1.1	Lectures, discussion and brain storming	Written, practical and oral exams
9	Taxonomical study for some important families	1.1.3, 2.1.1	Lectures, practical training	Written, practical and oral exams
10	General introduction for medicinal leaf and WHO monographs.	1.1.1, 1.1.3, 1.1.4, 2.1.5	Lectures, discussion and brain storming	Written, practical and oral exams
11	Study and analysis of WHO monographs for Hyoscyamus and datura medicinal plants.	1.1.4, 1.1.5, 1.1.6, 2.1.1, 2.1.3, 2.1.4, 2.1.5, 2.2.2, 2.2.3,	Lectures, practical and seminar presentation	Written, practical and oral exams

		3.1.1, 3.2.1, 4.1.1, 4.2.1		
12	Study and analysis of WHO monographs for belladonna and digitalis medicinal leafy plants.	1.1.4, 1.1.5, 1.1.6, 2.1.1, 2.1.3, 2.1.4, 2.1.5, 2.2.2, 2.2.3, 3.1.1, 3.2.1, 4.1.1, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
13	Study and analysis of WHO monographs for squill and buchu medicinal leafy plants.	1.1.4, 1.1.5, 1.1.6, 2.1.1, 2.1.3, 2.1.4, 2.1.5, 2.2.2, 2.2.3, 3.1.1, 3.2.1, 4.1.1, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
14	Study and analysis of WHO monographs for tea, eucalyptus and some leafy medicinal plants.	1.1.4, 1.1.5, 1.1.6, 2.1.1, 2.1.3, 2.1.4, 2.1.5, 2.2.2, 2.2.3, 3.1.1, 3.2.1, 4.1.1, 4.2.1	Lectures, practical and seminar presentation	Written, and oral exams
15	Revision	1.1.1, 1.1.4, 1.1.5, 1.1.6, 2.1.1, 2.1.3, 2.1.4, 2.1.5, 3.1.1, 3.2.1, 4.1.1, 4.2.1	Lectures, discussion and brain storming	Written, and oral exams

Course coordinator: **Head of Department:**

A. Prof. Dr. Ahmed Ashour Prof. Dr. Ramadan Eldomany

Date: 9/2020

Course Specifications

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Programme on which the course is given	**Bachelor of Pharmacy (pharmD)**
Major or minor element of programme	**Major**
Department offering the course	**Pharmaceutical Organic chemistry**
Department supervising the course	**Pharmaceutical Organic chemistry**
Academic Year / Level	**First year, semester (1)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Pharmaceutical Organic Chemistry I	**Code: PC 101**
Total credit Hours :3	**Lecture: 2**
	Practical :1

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- The basic theories and principles of pharmaceutical organic chemistry which include electronic structure of atom, hybridization and theories of acids and bases.
- The chemistry and basics of stereochemistry.
- The chemistry of alkanes, cycloalkanes, alkenes, alkadienes, alkynes and alkyl halides.
- The chemistry of Arenes and aromatic compounds (aromaticity, anti-aromaticity, and chemical behavior of aromatic compounds).
- Purification and identification of various organic compounds.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate knowledge from basic organic pharmaceutical sciences to manufacture products.

This competency will be developed via the following key elements:

Course Specifications

KEY ELEMENTS

1.1.1. Demonstrate understanding the different classes of organic compounds.
1.1.2. Articulate knowledge about nomenclature to a given organic compound
1.1.3. Retrieve the mechanisms of different chemical reactions.
1.1.4. Identify and categorize organic compounds according to their chemical properties.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

Upon finishing this course, students will be able to standardize organic pharmaceutical materials and manufacture organic pharmaceutical products.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.1.1. Predict new methods for synthesizing different classes of organic compounds.
2.1.2. Recognize the chemical characters and methods can be used for the synthesis of saturated and unsaturated aliphatic hydrocarbons, alkyl halides and aromatic compounds.
2.1.3. Carry out methods for synthesizing saturated and unsaturated hydrocarbons and aromatic compounds.

2-2- COMPETENCY

Upon finishing this course, students will be able to handle and dispose synthetic pharmaceutical materials effectively and safely with respect to relevant laws and legislations.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.2.1. Handle safely synthetic materials to avoid their harm to individuals.
2.2.2. Use effectively laboratory reagents appropriately and safely.

Course Specifications

DOMAIN 3: PHARMACEUTICAL CARE

3-1- COMPETENCY

Upon finishing this course, students will be able to apply the principles of body functions to participate in improving health care services using evidence-based data.

This competency will be developed via the following key elements:

KEY ELEMENTS

3.1.1. Relate etiology and features of certain diseases (e.g., cancer) to some high reactivity and cumulative toxicity of some synthetic compounds.

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express leadership, time management, critical thinking, problem solving, independent and team working skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.1.1. Demonstrate effective communication and leadership skills among students and staff. 4.1.2. Work effectively as part of a team to collect data and/or produce reports and presentations 4.1.3. Analyze data critically and able to solve scientific problems 4.1.4. Plan appropriate experiments in the laboratory bearing in mind technical availability and time limitations.

3. Contents

Week	Topic	Total credit hours	Lecture	Practical/Tutorial
1	Electronic structure of atom and hybridization.	3	2	1
2	Introduction to organic compounds and the types of reactions they react.	3	2	1

Course Specifications

3	Alkanes, Cycloalkanes (nomenclature &preparation)	**3**	**2**	**1**
4	Alkenes, alkadienes and Alkynes (reactions)	**3**	**2**	**1**
5	Alkyl halides (nomenclature, and preparation)	**3**	**2**	**1**
6	Alkyl halides chemical reactions (SN1, SN2, E1, E2	**3**	**2**	**1**
7	**Mid-term exam**	**3**	**2**	**1**
8	Introduction to stereochemistry	**3**	**2**	**1**
9	Stereochemistry (cont.)	**3**	**2**	**1**
10	Stereochemistry (cont.)			
11	Stereochemistry (cont.)	**3**	**2**	**1**
12	Aromaticity &aromatic compounds.	**3**	**2**	**1**
13	Benzene & electrophilic substitution.	**3**	**2**	**1**
14	Electrophilic substitution & arenes.	**3**	**2**	Practical exam
15	Nucleophilic substitutions related to aromatic compounds.	**2**	**2**	Practical exam

4. Teaching and learning methods

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

5. Student assessment methods

Written periodical 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.**
Written final exam	**To assess**	**The overall outcomes`**

Course Specifications

Oral exam	**To assess**	**The ability of students in expressing and presenting their knowledge clearly and in systematic approach**

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**

Weighting or assessments

Written periodical Examination	**15**	**%**
Practical Examination	**25**	**%**
Final Term Examination	**50**	**%**
Oral Examination	**10**	**%**
Other types of assessment		**%**
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.

Course Specifications

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.
- Data show
- Computers.
–Library.
–Internet.
- Hot plate with magnetic stirrers.

Course coordinator:

Dr. Rofaida Abdelmoaty Salem

Head of Department:

Prof.Dr. Ramadan Eldomany

Date: 9/2020

Course Plan

Week	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	Electronic structure of atom and hybridization.	1.1.1	Lectures and class activities	Written and oral exams
2	Introduction to organic compounds and the types of reactions they react.	1.1.1, 1.1.2, 2.2.1, 2.2.2	Lectures, practical training and class activities	Written, practical and oral exams
3	Alkanes, Cycloalkanes (nomenclature & preparation)	1.1.1, 1.1.2, 1.1.3, .1.1.4, 2.1.1, 2.1.2, 2.1.3, 3.1.1	Lectures, practical training and class activities	Written, practical and oral exams
4	Alkenes, alkadienes and Alkynes (reactions)	1.1.1, 1.1.2, 1.1.3, .1.1.4, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2 4.1.4	Lectures, practical training and class activities	Written, practical and oral exams
5	Alkyl halides (nomenclature, and preparation)	1.1.1, 1.1.2, 1.1.3, .1.1.4, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2 4.1.4	Lectures, practical training and class activities	Written, practical and oral exams
6	Alkyl halides chemical reactions (SN1, SN2, E1, E2)	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2 4.1.2	Lectures, practical training and class activities	Written, practical and oral exams

Course Specifications

7	**Mid-term exam**			
8	Introduction to stereochemistry	1.1.5, 4.1.1	Lectures, practical training and class activities	Written, practical and oral exams
9	Stereochemistry (cont.)	1.1.5, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2	Lectures, practical training and class activities	Written, practical and oral exams
10	Stereochemistry (cont.)	1.1.5, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2	Lectures, practical training and class activities	Written, practical and oral exams
11	Stereochemistry (cont.)	1.1.5, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2 4.1.3	Lectures, practical training and class activities	Written, practical and oral exams
12	Aromaticity & aromatic compounds.	1.1.1, 1.1.2, 1.1.3, .1.1.4, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2 3.1.1, 4.1.4	Lectures, practical training and class activities	Written, practical and oral exams
13	Benzene & electrophilic substitution.	1.1.1, 1.1.2, 1.1.3, .1.1.4, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2 4.1.4	Lectures, practical training and class activities	Written, practical and oral exams
14	Electrophilic substitution & arenes.	1.1.1, 1.1.2, 1.1.3, .1.1.4, 2.1.1, 2.1.2, 2.1.3, 2.2.1, 2.2.2 4.1.1	Lectures, practical training and class activities	Written, practical and oral exams
15	Nucleophilic substitutions related to aromatic compounds.	1.1.1, 1.1.2, 1.1.3, 1.1.4	Lectures and class activities	Written and oral exams

Course coordinator:

Dr. Rofaida Abdelmoaty Salem

Head of Department:

Prof.Dr. Ramadan Eldomany

Date: 9/2020

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (Pharm-D)**
Major or minor element of program	**Major**
Department offering the course	**Pharmacology &Toxicology**
Department supervising the course	**Pharmacology &Toxicology**
Academic Year / Level	**First year, semester (1)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Medical Terminology	**Code : EN302**
Credit Hours : 2	**Lecture: 2**

B- Professional Information

1. Overall aims of the course

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

- Illustrate the basics of medical terminology required in pharmaceutical studies.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to knowledge medical terminology

This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. Demonstrate understanding basic component of medical terms (suffix – root- and prefix)
1.1.2. Articulate knowledge about medical terms of different body systems (digestive , respiratory , ……..)
1.1.3. Identify common vocabulary used by medical staff members
1.1.4: Retrieve patient's file documents.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

This competency will be developed via the following key elements:

KEY ELEMENTS

2.1.1: Recognize the write medical order from medical term and medical abbreviation reported in prescription

2.1.2. Interpret patient information reported in medical files (diagnosis, lab investigation, medical history……etc).

DOMAIN 3: PHARMACEUTICAL CARE

3-1- COMPETENCY

This competency will be developed via the following key elements:

KEY ELEMENTS

3.1.1. Educate the proper pharmaceutical and medical terms, abbreviations and symbols in pharmacy practice.
3.1.2. Apply medical term analysis and interpret it.

