COURSE SPECIFICATIONS

Faculty of Pharmacy

Bachelor of pharmacy

(Clinical Pharmacy)

Fourth level – Semester 8

2018-2019

CONTENTS:

COURSE SPECIFICATIONS

Medicinal chemistry--2

Fourth level –Semester 8

2018-2019

Course specification of Medicinal Chemistry-2

University: Zagazig **Faculty:** Pharmacy

A- Course identification:

1. Program (s) on which the course is given: Bachelor of pharmacy (Clinical pharmacy)
2. Major or Minor element of programs: Major
3. Department offering the course: Medicinal chemistry Dept.
4. Academic year Level: fourth level /8th semester
5. Date of specification approval:

B- Basic information:

Title : Medicinal chemistry II Code: PC810

Credit Hours: 2h + 1h = 3h

Lectures: 2hrs/week

Practical: 1hr/week

Tutorials: ----

C- Professional information:

1- Objectives:

On completion of the course, students will be able to:

Describe synthesis, assay, mode of action, SAR and uses of CNS-acting drugs, nonsteroidal anti-inflammatory agents, steroidal hormones, cardiovascular drugs& opioid analgesics. nonsteroidal anti-inflammatory agents

- Analyze and interpret experimental results.

2- Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding:	
a1	Demonstrate the synthetic routes and the analytical methods, CNS-acting drugs, nonsteroidal anti-inflammatory agents, steroidal hormones, cardiovascular drugs and opioid analgesics
a2	Outline the mechanism of action for CNS-acting drugs, nonsteroidal anti-inflammatory agents, steroidal hormones, cardiovascular drugs and opioid analgesics.
B- Professional and Practical skills:	
b1	Handle chemicals safely & effectively.
b2	Perform titrimetric & spectrophotometric assay of drugs with interpretation of results
C- Intellectual skills:	
c1	Adopt GLP guidelines in handling chemicals & laboratory equipments.
c2	Apply quantitative and qualitative methodology and assay of authentic samples.
c3	Apply quantitative methods for assay of pharmaceutical preparations contained the mentioned drugs.
D-General and Transferable skills:	
d1	Improve professional abilities by evaluation information from different sources.
d2	Work effectively as a member of a team.
d3	Write reports and present it

D- Contents:

Week No.	Lecture contents	Practical session
1	**Steroidal hormones** -Nomenclature of Steroids -Female sex hormones (estrogenic agents) -Nonsteroidal anti-estrogenic agents -aromatase inhibitor	-Laboratory safety measures
2	-Female sex hormones (progesterone derivatives), oral contraceptives -Androgens& anti-androgenic agents	-Titrimetric analysis
3	-Anabolic Agents -Mineralocorticoids and Glucocorticoids	-Assay of acetylsalicylic acid (Aspirin) in powder form
4	**Nonsteroidal anti-inflammatory agents** -Introduction -Salicylates -p-Aminophenols -Pyrazolone derivatives -N-aryl anthranilic acid derivatives	-Assay of acetylsalicylic acid (Aspirin) in Tablets or suppositories form
5	- Arylacetic acid derivatives -Propionic acid derivatives, -Oxicams -Selective COX2 inhibitors - Drugs used in treatment of gout.	-Assay of Novalgin in tablets or suppositories form

6	**Narcotic analgesics** -Natural narcotic analgesics -Semisynthetic narcotic analgesics -Narcotic antagonists -Synthetic narcotic analgesics	**-Activity (presentation)**
7	**Midterm Exam**	**Practical exam (1)**
8	**Central nervous system stimulants** Analeptics, Antidepressants,Central sympathomimetic agents and Psychodelics	-Assay of paracetamol
9	**Central nervous system depressants** -Sedative and hypnotics	-Assay of Novalgin in ampoule form
10	-General anesthetics -Antiepileptic	-Assay of ketoprofen
11	-Minor tranquilizer -Major tranquilizer	-Assay of ibuprofen
12	**Cardiovascular drugs** **-Antianginal agents and vasodilators** **-Antihypertensive Agents** -Centrally acting sympatholytics (α-2 Agonists) -Peripherally acting Sympatholytics(α-1 antagonists) -β-Adrenergic Antagonists	-Assay of indomethacin **-Activity (case study)**
13	-Angiotensin Antagonists -Calcium Channel Blockers [CCBs] -Direct vasodilators -**Anti-arrhythmic Drugs**	-Functional group analysis and their applications
14	- Anticoagulants and antihyperlipidemic Drugs	Practical exam (2)
15	**Final exam (oral & written)**	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Activity(presentation-Case study)

F- Student Assessment methods:

1- Written exams to assess: a1, a2, c1, c2, c3

2- Activity to assess: d1, d3

3- Practical exams to assess: b1, b2, d2, d3

4- Oral exam to assess: a1, a2, c1, c2, c3

Assessment schedule

Assessment (1): Midterm exam	7
Assessment (2): Final written exam	Week 15
Assessment (3): Activity	Week 6, 12
Assessment (4): Practical exams	Week 7,14
Assessment (5): Oral exams	Week 15

Weighting of Assessment

Assessment method	Marks	Percentage
Midterm exam	10	10%

Final written exam	50	50%
Practical exams & activity	25	25%
Oral exam	15	15%
TOTAL	100	100%

G- Facilities required for teaching and learning:

•For lectures: Black (white) boards, data show, air conditioned classroom

•For practical: Chemicals, glassware, instruments, Software, Digital balances.

H- List of References:

1- Course Notes: Student book of Medicinal chemistry (2) approved by Medicinal chemistry department **2018**

2- Essential Books (Text Books)

i-Textbook of Organic Medicinal and Pharmaceutical Chemistry "Wilson, Charles Owens; Beale, John Marlowe; Block, John H.; Block, John H.; Gisvold, Ole "Wilson &Gisvold's, Wiley-Interscience (2011).

ii- "Foye's Principles of Medicinal Chemistry", Williams, David A., William O. Foye, and Thomas L. Lemke, Lippincott Williams and Wilkins (2013).

iii-An Introduction to Medicinal Chemistry", Patrick, Graham L "An Introduction to Medicinal Chemistry", Oxford University Press (2014).

3- Periodicals, Web Sites, etc

i- Anti-Cancer Drug Design

ii-Bioorganic & Medicinal Chemistry Letters

iii-Medicinal Research Reviews

iv-Drugs of the Future.

Course Coordinator: Prof. Dr. Mohamed Elhusseny

Head of Department: Prof. Dr. Kamel Metwally

Date.....واعتماد توصيف المقرر من مجلس القسم المقرر بتاريخ

Matrix- I of Medicinal chemistry-2

Course Contents		ILOs of Medicinal Chemistry- 2course									
		knowledge and understanding		professional and practical skills		intellectual skills			Transferable and general skills		
		a1	a2	b1	b2	c1	c2	c3	d1	d2	d3
1	Sedative and hypnotics	x	x								
2	General anesthetics & antiepileptic	x	x								
3	Minor tranquilizer& major tranquilizer	x	x								
4	Analeptics & antidepressants	x	x								
5	Central sympathomimetic agents and psychodelics	x	x								

6	Nonestroidal anti-inflammatory agents, salicylates, p-aminophenols, pyrazolone derivatives.	x	x								
7	Nonestroidal anti-inflammatory agents, N-arylanthranilic acid derivatives, aryl acetic acid derivatives, aryl propionic acid derivatives, oxicams and drugs used in treatment of gout.	x	x			x					
8	Narcotic analgesics, natural narcotic analgesics, semisynthetic narcotic analgesics, narcotic antagonists, synthetic narcotic analgesics	x	x								
9	Antianginal agents and vasodilators, calcium channel blockers	x	x								
10	Anti-arrhythmic drugs & antihypertensive agents	x	x								
11	Antihypertensive agents, anticoagulants and antihyperlipidemic drugs	x	x								
12	Nomenclature of steroidal hormones, mineralocorticoids and glucocorticoids	x	x								
13	Female sex hormones (Estrogen, Progesterone) & anti-estrogens,oral contraceptives	x	x								
14	Steroidal hormones ,androgens and anabolic agents & anti-Androgenics	x	x								
15	Open discussions	x	x								

16	Laboratory safety measures			x							
17	Assay of novalgin ,aspirin ,paracetamol, ketoprofen, ibuprofen, indomethacin & prescription									x	
18	Functional group analysis and their applications				x		x			x	
19	Activities								x		x

Matrix II of Medicinal Chemistry 2 Course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Method of assessment		
						lecture	practical session	self learning	written exam	practical exam	oral exam
2.5	Principles of drug design, development and synthesis.	A9	a1	Steroidal hormones	student book ,essential books	X			x		x
				Cardiovascular drugs	Student book	X			x		x
				Drugs acting on central nervous system	Student book	X			x		x
				Nonestroidal antiinflammatory agents	student book, essential books	X			x		x
				Narcotic analgesics	Student book	X			x		x

2.13	Pharmacological properties of drugs including mechanisms of action, therapeutic uses, dosage, contra-indications, ADRs and drug interactions.	A22	a2	Steroidal hormones	student book, essential books	X			x		x
				Cardiovascular drugs	Student book	X			x		x
				Drugs acting on central nervous system	Student book	X			x		x
				Nonestroidal antiinflammatory agents	student book essential books	X			x		x
				Narcotic analgesics	Student book	X			x		x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely.	B2	b1	Titrimetric analysis	Practical notes		x			x	
				Assay of novalgin ,aspirin ,paracetamol, ketoprofen, ibuprofen, indomethacin & prescription	Practical notes		x			x	
				Functional group analysis and their applications	Practical notes		x			x	

