COURSE SPECIFICATIONS

Faculty of Pharmacy

Second year – First Term

2019-2020

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COURSE SPECIFICATIONS

Analytical chemistry (3)

Second year – first Term
2019-2020

Course Specificationof Analytical chemistry (3)

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

A- Course specifications:

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

Major or Minor element of programs: Major

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

Department offering the course: Analytical Chemistry

Academic year / Level: Second year / First term

Date of specification approval: /10/2019

B- Basic information:

Title: Analytical Chemistry (3) Code: AC213

Credit Hours: ---

Lectures: 2hrs/week

Practical: 2hrs/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 theoretical bases and applications of acid-base, redox, preciptimetric and complexometric reactions.

2-Intended Learning Outcomes of Analytical Chemistry (3) (lLOs):

A- Knowledge and Understanding	
a1	Illustrate different types of volumetric analysis.
a2	Explain theories and mechanisms of neutralization, redox, preciptimetric and complexometric reactions..
a3	Describe suitable methods and optimum conditions for separation, and determination of different compounds

B- Professional and Practical skills	
b1	Handle and dispose chemicals safely.
b2	Perform neutralization, redox, preciptimetric and complexometric reactions in determination of some inorganic and organic compounds and their mixtures.
C- Intellectual skills	
c1	Interpret results into concentrations.
c2	Calculate pH, oxidation number, and potential of different systems and during titration
c3	Select the most appropriate procedures for determination of different compounds and their mixtures
D- General and Transferable skills	
d1	Work as member of team.
d2	Adopt safety guidelines.
d3	Perform tasks within time limit.
d4	Implement writing and presentation skills.

D- Contents:

Week No.	Lecture (2 hrs/week)	Practical session (2hrs/week)
1	- Theoretical bases of volumetric analysis -Acid base reactions and pH calculations	- Safety guidelines - Standardization of strong acids and bases
2	- Buffer solutions and neutralization indicators -Types of acid base indicators	- Determination of NaOH/Na_2CO_3
3	- Acid –base titration curve	- Determination of HCl/HAC mixture - Determination of NH_4Cl
4	- Application of neutralization reactions	-Determination of $Al_2(SO_4)_3$ -Determination of Cu SO_4
5	- Non-aqueous titrationsand their application	-Determination of boric acid/borax mixture.
6	- Theory of redox reactions - Calculation of oxidation no., and electrode potential	- Determination of oxalicacid /oxalate. - Determination of ferrocyanide
7	**Midterm exam**	
8	- Titration curves and determination	- Determination of I_2

	of E.P. in redox reactions	- Determination of $NaNO_2$ - Determination of glucose
9	- Redox reactions involving I_2	- Determination of Al^{3+}. - Determination of Cl^- by Mohr's method.
10	- Application of redox reactions	- Determination of Ca^{2+}/Mg^{2+}mixture. - Determination of Cu^{2+}.
11	- Theory of preciptimetry and solubility product rule	**-Activity**
12	- Detection of E.P. in preciptimetric reactions	**- Practical exam**
13	- Theory of complexometry and complexometric indicators	
14	- Types of complexometric titrations and their applications	
15	**-Final Exam**	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Open discussion
- Problem solving
- Self-learning (activity): Apply internet search about different topics related to iodometry and iodimetry application in pharmacy and present as a report.

F- Student Assessment Methods

1- Written exam to assess a1,a2,a3,c2,c3

2- Practical exam to assess b1, b2,c1,d1,d2,d3

3- Activity to assess d3, d4

3- Oral exam to assess a1,a2,a3,c3

Assessment Schedule:

Assessment (1): Final written exam	Week 15
Assessment (2): Practical exam	Week 12
Assessment (3): Oral exam	Week 15
Assessment (4): Midterm exam	Week 7
Assessment (5): Activity	Week 11

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	50	50%

Practical exam	20	20%
Oral exam	15	15%
Midterm exam	10	10%
Activities	5	5%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- Black (white) board, Data show, Laboratory equipment and Chemicals.