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

This competency will be developed via the following key elements:

KEY ELEMENTS

4.1.1. perform writing reports and documentation skills.
4.1.2. Work effectively as a part of a health care team.

3. Contents

Week	Topic	Total contact hours	Lecture
1	Introduction	2	2
2	Level of organization	2	2
3	Digestive system	2	2
4	Cardiovascular system	2	2
5	Blood	2	2
6	Nervous system	2	2
7	**Semester work**		
8	Endocrine terminology	2	2
9	Eye and ear Terminology	2	2
10	Skin Terminology	2	2
11	Urinary system	2	2
12	Respiratory system	2	2
13	Medical records	2	2

14	Prescription abbreviation	**2**	**2**
15	Revision	**2**	**2**

4. Teaching and learning methods

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

5. Student assessment methods

Semester work	**To assess**	**The ability of students to follow-up The course subjects.**
Written final exam	**To assess**	**The overall outcomes.**

Assessment schedule

Assessment 1	**Semester work**	**Week**	**7**
Assessment 2	**Final exam**	**Week**	**16,17**

Weighting or assessments

Final-Term Examination	**85**	**%**
Semester Work	**15**	**%**
Total	**100**	**%**

6. List of references

Course notes

Notes on Medical Terminology (Department of Pharm./Tox., college of Pharmacy,), Approved by department counsil

Essential books (text books)

Medical Terminology: a living language 4th edition Fremgen BS and Frucht SS , 2009

Marjorie C. Willis (1996): Medical Terminology, the basic language of health care, first edition. Williams & Wilkins Press, Baltimore

Recommended books

Andrew R. Hutton (2002): An introduction to medical terminology for health care, A self-teaching package, third edition. Churchill-Livingstone-Elsevier Press, Edinburgh

Websites

- www.sciencedirect.com

7. Facilities required for teaching and learning

-Class rooms - Data Show - Computers - Library -Internet

Course coordinator:

Dr. Sherin zakaria

Head of Department:

Dr. Sherin Zakaria **Date : 9/2020**

Course Plan
Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: **Medical Terminology** Course code: **MD101**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction	1.1.1,2.1.1	Lectures and brain storming	Written exams
Week # 2	Level of organization	1.1.2, 4.1.2	Lectures and brain storming	Written exams
Week # 3	Digestive system	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 4	Cardiovascular system	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 5	Blood	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1,3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 6	Nervous system	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 7	Semester work			
Week # 8	Endocrine terminology	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 9	Eye and ear Terminology	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 10	Skin Terminology	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 11	Urinary system	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 12	Respiratory system	1.1.2,1.1.3,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 13	Medical records	1.1.4,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 14	Prescription abbreviation	1.1.4,2.1.1, 2.1.2, 3.1.1, 3.1.2, 4.1.1, 4.1.2	Lectures and brain storming	Written exams
Week # 15	Revision		Lectures and brain storming	Written and oral exams

Course coordinator: Dr / sherin zakaria
Head of department: Prof.Dr. sherin zakaria

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (pharmD)**
Major or minor element of program	Minor
Department offering the course	Human right- faculty of Law- Kafrelsheikh University
Department supervising the course	Vice dean of students affairs
Academic Year / Level	First level/ Semester 1
Date of specification approval	**9/2020**

A- Basic Information

Title: Human Rights and Fighting Corruption	**Code: UR 101**
Total credit Hours :1	**Lecture: 1**
	Practical :-----

البيانات المهنية:

1) الأهداف العامة للمقرر:

- عند إتمام المقرر سوف يكون الطلاب قادرين على معرفة أهمية حقوق الإنسان وواجباته نحو المجتمع وكيفية حماية تلك الحقوق.

2) النتائج التعليمية المستهدفة لمقرر حقوق الإنسان:

1 – المعرفة الأساسية **1-1- Competency** **Integrate knowledge from basic and applied pharmaceutical and clinical sciences to standardize materials, formulate and manufacture products, and deliver population and patient-centered care.**	
يلم بالمقصود بحقوق الإنسان ومصدرها.	1-1-1
يعدد أنواع حقوق الإنسان الفردية والجماعية.	2-1-1
يشرح كيفية حماية هذه الحقوق.	3-1-1

2- الممارسات الأخلاقية والمهنية **2-1- Competency Work collaboratively as a member of an inter-professional health care team to improve the quality of life of individuals and communities, and respect patients' rights**	
1-1-2	يدرك تطبيقات حقوق الإنسان والسلوكيات الاخلاقية فى مجال الصيدلة .
2-1-2	يلم بواجباته نحو الآخرين متقبلا التعددية والاختلاف .
3-1-2	ينمي شخصية الفرد من خلال معرفة الحقوق الفردية و الجماعية للإنسان.
2-5- Competency **Contribute in pharmaceutical research studies and clinical trials needed to authorize medicinal products.**	
1-5-2	يستوفى الإجراءات ويتبع اللوائح فى المؤسسات الصيدلية المختلفة
4- الممارسات الفردية	
4-1- Competency **Graduates will be able to express leadership, time management, critical thinking, problem solving, independent and team working, creativity and entrepreneurial skills.**	
1-1-4	ينمي قدرات الطالب على تقييم سلوك الآخرين في مجال حقوق الإنسان.
2-1-4	ينمي مهارات التفكير النقدي و اتخاذ القرارات و حل المشكلات.
4-2- Competency **Graduates will be able to effectively communicate verbally, non-verbally and in writing with individuals and communities.**	
1-2-4	يستخدم أدوات التكنولوجيا فى مناقشة وعرض القضايا الحقوقية فى إطار الأخلاقيات والقوانين
4-3- Competency **Graduates will be able to express self-awareness and be a life-long learner for continuous professional improvement.**	

1-3-4	يتعرف على المصـــاد الموثوقة و القوانين والإجراءات الحديثة فور صـــدورها من أجل تحديد الحقوق والواجبات

د- المحتويات:

الأسبوع	المحاضرة (2ساعة/ الأسبوع)
1	- مقدمة
2	- التعريف بحقوق الإنسان
3	- قانون حقوق الإنسان (1)
4	- قانون حقوق الإنسان (2) تكملة
5	- قانون حقوق الإنسان (3) تكملة
6	- مصادر قانون حقوق الإنسان (1)
7	- مصادر قانون حقوق الإنسان (2) تكملة **الامتحان الدوري**
8	- أنواع حقوق الإنسان (فردية)
9	- أنواع حقوق الإنسان (جماعية)
10	- حماية حقوق الإنسان (1)
11	- حماية حقوق الإنسان (2) تكملة
12	- تطبيقات حقوق الإنسان في المجال الطبي (1)
13	- تطبيقات حقوق الإنسان في المجال الطبي (2)
14	- تطبيقات حقوق الإنسان في المجال الطبي (3)
15	- مراجعة عامة و مناقشة حره

هـ- أساليب التعليم و التعلم:

- المحاضرة
- المناقشة
- التعليم عن بعد

و-أساليب تقييم الطلبة:

1- الامتحان الدوري
2- الامتحان التحريري:

الجدول الزمني التقييم:

تقييم (1): الامتحان الدوري	**الأسبوع السابع**
تقييم (2): الامتحان التحريري	**الأسبوع السادس عشر**

ترجيح التقييم:

طريقة التقييم	الدرجات	النسب المئوية
الامتحان الدوري	**15**	**%20**
الامتحان التحريري	**85**	**%80**
الإجمالي	**100**	**%100**

ز- التسهيلات اللازمة للتعليم و التعلم:

1- للمحاضرات: اللوحات (البيضاء) و جهاز العرض المرئي (داتا شو) والتعليم عن بعد (السبورة الذكية).

ي- قائمة المراجع:

1- مذاكرات المقرر: كتاب الطالب (حقوق الإنسان) (2020)

2- الكتب الدراسية

حقوق الإنسان

3- كتب مقترحة

القانون الدولي الإنساني

4- مجلات دورية، مواقع انترنت، الخ

مجلات حقوق الإنسان

منسق المقرر: أ.د. ماهر ابوخوات

التاريخ: / 9 /2020

مصفوفة 1 مقرر حقوق الإنسان

	محتويات المقرر	نتائج التعلم المنشودة لمادة حقوق الإنسان									
		Domain 1			Domain 2				Domain 4		
		1	2	3	1	2	3	4	1	2	3	4
1	مقدمة	x										
2	التعريف بحقوق الإنسان	x										
3	قانون حقوق الإنسان (1)	x										
4	قانون حقوق الإنسان (2) تكملة	x										
5	قانون حقوق الإنسان (3) تكملة	x					X				x	
6	مصادر قانون حقوق الإنسان (1)	x							X			
7	مصادر قانون حقوق الإنسان (2) تكملة	x							X			
8	أنواع حقوق الإنسان (فردية)		x				X					
9	أنواع حقوق الإنسان (جماعية)		x				X				x	
10	حماية حقوق الإنسان (1)			X		X						
11	حماية حقوق الإنسان (2) تكملة			X		X	X					
12	تطبيقات حقوق الإنسان في المجال الطبي (1)		x	X	x			x	x	x		X
13	تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة		x	X	x			x		x		X
14	تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة		x	X	x		X	x		x		X
15	مراجعة عامة و مناقشة حره		x	X	x			x	x	x	x	X

منسق المقرر: .د. ماهر ابوخوات

التاريخ: / 2020/9

Course Specifications

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (Pharm-D)**
Major or minor element of program	**Major**
Department offering the course	**Department of Information Technology.** (Faculty of Computing and Information) **Department of Pharmaceutical chemistry** (Faculty of Pharmacy)
Department supervising the course	**Vice Dean for Education and Student Affairs**
Academic year / Level	**Level (1), Semester (1)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Information Technology	**Code: NP 101**
Total credit Hours :2	Lecture: 1
	Practical :1

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- The concept and importance of information technology and its applications.
- The recent developments of Information Technology.
- The hardware and software suitable for Information Technology.
- The importance of artificial intelligence in the field of Pharmacy.
- Applications of computer and internet in the laboratories.
- The policy and ethics of Information Technology.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate basic knowledge from information technology to deliver population-centered care.