3.4	Extract, isolate, synthesize, purify, identify, and /or standardize active substances from different origins.	B5	b2	Titrimetric analysis	Practical notes		x			x	
				Assay of novalgin ,aspirin ,paracetamol, ketoprofen, ibuprofen, indomethacin & prescription	Practical notes		x			x	
3.11	Conduct research studies and analyze the results.	B17		Functional group analysis and their applications	Practical notes		x			x	
4.2	Comprehend and apply GLP, GPMP, GSP and GCP guidelines in pharmacy	C2	c1	Titrimetric analysis	Practical notes		x			x	

	practice.			Assay of novalgin ,aspirin ,paracetamol, ketoprofen, ibuprofen, indomethacin & prescription	Practical notes		x			x	
				Functional group analysis and their applications	Practical notes		x			x	
4.3	Apply qualitative and quantitative analytical and biological methods for QC and assay of raw materials as well as pharmaceutical preparations	C3	c2	Steroidal hormones	student book	X			x		x
				Cardiovascular drugs	student book	X			x		x
				Drugs acting on central nervous system	student book	X			x		x
				Nonestroidal antiinflammatory agents	student book	X			x		x
				Narcotic analgesics	student book	X			x		x

4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C5	c3	Steroidal hormones	student book	X			x		x
				Cardiovascular drugs	student book	X			x		x
				Drugs acting on central nervous system	student book	X			x		x
				Nonestroidal antiinflammatory agents	student book ,essential books	X			x		x
				Narcotic analgesics	student book	X			x		x
				Titrimetric analysis	Practical notes		x			x	
				Assay of novalgin ,aspirin ,paracetamol, ketoprofen, ibuprofen, indomethacin & prescription	Practical notes		x			x	
				Functional group analysis and their applications	Practical notes		x			x	

5.2	Retrieve and evaluate information from different sources to improve professional competencies	D2	d1	Activities	Practical notes/ Internet			x			
5.3	Work effectively in a team	D4	d2	Functional group analysis and their applications Assay of novalgin ,aspirin, paracetamol, ketoprofen, ibuprofen, indomethacin & prescription	Practical notes		x			x	
				Activities	Practical notes/ Internet			x			
5.9	Implement writing and presentation skills	D11	d3	Activities	Practical notes/ Internet			x			

Course Coordinator: Prof. Dr. Mohamed Elhusseny

Head of Department: Prof. Dr. Kamel Metwally

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COURSE SPECIFICATIONS

Clinical Pharmacy 2

Fourth level –Semester 8

2018-2019

Course Specification of Clinical pharmacy-2

University: Zagazig **Faculty: Pharmacy**

A- Course identification:

1. Program (s) on which the course is given: Bachelor of pharmacy (Clinical pharmacy)

2. Major or Minor element of programs: Major

3. Department offering the course: Pharmacology and toxicology department

4. Academic year Level: fourth level/8th semester

5. Date of specification approval: Jan 2019

B- Basic information:

Title : Clinical pharmacy-2 Code: PP 805

Credit Hours:

Lectures: 2hrs/week

Practical: 1hr/week

Tutorials: ----

Total : 3 hrs / week

C- Professional information:

1-Overall Aims of the Course

- Illustrate the principles of dispensing drugs, hospital formulary and dose adjustment in clinical case studies
- Describe various precautions that should be followed during dispensing

2-Intended Learning Outcomes

A- Knowledge and Understanding	
a1	Outline the principles of dispensing drugs ,hospital formulary and dose adjustment
a2	Describe laboratory tests to diagnose different diseases
B- Professional and Practical Skills	
b1	Solve different cases involving dispensing of medicines of different classes
C- Intellectual Skills	
c1	Differentiate between different formulations of hormones
c2	Solve problems of therapeutic incompatibilities during drug dispensing
C3	Calculate insulin dose
D- General and Transferable Skills	
d1	Communicate effectively with public
d2	Work effectively as a team member
d3	Demonstrate critical thinking and decision skills

D- Contents:

Week No.	Lecture (2 hr/week)	Practical Session (1 hrs/week)
1	Introduction to hormones	Introduction to hormones
2	Thyroid gland	Case study on thyroid gland hypofunction
3	Adrenal gland	Case study on thyroid gland hyperfunction
4	Diabetes	Case study on adrenal gland
5	Diabetic complications	Case study on diabetes & calculation of insulin dose **(Activity report)**
6	Insulin regimen	Case study on diabetic complications
7	-**Midterm exam** Oral hypoglycemics	Case study on diabetes treatment
8	Pituitary gland hormones.	Case study on pituitary gland hormones.
9	Male & female sex hormones.	Case study on male & female sex hormones.
10	Contraception & PMS.	Case study on contraception & PMS.
11	Menstrual disorders.	Case study on menstrual disorders. **(Activity report)**
12	Menopause	Case study on menopause
13	Obesity & pcos.	**Practical Exam**

14	Revision	
15	Final exam	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Open discussion, case study, self learning……..

F- Student Assessment Methods:

1- Written exam to assess a1,a2,c1

2- Practical exam to assess b1,c2,c3

3- Oral exam to assess a1,a2,c1

4- Midterm to assess a1,a2,c1

5- Activity to assess d1,d2,d3

Assessment Schedule:

Assessment (1): Final written exam	15	Week
Assessment (2): Practical exam	13	Week
Assessment (3): Oral exam	15	Week
Assessment (4): Midterm exam	7	Week
Assessment (5): Activity	5,11	Week

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	50	50
Practical exam & activity	25	25
Oral exam	15	15
Midterm exam	10	10
TOTAL	100	100

F- Facilities required for teaching and learning:

- **For lectures: Black (white) boards, data show**

- **For labs: Black (white) boards, data show, formal patients clinical cases of selected disease states and - Sphygmomanometers; Glucocheck devices**

H- List of References:

1- Course Notes:

- Student book of Clinical Pharmacy approved by pharmacology department 2018.

- Practical notes of Clinical Pharmacy approved by pharmacology department 2019.

2- Essential Books:

i- Pharmacotherapy. J.T. DiPiro et al (Ed). McGraw Hill, 7th Edition, 2008.

ii-Applied therapeutics, Mary-Ann Koda-Kimble, Lippincott, , 2009

3- Recommended Books

i- **Textbook of therapeutics, 7th edition. Williams & Wilkins, 2006**

4- Periodicals and websites:

www.Pubmed.Com

www.sciencedirect.com

Course Coordinator: Prof.Dr. Salah Gharib

Head of Department: Prof.Dr. Mona Fouad

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Course contents		Knowledge and understanding		Professional and Practical Skills	Intellectual skills			Transferable and general skills		
Lectures		a1	a2	b1	c1	c2	c3	d1	d2	d3
1	Introduction to hormones	x	x		x	x	x	x	x	x
2	Thyroid gland	x	x		x	x	x	x	x	x
3	Adrenal gland	x	x		x	x	x	x	x	x
4	Diabetes	x	x		x	x	x	x	x	x
5	Diabetic complications	x	x		x	x	x	x	x	x
6	Insulin regimen	x	x		x					
7	**-Midterm exam** Oral hypoglycemics	x	x		x	x	x	x	x	x
8	Pituitary gland hormones.	x	x		x	x	x	x	x	x
9	Male & female sex hormones.	x	x		x	x	x	x	x	x
10	Contraception & PMS.	x	x		x	x	x	x	x	x
11	Menstrual disorders.	x	x		x	x	x	x	x	x
12	Menopause	x	x		x	x	x	x	x	x

13	Obesity & pcos.	x	x		x		x		x	
14	Revision	x	x		x	x	x	x	x	x
15	Final exam	x	x		x					
Practical sessions										
1	Introduction to hormones			x		x	x		x	x
2	Case study on thyroid gland hypofunction			x		x	x		x	x
3	Case study on thyroid gland hyperfunction			x		x	x		x	x
4	Case study on adrenal gland			x		x	x		x	x
5	Case study on diabetes (Activity report)			x		x	x		x	x
6	Case study on diabetic complications			x		x	x		x	x
7	Case study on diabetes treatment			x		x	x		x	x
8	Case study on pituitary gland hormones.			x		x	x		x	x
9	Case study on male & female sex hormones.			x		x	x		x	x

10	Case study on contraception & PMS.			x		x	x		x	x
11	Case study on menstrual disorders. (Activity report)			x		x	x		x	x
12	Case study on menopause			x		x	x		x	x
13	**Practical Exam**			x						

Matrix II of Clinical pharmacy 2 course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Source	Teaching and learning methods			Method of assessment			
						Lecture	Practical session	Self-learning	Written exam	Practical exam	Mid-term exam	Oral exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A4	a1	All lectures	Student book, Essential books	√			√		√	√
2.12	Etiology, epidemiology, laboratory diagnosis and clinical features of different	A20	a2	All lectures	Student book Essential books	√			√		√	√

	diseases and their pharmacotherapeutic approaches.	A21		All lectures	Student book Essential books	√			√		√	√
2.13	Pharmacological properties of drugs including mechanisms of action, therapeutic uses, dosage, contraindications, ADRs and drug interactions.	A22	a1 c3	All lectures	Student book Essential books	√			√		√	√
2.14	Principles of clinical pharmacology, pharmacovigilance and the rational use of drugs.	A23	a2	All lectures	Student book Essential books Recommended books	√			√		√	√
2.20	Principles of proper documentation and drug filing systems.	A30		All lectures	Student book Essential books Recommended books	√			√		√	√

3.5	Select medicines based on understanding etiology and path physiology of diseases.	B7	b1	All practical sessions	Practical notes Internet		√	√		√		
4.9	Utilize the pharmacological basis of therapeutics in the proper selection and use of drugs in various disease conditions.	C11	c1 c2	All lectures	Student book Essential books Recommended book Internet	√			√		√	√
5.1	Communicate clearly by verbal and means	D1	d1	All practical sessions	Recommended books Internet							
5.3	Work effectively in a team	D4	d2	All practical sessions	Recommended books Internet			√		√		
5.10	Implement writing and thinking, problem- solving and decision- making abilities.	D12	d3	All practical sessions	Recommended books Internet			√		√		

Course Coordinator: **Prof.Dr. Salah Gharib**

Head of Department: **Prof.Dr. Mona Fouad**

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COURSE SPECIFICATIONS

Phytotherapy

Fourth level –Semester 8

2018-2019

Course Specification of Phytotherapy

University: **Zagazig** **Faculty:** **Pharmacy**

A- Course specifications:

Program (s) on which the course is given: Bachelor of pharmacy

(Clinical Pharmacy)

Major or Minor element of program: Major

Department offering the program: -------

Department offering the course: Pharmacognosy department

Academic year/Level: Fourth level /eighth semester

Date of specification approval: 9 / 2018

B- Basic information:

Title: Phytotherapy Code: PG 807

Credit Hours:

- Lectures : 2 hrs/week
- Practical: 1hrs/week
- Tutorials: ---
- Total: 3hrs/week

C- Professional information:

1-Overall Aims of the Course:

On completion of the course, students will be able to:

- Illustrate the fundamental knowledge about herbal medicine including preparation, identity, efficacy, standardization and its relation to conventional medicine, in addition to the use of herbal medications in some common health problems, its toxicological aspects, regulatory laws of production and forensic pharmacognosy.