H- List of References:

1- Course Notes: Student book of Analytical chemistry (3) approved by Analytical chemistry department (2019).

- Practical notes of Analytical chemistry (3) approved by Analytical chemistry department (2019).

2- Essential (textbooks):

i- J. Mendham, et al., Vogel's Textbook of Quantitative Chemical Analysis (6^{th} edition);, Addison Wesley Publishing Co., 2000

ii-Daniel C. Harris, Quantitative Chemical Analysis (6^{th}Edition);. (2002).

3- Recommended books:

i. D. C. Harris, Quantitative Analytical Chemistry (9^{th} edition), W. H. Freeman and Co. (2015)

ii. D. Chowrasia, N. Sharma, Analytical Chemistry. A Qualitative & Quantitative Approach(General Techniques)Knoc education (2015).

4- Periodicals, Web Sites, etc

https://www.ekb.eg/

http://chemwiki.ucdavis.edu/

http://en.wikipedia.org/

www.Pubmed.Com and

www.sciencedirect.com

Course Coordinators: Prof. Dr. HishamEzzat

Head of Department: Prof. Dr. HishamEzzat

Date: /10/2019 تم مناقشة واعتماد توصيف المقرر من مجلس القسم بتاريخ

Matrix I of 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	d1	d2	d3	d4
1	-Theoretical bases of volumetric analysis -Acid base reactions and pH calculations	x	x					x					
2	- Buffer solutions and neutralization indicators -Types of acid base indicators		x										
3	- Acid –base titration curve							x					
4	- Application of neutralization reactions			x					x				
5	- Non-aqueous titrations and their application		x	x					x				
6	**Midterm Exam**	x	x	x				x	x				
7	- Theory of redox reactions - Calculation of oxidation no., and electrode potential		x					x					
8	- Titration curves and determination of E.P. in redox reactions							x					
9	- Redox rections involving I_2		x						x				
10	- Application of redox reactions			x					x				
11	- Theory of preciptimetry and solubility product rule		x										
12	- Detection of E.P. in preciptimetric reactions and their application.		x	x					x				
13	- Theory of complexometry and complexometric indicators		x										
14	- Types of complexometric titrations and their applications		x	x					x				

Practical sessions													
	Practical session	**a1**	**a2**	**a3**	**b1**	**b2**	**c1**	**c2**	**c3**	**d1**	**d2**	**d3**	**d4**
1	- Safety guidelines - Standardization of strong acids and bases				x	x	x			x	x		
2	- Determination of $NaOH/Na_2CO_3$				x	x	x			x	x		
3	- Determination of HCl/HAC mixture - Determination of NH_4Cl				x	x	x			x	x		
4	-Determination of $Al_2(SO_4)_3$ -Determination of $Cu\ SO_4$				x	x	x			x	x		
5	-Determination of boric acid/borax mixture.				x	x	x			x	x		
6	**MidtermExam**												
7	- Determination of oxalic acid /oxalate. - Determination of ferrocyanide.				x	x	x			x	x		
8	- Determination of I_2 - Determination of $NaNO_2$ - Determination of glucose				x	x	x			x	x		
9	- Determination of Al^{3+}. - Determination of Cl^- by Mohr's method.				x	x	x			x	x		
10	- Determination of Ca^{2+}/Mg^{2+} mixture. - Determination of Cu^{2+}.				x	x	x			x	x		
11	**Activity**											x	x
12	**Practical exam**				x	x	x				x	x	