This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. *Demonstrate understanding* of the basic concepts of information technology.
1.1.2. *Identify* recent applications of information technology in drug market and pharmacy.
1.1.3. *Retrieve* information from a variety of sources such as online medical databases and websites.
1.1.4. *Integrate knowledge about* theoretical application of computing in medical field and pharmacy, and importance in reasoning, communication and system development.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

Upon finishing this course, students will be able to virtually prepare for handling laboratory material, methods and tools and using computer hardware and software effectively and safely with respect to relevant laws and legislations.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.1.1	*Fullfil* GLP and safety guidelines in dry labs before execution in physical labs.
2.1.2	*Adopt* ethics in using computer software and hardware.
2.1.3	*Handle* internet and software safely to avoid their harm to users.

Domain 3: Pharmaceutical Care

3-1- COMPETENCY

Upon finishing this course, students will be able to provide counseling and education services to patients and communities about safe and rational use of medicines and medical devices.

This competency will be developed via the following key elements:

KEY ELEMENTS

3.1.1	*Integrate* information technology and medical databases to provide healthcare related services, and up-to-date medicinal guidance.
3.1.2	*Provide* patient counseling about safe and rational use of medicines and medical devices through implementation of virtual clinics and pharmacies.

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express leadership, time management, critical thinking, problem solving, independent and team working skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.1.1.Demonstrate effective communication and leadership skills among students and staff.
4.1.2.Work effectively as part of a team to collect data and/or produce reports and presentations to show the recent computers technology.
4.1.3.Analyze data critically and ability to solve scientific problems
4.1.4.Plan appropriate experiments in the laboratory bearing in mind technical availability and time limitations.

4-2- COMPETENCY

Upon finishing this course, students will be able to effectively communicate verbally, non-verbally and in writing with individuals and communities.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.2.1	*Practice* oral and written communication sills in English.
4.2.2	*Practice* Independent learning.
4.2.3	*Demonstrate creativity for* Ideas formulation and presentation.

3. Contents

Week	Topic	Total credit hours	Lecture	Practical /Tutorial
1	Introduction to information technology and use of Information systems in society.	**2**	**1**	**1**
2	Information technology concepts, policy and ethics.	**2**	**1**	**1**
3	Information system, Operating systems and Utility Systems.	**2**	**1**	**1**
4	Components of computer system (hardware & software)	**2**	**1**	**1**
5	Microsoft office (Introduction to Word processing and power point data presentation).	**2**	**1**	**1**
6	Microsoft office (Introduction to Access data-bases and Excel programs).	**2**	**1**	**1**
7	**Periodical exam**	**2**	**1**	**1**
8	Computer networks, internet protocol, and internet services.	**2**	**1**	**1**
9	Data communication, transmission modes and transmission media.	**2**	**1**	**1**
10	Online drug databases.	**2**	**1**	
11	Artificial intelligence in the field of Pharmacy.	**2**	**1**	**1**
12	Overview of Computer Aided Drug design (CADD) programs.	**2**	**1**	**1**
13	Overview of Computer-based dry labs (Virtual labs).	**2**	**1**	**1**
14	Overview of Computer-based virtual clinics and virtual pharmacy.	**2**	**1**	1
15	Revision	**2**	**1**	Practical exam

4. Teaching and learning methods

a. Lectures (√)

b. Practical training / laboratory (√)

c. Seminar / Workshop (√)
d. Class Activity
- Discussion (√)
- Brain storming (√)
e . E-Learning (√)

5. Student assessment methods

Written periodical 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.**
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	**periodical 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

Written periodical Examination	**15**	**%**
Practical Examination	**25**	**%**
Final Term Examination	**50**	**%**
Oral Examination	**10**	**%**
Other types of assessment		**%**
Total	**100**	**%**

6. List of references

Course notes

Notes on information technology (NP 101) and lab manuals: Prepared in the form of a book authorized by the department and vice dean.

Essential books (text books)

- Robon Williams & John Tollett. THE NON-DESIGNER'S WEB BOOK . 2nd edition, Peachit Press , 2007 . (ISBN : - 2017-1038-2)
- Ruth Maran . COMPUTERS SIMPLIFIED . 5nd edition . John Wiley & sons , 2005, (ISBN : 0-7645-3524-2) .
- Management of Information Technology, by Carroll W. Frenzel, Course Technology 3rd edition (July 10, 1998) ISBN #: 0760049904

Recommended books

- Introduction to Information Systems: Supporting and Transforming Business, 2nd Edition by R. Kelly Rainer, Jr., Auburn Univ. ISBN: 978-0-470- 16900-1 ©2008.

- Introduction to Information Systems by James A. O'Brien ,George Maracas' James Obrien. ISBN: 0073043559

Websites

https://www.medscape.com/
https://praxilabs.com/en/
https://www.sib.swiss/

7. Facilities required for teaching and learning

-Class room.
- Laboratory facilities –Library .
-Data show - Computers. –Internet.

Course coordinator:

Prof.Dr. Ahmed Elashery

Head of Department:

Prof.Dr. Ramadan Eldomainy

Date: 9/2020

Course Specifications

Course Plan

Wk.	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	Introduction to information technology and use of Information systems in society.	1.1.1,	Lectures, and brain storming	Written, and oral exams
2	Information technology concepts, policy and ethics.	1.1.1, 1.1.2, 2.1.2, 2.1.3, 3.1.1	Lectures and seminar.	Written, and oral exams
3	Information system, Operating systems and Utility Systems.	1.1.1,	Lectures and practical training	Written, practical and oral exams
4	Components of computer system (hardware & software)	1.1.1, 1.1.4,	Lectures , practical and brain storming	Written, practical and oral exams
5	Microsoft office (Introduction to Word processing and power point data presentation).	1.1.1, 1.1.4, 4.1.1,	Lectures , practical and brain storming	Written, practical and oral exams
6	Microsoft office (Introduction to Access data-bases and Excel programs).	1.1.1, 1.1.4,	Lectures , practical and brain storming	Written, practical and oral exams
7	**Periodical exam**			
8	Computer networks, internet protocol, and internet services.	1.1.3, 4.1.24.2.1, 4.2.2, 4.2.3	Lectures and **seminar**.	Written, practical and oral exams
9	Data communication, transmission modes and transmission media.	1.1.3, 4.1.34.2.1, 4.2.2, 4.2.3	Lectures, **Seminar**, discussion and brain storming	Written, practical and oral exams
10	Online drug databases.	1.1.2, 1.1.3, 1.1.4, 3.1.1,	Lectures , practical and brain storming	Written, practical and oral exams
11	Artificial intelligence in the field of Pharmacy.	1.1.2, 1.1.3, 1.1.4, 2.1.1, 2.1.2, 2.1.3, 3.1.1	Lectures , practical and brain storming	Written, practical and oral exams
12	Overview of Computer Aided Drug design (CADD) programs.	1.1.2, 1.1.3, 1.1.4, 2.1.1, 2.1.2, 2.1.3, 4.1.2,	Lectures , practical and brain storming	Written, practical and oral exams

13	Overview of Computer-based dry labs (Virtual labs).	1.1.2, 1.1.3, 1.1.4, 2.1.1, 2.1.2, 2.1.3, 3.1.1, 3.1.2, 4.1.2	Lectures , practical and brain storming	Written, practical and oral exams
14	Overview of Computer-based virtual clinics and virtual pharmacy.	1.1.2, 1.1.3, 1.1.4, 2.1.1, 2.1.2, 2.1.3, 3.1.1, 3.1.2, 4.1.2	Lectures , practical and brain storming	Written, practical and oral exams
15	Revision	1.1.1, 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.2.1, 4.2.2, 4.2.3	Lectures, discussion and brain storming	Written, and oral exams

Course coordinator:

Prof.Dr. Ahmed Elashery

Head of Department:

Prof.Dr. Ramadan Eldomainy

Date: 9/2020

Course Specifications

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of pharmacy (Pharm D)**
Major or minor element of program	**Minor**
Department offering the course	**Faculty of Commerce**
Department supervising the course	**Pharmaceutical chemistry**
Academic year / Level	**Level (1), Semester (1)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Math	**Code: MS 101**
Total credit Hours :2	Lecture: 2
	Practical:

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- Build up comprehensive knowledge on the basic mathematical procedures which are required in pharmaceutical studies.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate knowledge from basic mathematics to implement it in relevant pharmaceutical disciplines.

This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. *Demonstrate understanding* of the nature of data and fundamentals of mathematics.
1.1.2. *Articulate knowledge* about the value of functions and hypothesis testing.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

Upon finishing this course, student will be able to categorize and manipulate data sets needed in standardization, formulation and manufacturing of pharmaceutical products.

This competency will be developed via the following key elements:

Course Specifications

KEY ELEMENTS

2.1.1. Recognize the structure of the data in a variety of standard situations and define the problem to be solved in mathematical terms. 2.1.2. Apply different methods of calculations needed in pharmaceutical fields and be able to solve scientific problems

DOMAIN 3: PHARMACEUTICAL CARE

DOMAIN 4: PERSONAL PRACTICE

3. Contents

Week	Topic	Total credit hours	Lecture	Practical /Tutorial
1	Introduction to Mathematics	2	2	
2	Algebra-1 (The Binomial Theory)	2	2	
3	Algebra-1 (Fitting of Curves)	2	2	
4	Algebra-2 (Partial Fractions, Solution of Linear Equations)	2	2	
5	Algebra-2 (Using Determinants or Matrices)	2	2	
6	Functions and applications (1)	2	2	
7	**Periodical exam**			
8	Functions and applications (2)	2	2	
9	Differential Calculus	2	2	
10	Fundamentals Theories on Differentiation (Related Rates – Drawing of Curves)	2		
11	Integration-1	2	2	
12	Integration-2	2	2	
13	Data presentation,	2	2	
14	Gaussian distribution and Probability	2	2	
15	**Revision & Exercises**	2	2	

4. Teaching and learning methods

a. Lectures	**(√)**
b. Practical training / laboratory	**( )**
c. Seminar / Workshop	**( )**
d. Class Activity	
- Discussion	**(√)**
- Brain storming	**(√)**
e. E-learning	**(√)**

5. Student assessment methods

Written periodical 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	**periodical exam**	**Week**	**7**
Assessment 2	**Practical exam**	**Week**	
Assessment 3	**Final exam**	**Week**	**16, 17**
Assessment 4	**Oral**	**Week**	

Weighting or assessments

Written periodical Examination	**15**	**%**
Practical Examination		**%**
Final Term Examination	**85**	**%**
Oral Examination		**%**
Other types of assessment		**%**
Total	**100**	**%**

6. List of references

Course notes

Notes of mathematics for prepharmacy students, prepared and distributed by dep. of accounting and information systems , faculty of commerce .