2-Intended Learning Outcomes of Phytotherapy (ILOs):

A- Knowledge and Understanding	
a1	Illustrate the principles of alternative medicine (history and forms) and its relation to conventional medicine.
a2	Outline the principles of herbal medicine preparation, identification, efficacy and standardization.
a3	List different herbal medications to relief some common health problems such as GIT, Cardiac problems… etc.
a4	Verify principles and approaches about narcotic drugs, toxicological aspects of herbal medicines, its concomitant use with conventional medicine, regulations of its production and forensic pharmacognosy.
a5	Describe both physical and chemical properties of active ingredients used in preparation of medications.
a6	Identify pharmacological properties of some herbal medications used in some specific health problems; in addition to the adverse reactions and contraindications of these drugs and the concomitant use of these drugs with conventional medicine
B- Professional and Practical skills	
b1	Identify simple health problems.
b2	Describe a herbal remedy for treatment of common health problems.
b3	Practice patient counseling using case study.
C- Intellectual skills	
c1	Select appropriate herbs or formulas of herbs for treatment of common diseases such as GIT and Cardiovascular problems.
c2	Select appropriate methods of standardization of active substances in herbal medicine.
c3	Analyze information using scientific and library based knowledge for using herbal medicine as an alternative medicine

D- General and Transferable skills	
d1	Retrieve information from different sources.
d2	Work effectively as a member of a team
d3	Write reports and present it**.**
d4	Demonstrate, decision making and problem solving skills.

D- Contents:

Week No.	Lecture (2hrs/week)	Practical session (1hrs/week)
1	-Definition, history and forms of alternative medicine. -Preparation of herbal medications.	-Preparation of herbal medications.
2	- Herbal medicine versus conventional medicine -Identity, efficacy and standardization of herbal medications.	-Phytochemical screening of some herbal drug. (Case study)
3	-Herbal remedies for dermatologic use.	-Drugs used for dermatologic use.
4	-Herbal medications and nutraceuticals for renal problems.	-Drugs used for renal disorders.
5	-Herbal medications and nutraceuticals for hepatic disorders.	-Drugs used for hepatic disorders.
6	-Herbal medications and nutraceuticals for diabetes.	-Drugs used for diabetes.
7	-Drugs used for anxiety and as tranquilizers. Periodical exam	-Drugs used for anxiety and as tranquilizers
8	-Herbal medications and nutraceuticals for arthritis.	-Drugs used for arthritis. -Activity (case studies of renal, hepatic and diabetes disorders).
9	-Herbal medications and nutraceuticals for cancer (prevention/ treatment)	-Drugs used for cancer
10	-Herbal remedies for respiratory tract problems. -Herbal remedies for colds and flu	-Herbal remedies for respiratory tract problems

11	Herbal medications for circulatory disorders. -Herbal remedies for digestive disorders	-Drugs used for circulatory disorders. -Drugs used for digestive disorders
12	-Narcotic drug	-Applications on forensic pharmacognosy
13	-Revision.	**-Practical exam**
14	- Open discussion	**-Practical exam**
15	**- Final Exam**	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions (case studies).
- Self-learning (Activities (internet search and report preparation about different health problems e.g. renal, hepatic and diabetes disorders)), Open discussion...)

F- Student Assessment Methods:

1. Written exams to assess: a1, a2, a3, a4, a5, a6, c1, c2, c3.
2. Activities to assess: d1, d2, d3, d4.
3. Practical exams to assess: b1, b2, b3, d1, d2, d3.
4. Oral exam to assess: a1, a2, a3, a4, a5, a6, c1, c2, c3, d4.
5. Periodical exam to assess: a1, a2, a3, a4, a5, a6, c1, c2, c3.

Assessment schedule:

Assessment (1): Periodical exam	Week 7

Assessment (2): Activity	Week 8
Assessment (3): Practical exam	Week 13 ,14
Assessment (4): Written exam	Week 15
Assessment (5): Oral exam	Week 15

Weighting of Assessment:

Assessment method	Marks	Percentage
Periodical exam	10	10%
Practical exam & activity	25	25%
Written exam	50	50%
Oral exam	15	15%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- Black (white) board, data show.

H- List of References:

1- Course Notes:

A. Student book of Phytotherapy approved by Pharmacognosy department 2018.

B. Practical notes of Phytotherapy approved by Pharmacognosy department 2018.

2- Essential books:

A. HEINRICH, Michael, et al. Fundamentals of Pharmacognosy and Phytotherapy E-Book. Elsevier Health Sciences, 2017.
B. EASLEY, Thomas; HORNE, Steven. The modern herbal dispensatory: A medicine-making guide. North Atlantic Books, (2016).
C. Evans,W.C.; Pharmacognosy; Saunders-Elsevier (2009).

3- Recommended books:

A. TOBYN, Graeme; DENHAM, Alison; WHITELEGG, Midge. The Western herbal tradition: 2000 years of medicinal plant knowledge. Singing Dragon, (2016).
B. The honest herbal ;Varror, T. and Foster, S.; Haworth Herbal Press, Binghamton, NY. (1999).
C. Herbal medicine: a clinical guide ; Miller, L. and Murray, W.; Pharmaceutical Products Press ,Binghamton, NY.(1998).

4- Periodicals and websites:

A. GLASTONBURY, Stuart. Principles and Practice of Phytotherapy. Modern Herbal Medicine. Australian Journal of Herbal Medicine, 2013, 25.2: 95-96.
B. Journal of Natural Products
C. J. Ethnopharmacology
D. Planta Medica
E. Phytoterapia

Course Coordinators: **Prof. Dr. Samih El-Dahmy**

Head of department: **Prof. Dr.**

Date: **9 /2018** تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

Matrix I of Phytotherapy course 2018-2019																
Course Contents		ILOs of Phytotherapy course														
		Knowledge and understanding						Professional and practical skills			Intellectual skills			General and transferable skills			
Lectures		a1	a2	a3	a4	a5	a6	b1	b2	b3	c1	c2	c3	d1	d2	d3	d4
1	-Definition, history and forms of alternative medicine -Preparation of herbal medications.	X	X								X						
2	- Herbal medicine versus conventional medicine -Identity, efficacy and standardization of herbal medications.	x	x								X	x					
3	-Herbal remedies for dermatologic use.			x		x	X						x				
4	-Herbal medications and nutraceuticals for renal problems.			x		x	X						x				
5	-Herbal medications and nutraceuticals for hepatic disorders.			x		x	X						x				

6	-Herbal medications and nutraceuticals for diabetes.			x		x	X						x				
7	-Drugs used for anxiety and as tranquilizers.			x		x	X						x				
8	-Herbal medications and nutraceuticals for arthritis.			x		x	X						x				
9	-Herbal medications and nutraceuticals for cancer (prevention/ treatment)			x		x	X						x				
10	-Herbal remedies for respiratory tract problems. -Herbal remedies for colds and flu			x		x	X						x				
11	Herbal medications for circulatory disorders. -Herbal remedies for digestive disorders			x		x	X						x				
12	-Narcotic drugs			x	x	x	X						x				
1	-Revision and open discussion.																x

3														x	x		
Practical sessions																	
1	-Preparation of herbal medications.							x									
2	-Phytochemical screening of some herbal drug								x								
3	-Drugs used for dermatologic use.								x								
4	-Drugs used for renal disorders.								x								
5	-Drugs used for hepatic disorders.								x								
6	-Drugs used for diabetes.								x								
7	-Drugs used for anxiety and as tranquilizers								x								
8	-Drugs used for arthritis. **-Activity (case studies of renal, hepatic and diabetes disorders).**								x	x				x	x	x	x
9	-Drugs used for cancer								x								
10	-Herbal remedies for respiratory tract problems								x								

11	-Drugs used for circulatory disorders. -Drugs used for digestive disorders								x								
12	-Applications on forensic pharmacognosy.								x								

Matrix II of Phytotherapy course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Source	Teaching and learning methods			Method of assessment			
						Lecture	Practical session	Self-learning	Written exam	Practical exam	Periodical exam	Oral exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A2	a1, a2	-Definition, history and forms of alternative medicine -Preparation of herbal medications.	Student book Essential books	x			x		x	x
2.2	Physical-chemical properties of various substances used in preparation of medicines including inactive and active ingredients as well as biotechnology and radio- labeled products.	A5	a1, a2	- Herbal medicine versus conventional medicine -Identity, efficacy and standardization of herbal medications.	Student book Essential books	x			x		x	x
2.1	Pharmacological properties of drugs	A22	a3, a5,	-Herbal remedies for dermatologic use.	Student book Essential	x					x	x

3	including mechanisms of action, therapeutic uses, dosage, contra-indications, ADRs and drug interactions.		a6		books							
				-Herbal medications and nutraceuticals for renal problems.	Student book Essential books	x			x		x	x
				-Herbal medications and nutraceuticals for hepatic disorders.	Student book Essential books	x			x		x	x
				-Herbal medications and nutraceuticals for diabetes.	Student book Essential books	x			x		x	x
				-Drugs used for anxiety and as tranquilizers.	Student book Essential books	x			x		x	x
				-Herbal medications and nutraceuticals for arthritis.	Student book Essential books	x			x		x	x
2.15	Basis of complementary and alternative medicine.	A24	a3, a5, a6	-Herbal medications and nutraceuticals for cancer (prevention/ treatment)	Student book Essential books	x			x		x	x
				-Herbal remedies for respiratory tract problems. -Herbal remedies for colds and flu	Student book Essential books	x			x		x	x