Matrix II of 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
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A1	a1	- Theoretical bases of volumetric analysis	Student book Essential books Recommended books Internet	x		x	x		x
2.3	Principles of different analytical techniques using GLP guidelines and validation procedures.	A11	a2	Acid base reactions and pH calculation -Theory of redox reactions -Calculation of oxidation no., and electrode potential- Redox rections involving I2 - Theory of preciptimetry and solubility product rule - Theory of complexometry and complexometric indicators	Student book Essential books Recommended books Internet	x		x	x		x

			a3	-Non-aqueous titrations and their application -Application of redox reactions -Detection of E.P. in preciptimetric reactions and their application. - Types of complexometric titrations and their applications							
2.17	Methods of biostatistical analysis and pharmaceutical calculations	A36	a3	-Non-aqueous titrations and their application -Application of redox reactions -Detection of E.P. in preciptimetric reactions and their application. - Types of complexometric titrations and their applications	Student book Essential books Recommended books Internet	x		x	x		x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely.	B2	b1	- Practical sessions	Practical notes		x			x	
3.4	Extract, isolate, synthesize, purify, identify, and/or standardize active substances from different origins.	B7	b2	- Practical sessions	Practical notes		x			x	
4.13	Analyze and interpret experimental results as well as published literature	C18	c1	- Practical sessions	Practical notes		x			x	
			c2	-Acid base reactions and pH calculations - Acid –base titration curve	Student book Essential books Recommended	x		x	x		x

				- Calculation of oxidation no., and electrode potential	books Internet						
4.3	Apply qualitative and quantitative analytical and biological methods for QC and assay of raw materials as well as pharmaceutical preparations	C6	c1	- Practical sessions	Practical notes		x			x	
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C10	c3	-Non-aqueous titrations and their application -Application of redox reactions -Detection of E.P. in preciptimetric reactions and their application. - Types of complexometric titrations and their applications - Practical sessions	Student book Essential books Recommended books Internet	x		x	x		x
5.3	Work effectively in a team.	D3	d1	- Practical sessions - Activity	Practical notes		x			x	
5.6	Adopt ethical, sales and safety guidelines	D7	d2	- Practical sessions	Practical Notes		x			x	
5.8	Demonstrate creativity and time management abilities.	D9	d3	- Practical sessions - Activity	Practical Note Internet		x	x		x	

5.9	Implement writing and presentation skills.	D10	d4	- Activity	Internet			x		x	

Course Coordinator: Prof. Dr./HishamEzzat

Head of Department: Prof. Dr./HishamEzzat

Date: /10/2019 تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

COURSE SPECIFICATIONS

Pharmaceutical organic chemistry (3)

Second year – first Term 2019-2020

Course Specification of Pharmaceutical Organic Chemistry 3

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

A- Course specifications:

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

Major or Minor element of programs: Major

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

Department offering the course: Pharm. Organic Chemistry Department

Academic year/Level: Second year / First term

Date of specification approval: **2019 / 26/8**

B- Basic information:

Title: Pharmaceutical Organic Chemistry (3)

Code: POC212

Credit Hours: ---

Lectures: 2hrs /week

Practical: 2hrs /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 structure and synthesis of alcohols, thiols, phenols, aldehydes, ketones, carboxylic acid, and their derivatives and carbohydrates chemistry

2-Intended Learning Outcomes

A- Knowledge and Understanding	
a1	Demonstrate the principles of chemistry of alcohols,thiols,ethers,epoxide phenols, aldehydes, ketones, carboxylic acids/derivatives and carbohydrates
a2	Predict the nomenclature of each class of organic compounds
a3	Outline different synthetic routes of alcohols,thiols ethers ,epoxide, phenols, aldehydes, ketones, carboxylic acids and pharmaceutically related compounds
B- Professional and Practical skills	
b1	Handle basic laboratory equipments and chemicals effectively and safely.
b2	Identify qualitatively phenols, aldehydes, ketones, carboxylic acids and carbohydrate.
b3	synthesize/purify different target compounds using the previous precursors
C- Intellectual skills	
c1	Select suitable methods of identification of phenols, aldehydes, ketones, carboxylic acids and carbohydrates.
c2	Suggest different chemical reactions of alcohols, ethers, epoxide, phenols, aldehydes, ketones, carboxylic acids as precursors.
c3	Classify organic compounds according to their chemical properties.
c4	Suggest different synthetic pathways for designing pharmaceutically active compounds starting from phenols, alcohols, aldehyde, ketone, carboxylic acids and derivatives.
D- General and Transferable skills	
d1	Communicate effectively with others
d2	Demonstrate team working and time management skills
d3	Implement writing skills through lab reports and discussion of results.