Essential books (text books)

- Abstract Algebra, 3rd Edition 3rd Edition, 2003
- The Calculus Lifesaver: All the Tools You Need to Excel at Calculus (Princeton Lifesaver Study Guides) 1st Edition, 2007

Recommended books

- Calculus Made Easy: Being a Very-Simplest Introduction to those Beautiful Methods of Rekoning which are Generally Called by the Terrifying Names of the Differential Calculus and the Integral Calculus Enlarged Edition, 2014

Websites

http://www.math.com/
https://www.basic-mathematics.com/math-websites.html

7. Facilities required for teaching and learning

-Class room.
–Library .
-Data show - Computers. –Internet.

Course coordinator:

Dr. Osama Abu-seada

Head of Department:

Dr. Osama Abu-seada

Date: 9/2020

Course Specifications

Course Plan

Wk.	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	Introduction to Mathematics	1.1.1, 1.1.2	Lectures, and brain storming	Written exams
2	Algebra-1 (The Binomial Theory)	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams
3	Algebra-1 (Fitting of Curves), Applications.	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams
4	Algebra-2 (Partial Fractions, Solution of Linear Equations)	1.1.1, 1.1.2,	Lectures, discussion and brain storming	Written exams
5	Algebra-2 (Using Determinants or Matrices) Applications	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams
6	Functions and applications (1)	1.1.1, 1.1.2,	Lectures, discussion and brain storming	Written exams
7	**Periodical exam**			
8	Functions and applications (2) Exercises	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams
9	Differential Calculus	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams
10	Fundamentals Theories on Differentiation (Related Rates – Drawing of Curves)	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams
11	Integration-1	1.1.1, 1.1.2,	Lectures, discussion and brain storming	Written exams
12	Integration-2 Applications	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams
13	Data presentation,	1.1.1, 1.1.2,	Lectures, discussion and brain storming	Written exams
14	Gaussian distribution and Probability	1.1.1, 1.1.2,	Lectures, discussion and brain storming	Written exams
15	**Revision & Exercises**	1.1.1, 1.1.2, 2.1.1, 2.1.2	Lectures, discussion and brain storming	Written exams

Course coordinator: **Head of Department:**

Dr. Osama Abu-seada **Dr. Osama Abu-seada**

Date: 9/2020

Bachelor of Pharmacy

(PharmD)

Course Specification

Level 2 / Third Semester

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of pharmacy (Pharm D)**
Major or minor element of program	**Major**
Department offering the course	**Faculty of Pharmacy**
Department supervising the course	**Pharmaceutical Analytical Chemistry**
Academic year / Level	**Level (2), Semester (3)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Pharmaceutical Analytical Chemistry III	**Code: PA 303**
Total credit Hours :2	Lecture: 1
	Practical :1

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- The principles and the application of oxidation-reduction reactions.
- The principles and the application of electrochemical analysis.-.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Graduates will be able to integrate knowledge from basic analytical chemical techniques to identify as well as quantify different active pharmaceutical ingredients either authentic or in different pharmaceutical formulations in addition to biological samples.

This competency will be developed through understanding the following key elements:

1.1.1. Principles of basic analytical chemistry techniques and their applications.
1.1.3. Exploit basic scientific information in isolation of active pharmaceutical ingredients from natural sources or formulations, its analytical characterization by different spectroscopic techniques and finally quantitation.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-2- COMPETENCY

Graduates will be able to determine pharmaceutical active ingredients and their stability in formulations as well as inspection of their shelf lives in addition to calibration of instrumentations.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.2.3. Employ international guidelines concerning QC and QA in sampling, stability indicating assays on storage and incompatibility problems. 2.2.4 Select and develop analytical methodologies to ensure that the results obtained comply with the pharmacopeial international specifications of both synthetic or natural authentic samples in addition to pharmaceuticals. 2.2.5 Apply the basic chemical knowledge to suggest new synthesized active molecules, purification of active pharmaceutical ingredients of adulterants and impurities in addition to qualitative and quantitative of pharmaceutical compounds including the required technical skills at all aspects of chemistry like physical, analytical and organic ones.

2.3. Competency

Proper dealing with samples containing active pharmaceutical ingredients either biological, pharmaceutical product or even authentic without deterioration in a manner keeping their physical and chemical characteristics in accordance to national and international regulations.

Key Elements

2.3.1 Proper treatment of different samples of pharmaceutical interest like those are natural, authentic, nano-formulated, radioactive and pharmaceutical products as well as their characterization. 2.3.2 Setting regulations for safe dealing with active pharmaceutical ingredients.

D- Contents:

Week	Topic	Total credit hours	Lecture	Practical
1	- Introduction to Redox reaction -Electrical properties of redox systems, Nernest eqution for electrode potential.	2	1	1
2	- Nernest equation for oxidation potential - Factros affecting oxidation potential	2	1	1
3	- Detection of the end point in redox titrations - Types of redox indicators. - Redox titration curve and applied examples.	2	1	1
4	Different oxidizing agents.	2	1	1
5	Iodine titrations	2	1	1
6	Applications to Redox titration	2	1	1
7	**periodical exam**			
8	Introduction to instrumental methods of analysis and overview on electrochemical ones.	2	1	1
9	Basic principles of potentiomety.	2	1	1
10	- Galvanic and lectrolytic cells. - Types of reference electrodes. - Types of indicator electrodes.	2	1	1
11	- Membrane eleectrodes and glass electrode. - Ion selecive electrodes. - Applications	2	1	1
12	Conductimetric titration	2	1	1
13	Applications to Conductimetric titration.	2	1	1
14	Principle of polarographic measurements	2	1	Practical exam
15	- Derivatization in polarography - Applications	2	1	Practical exam

4. Teaching and learning methods

a. Lectures	**(√)**
b. E-learning	**(√)**
c. Practical training / laboratory	**(√)**
d. Seminar / Workshop	**(√)**
e. Class Activity	
- Discussion	**(√)**
- Brain storming	**(√)**

5. Student assessment methods

Written periodical 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.**
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	**periodical 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

Written periodical Examination	**15**	**%**
Practical Examination	**25**	**%**
Final Term Examination	**50**	**%**
Oral Examination	**10**	**%**
Other types of assessment		**%**
Total	**100**	**%**

6. List of references

Course notes

- Notes on Pharmaceutical Analytical chemistry (Electrochemistry) for second level clinical pharmacy students .Dept. Pharmaceutical Analytical chemistry.
- Lab manual on Pharmaceutical Analytical chemistry (Electrochemistry)for second level clinical pharmacy students .Dept. Pharmaceutical Analytical chemistry.

Essential books (text books)

1. G. D. Christian and J. E. Oreilly, "Instrumental analysis " ,Ally and Bacon ,inc. latest edition.
2-D. A. Skoog, D. M. west, F. J. holler and S. R. crouch, "fundamentals of analytical chemistry", ninth edition brooks / cole-thomson learning, inc. (2014)

Recommended books

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

Websites

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

7. Facilities required for teaching and learning

-Class room.
- Laboratory facilities (Microscopes, flames) –Library .
-Data show - Computers. –Internet
-Smart board - Unit for distance learning

Course coordinator:

Dr. Ahmed Faried

Head of Department:

Assistant Prof. Dr. Ahmed Abdelmagid

Date: 9/2020

Course Plan

Week	Topic	Key elements	Teaching and Learning Methods	Student Assessment Methods
1	- Introduction to Redox reaction - Electrical properties of redox systems, Nernest eqution for electrode potential.	2.2.3, 2.2.4	Lectures, class activity, E-learning and brain storming	Written, and oral exams
2	- Nernest equation for oxidation potential - Factros affecting oxidation potential	2.2.3, 2.2.4	Lectures, E-learning and class activity	Written and oral exams
3	- Detection of the end point in redox titrations - Types of redox indicators. - Redox titration curve and applied examples.	2.2.3, 2.2.4, 2.2.5	Lectures, practical training, E-learning and class activity	Written, and oral exams
4	Different oxidizing agents.	2.2.3, 2.2.4, 2.2.5	Lectures, practical training, E-learning and class activity	Written, and oral exams
5	Iodine titrations	2.2.3, 2.2.4, 2.2.5	Lectures, practical training, E-learning and class activity	Written, practical and oral exams
6	Applications to Redox titration	2.2.3, 2.2.4, 2.2.5, 2.3.1, 2.3.2	Lectures, practical training, E-learning and class activity	Written, practical and oral exams
7	**periodical exam**			
8	Introduction to instrumental methods of analysis and overview on electrochemical ones.	2.2.3, 2.2.4	Lectures, class activity, E-learning and brain storming	Written, practical and oral exams
9	Basic principles of potentiomety.	2.2.3, 2.2.4	Lectures, class activity, E-learning and brain storming	Written, practical and oral exams
10	- Galvanic and lectrolytic cells. - Types of reference electrodes. - Types of indicator electrodes.	2.2.3, 2.2.4, 2.2.5	Lectures, practical training, E-learning and class activity	Written, practical and oral exams
11	- Membrane eleectrodes and glass electrode. - Ion selecive electrodes. - Applications	2.2.3, 2.2.4, 2.2.5, 2.3.1, 2.3.2	Lectures, practical training, E-learning and class activity	Written, practical and oral exams
12	Conductimetric titration	2.2.3, 2.2.4	Lectures, practical training, E-learning and class activity	Written, practical and oral exams
13	Applications to Conductimetric titration.	2.2.3, 2.2.4, 2.2.5, 2.3.1, 2.3.2	Lectures, practical training, E-learning and class activity	Written, practical and oral exams
14	Principle of polarographic measurements	2.2.3, 2.2.4	Lectures, practical	Written,

			training, E-learning and class activity	practical and oral exams
15	- Derivatization in polarography - Applications	2.2.3, 2.2.4, 2.2.5, 2.3.1, 2.3.2	Lectures, practical training, E-learning and class activity	Written, practical and oral exams

Course coordinator: Dr. Ahmed Faried

Head of department: Assistant Prof. Dr. Ahmed Abdelmagid

Kafrelsheikh University
Faculty of Pharmacy

جامعة كفر الشيخ
كلية الصيدلة

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (Pharm D)**
Major or minor element of program	**Major**
Department offering the course	**Pharmaceutical Organic chemistry**
Department supervising the course	**Pharmaceutical Organic chemistry**
Academic Year / Level	**Second year, semester (3)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Pharmaceutical Organic Chemistry III	**Code: PC 303**
Total credit Hours: 3	**Lecture: 2**
	Practical: 1

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

Basic information regarding different classes of organic compounds:

1. Carbohydrates
2. Amino acids & peptides
3. Polynuclear & heterocyclic compounds

In addition to an introduction about the use of different spectroscopic tools for the structural elucidation of organic compounds, including:

1. Ultraviolet (UV),
2. Infrared (IR),
3. Nuclear magnetic resonance (NMR) spectroscopy and
4. Mass spectrometry (MS)

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate knowledge from basic organic pharmaceutical science to synthesize intermediate chemicals belonging to different classes of carbohydrates, amino acids, peptides and polynuclear &

heterocyclic compounds paving the way for manufacturing active pharmaceutical products.