				Herbal medications for circulatory disorders. -Herbal remedies for digestive disorders	Student book Essential books	x			x		x	x
				-Narcotic drugs	Student book Essential books	x			x		x	x
3.5	Select medicines based on understanding etiology and path physiology of diseases.	B7	b1, b2	-Preparation of herbal medications.	Practical notes		x			x		
				-Phytochemical screening of some herbal drug	Practical notes	x			x		x	x
3.10	Advise patients and other health care professionals about safe and proper use of medicines	B16	b3	-Drugs used for dermatologic use.	Practical notes	x			x		x	x
				-Drugs used for renal disorders.	Practical notes	x			x		x	x
				-Drugs used for hepatic disorders.	Practical notes	x			x		x	x
				-Drugs used for diabetes.	Practical notes	x			x		x	x

				-Drugs used for anxiety and as tranquilizers	Practical notes	x			x		x	x
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C6	c1, c2 & c3	-Drugs used for arthritis. **-Activity (case studies of renal, hepatic and diabetes disorders).**	Practical notes, Recommended books, Internet	x		x	x		x	x
4.11	Assess drug interactions, ADRs and pharmacovigilance.	C13		-Drugs used for cancer	Practical notes	x			x		x	x
4.14	Analyze and evaluate evidence-based information needed in pharmacy practice.	C16		-Herbal remedies for respiratory tract problems	Practical notes	x			x		x	x
				-Drugs used for circulatory disorders. -Drugs used for digestive disorders	Practical notes	x			x		x	x
				-Applications on forensic pharmacognosy.	Practical notes	x			x		x	x
5.2	Retrieve and evaluate information from different sources to	D2	d1		Recommended books Internet			x				

	improve professional competencies.			Activity								
5.3	Work effectively in a team.	D4	d2	Activity	Recommended books Internet			x				
5.9	Implement writing and presentation skills	D11	d3	Activity	Recommended books Internet			x				
5.10	Implement writing and thinking, problem solving and decision-making abilities.	D12	d4	Activity	Recommended books Internet			x				

COURSE SPECIFICATIONS

Pharmaceutical Analysis & Quality Control

Fourth level –Semester 8

2018-2019

Course Specification Pharmaceutical Analysis & Quality Control

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University: **Zagazig** **Faculty:** **Pharmacy**

A- Course specifications:

Program (s) on which the course is given: Bachelor of pharmacy (Clinical pharmacy program)

Major or Minor element of program: Major

Department offering the program: -------

Department offering the course: Pharmaceutical analytical chemistry department

Academic year/Level: Fourth level/eighth semester

Date of specification approval:

B- Basic information:

Title: Pharmaceutical analysis and quality control Code: PC 808

Credit Hours:

- Lectures : 2 hrs/week
- Practical: 1hrs/week
- Tutorials: ---
- Total: 3hrs/week

C- Professional information:

-Overall Aims of the Course:

On completion of the course, students will be able to:

- Gain several competencies in the area of QC/QA of drugs that would enable them to perform as QC/QA pharmacist upon graduation.

- Perform various laboratory tests for analysis of different pharmaceutical preparations.

2-Intended Learning Outcomes ofpharmaceutical analysis and Quality control

A-Knowledge and Understanding	
a1	Illustrate various analytical techniques for drug analysis.
a2	Describe principles of identification and appropriate methods of pharmaceutical calculation for pharmaceutical samples
a3	Illustrate GMP guidelines in pharmacy practice.
B-Professional and Practical skills	
b1	Handle basic laboratory equipment& chemicals effectively and safely.
b2	Identify active ingredients quantitatively.
b3	Perform practical method for determination of impurities in different formulations.
C-Intellectual skills	
c1	Apply GMP guidelines in pharmacy practice.
c2	Decide quantitative and qualitative methodology and assay of raw materials
c3	Select quantitative and qualitative methodology and assay of different pharmaceutical formulations including tables, semisolids, eye drops, injection, suppositories and aerosols inhalation.
d-General and Transferable skills	
d1	Work as member of team
d2	Adopt safety guidelines

d3	Manage time and perform a task within time limit
d4	Write reports and present it.

D- Contents

Week No.	Lecture contents (2hrs/week)	Practical session (1 hrs/week)
1	Drug registration and assessment.	Safety guidelines
2	Analytical Problem: sampling and experimental errors	Assay of Paracetamol tablets.
3	Analytical Problem: Choice of methods of an analysis and validation	Assay of Isoniazid tablets
4	Drug stability and degradation product Self learning(presentation)	Assay of Glycerol suppositories
5	Drug stability and degradation product	Assay of Chloramphenicol capsules
6	Function group analysis Classical analysis **Periodical exam**	Assay of Chloramphenicol eye drops **Activity(Report)**
7	Function group analysis Instrumental analysis Open discussion	**Revision**
8	Automation in pharmaceutical analysis	Assay of Lidocaine injection
9	Automation in pharmaceutical analysis	Assay of Furosemide

10	Determination of active ingredients in Tablets semisolid and eye drops (homework assignment)	Assay of Sodium chloride intravenous infusion
11	Determination of active ingredients in injection and suppositories	Assay of Salicylic acid ointment **Activity (Report).**
12	Determination of active ingredients in aerosols inhalation	Assay of Phenylephrine eye drops Lab report and Presentation
13	Quality assurance of pharmaceuticals G.M.P ,ISO and BSI	**Final Practical exam.**
14	Open discussion	
15	Final exam	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Self-learning (Internet search on method validation followed by open discussion)

F- Student Assessment Methods:

1. Written exam to assess: a1,a2,a3, c1,c2,c3
2. Practical exam to assess: b1,b2,b3, d2
3. Oral exam to assess: a1,a2,a3,c1,c2,c3
4. Activities to assess: d1,d2,d3,d4
5. Periodical exam to assess: a1,a3,c1,c2

Assessment schedule:

Assessment (1): Written exam	Week 15
Assessment (2): Practical exams	Week 13
Assessment (3): Activity	Week 11
Assessment (4): Oral exam	Week 15
Assessment (5): Periodical exam	Week 6

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	50	50%
Periodical Exam.	10	10%
Practical exam and activities	25	25%
Oral exam	15	15%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- Black (white) boards, data show. internet
- Chemicals, glassware, instruments, Software, Digital balances, water bathes. Central lab.

H- List of References:

1- **Course Notes:** Student book of Quality Control approved by analytical medicinal chemistry departments.

- Practical notes of Quality Control approved by analytical and medicinal chemistry departments.

2- **Essential Books:**

i- Stability of drugs and dosage forms Sumie Yoshioka, Valentino J. Stella (Pages:268 - 2000).

ii- Chemical stability of pharmaceuticals: Kenneth A. Connors, Kenneth

iii- Kenneth A. Connors, Kenneth Antonio Connors, GordonL. Amidon, Valentino J. Stella

iv- Pharmaceutical process validation: Robert A. Nash, Alfred H. Wachter (2006)

v- Photostability of drugs and drug formulations: Hanne HjorthTonnesen (2004)

3- Recommended books

i- Halpern,A in "Experimental physical chemistry"

ii- Oxtoby,D and Nachtrieb, N in "Principles of Modern chemistry"

iii- Garfied, F .M., Klesta ,E and Hirsch, J in" Quality Assurance

iv- Principles for Analytical Laboratories"

4- Periodicals, Web Sites, etc

http://www.ncbi.nlm.nih.gov/sites/entrez

http://journals.tubitak.gov.tr/chem/index.php

http://www.pharmacopoeia.co.uk/

www.Pubmed.Com and www.sciencedirect.com

Course Coordinators: **Prof. Dr.Abdallah El Shanwany**

Head of department: **Prof. Dr/ Magda El-Henawee**

Date: **تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ**

Matrix 1 of Quality control and drug analysis course

Course contents		ILOS of pharmaceutical analysis and quality control course												
		Knowledge and understanding			Professional and practical skills			Intellectual skills			Transferable and general skills			
Lectures		a1	a2	a3	b1	b2	b3	c1	c2	c3	d1	d2	d3	d4
1	Drug registration and assessment	x												
2	Analytical problem: sampling and experimental errors	X												
3	Analytical problem: choice of method of an analysis and validation.		x											
4	Drug stability and degradation product	x							x					
5	Function group analysis (classical analysis)		x											
6	Function group analysis (instrumental analysis)		x											
7	Automation in pharmaceutical analysis		x											
8	Determination of active ingredients in Tablets semisolid and eye drops, injection, suppositories and aerosols		x											

	inhalation									x				
9	Quality assurance of pharmaceuticals G.M.P, ISO and BSI			x				x						
Practical sessions														
1	Assay of:Paracetamol tablets, isonizaid tablets, glycerol suppositories, chloramphenicol capsules, chloramphenicol eye drops, lidocaine injection, furosemide, sodium chloride intravenous infusion, salicylic acid ointment & phenylephrine eye drops.				x	x	x					x		
2	Activities (reports)										x	x	x	x

Matrix II of Quality control and drug analysis course

National academic reference standards NARS		Program ILOs	Course ILOS	Course contents	Sources	Teaching and learning methods			Weighting of assessment			
						Lecture	Practical session	Self-learning	Written exam	Practical exam	Oral exam	Periodical exam
2.2	Physico-chemical properties of various substances used in preparation of medicines including inactive and active ingredients as well as biotechnology and radio-labeled products.	A5	a1	Drug stability and degradation product	Student book Essential books	x			x		x	x
2.3	Principle of different analytic techniques using GLP guidelines and validation procedures.	A7	a2	Function group analysis Analytical problem: choice of method of an analysis and validation Automation in pharmaceutical analysis	Student book Essential books	x			x		x	

2.7	Principles of various instruments and techniques including sampling, manufacturing, packaging, labeling, storing and distribution processes in pharmaceutical industry..	A11	a3	Drug registration and assessment Quality assurance of pharmaceuticals G.M.P, ISO and BSI	Student book Essential books	x			x		x	x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	Safety guidelines	Practical notes		x			x		
3.4	Extract, isolate, synthesis purify, identify and / or stnadarize active substances from different origins.	B5	b2	Assay of: parcetamol tablets; isoniazid tablest. Glycerol suppositories, chloraphenicol	Practical notes		x			x		

			b3	capsules, chloraphenicol eye drops, lidocaine injection, furosemide, sodium chloride intravenous infusion, salicylic acid ointment & phenylephrine eye			x			x		
4.2	Comprehend and apply GLP GPMP, GSP and GCP guiltiness in pharmacy practice	C2	c1	Quality assurance of pharmaceuticals GMP ISO and BSI	Student book Essential books							
4.3	Apply qualitative and quantitative analytical and biological methods for QC and assay of raw	C3	c2	Determination of active ingredients in tablet semisolid	Student book Essential books	x			x		x	x

	materials as well as pharmaceutical preparations		c3	and eye drops								
5.3	Work effectively in a team.	D4	d1	Activities (reports)	Internet		x			x		
5.6	Adopt ethical, sales and safety guidelines.	D8	d2	Drug registration and assessment	Student book, essential books		x			x		
5.8	Demonstrate creativity and time management abilities.	D10	d3	Activities (reports)	Internet		x			x		
5.9	Implement writing and presentation skills.	D11	d4									

COURSE SPECIFICATIONS

Clinical biochemistry

Fourth level –Semester 8

2018-2019

Course Specification of Clinical Biochemistry

University: **Zagazig** **Faculty:** **Pharmacy**

A- Course specifications:

Program (s) on which the course is given: Bachelor of pharmacy

(Clinical pharmacy)

Major or Minor element of program: Major

Department offering the program: -------

Department offering the course: Biochemistry department

Academic year/Level: Fourth level/eighth semester

Date of specification approval:

B- Basic information:

Title: Clinical Biochemistry Code: PB 803

Credit Hours:

- Lectures : 2 hrs/week
- Practical: 1 hrs/week
- Tutorials: ---
- Total: 3 hrs/week

C- Professional information:

1-Overall Aims of the Course:

On completion of the course, students will be able to:

- Outline disorders of endocrine system, absorption and bilirubin metabolism.
- Illustrate diseases of different body organs and their diagnosis.

2-Intended Learning Outcomes of Clinical Biochemistry (ILOs):

A- Knowledge and Understanding	
a1	Describe different functions of body organs and different diseases.
a2	Verify various enzymes changes in different diseases.
a3	Outline disorders of absorption and bilirubin metabolism.
a4	Illustrate etiology and clinical features of endocrine system diseases.
a5	Identify the importance of some markers determination in diagnosis of diseases.
B- Professional and Practical skills	
b1	Handle chemicals and biological samples safely.
b2	Perform laboratory tests to identify various diseases.
C- Intellectual skills	
c1	Apply good laboratory practice in pharmacy practice.
c2	Assess different analytical methods used for different metabolites and biological samples.
c3	Analyze and interpret quantitative data in a suitable form.
c4	Integrate scientific information from different sources in clinical biochemistry practice.
D- General and Transferable skills	
d1	Develop both written and oral communication.
d2	Evaluate information from different sources to improve professional abilities.
d3	Work effectively as a member of a team.
d4	Write reports and present it.
d5	Develop critical thinking and problem solving abilities.

Week No.	Lecture (2hrs/week)	Practical session (1 hr/week)
1	- Liver anatomy - Liver functions	-PCR
2	- Liver diseases - Metabolic disorders of the liver	- liver function test (determination of total protein)
3	- Liver function tests - Inherited disorders of bilirubin metabolism	- liver function test (determination of albumin)
4	-Gastrointestinal tract (GIT) normal functions - Digestion and absorption of carbohydrates, lipids, proteins, calcium, magnesium and vitamin B12	- liver function test (determination of bilirubin)
5	- GIT diseases - Assay of GIT functions	- Urine analysis
6	- Malabsorption, Heart function tests	- Case study 1 + activity
7	**Periodical exam**	-Case study 2
8	- Kidney normal functions (urine formation, clearance)	-Case study 3
9	- Kidney diseases (pathophysiology, tubular dysfunction, fanconi syndrome, renal stones, acute renal failure, chronic renal failure, management)	
10	- Kidney function tests (renal diseases investigation, diagnosis)	- **Practical exam (1)** **(sheet + case)**
11	- Types of hormones - Transport of hormones	- Activity + presentation

	- Measurements of hormones - Factors control hormone secretion	
12	- Diseases of different glands - Commonly used dynamic tests in the investigation of endocrine disease	**- Practical exam (2)**
13	- Functions of bones (metabolism, minerals content, osteoblast, control of calcium balance) -Common Bone diseases (osteoporosis, diagnosis , treatments, osteomalacia and rickets, Paget's disease) - Markers of bone disorders (enzymes, vitamin D states assessment, biochemical tests in calcium disorders)	
14	Revision& Open discussion	
15	Final exam	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Case study
- Self-learning (Activities (reports), Open discussion...)

F- Student Assessment Methods:

1. Written exam to assess:a1, a2, a3, a4, a5, c3, c4
2. Practical exam to assess:b1, b2, c1, c2, c3, d1, d2, d3, d4, d5
3. Activities to assess: d1, d2, d3, d4, d5

4. Oral exam to assess:a1, a2, a3, a3, a4, a5, c3, c4, d5
5. Periodical exam to assess:a1, a2, a3, a5, c3, c4

Assessment schedule:

Assessment (1): Written exam	Week 15
Assessment (2): Practical exam	Week 10,12
Assessment (3): Activity	Week 6,11
Assessment (4): Oral exam	Week 15
Assessment (5): Periodical exam	Week 7

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	50	50%
Practical exam and activities	25	25%
Oral exam	15	15%
Periodical exam	10	10%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- Black (white) board, Data show, Laboratory equipment (spectrophotometer, water bath, centrifuge) and Chemicals.

H- List of References:

1- Course Notes:

Student book of Clinical Biochemistry approved by biochemistry department 2018.

- Practical notes of Clinical Biochemistry approved by biochemistry department 2018.

2- Essential books:

i- Clinical biochemistry: An illustrated colour text book (fourth edition);Murphy M.J., Cowan R.A., O'ReillyD. St. J., Stewart M.J, Shepherd J.; Churchil Livingstone Elsevier (2008).

ii- Text book of Biochemistry with clinical correlations (fifth edition); Devlin T.M.; AJohn Willey& Sons Inc. (2002).

iii- Medical Biochemistry (third edition); Baynes J.W.,Domoiniczak M.H.; Mosby Elsevier (2009).

3- Recommended books:

i- Lippincott's Illustrated Review Biochemistry (fifth edition); Ferrier D.R., Harvey R.A.; Lippincott Williams & Wilkins (2010).

ii- Tietz Fundamentals of Clinical Chemistry Fundamentals (fifth edition); BurtisC.A., AshwoodE.R.; W.B. Saunders company (2005).

iii- Essentials of medical biochemistry with clinical cases; BahagavanN.V, Chung-Eun Ha; ElsevierInc. (2011).

4- Periodicals and websites:

Indian J. of Clinical Biochemistry

Egyptian J. of biochem. and molecular biology.

Annals of Clinical Biochemistry

Arab J. of Laboratory Medicine,

J. of Cardiovascular diseases.

www.Pubmed.Com

www.sciencedirect.com

Course Coordinators: **Prof. Dr.Sousuo Ibrahim**

Head of department: **Prof. Dr. Sahar Elsweify**

Date:

Matrix I of Clinical biochemistry course

Course Contents		ILOs of clinical biochemistry course																
		Knowledge and understanding					Professional and practical skills		Intellectual skills				General and transferable skills					
Lectures		a1	a2	a3	a4	a5	b1	b2	c1	c2	c3	c4	d1	d2	d3	d4	d5	
1	Liver anatomy- Liver functions	x																
2	Liver diseases- Metabolic disorders of the liver	x																
3	Liver function tests- Inherited disorders of bilirubin metabolism		x	x		x					x	x						
4	Gastrointestinal tract (GIT) normal functions- Digestion and absorption of carbohydrates, lipids, proteins, calcium, magnesium and vitamin B12	x																
5	GIT diseases- Assay of GIT functions	x	x			x					x	x						
6	Malabsorption	x		x														
7	Heart function tests		x			x					x	x						
8	Kidney normal functions(urine formation,	x																

	clearance)																	
9	Kidney diseases(pathophysiology, tubular dysfunction, fanconi syndrome, renal stones, acute renal failure, chronic renal failure, management)	x																
10	Kidney function tests(renal diseases investigation, diagnosis)		x			x					x	x						
11	Types of hormones- Transport of hormones- Measurements of hormones- Factors control hormone secretion				x													
12	Diseases of different glands- Commonly used dynamic tests in the investigation of endocrine disease				x						x	x						
13	- Functions of bones (metabolism, minerals content, osteoblast, control of calcium balance) -Common Bone diseases (osteoporosis, diagnosis , treatments, osteomalacia and rickets, Paget's disease)	x																
14	**Revision- Open discussion**		x			x					x	x						
15	**Final exam**																	x

Practical sessions																	
1							x		x				x				
2							x		x				x				
3								x		x	x		x				
4								x		x	x		x				
5								x		x	x		x				
6								x		x	x		x				
7								x		x	x		x				
8								x		x	x		x				
9								x		x	x		x				
10													x	x	x	x	x