This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1.	Demonstrate understanding the different classes of organic compounds as well as different spectroscopic tools used for structure elucidation.
1.1.2.	Utilize the proper methods of nomenclature of a given organic compound including the IUPAC & the Hantzsch-Widman nomenclature systems.
1.1.3.	Integrate knowledge from fundamentals of organic chemistry to handle, and synthesize active heterocyclic pharmaceutical materials and others derived from carbohydrates, amino acids & short peptides. Integrate understanding of fundamentals of spectroscopy to elucidate structure of a wide variety of organic compounds.
1.1.4.	Articulate knowledge from fundamentals of organic chemistry & spectroscopy to the structural identification of heterocyclic compounds. Explain the mechanisms of their chemical synthesis & their reactions as an introduction to understanding molecular mechanisms of drugs' actions.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-2- COMPETENCY

Upon finishing this course, students will be able to standardize and synthesize intermediate pharmaceutical materials which are useful in the manufacture of organic pharmaceutical products.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.2.1.	Identify chemically & schematically different mono-, di- & polysaccharrides and synthesize wide variety of organic pharmaceutical materials derived from them. Spectroscopically identify, analyse & standardize a wide variety of organic pharmaceutical materials.
2.2.3.	Recognize the principles of various spectroscopic tools and instruments and select the proper techniques for structural analysis of different materials. Recognize the principle techniques and select the most straightforward methodology used for the synthesis of carbohydrates, some heterocyclic compounds & peptides.

2-3- COMPETENCY

Upon finishing this course, students will be able to handle and dispose synthetic pharmaceutical materials effectively and safely with respect to relevant laws and legislations.

This competency will be developed via the following key elements:

KEY ELEMENTS

2.3.1.	Safely handle synthetic materials as well as chemical reagents to avoid their harm to individuals.
2.3.2.	Recognize and adopt MSDS safety guidelines for safe and appropriate handling and disposal of laboratory reagents and pharmaceutical chemical materials.

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express leadership, time management, critical thinking, problem solving, independent and team working skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.1.1.	Demonstrate effective communication and team work skills among students and enhance time management through task delegation among team members.
4.1.2.	Retrieve information about chemical reactions of different categories of organic compounds and critically analyze results of schematic chemical tests in order to identify a given functional group and solve problems of structural similarity. In doing so, students learn how to work in a team as well as independently.
4.1.3.	Demonstrate individual creativity through encouragement of innovative problem solving activities.

4-2- Competency

Upon finishing this course, students are supposed to effectively communicate verbally, non-verbally and in writing with individuals for creative problem solving

This competency will be developed via the following key elements:

KEY ELEMENTS

4.2.2. Use contemporary technologies and media to demonstrate effective presentation skills concerning spectroscopic identification of organic compounds.

4-3- COMPETENCY

Upon finishing this course, students are supposed to express self-awareness and be life-long learners for continuous improvement of their knowledge and personal skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4.3.1. Perform self-assessment of their own practical work by comparing their results with standards to enhance professional competencies and self-estimation. 4.3.2. Practice independent learning by giving the opportunity to perform internet search and literature survey so as to find out answers to tutorial questions throughout the course.

3. Contents

Week	Topic	Total credit hours	Lecture	Practical/ Tutorial
1	Carbohydrates: Introduction, classification, stereochemistry, synthesis of monosaccharrides	4	2	2
2	Carbohydrates: reactions of monosaccharrides	4	2	2
3	Nomenclature & Chemistry of five-membered heterocycles with one heteroatom	4	2	2
4	Chemistry of five-membered heterocycles with one heteroatom (cont.)	4	2	2
5	Chemistry of five-membered heterocycles with two heteroatoms	4	2	2
6	Chemistry of five-membered heterocycles with two heteroatoms (cont.)	4	2	2
7	Chemistry of six-membered heterocycles	4	2	2

8	Chemistry of six-membered heterocycles (cont.)	**4**	**2**	**2**
9	**Mid-term Exam**			
10	IR spectroscopy	**4**	**2**	**2**
11	^{1}H NMR spectroscopy	**4**	**2**	**2**
12	^{1}H NMR spectroscopy (cont.)	**4**	**2**	**2**
13	^{1}H NMR spectroscopy (cont.) & ^{13}C NMR spectroscopy & Mass spectroscopy	**4**	**2**	**2**
14	Aminoacids & Peptides	**2**	**2**	**Practical exam**
15	Nucleic acids & Protein synthesis	**2**	**2**	**Practical exam**

4. Teaching and learning methods

a. Lectures **(√)**
b. Practical training/ laboratory **(√)**
c. Class activity **(√)**

5. Student assessment methods

Written periodical exam	**To assess**	**The ability of students to follow-up The course subjects.**
Practical exam	**To assess**	**The gained experience in laboratory methods& techniques and problem solving.**
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	**periodical exam**	**Week**	**9**
Assessment 2	**Practical exam**	**Week**	**14, 15**
Assessment 3	**Final exam**	**Week**	**16, 17**
Assessment 4	**Oral**	**Week**	**16, 17**

Weighting or assessments

Written periodical Examination	**15**	**%**
Practical Examination	**25**	**%**
Final Term Examination	**50**	**%**
Oral Examination	**10**	**%**
Other types of assessment		**%**
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) Spectrometric Identification of Organic Compounds, 7th ed. (2005), John Wiley and sons, Inc, NY.
- 2) Introduction to Spectroscopy: A Guide for Students of Organic Chemistry, 3rd ed. (2001), Harcourt College Publishers, Fort Worth.
- 3) Heterocyclic Chemistry (Vol 2: Five-Membered Heterocycles & Vol 3: Six-Membered Heterocycles), Springer-Verlag Berlin Heidelberg.
- 4) The Chemistry of Heterocycles: Structure, Reactions, Syntheses and Applications, 2nd ed. (2003), Wiley-VCH, Weinheim.
- 5) McMurry, J. in organic chemistry, 8th ed. (2011), Brooks/Cole, London.
- 6) Solmon's T. W. G. in Organic Chemistry 10th ed. (2010), John Wiley and sons, Inc, NY.
- 7) Clayden, Greeves, Warren and wothers Textbook of Organic Chemistry, Oxford University Press, 2001.

Recommended books

- 1) Spectrometric Identification of Organic Compounds, 7th ed. (2005), John Wiley and sons, Inc, NY.
- 2) Introduction to Spectroscopy: A Guide for Students of Organic Chemistry, 3rd ed. (2001), Harcourt College Publishers, Fort Worth.
- 3) Heterocyclic Chemistry (Vol 2: Five-Membered Heterocycles & Vol 3: Six-Membered Heterocycles), Springer-Verlag Berlin Heidelberg.
- 4) The Chemistry of Heterocycles: Structure, Reactions, Syntheses and Applications, 2nd ed. (2003), Wiley-VCH, Weinheim.
- 5) I. L. Finar Organic Chemistry Volume 1: The Fundamental Principles 5th edition, 1998, Longman Publishing Group.
- 6) Marc Loudon, Textbook of Organic Chemistry, "4th edn." Oxford University Press, New York, 2002.

7. Facilities required for teaching and learning

-Class rooms.
-Laboratory facilities.
- Data show.
- Computers.
–Library.
–Internet.
- Hot plate with magnetic stirrers.

Course coordinator:

Dr. Wagdy Mohamed

Head of Department:

Prof. Dr. Ramadan Eldomany

Date: 9/2020

Course Plan

Week	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	Carbohydrates: Introduction, classification, stereochemistry, synthesis of monosaccharrides	1.1.1., 1.1.3., 2.2.1., 2.2.3., 2.3.1., 2.3.2., 4.1.1., 4.1.2., 4.1.3., 4.3.1.	Lectures, practical training and class activities	Written, practical and oral exams
2	Carbohydrates: reactions of monosaccharrides	1.1.3., 1.1.4., 2.2.1., 2.3.1., 2.3.2., 4.1.1., 4.1.2., 4.1.3., 4.3.1.	Lectures, practical training and class activities	Written, practical and oral exams
3	Nomenclature & Chemistry of five-membered heterocycles with one heteroatom	1.1.1., 1.1.2., 1.1.3., 1.1.4., 2.2.3., 4.1.1., 4.1.3., 4.3.1.	Lectures, training and class activities	Written, practical and oral exams
4	Chemistry of five-membered heterocycles with one heteroatom (cont.)	1.1.1., 1.1.3., 1.1.4., 2.2.3., 4.1.1., 4.1.3., 4.3.1.	Lectures, training and class activities	Written, practical and oral exams
5	Chemistry of five-membered heterocycles with two heteroatoms	1.1.1., 1.1.3., 1.1.4., 2.2.3., 4.1.1., 4.1.3., 4.3.1.	Lectures, training and class activities	Written, practical and oral exams
6	Chemistry of five-membered heterocycles with two heteroatoms (cont.)	1.1.1., 1.1.3., 1.1.4., 2.2.3., 4.1.1., 4.1.3., 4.3.1.	Lectures, training and class activities	Written, practical and oral exams
7	Chemistry of six-membered heterocycles	1.1.1., 1.1.3., 1.1.4., 2.2.3., 4.1.1., 4.1.3., 4.3.1.	Lectures, training and class activities	Written, practical and oral exams
8	Chemistry of six-membered heterocycles (cont.)	1.1.1., 1.1.3., 1.1.4., 2.2.3., 4.1.1., 4.1.3., 4.3.1.	Lectures, training and class activities	Written, practical and oral exams
9	**Mid-term Exam**			
10	IR spectroscopy	1.1.1., 1.1.3., 1.1.4., 2.2.1., 2.2.3., 4.1.1., 4.1.3., 4.2.2., 4.3.1., 4.3.2.	Lectures and class activities	Written, practical and oral exams
11	^{1}H NMR spectroscopy	1.1.1., 1.1.3., 1.1.4., 2.2.1., 2.2.3., 4.1.1., 4.1.3., 4.2.2., 4.3.1., 4.3.2.	Lectures and class activities	Written, practical and oral exams
12	^{1}H NMR spectroscopy (cont.)	1.1.1., 1.1.3., 1.1.4., 2.2.1., 2.2.3., 4.1.1., 4.1.3., 4.2.2., 4.3.1., 4.3.2.	Lectures and class activities	Written, practical and oral exams