Matrix II of Clinical biochemistry course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Method of assessment			
						Lecture	Practical session	Self learning	Written exam	Practical exam	Periodical exam	Oral exam
2.11	Principles of body function in health and disease states as well as basis of genomic and different biochemical pathways regarding their correlation with different diseases.	A16	a1	Liver anatomy- Liver functions- Liver diseases- Metabolic disorders of the liver- Gastrointestinal tract (GIT) normal functions- Digestion and absorption of carbohydrates, lipids, proteins, calcium, magnesium and vitamin B12- GIT diseases- Malabsorption	Student book Essential books	x			x		x	x

				Kidney normal functions- Kidney diseases- Functions of bones- Bone diseases-	Student book Essential books	x			x		x	x
			a2	Liver function tests- Assay of GIT functions- Heart function tests- Kidney function tests- Markers of bone disorders	Student book Essential books	x			x		x	x
		A17	a3	Inherited disorders of bilirubin metabolism	Student book Essential books	x			x		x	x
				Malabsorption	Student book Essential books	x			x		x	x

2.12	Etiology, epidemiology, laboratory diagnosis and clinical features of different diseases and their pharmaco-therapeutic approaches	A19	a4	Types of hormones- Transport of hormones	Student book Essential books	x			x			x
				Diseases of different glands	Student book Essential books	x			x			x
		A20	a5	Liver function tests- Inherited disorders of bilirubin metabolism	Student book Essential books	x			x		x	x
				Assay of GIT functions- Heart function tests- Kidney function tests- Markers of bone disorders	Student book, essential books	x			x		x	x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	Clinical biochemistry- Good laboratory practice	Practical notes		x			x		

3.6	Monitor and control microbial growth and carry out laboratory tests for identification of infectious and non- infections in biological specimens.	B11	b2	Determination of plasma HDL-C, TAG- Calculation of plasma LDL-C - Determination of blood hemoglobin- Pathological disorders of iron metabolism- Determination of serum iron- Oxidative stress- Lipid peroxidation- Determination of serum malondialdehyde (MDA)- Antioxidant defense system- Determination of glutathione (GSH)	Practical notes		x			x		
4.2	Comprehend and apply GLP,GPMP, GSP and GCP guidelines in	C2	c1	Clinical biochemistry- Good laboratory practice	Practical notes		x			x		

	pharmacy practice											
4.3	Apply qualitative and quantitative analytical and biological methods for QC and assay of raw materials as well as pharmaceutical preparations	C3	c2	Determination of plasma HDL-C, TAG- Calculation of plasma LDL-C - Determination of blood hemoglobin- Pathological disorders of iron metabolism- Determination of serum iron- Oxidative stress- Lipid peroxidation- Determination of serum malondialdehyde (MDA)- Antioxidant defense system- Determination of glutathione (GSH)	Practical notes		x			x		

4.13	Analyze and interpret experimental results as well as published literature	C15	c3	Determination of plasma HDL-C, TAG- Calculation of plasma LDL-C - Determination of blood hemoglobin- Pathological disorders of iron metabolism- Determination of serum iron- Oxidative stress- Lipid peroxidation- Determination of serum malondialdehyde (MDA)- Antioxidant defense system- Determination of glutathione (GSH)	Practical notes		x			x		

				Liver function tests- Inherited disorders of bilirubin metabolism- Assay of GIT functions- Heart function tests- Kidney function tests-Diseases of different glands- Markers of bone disorders	Student book, essential books	x			x		x	x
4.14	Analyze and evaluate evidence-based information needed in pharmacy practice	C16	c4	Liver function tests- Inherited disorders of bilirubin metabolism- Assay of GIT functions- Heart function tests- Kidney function tests-Diseases of different glands- Markers of bone disorders	Student book, essential books	x			x		x	x

5.1	Communicate clearly by verbal and written means	D1	d1	Clinical biochemistry- Good laboratory practice- Determination of plasma HDL-C, TAG- Calculation of plasma LDL-C - Determination of blood hemoglobin- Pathological disorders of iron metabolism- Determination of serum iron- Oxidative stress- Lipid peroxidation- Determination of serum malondialdehyde (MDA)- Antioxidant defense system- Determination of glutathione (GSH)- Activity	Practical notes Recommended books Internet		x	x		x		

				(Case study)								
5.2	Retrieve and evaluate information from different sources to improve professional competencies	D2	d2	Activity (Case study- Report)	Recommended books Internet		x	x		x		
5.3	Work effectively in a team	D4	d3	Activity (Case study- Report)	Recommended books Internet		x	x		x		
5.9	Implement writing and presentation skills	D11	d4	Activity (Case study- Report)	Recommended books Internet		x	x		x		
5.10	Implement writing and thinking, problem- solving and decision-making abilities.	D12	d5	Revision- open discussion	Student book Essential books Recommended books Internet	x		x				x

				Activity (Case study- Report)	Recommended books Internet		x	x		x		

COURSE SPECIFICATIONS

Drug marketing

Fourth level –Semester 8

2018-2019

Course Specification of Drug Marketing

University: **Zagazig** **Faculty:** **Pharmacy**

A- Course specifications:

Program (s) on which the course is given: Bachelor of pharmacy

(Clinical pharmacy)

Major or Minor element of program: Major

Department offering the program: -------

Department offering the course: Business administration department (Faculty of Commerce)

Academic year/Level: Fourth level /eighth semester

Date of specification approval:

B- Basic information:

Title: Drug marketing Code: PP 806

Credit Hours:

- Lectures : 1 hr/week
- Practical: ……
- Tutorials: ---
- Total: 1 hr/week

C- Professional information:

1-Overall Aims of the Course:

On completion of the course, students will be able to:

Outline principles of marketing including definitions, planning, marketing environment, market, pricing and promotion strategies

2-Intended Learning Outcomes of drug marketing (ILOs)

A- Knowledge and Understanding	
a1	Describe marketing process, strategic planning process, market segmentation and market targeting as well as product and service branding
a2	Outline the environmental forces affecting marketing decision as well as factors affecting consumer/business buyer behavior
a3	Outline the steps in marketing research process
a4	Explain different pricing strategies, promotion strategies and importance of marketing channels
B- Professional and Practical skills	
	……
C- Intellectual skills	
c1	Explain customer relationship management and strategies for building lasting customer relationships
c2	Discuss how to design business portfolios
c3	Develop growth strategies
D- General and Transferable skills	
d1	Develop both written and oral communication.
d2	Evaluate information from different sources to improve professional abilities.

Week No.	Lecture (1 hr/week)
1	Marketing definition
2	Marketing planning
3	Marketing environment

4	Managing marketing information
5	Consumer and business buyer behavior
6	Consumer and business buyer behavior (cont.)
7	**Periodical exam**
8	Market segmentation, targeting and positioning
9	Products, services and branding strategy
10	Pricing strategies
11	Pricing strategies
12	marketing channels
13	Promotion strategies
14	Revision& Open discussion
15	Final exam

E- Teaching and Learning Methods:

- Lectures

F- Student Assessment Methods:

Written exam to assess:a1, a2, a3, a4, c1,c2, c3, d1, d2

Assessment schedule:

Assessment (1): final Written exam	Week 15
Assessment (2): Periodical exam	Week 7

Weighting of Assessment:

Assessment method	Marks	Percentage
Final Written exam	90	90%
Periodical exam	10	10%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- Black (white) board, Data show

H- List of References:

1- Course Notes:

Student book of Drug marketing, 2019

3- Essential books:

Ross Mullner, Pharmaceutical marketing, vol.22 (7), 2005.

3- Recommended books:

Smith, Pharmaceutical Marketing-Principals, ISBN: 9780789015839, Informa Healthcare

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Course Coordinators: **Prof. Sherif A. El-Aasi**

Prof. Mohammud G. Elshawadfy

Matrix I of drug marketing course

Course Contents		ILOs of drug marketing course										
		Knowledge and understanding				Professional and practical skills		Intellectual skills			General and transferable skills	
Lectures		a1	a2	a3	a4			c1	c2	c3	d1	d2
1	Marketing definition	x						x			x	
2	Marketing planning	x						x			x	
3	Marketing environment		x						x		x	
4	Managing marketing information			x				x	x	x	x	x
5	Consumer and business buyer behavior		x							x	x	
6	Market segmentation, targeting and positioning	x									x	

7	Products, services and branding strategy				X						x	x
9	Pricing strategies				X						x	x
10	marketing channels				X						x	x
11	Promotion strategies				x						x	x

Matrix II of drug marketing course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Method of assessment			
						Lecture	Practical session	Self learning	Written exam	Practical exam	Periodical exam	Oral exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A4	a1	Marketing definition Marketing planning Market segmentation, targeting and positioning	Student book Essential books	x			x		x	
					Student book Essential books	x			x		x	
			a2	Marketing environment Consumer and business buyer behavior	Student book Essential books	x			x		x	
			a3	Managing marketing information	Student book Essential books	x			x		x	

					Student book Essential books	x			x		x	
2.19	Principles of drug promotion, sales and marketing, business administration, accounting and pharmacoeconomics	A29	a4	Products, services and branding strategy Pricing strategies marketing channels Promotion strategies	Student book Essential books	x			x			
					Student book Essential books	x			x			
4.13	Analyze and interpret experimental results as well as published literature	C15	c1 c2 c3	Marketing definition Marketing planning Marketing environment Managing marketing information	Student book Essential books	x			x		x	

5.1 **5.2**	Communicate clearly by verbal and means Retrieve and evaluate information from different sources to improve professional competencies.	D1 D2	d1 d2	Marketing definition Marketing planning Marketing environment Managing marketing information Consumer and business buyer behavior Market segmentation, targeting and positioning Products, services and branding strategy Pricing strategies marketing channels Promotion	Student book, essential books	x			x		x	

				strategies								

COURSE SPECIFICATIONS

Drug interactions

Fourth level –Semester 8

2018-2019

Course Specification of Drug interaction

University: **Zagazig** **Faculty:** **Pharmacy**

A- Course specifications:

Program(s) on which the course is given: Bachelor of pharmacy (Clinical pharmacy)

Major or Minor element of programs: Major

Department offering the program: ------

Department offering the course: Pharmacology and Toxicology department

Academic year / Level: Level 4/ semester 8

Date of specification approval:

B- Basic information:

Title: Drug interaction Code: **PO803**

Credit Hours: ---

Lectures: 2 hr/week

Practical: ……

Tutorials: ---

Total: 2 hrs/week

C- Professional information:

1-Overall Aims of the Course

On completion of the course, the student will be able to understand drug interactions and to identify, evaluate, and manage drug interactions in an evidence-based, patient-specific manner. Given real-world patient case scenarios, students were expected to determine whether a given interaction was clinically significant or required pharmacist intervention, and make rational, scientifically sound, practical recommendations for the management of drug interactions.

2-Intended Learning Outcomes (ILOS)

A- Knowledge and Understanding	
a1	Describe common mechanisms of drug interactions
a2	Determine the clinical significance of a given drug interaction
a3	Explain different drug interactions (drug-drug, drug-food, drug-herb, drug-disease and drug-environment)
B- Professional and Practical Skills	
b1	Use the proper pharmaceutical and medical terms, abbreviations and symbols in pharmacy practice.
b2	Solve clinical problems that may result from drug interactions.
C- Intellectual Skills	
c1	Differentiate between pharmacokinetic and pharmacodynamics drug interactions
c2	Differentiate between adverse and beneficial interactions of drugs
c3	Criticize and evaluate any new drug combination.
c4	Recommend appropriate management of a given drug interaction for a specific patient.
D- General and Transferable Skills	
d1	Manage time to meet targets within deadlines.
d2	Demonstrate critical thinking and decision making

D- Contents:

Week No.	Lecture (2 hr/week)
1	Overview of drug interactions
2	Mechanisms of drug interactions
3	Drug-food and drug-herb interactions
4	Drug interaction of CVS acting agent (1)
5	Drug interaction of CVS acting agent (2)
6	Drug interaction of antibiotics (1)
7	Drug interaction of antibiotics (2) Periodical exam
8	Drug interaction of NSAIDs, DMARDs and antigout agents
9	Drug interaction of respiratory system- acting agents
10	Drug interaction of GI tract- acting agents
11	Drug interaction of CNS- acting agents
12	Drug-environment interactions
13	Drug interactions for specific population
14	Revision
15	Final exam

E- Teaching and Learning Methods:

- Lectures
- Think/pair/share
- Case study

F- Student Assessment Methods:

1- Written exam to assess: a1,a2,a3, b1, c1,c2,c3,c4

2- Mid-term exam to assess : a1,a2,a3, b1, b2, c1,c2, d1, d2

3- Oral exam to assess: a1,a2,a3,b1, c1,c2, c3, c4, d1, d2

Assessment Schedule:

Assessment (1): Final written exam	15 Week

Assessment (2): Oral exam	15 Week
Assessment (3): Mid-term exam	7 Week

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	75	75%
Oral exam	15	15%
Midterm exam	10	10%
TOTAL	100	100%

F- Facilities required for teaching and learning:

- Black (white) board, Data show.

H- List of References:

1- Course Notes: Student book of Pharmacology I approved by Pharmacology department

2- Essential Books:

- Richard A. Harvey, Michelle A. Clark, Lippincott's Illustrated Reviews Pharmacology 5th ed. Lippincott Williams & Wilkins, 2012.

3- **Recommended Books**

i- H.P.Rang,M.M.Dale,J.M.Ritter& R.J. Flower ed. RANG & DALE Pharmacology 6th 2008 Churchill 2. Livingstone Elsevier London.

ii- Katzung, B.G., ed. Basic and Clinical Pharmacology. 9th ed. New York : McGraw Hill, 2006.

iii- Bennet P.N., and M.J. Brown, eds. Clinical Pharmacology. 10th ed. London : Churchil Livingstone, 2006.

iv- Hardman J.G., L.E. Limbrid, and A.G. Gilman, eds. Goodman & Gilman's the Pharmacological Basis of Therapeutics. 10th ed. New York : McGraw Hill, 2006.

v- Luellmann H., L. Hein, K. Mohr, and D. Bieger. Color Atlas of Pharmacology. 3rd ed. Stuttgart : Thieme, 2005.

vi- Brenner,G.M.andSteven,C.W.., Pharmacology,3rd ed.,2010

4- Periodicals and websites:

- British J Pharmacol,
- European J Pharmacol,
- Pharmacology,
- Pharmacology and Toxicology

Pubmed.com

www.medconsult.com/www.pharmanet.com

Course Coordinator: Prof. Dr. Hany El-Bassossy

Head of Department: Prof. Dr. Mona Fouad

Date: 2019 / **تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ**

Matrix I of Drug Interaction course												
Course Contents		ILOs of the course										
		Knowledge and understanding			Practical skills		Intellectual skills				General and transferable and skills	
Lectures		a1	a2	a3	b1	b2	c1	c2	c3	c4	d1	d2
1	Overview of drug interactions	√			√		√	√			√	
2	Mechanisms of drug interactions	√			√		√	√			√	
3	Drug-food and drug-herb interactions		√	√	√	√			√	√	√	√
4	Drug interaction of CVS acting agent (1)		√	√	√	√			√	√	√	√
5	Drug interaction of CVS acting agent (2)		√	√	√	√			√	√	√	√
6	Drug interaction of antibiotics (1)		√	√	√	√			√	√	√	√
7	Drug interaction of antibiotics (2)		√	√	√	√			√	√	√	√
8	Drug interaction of NSAIDs, DMARDs and antigout agents		√	√	√	√			√	√	√	√
9	Drug interaction of respiratory system- acting agents		√	√	√	√			√	√	√	√
10	Drug interaction of GI tract- acting agents		√	√	√	√			√	√	√	√
11	Drug interaction of CNS- acting agents		√	√	√	√			√	√	√	√
12	Drug-environment interactions		√	√	√	√			√	√	√	√
13	Drug interactions for specific population		√	√	√	√			√	√	√	√
14	Revision		√	√	√	√			√	√	√	√
15	Final exam		√	√	√	√			√	√	√	√

Matrix II of Drug interaction course									
National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods		Weighting of assessment		
						Lecture	Think-pair-share	Written exam	Mid-term exam	Oral exam
2.13	Pharmacological properties of drugs including mechanisms of action, therapeutic uses, dosage, contra- indications, ADRs and drug interactions.	**A22**	a1	Overview of drug interactions, Mechanisms of drug interaction	Student book Essential books	√		√	√	√
2.14	Principles of clinical pharmacology, pharmacovigilance and the rational use of drugs.	**A23**	a2	Drug-food and drug-herb interactions, Drug interaction of CVS acting agent, Drug interaction of antibiotics, Drug interaction of NSAIDs, DMARDs and antigout agents, Drug interaction of respiratory system- acting agents, Drug interaction of GI tract- acting agents, Drug interaction of CNS- acting agents, Drug-environment interactions, Drug interactions for specific population	Student book Essential books Internet	√	√	√	√	√
			a3		Student book Essential books Internet	√	√	√	√	√

3.1	Use the proper pharmaceutical and medical terms, abbreviations and symbols in pharmacy practice.	B1	b1	All lectures	Student book Essential books Internet	√	√	√	√	√
3.10	Advise patients and other health care professionals about safe and proper use of medicines.	B16	b2	Drug-food and drug-herb interactions, Drug interaction of CVS acting agent, Drug interaction of antibiotics, Drug interaction of NSAIDs, DMARDs and antigout agents, Drug interaction of respiratory system- acting agents, Drug interaction of GI tract- acting agents, Drug interaction of CNS- acting agents, Drug-environment interactions, Drug interactions for specific population	Student book Essential book Internet	√	√		√	
4.9	Utilize the pharmacological basis of	C11	c3	Drug-food and drug-herb interactions, Drug interaction of CVS acting agent,	Student book Essential	√	√	√		√

	therapeutics in the proper selection and use of drugs in various disease conditions.			Drug interaction of antibiotics, Drug interaction of NSAIDs, DMARDs and antigout agents, Drug interaction of respiratory system- acting agents, Drug interaction of GI tract- acting agents, Drug interaction of CNS- acting agents, Drug-environment interactions, Drug interactions for specific population	book Internet				
4.11	Assess drug interactions, ADRs and pharmacovigilance	C13	c1	Overview of drug interactions, Mechanisms of drug interaction	Student book Essential book Internet	√	√	√	√	√
			c2		Student book Essential book Internet	√	√	√	√	√
4.14	Analyze and evaluate evidence-based information needed in pharmacy practice.	C16	C3	Drug-food and drug-herb interactions, Drug interaction of CVS acting agent, Drug interaction of antibiotics, Drug interaction of NSAIDs, DMARDs and	Student book Essential book Internet	√	√	√		√

			C4	antigout agents, Drug interaction of respiratory system- acting agents, Drug interaction of GI tract- acting agents, Drug interaction of CNS- acting agents, Drug-environment interactions, Drug interactions for specific population	Student book Essential book Internet	√	√	√		√
5.8	Demonstrate creativity and time management abilities.	D10	d1	All lectures	Recommended book Internet	√	√		√	√
5.10	Implement writing and thinking, problem- solving and decision-making abilities.	D12	d2	Drug-food and drug-herb interactions, Drug interaction of CVS acting agent, Drug interaction of antibiotics, Drug interaction of NSAIDs, DMARDs and antigout agents, Drug interaction of respiratory system- acting agents, Drug interaction of GI tract- acting agents, Drug interaction of CNS- acting agents, Drug-	Recommended book Internet	√	√		√	√

				environment interactions, Drug interactions for specific population						

Course Coordinator:
Head of Department:
Date: تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

COURSE SPECIFICATIONS

Cosmetic (elective)

Fourth level –Semester 8

2018-2019

Course specification of Cosmetics

-

University: **Zagazig** **Faculty:** **Pharmacy**

A- Course specifications:

Program (s) on which the course is given: Bachelor of Pharmacy (Clinical pharmacy)

Major or Minor element of programs: Major

Department offering the program: -------

Department offering the course: Pharmaceutics department

Academic year / Level: Level 4 – 8thsemister

Date of specification approval: 26/11/2018

B- Basic information:

Title: Cosmetics Code: PT E13

Credit Hours: 3hrs

- Lectures : 2 hrs/week
- Practical: 1 hrs/week
- Tutorials: ---
- Total: 3 hrs/week

C- Professional information:

1-Overall Aims of the Course: at the end of the course the student will be able to describe:

hair, bath, fragrance, and make up preparations, nail lacquers, shaving, and after-shave preparations, skin care, and hygiene products, antiperspirant and deodorants, quality control test and evaluation of cosmetic products.