13	^{1}H NMR spectroscopy (cont.) & ^{13}C NMR spectroscopy	1.1.1., 1.1.3., 1.1.4., 2.2.1., 2.2.3., 4.1.1., 4.1.3., 4.2.2., 4.3.1., 4.3.2.	Lectures and class activities	Written, practical and oral exams
14	Aminoacids & Peptides	1.1.1., 1.1.3., 2.2.3., 4.1.2., 4.1.3., 4.3.1.	Lectures and class activities	Written and oral exams
15	Nucleic acids & Protein synthesis	1.1.1., 1.1.3., 2.2.3., 4.1.2., 4.1.3., 4.3.1.	Lectures and class activities	Written and oral exams

Course coordinator:

Dr. Wagdy Mohamed

Head of Department:

Prof. Dr. Ramadan Eldomany

Date: 9/2020

Kafrelsheikh University
Faculty of Pharmacy

جامعة كفر الشيخ
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Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	Bachelor of Pharmacy (Pharm D)
Major or minor element of program	Major
Department offering the course	Pharmaceutical technology
Department supervising the course	
Academic Year / Level	Second year, Semester 3
Date of specification approval	9/2020

A- Basic Information

Title: Pharmaceutics 1	Code :PT 303
Total credit Hours: 3 h	Lecture: 2 Practical :1hr

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- Liquid dosage forms such as solutions and disperse systems.
- Specification of liquid dosage forms.
- Factors affecting formulation design.
- Role of formulation design and additives in maintaining the stability of the dosage forms and thebioavailability of drug.
- Quality attributes of the selected products.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate knowledge from basic pharmaceutical science to formulate different classes of liquid dosage forms as a preliminary step in the manufacture of active pharmaceutical products.
This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. Identify pharmaceutical calculations requisite to the compounding and dispensing drugs in pharmacy practice.
1.1.2. Demonstrate the specifications of ideal suspension, emulsion and colloid.
1.1.3. Discuss the factors affecting stability of pharmaceutical colloid, suspensions and emulsions..
1.1.4. Definethe best additives to enhance the stability of pharmaceutical solutions, suspension and other disperse systems.

1.1.5. Integrate knowledge from fundamental pharmaceutical sciences to assess the efficacy and safety in patient and community.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1-COMPETENCY

Students will be able to work as a collaborative member of an inter-professional health care team

2.1.1. Work independently and effectively in a team 2.1.2. Retrieve and evaluate information from different sources about pharmaceutics.

2-2- COMPETENCY

Upon finishing this course, students will be able to formulate and standardize different liquid dosage forms which are useful in the manufacture of pharmaceutical products.
This competency will be developed via the following key elements:

KEY ELEMENTS

2.2.1. Apply the rules of manufacturing, storage and transportation of pharmaceutical disperse systems.. 2.2.2. Integrate pharmaceutical knowledge in formulating safe and effective dosage forms taking in consideration incompatibilities issues.. 2.2.3. Examine the best method for preparation of different pharmaceutical dispers systems. 2.2.4. Select suitable method for characterization of liquid dosage forms, active ingredient and excipients . 2.2.5. Develop and evaluate the quality attributes of liquid dosage forms. 2.2.6. Apply the principles of different techniques to operate the pharmaceutical equipment and instruments used in liquid dosage for

2-3- COMPETENCY

Upon finishing this course, students will be able to handle and dispose synthetic pharmaceutical products effectively and safely with respect to relevant laws and legislations.
This competency will be developed via the following key elements:

KEY ELEMENTS

2.3.1. Safely use different chemicals to avoid their harm to the students. 2.3.2. Recognize and follow MSDS safety guidelines for safe and appropriate handling and disposal of pharmaceutical chemical materials in the laboratory. 2.3.3. Demonstrateto the patient the safe use and storage of the prescribed medicine.

DOMAIN 3:Pharmaceutical Care

DOMAIN 4: PERSONAL PRACTICE

3. Contents

Week	Topic	Total credit hours	Lecture	Practical(credit hours)
1	Introduction -Pharmaceutical calculations	3	2	1
2	-Liquid dosage forms	3	2	1
3	- Pharmaceutical solutions	3	2	1
4	-Mixtures	3	2	1
5	-Introduction to disperse system Suspensions -Reasons for preparing suspension -Characters of ideal suspension	3	2	1
6	- ideal characters of suspending agents -Formulation and evaluation of suspensions ‘-Stability of suspensions	3	2	1
7	Periodical exam			
8	Emulsion -Definition -Types of emulsion	3	2	1
9	- Theories of emulsification	3	2	1
10	-Stability of emulsions	3		1
11	Different methods for Preparation of emulsion	3	2	1
12	ideal characters of Emulsifying agents -examples of emulsifying agents	3	2	1
13	Colloids -definition -Pharmaceutical application of colloids	3	2	1
14	-Types of colloidal systems	2	2	Practical exam
15	-ideal characters of colloids -Stability of colloids	2	2	Practical exam

Kafrelsheikh University
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4. Teaching and learning methods

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

5. Student assessment methods

Written periodical 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.
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	periodical 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

Written periodical Examination	15	%
Practical Examination	25	%
Final Term Examination	50	%
Oral Examination	10	%
Other types of assessment		%
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.
Geoffrey D. Tovey, Pharmaceutical Formulation :The Science and Technology of Dosage Forms, 2018.
Kevin Taylor, Michael Aulton, Aulton's Pharmaceutics: The Design and Manufacture of Medicines. 5th Edition, 2017.

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

- **Class rooms.**
- **Laboratory facilities.**
- **Data show.**
- **Computers.**
- **Internet**
- **smart board**
- **Unit for distance learning.**

Course coordinator:

Prof. Dr / Abd El -aziz El-said

Head of Department:

Prof. Dr / Abd El -aziz El-said

Date: / 9 /2020

Kafrelsheikh University
Faculty of Pharmacy

جامعة كفر الشيخ
كلية الصيدلة

Course Plan

Course ILOs Matrix – Teaching and Learning Strategy and Student Assessment

Course title: Pharmaceutics 1 **Course code: PT 303**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Introduction -Pharmaceutical calculations	1.1.1, 1.1.2,2.1.2, 2.2.1, 2.2.2, 2.2.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 2	-Liquid dosage forms	1.1.2, 1.1.3, 1.1.4, 2.2.1, 2.2.2, 2.2.3, 2.2.5, 2.2.6, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 3	- Pharmaceutical solutions	1.1.2, 1.1.3, 1.1.5,2.1.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.2.6, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 4	-Mixtures	1.1.5,2.1.1, 2.2.1, 2.2.2, 2.2.3, 2.2.5, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 5	-Introduction to disperse system Suspensions -Reasons for preparing suspension -Characters of ideal suspension	1.1.3, 1.1.5, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 6	- ideal characters of suspending agents -Formulation and evaluation of suspensions ‘-Stability of suspensions	1.1.4, 1.1.5, 2.2.3, 2.2.5, 2.2.6, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 7	Periodical exam			
Week # 8	Emulsion -Definition -Types of emulsion	1.1.1, 1.1.3, 2.2.1, 2.2.2, 2.2.3, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 9	- Theories of emulsification	1.1.3, 2.2.1, 2.2.2, 2.2.3,	Lectures, E-learning,	Written, practical and

		2.2.4, 2.3.1, 2.3.2, 2.3.3.	practical training and class activities	oral exams
Week # 10	-Stability of emulsions	1.1.4, 1.1.5,2.1.2, 2.2.5, 2.2.6, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, practical training and class activities	Written, practical and oral exams
Week # 11	Different methods for Preparation of emulsion	1.1.1,2.1.1, 2.2.1, 2.2.4, 2.2.5, 2.2.6, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, and practical training	Written, practical and oral exams
Week # 12	ideal characters of Emulsifying agents -examples of emulsifying agents	1.1.1, 2.2.1, 2.2.4, 2.2.5, 2.2.6, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, and practical training	Written, practical and oral exams
Week # 13	Colloids -definition -Pharmaceutical application of colloids	1.1.1, 1.1.3, 2.2.1, 2.2.2, 2.2.3, 2.3.1, 2.3.2, 2.3.3.	Lectures, E-learning, and practical training	Written, practical and oral exams
Week # 14	-Types of colloidal systems	1.1.3, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.1, 2.3.2, 2.3.3.	Lectures and E-learning	Written and oral exams
Week # 15	-ideal characters of colloids -Stability of colloids	1.1.4, 1.1.5, 2.2.1, 2.2.5, 2.2.6,, 2.3.1, 2.3.2, 2.3.3.	Lectures and E-learning	Written and oral exams

Course coordinator: **Head of department:**

Prof. Dr / Abd El -aziz El-said. **Prof. Dr / Abd El -aziz El-said**

Course Specifications

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (Pharm D)**
Major or minor element of program	**Major**
Department offering the course	**Pharmacognosy**
Department supervising the course	**Pharmacognosy**
Academic Year / Level	**Level 2, semester (3)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Pharmacognosy (2)	**Code: PG 303**
Total credit Hours :3	**Lecture: 2**
	Practical: 1

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

- Different macroscopical and microscopical characters of some representative examples of medicinal plant used in international and Egyptian market with focus on organs as fruits, herbs, subterranean organs, unorganized, marine and animal drugs.
- Different medicinal plants' active constituents and their traditional, evidence-bases uses, contraindications, side effects, and potential drug-herb interaction.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to correlate knowledge from basic chemistry, microscopic character and ethnopharmacological properties of plants to identify different plants and their uses in Egyptian and worldwide pharmaceutical markets. This competency will be developed via the following key elements:

KEY ELEMENTS

1.1.1. Explain the pharmacology of fruits, herbs, subterranean organs, unorganized, marine, and animal drugs based in correlation with their active constituents.
1.1.2. *Retrieve information* about morphological and histological characters and production of fruits, herbs, subterranean organs, unorganized, marine and animal drugs
1.1.3. Communicate efficiently and effectively with other health care team using the proper terms, abbreviations and symbols related to pharmacology of medicinal plants.