2-Intended Learning Outcomes (ILOs):

A- Knowledge and Understanding	
a1	Describe the structure and properties of hair fibers (hair follicle, dermal papillae) as well as hair problems
a2	Outline the composition of the skin and skin problems
a3	classify different ingredients used in formulations of skin care and cosmetic products according to their chemistry and function
a4	Describe the properties of different cosmetic preparations including skin and hair products.
B- Professional and Practical skills	
b1	Calculate ingredients amounts in cosmetic preparations.
b2	Prepare different formulations for skin, hair, scalp

b3	Handle the cosmetics preparation and chemicals safely
b4	Evaluate quality of the prepared formulations based on its physical properties.
C- Intellectual skills	
c1	Select the appropriate ingredients used in preparation of different cosmetics preparations.
c2	Recommend the appropriate cosmetic preparations according to customer needs.
D- General and Transferable skills	
d1	Communicate properly in an oral way.
d2	Work effectively as a team member.

D- Contents:

Week No.	Lecture (2hrs/week)	Practical session (1 hr/week)
1	- Definition and Classifications of cosmetics - Skin, functions, structure. Glands, Skin types and Skin color	Cold cream
2	- Hair structure and color	Cleansing Cream

	- Creams. uses, classification	Formula
3	Skin cleansing creams: Cold cream, Sorbitan fatty acid ester cream, Acid containing cleansing cream, Detergent cleansing cream, Antibacterial cleansing cream	Vanishing Cream
4	- Vanishing and foundation creams - Shaving preparations: Preshaving preparation, Shaving creams and gels: brushless shaving creams lather shaving creams, soap, foaming shaving products, shaving gels.	Shaving Creams
5	- Commonly used additives added to creams - Past: types, preparation, difference between past and ointment.	Acne Cream Formula
6	Tooth paste Hair care products (Hair shampoo, hair conditioner, styling aid, hair dyes , hair tonic and depilatories)	Shampoo
7	- Periodical exam	
8	- Bath preparations and baby cosmetics - Cosmetics FOR NAILS,Nail Lacquers And Removers; Basic components	Toothpaste
9	Colour cosmetic and Face makeup(toilet powder, lip sick, mascara, eye liner and eye shadow)	Type Eye Shadow

10	Antiperspirant & Deoderant materials and formulations, Fragrance preparations (Perfumes)	Lipstick
11	Sunscreen, sun block and sun protection factors, Sun Tanning, Sunless tanning	Deodorant stick
12	Skin whiting product	Sunscreen Cream
13	- Antiaging&Antiwrinkles and Antiacne products	Final practical exam
14	- Comparison between Facial Masks and Facial Packs - Quality Control Test For Cosmetics	
15	- Written exam	

E- Teaching and Learning Methods:

- Lectures
- Practical session
- Video demonstration.
- Assignments (prepare power point presentations about some marketed cosmetics products)

F- Student Assessment Methods:

- Periodical exam **to assess:** a1, a2, a3, a4, c1, c2
- Written exam **to assess:** a1, a2, a3, a4, c1, c2
- Practical exams **to assess:** b1, b2, b3 and b4
- Oral exam **to assess:** a1, a2, a3,a4, c1, c2, b3, b4, d1
- PowerPoint presentation **to assess:** d1, d2

Assessment schedule:

Assessment (1): Written exam	Week 15
Assessment (2): Practical exams	Weeks 13
Assessment (3): Oral exam	Week 15
Assessment (4): Activity	Weeks 13
Assessment (5): Periodical exam	Weeks 7

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	50	50%
Practical exam and activities	25	25%
Oral exam	15	15%
Periodical exam	10	10%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- For lectures : Black (white) boards, data show

- For labs: Chemicals, glass ware, instruments, digital balance, water bathes

H- List of References:

1- Course Notes:

2- Essential books:

- ***COSMETICS ADDITIVES: An Industrial Guide***
- **Ansel's Pharmaceutical Dosage Forms and Drug Delivery Systems , ninth edition "**Loyd V. Allen Jr. PhD , Nicholas G. Popovich PhD , Howard C. Ansel PhD ", 720, 2010.
- **Remington's Pharmaceutical Sciences,** 2393, 2005.
- **Cosmetic and Toiletry Formulations (Second Edition)**, 1992, Ernest W. Flick
- **Manufacturing Cosmetic Ingredients according to Good Manufacturing Practice Principles**, Global Regulatory Issues for the Cosmetics Industry, 2009, Pages 79-92

3- Recommended books:

4- Periodicals and websites:

Course Coordinators: **Prof. Dr. Hanan El Nahas**

Course Staff: **Prof. Dr. Hanan El Nahas**

Ass. Prof. Dr. Azza Ali Hasan

Dr. Eman Gomaa

Head of department: **Prof. Dr. Nagia Ahmed Al-Amin Almegrab**

Date: **تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ**

26/11/2018

Matrix I of Cosmetic course

Course Contents		ILOs of First term course											
		Knowledge and understanding				Professional and practical skills				Intellectual skills		Transferable and general skills	
Lectures		a1	a2	a3	a4	b1	b2	b3	b4	c1	c2	d1	d2
1	Cleansing creams (definition, types)	x	x	x	x					x	x		
2	Cleansing creams (definition, types)	x	x	x	x					x	x		
3	Cold and Vanishing cream	x	x	x	x					x	x		
4	Foundation cream	x	x	x	x					x	x		
5	Toilet powders “cosmetic Posers”	x	x	x	x					x	x		
6	Toilet powders “cosmetic Posers”	x	x	x	x					x	x		
7	Deodorants	x	x	x	x					x	x		
8	Shampoos	x	x	x	x					x	x		

9	Lipstick	x	x	x	x					x	x		
10	Nail lacquers	x	x	x	x					x	x		
11	Lacquers removal	x	x	x	x					x	x		
12	Hair removers (Depilatories and Depilatories)	x	x	x	x					x	x		
	Practical Session												
1	Preparation of cold cream + Lab evaluation					X	x	X	x		x		x
2	Preparation of vanishing cream + Lab evaluation					X	x	X	x		x		x
3	Preparation of shaving cream + Lab evaluation					X	x	X	x		x		x
4	Preparation of sunscreen cream + Lab evaluation					X	x	X	x		x		x
5	Revision on preparation of creams					X	x	X	x		x		x
6	Preparation of calamine lotion + Lab evaluation					x	x	X	x		x		x
7	Preparation of sulfur ointment+ Lab evaluation					x	x	X	x		x		x

8	Preparation of white field ointment+ Lab evaluation					x	x	X	x		x	x
9	Revision on Lotions					x	x	X	x		x	x
10	Preparation of lipstick + Lab evaluation					x	x	X	x		x	x
11	Preparation of powders+ Lab evaluation					x	x	X	x		x	x
12	Preparation of powders+ Lab evaluation					x	x	X	x		x	x

Matrix II of Cosmetic course												
National Academic Reference Standards NARS		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Weighting of assessment			
						lecture	practical session	self-learning	written exam	practical exam	oral exam	periodical exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A2	a1 a2	Cleansing creams (definition, types) Cold and Vanishing cream Foundation cream Toilet powders “cosmetic Posers” Deodorants Shampoos Lipstick Nail lacquers Hair removers (Depilatories and Depilatories)	Student book Essential books	x			x		x	x
2.2	Physical-chemical properties	A6	a3	Toilet powders “cosmetic Posers” Lipstick	Student book Essential	x			x		x	x

	of various substances used in preparation of medicines including inactive and active ingredients as well as biotechnology and radio-labeled products.			Nail lacquers	books							
2.6	Properties of different pharmaceutical dosage forms including novel drug delivery systems.	A10	a4	Cold and Vanishing cream Foundation cream Toilet powders "cosmetic Posers" Deodorants Shampoos Hair removers (Depilatories and Depilatories) Lipstick Nail	Student book Essential books	x			x		x	

				lacquers								
3.2	Handle and dispose chemicals in a safe way.	B2	b3	Preparation of cold cream + Lab evaluation Preparation of vanishing cream + Lab evaluation Preparation of	Practical notes		x			x		

3.3	Compound, dispense, label, store and distribute medicines effectively	B3	b1 b2 b4	shaving cream + Lab evaluation Preparation of sunscreen cream + Lab evaluation Revision on preparation of creams Preparation of calamine lotion + Lab evaluation Preparation of sulfur ointment+ Lab evaluation Preparation of white field ointment+ Lab evaluation								

	and safely.			Revision on Lotions Preparation of lipstick + Lab evaluation Preparation of powders+ Lab evaluation Preparation of powders+ Lab evaluation								
4.1	Apply pharmaceutical knowledge in the formulation of safe and effective medicines as well as in dealing with new drug	C1	c1	Preparation of cold cream + Lab evaluation Preparation of vanishing cream + Lab evaluation Preparation of shaving cream + Lab evaluation Preparation of calamine lotion + Lab evaluation Preparation of	Student book Essential bookspractical notes		x			x		

	delivery systems.		c2	sulfur ointment+ Lab evaluation Preparation of white field ointment+ Lab evaluation Revision on Lotions Preparation of lipstick + Lab evaluation Cold and Vanishing cream									
5.1	Communicate clearly by verbal and means.	D1	d1	Market search internet search				x		x			
5.3	Work effectively in a team.	D4	d2					x		x			