1.1.4. Articulate knowledge about different analytical techniques for detection of adulteration of different fruits, herbs, subterranean organs, unorganized, marine, and animal drugs.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-2- Competency

Students will be able to prepare, dispense, store, and distribute medical plant-derived products according to national and WHO guidelines in healthcare institutes and formulary

This competency will be developed via the following key elements:

KEY ELEMENTS

2-2-8 Select the suitable techniques for identification of different fruits, herbs, subterranean organs, unorganized, marine, and animal drugs based on their microscopic and chemical profile .

2-2-12 Employ guidelines of WHO regarding the safe use of herbal and alternative medicine including uses, dosage, safety and herbal medicines.

2-3- COMPETENCY

Upon finishing this course, students will be able to handle and dispose chemicals derived from natural pharmaceutical materials/products effectively and safely with respect to relevant laws and legislations.

This competency will be developed via the following key elements:

KEY ELEMENTS

2-3-1 Manage and handle raw material and chemicals derived from fruits, herbs, subterranean organs, unorganized, marine, and animal drugs. 2-3-2 Dispose chemicals material and chemicals derived from fruits, herbs, subterranean organs, unorganized, marine, and animal drugs. products/waste safely to avoid the environmental hazards.

DOMAIN 3: PHARMACEUTICAL CARE

3-2- Competency

Upon finishing this course, students will be able to provide counselling and education services to patients and communities about safe and rational use of medicinal plants

This competency will be developed via the following key elements:

KEY ELEMENTS

3-2-6 Use effectively drugs derived from from fruits, herbs, subterranean organs, unorganized, marine, and animal sources for the management of different diseases

DOMAIN 4: PERSONAL PRACTICE

4-2- Competency

Upon finishing this course, Students will be able to effectively communicate verbally, non-verbally and in writing with patient and health care team.

This competency will be developed via the following key elements:

KEY ELEMENTS

4-2-1 Show the ability to effectively present a topic of interest using recent technologies

3. Contents

Week	Topic	Total credit hours	Lecture	Practical/ Tutorial
1	-Introduction of fruits -Umbelliferous fruits (fennel, anise, Cumin)	4	2	2
2	-Umbelliferous fruits (ammi visnaga, ammi majus, coriander, Carawy, Dill, Celery)	4	2	2
3	-Medicinal fruits as capsicum, colocynth, vanilla, Black pepper, cubebs, poppy capsule, bitter orange peel, star anise, wheat grain	4	2	2
4	-Introduction of subterranean organs	4	2	2
5	-Rhizomes as rhubarb, filix mas, podophyllum, ginger, hydrastis, galangl, colchicum	4	2	2
6	-Roots as ipecacuanha, senega	4	2	2
7	**Mid-term exam**			
8	-unorganized drugs as extracts, gums, Dried juices, lattices, resins	4	2	2
9	- unorganized drugs as oleo-resins, oleo-gum-resins, volatile oil, oils & fats, waxes, saccharine substances	4	2	2
10	Drugs of animal origin	4	2	2
11	Marine drugs	4	2	2
12	Marine drugs	4	2	2
13	Introduction to herb	4	2	2

14	Mentha, lobelia	2	2	Practical exam
15	solanaceous herbs	2	2	Practical exam

4. Teaching and learning methods

a. Lectures (√)
b. Practical training/ laboratory (√)
c. Class activity (√)
c. E-learning (√)

5. Student assessment methods

Written periodical 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.
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	periodical 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

Written periodical Examination	15	%
Practical Examination	25	%
Final Term Examination	50	%
Oral Examination	10	%
Other types of assessment		%

Total	100	%

6. List of references

Course notes

- Notes on pharmacognosy prepared in the form of a book authorized by the department
- Lab Manual of pharmacognosy prepared and distributed by the Department

Essential books (text books)

- Trease and Evans, Pharmacognosy 16th edition, WB Saunders

Recommended books

- Bruneton, Pharmacognosy-Pyhtochemistry-Medicinal Plants, 2nd edition, Technique Documentation, 2001.
- McCreath, S. B., and Delgoda, R. (2017) *Pharmacognosy: Fundamentals, applications and strategies*, Academic Press.
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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 (Water baths, Microscopes)
- Data show.
- Computers.
–Library.
–Internet.
-Interactive boards and distant learning unit

Course coordinator:

Dr. Saleh Elsharkawy

Head of Department:

Prof. Dr. Ramadan Eldomany

Date: 9/2020.

Course Specifications

Course Plan

Wk.	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	-Introduction of fruits -Umbelliferous fruits (fennel, anise, Cumin)	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, discussion, and brain storming	Written, and oral exams
2	-Umbelliferous fruits (ammi visnaga, ammi majus, coriander, Carawy, Dill, Celery)	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
3	-Medicinal fruits as capsicum, colocynth, vanilla, Black pepper, cubebs, poppy capsule, bitter orange peel, star anise, wheat grain	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
4	-Introduction of subterranean organs	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
5	-Rhizomes as rhubarb, filix mas, podophyllum, ginger, hydrastis, galangl, colchicum	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, discussion, and brain storming	Written, practical and oral exams
6	-Roots as ipecacuanha, senega	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
7	**Mid-term exam**			
8	-unorganized drugs as extracts, gums, Dried juices, lattices, resins	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
9	- unorganized drugs as oleo-resins, oleo-gum-resins, volatile oil, oils & fats, waxes, saccharine substances	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8.,	Lectures, practical and	Written, practical and oral exams

		2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	seminar presentation	
10	Drugs of animal origin	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
11	Marine drugs	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, discussion and brain storming	Written, practical and oral exams
12	Marine drugs	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, practical and oral exams
13	Introduction to herb	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, discussion and brain storming	Written, practical and oral exams
14	Mentha, lobelia	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, practical and seminar presentation	Written, and oral exams
15	solanaceous herbs and revision	1.1.1, 1.1.2, 1.1.3, 1.1.4, 2.2.8., 2.2.12, 2.3.1, 2.3.2 ,3.2.6, 4.2.1	Lectures, discussion and brain storming	Written, and oral exams

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

programme on which the course is given	**Bachelor of Pharmacy (Pharma D)**
Major or minor element of programme	**Major**
Department offering the course	**Physiology department , faculty of medicine**
Department supervising the course	**Pharmacology and toxicology department**
Academic Year / Level	**Level (2), semester 3**
Date of specification approval	**9/2020**

A- Basic Information

Title : Physiology	**Code : MD304**
Total contact hours:3	**Lecture :2**
Tutorial :	**Practical :1**

B- Professional Information

1. Overall aims of the course

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

- Study the normal physiological functions of respiratory system, autonomic nervous system, digestive system and blood.
- Study the abnormal pathophysiological conditions affecting respiratory system, autonomic nervous system, digestive system and blood.
- Practically identify some physiological parameters such as ESR, Respiratory rate, ….etc.

2. Intended learning outcomes of the course (ILOs)

A- DOMAIN 1- FUNDAMENTAL KNOWLEDGE

1-1- COMPETENCY

Upon finishing this course, students will be able to integrate knowledge from basic physiological knowledge to identify the abnormality in body function via the following key elements

- 1.1.1 Demonstrate Physiological aspects of different body systems

including respiratory system, autonomic nervous system and blood.

- 1.1.2 identify the Normal and abnormal body function.
- 1.1.3 Identify The basic epidemiology and pathophysiology of diseases of the different body systems.
- 1.1.4 Identify Different physiological parameters.

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-1- COMPETENCY

Upon finishing this course, students will be able to detect abnormal physiological function,based on key physiological indicator

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

DOMAIN 3: PHARMACEUTICAL CARE

3-1- COMPETENCY

Upon finishing this course, students will be able to apply the principles of body functions

This competency will be developed via the following key elements:

- 3.1.1. relate the difference between physiology of body systems studied.
- 3.1.2. monitor some common physiological tests e.g. blood group testing and ESR.
- 3.1.3. integrate effectively library search, retrieval of information, carry out private study as well as analyze and interpret experimental results.

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express leadership, time management, critical thinking, problem solving, independent and team working skills.
This competency will be developed via the following key elements

- 4.1.1. Retrieve information from a variety of sources, including libraries, databases and internet.
- 4.1.2. apply skills of Interact independently or as a part of team in different pharmaceutical field
- 4.1.3. Demonstrate creativity and time management skills.
- 4.1.4. learning needed to implementing presentation, writing reports and interviewing skills.
- 4.1.5- 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	Tutorial / Practical
1	Respiratory system, Blood, Autonomic Nervous System	3	2	1
2	Respiratory system, Blood, Autonomic Nervous System (cont.)	3	2	1
3	Respiratory system, Blood, Autonomic Nervous System (cont.)	3	2	1
4	Respiratory system, Blood, Autonomic Nervous System (cont.)	3	2	1
5	Respiratory system, Blood, Autonomic Nervous System (cont.)	3	2	1
6	Respiratory system, Blood, Autonomic Nervous System (cont.)	3	2	1
7	**Mid-term exam**			
8	Respiratory system, Blood, Autonomic Nervous System (cont.)	3	2	1
9	Respiratory system, Blood, Autonomic Nervous System (cont.)	3	2	1
10	Blood,Digestion, Respiratory system	3	2	1

11	Digestion, Respiratory system	**3**	**2**	**1**
12	Digestion, Respiratory system (cont.)	**3**	**2**	**1**
13	Digestion, Respiratory system (cont.)	**3**	**2**	**1**
14	Digestion, Respiratory system (cont.)	**2**	**2**	Practical exam
15	Digestion, Respiratory system (cont.)	**2**	**2**	Practical exam

4. Teaching and learning methods

a. Lectures&virtual lectures(√
b. Practical training / laboratory(√)
c. Seminar / Workshop ( )
d. Class Activity(on line 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	15%
Final term Examination	50%
Oral Examination	10%
Practical Examination	25%
Other types of assessment	
Total	**100%**

6. List of references

Essential books (text books)

Textbook in Medical Physiology and Pathophysiology(2005). Poul-Erik Paulev. 2 nd 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 -library

-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

Course coordinator :

Dr. Sanad Elkholy

Head of Department :

Dr. Sherin zakria

Date : / 9 /2020

Course Plan

Course title: **Physiology** Course code: **MD 304**

Course Contents		ILOs	Teaching and Learning Methods	Student Assessment Methods
Week # 1	Respiratory system, Blood, Autonomic Nervous System	1.1.1, 2.1.1, 3.1.1,4.1.1 , 4.1.3	Lectures and practical training	Written, practical and oral exams
Week # 2	Respiratory system, Blood, Autonomic Nervous System (cont.)	1.1.1,1.1. 4, 2.1.2,3.1.3 , 4.1.2	Lectures and practical training	Written, practical and oral exams
Week # 3	Respiratory system, Blood, Autonomic Nervous System (cont.)	1.1.3,1.1.4,b1, 2.1.2, 3.1.1, 3.1.3, 4.1.2, 4.1.3	Lectures and practical training	Written, practical and oral exams
Week # 4	Respiratory system, Blood, Autonomic Nervous System (cont.)	1.1.2,1.1.4,2.1.1,2.1.2 , 3.1.3, 4.1.2 , 4.1.3	Lectures and practical training	Written, practical and oral exams
Week # 5	Respiratory system, Blood, Autonomic Nervous System (cont.)	1.1.1, 1.1.3,2.1.1,2.1.2 , 3.1.1, 3.1.3, 4.1.1	Lectures and practical training	Written, practical and oral exams
Week # 6	Respiratory system, Blood, Autonomic Nervous System (cont.)	1.1.1,1.1. 2,11.3,1.1.4,2.1. 1, 3.1.3, 4.1.3	Lectures and practical training	Written, practical and oral exams

Week # 7	**Mid-term exam**			
Week # 8	Respiratory system, Blood, Autonomic Nervous System (cont.)	1.1.4,2.1. 1,2.1.2 , 3.1.1, 3.1.3, 4.1.4,4.1.5	Lectures and practical training	Written, practical and oral exams
Week # 9	Respiratory system, Blood, Autonomic Nervous System	1.1.1,1.1.4,2.1.1,2.1.2 , 3.1.1, 3.1.3, 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5	Lectures and practical training	Written, practical and oral exams
Week # 10	Blood,Digestion, Respiratory system	1.1.1,1.1.2,1.1.3,1.1.4,2.1 .1, 2.1.2, 3.1.1, 3.1.3, 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5	Lectures and practical training	Written, practical and oral exams
Week # 11	Digestion, Respiratory system	1.1.1,1.1.2,1.1.3,1.1.4,2.1 . 1,2.1.2 ,2.1.3 ,3.1.2 , 4.1.1, 4.1.2, 4.1.3	Lectures and practical training	Written, practical and oral exams
Week # 12	Digestion, Respiratory system (cont.)	1.1.1,1.1.2,1.1.3,1.1.4,2.1 . 1,2.1.2 , 3.1.2, 4.1.1, 4.1.2, 4.1.3	Lectures and practical training	Written, practical and oral exams
Week # 13	Digestion, Respiratory system (cont.)	1.1.1,1.1.2,1.1.3,1.1.4,2.1 . 1,2.1.2 ,2.1.3 , 3.1.2, 4.1.1, 4.1.2, 4.1.3	Lectures and practical training	Written, practical and oral exams
Week # 14	Digestion, Respiratory system (cont.)	1.1.1,1.1.2,1.1.3,1.1.4,2.1 . 1,2.1.2 ,3.1.2 , 4.1.1, 4.1.2, 4.1.3	Lectures	Written and oral exams
Week # 15	Digestion, Respiratory system (cont.)	1.1.1,1.1.2,1.1.3,1.1.4,2.1 . 1,2.1.2 ,2.1.3 , 3.1.2, 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5	Lectures	Written and oral exams

Course coordinator :

Dr. Sanad Elkholy

Head of Department :

Dr. Sherin zakria

Date : 9 /2021

Course Specifications

Kafrelsheikh University, Faculty of Pharmacy
Course Specifications

Program on which the course is given	**Bachelor of Pharmacy (Pharm D)**
Major or minor element of program	**Major**
Department offering the course	**College Vice Dean**
Department supervising the course	**College Vice Dean**
Academic Year / Level	**Second year , semester (3)**
Date of specification approval	**9/2020**

A- Basic Information

Title: Scientific writing	**Code: NP 302**
Total credit Hours :1	**Lecture: 1**
	Practical: 0

B- Professional Information

1. Overall aims of the course

Upon successful completion of this course, the students will develop various competencies based on covering the following general outlines:

Basic information that introduce students to the principles of good scientific writing to be familiar with basic structure of scientific reports and research articles to cover:-

1- Methods of paraphrasing and common mistakes on scientific writing.

2-Different writing styles and how to write a scientific report.

3-Proposal and manuscript to use tables and figures in data presentation.

4-Evaluation of literature and information sources.

2. Course learning outcomes

DOMAIN 1- FUNDAMENTAL KNOWLEDGE

Course Specifications

1-1- COMPETENCY

Upon finishing this course, students will be able to cover basic of scientific writing and research articles

This competency will be developed via the following key elements:

KEY ELEMENTS

1-1-1 Principles of basic and applied pharmaceutical, clinical sciences and behavioral sciences as well as administrative sciences.
1-1-2 Retrieve basic scientific drug information from different resources to manage different therapeutic issues and improve health care services.
1-1-3 Integrate information from different scientific resources on recent technologies that contribute to pharmaceutical industry.
1-1-4 Articulate and interpret informationfrom different scientific literature to improve professional decision making skills

DOMAIN 2: PROFESSIONAL AND ETHICAL PRACTICE

2-5- COMPETENCY

Upon finishing this course, students will be able to write research articles ,proposal and manuscript .

This competency will be developed via the following key elements:

KEY ELEMENTS

2-1-1 Contribute in a research team in order to plan and carryout research studies using suitable methodologies.

Course Specifications

DOMAIN 4: PERSONAL PRACTICE

4-1- COMPETENCY

Upon finishing this course, students will be able to express leadership, time management, critical thinking, problem solving, independent and team working skills.

This competency will be developed via the following key elements:

KEY ELEMENTS

4-1-1 Show the ability to effectively present a topic of interest using recent technologies.

4-1-2 Communicate clearly by verbal and written means with patients and members of healthcare society.

3. Contents

Week	Topic	Total credit hours	Lecture	Practical/ Tutorial
1	Methods of paraphrasing and common mistakes on scientific writing	1	1	0
2	Methods of paraphrasing and common mistakes on scientific writing	1	1	0
3	Different writing styles and how to write a scientific report.	1	1	0
4	Different writing styles and how to write a scientific report.	1	1	0
5	Different writing styles and how to write a scientific report.	1	1	0
6	Proposal and manuscript to use tables and figures in data presentation	1	1	0

7	Proposal and manuscript to use tables and figures in data presentation	**1**	**1**	**0**
8	Proposal and manuscript to use tables and figures in data presentation	**1**	**1**	**0**
9	**Mid-term exam**			
10	-Evaluation of literature and information sources.	**1**	**1**	**0**
11	-Evaluation of literature and information sources.	**1**	**1**	**0**
12	-Evaluation of literature and information sources.	**1**	**1**	**0**
13	-Evaluation of literature and information sources.	**1**	**1**	**0**
14	Revision	**1**	**1**	**0**
15	Practical exam			

4. Teaching and learning methods

a. Lectures **(√)**
b. Practical training/ laboratory **( )**
c. Class activity **(√)**

5. Student assessment methods

Written periodical 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**

Course Specifications

Assessment schedule

Assessment 1	**periodical exam**	**Week**	**7**
Assessment 2	**Final exam**	**Week**	**16, 17**
Assessment 3	**Oral**	**Week**	**16, 17**

Weighting or assessments

Written periodical Examination	**20**	**%**
		%
Final Term Examination	**60**	**%**
Oral Examination	**20**	**%**
Other types of assessment		**%**
Total	**100**	**%**

6. List of references

Course notes

- Notes on scientific writing prepared and distributed by Dept. of Pharmaceutical Chemistry.

Essential books (text books)

d books

- 1) Writing literature reviews.
- 2) Writing science.
- 3) The scientist's guide to write.
- 4)Concepts in scientific writing.
- 5)Scientific writing and communication,: papers, proposals and presentation.

Websites

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

7. Facilities required for teaching and learning

-Class rooms.
- Data show.
- Computers.
–Library.
–Internet.

Course coordinator:

Dr. Wagdy Mohamed

Head of Department:

Prof. Dr. Abd El Aziz El Said **date: 9/2020**

Course Specifications

Course Plan

Week	Topic	Key Elements	Teaching & Learning Methods	Student Assessment Methods
1	Methods of paraphrasing and common mistakes on scientific writing	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
2	Methods of paraphrasing and common mistakes on scientific writing	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
3	Different writing styles and how to write a scientific report	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
4	Different writing styles and how to write a scientific report	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
5	Different writing styles and how to write a scientific report	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
6	Proposal and manuscript to use tables and figures in data presentation	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
7	Proposal and manuscript to use tables and figures in data presentation	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
8	Proposal and manuscript to use tables and figures in data presentation	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures and practical training	
9	**Mid-term exam**			
10	Evaluation of literature and information sources.	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
11	Evaluation of literature and information sources.	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams

Course Specifications

12	Evaluation of literature and information sources.	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
13	Evaluation of literature and information sources.	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures, practical training and class activities	Written, practical and oral exams
14	Revision	1.1.1, 1.1.2,1.1.3, 1.1.4,2.1.1,4.1.1,4.1.2.	Lectures and class activities	Written and oral exams
15	Written exam			Written and oral exams

Course coordinator:

Dr. Wagdy Mohamed

Head of Department:

Prof. Dr. Abd El Aziz El Said

Date: 9/2020