D- Contents:

Week No.	Lecture contents (2hrs/week)	Practical session (2 hrs/ week)
1	- Alcohols and phenols: classification. - Alcohols: nomenclature and preparations.	Laboratory safety measures
2	- Alcohols: Synthesis, chemical reactions and physical properties - Thiols: synthesis and chemical reactions	Identification of phenol
3	- Phenols: physical properties and chemical reactions, phenol derivatives of pharmaceutical interest.	Synthesis of tribromo-phenol
4	- Ethers (aliphatic and aromatic): nomenclature, preparations, chemical properties, ethers of pharmaceutical interest	Identification of acetone and benzaldhyde
5	- Aldehydes (aliphatic and aromatic): nomenclature, synthesis	preparation of :Dibenzalacetone
6	- Ketones (aliphatic and aromatic): nomenclature and synthesis	- Identification of aniline
7	Midterm exam	
8	Aldehydes and Ketones (aliphatic and aromatic): chemical reactivity	Synthesis of Schiff's base
9	Carboxylic acid (aliphatic and Aromatic): nomenclature, preparations	✓ Identification of salicylic acid. ✓ preparation of aspirin
10	Carboxylic acid (Aliphatic and Aromatic): physical and chemical properties.	Identification of glucose, fructose, lactose, sucrose and starch
11	Carboxylic acid (Aliphatic and Aromatic): chemical reactivity	✓ Preparation of fructosazone
12	Carboxylic acid derivatives (Aliphatic and Aromatic): nomenclature, synthesis and physical properties and chemical reactions	preparation of β-pentaacetylglucose
13	Carbohydrates nomenclature	practical exam

14	Carbohydrates chemical reactivity	practical exam
15	Final written	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions: Synthesis, identification, preparation of lab. report with interpretation of experimental results.

F- Student Assessment Methods:

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

2- Practical exam to assess b1, b2,b3,d3

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

4- Student participation within labs to assess d1, d2, d3

Assessment schedule:

Assessment (1): Periodic exam	Week 7
Assessment (2): Activity	Each lab.
Assessment (3): Practical exam	Week 13& 14
Assessment (4): Final written exam	Week 15
Assessment (5): Oral exams	Week 15

Weighting of Assessment:

Assessment method	Marks	Percentage
Periodic exam	10	10%
Activity	5	5%
Practical exam	20	20%
Final written exam	50	50%
Oral exam	15	15%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

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

H- List of References:

1- Course Notes: Student book of pharmaceutical organic chemistry

approved by pharmaceutical organic chemistry department 2019-2020

- ✓ Practical notes of organic chemistry 3 approved by Pharmaceutical organic chemistry department 2019-2020.

2- Essential books: i- Organic Chemistry (eighth edition); Solomons T.W.G. & Fryhle C.B.; John Wiley and Sons Inc., USA (2004).

3- Recommended books: - Organic Chemistry, Second Edition, Bhupinder Mehta and Manju Mehta (2015).

Course Coordinator: Prof.dr.Hanan Abdel-Razik Abdel-Fattah

Head of Department: Prof.dr.Hanan Abdel-Razik Abdel-Fattah

تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ/ 26/8/ 2019

Matrix I of Pharmaceutical organic chemistry 3 course

Course Contents		ILOs of pharmaceutical organic chemistry 3 course												
		knowledge and understanding			Professional and practical skills			Intellectual skills				General and transferable skills		
	Lectures	a1	a2	a3	b1	b2	b3	c1	c2	c3	c4	d1	d2	d3
1	Alcohols and phenols: classification,alcohols nomenclature and prepration	x	x	x				x	x	x	x			
2	Alcohols chemical and physical proparties,thiols synthesis and chemistry	x	x	x				x	x	x	x			
3	Phenols:nomenclature and preparations.	x	x	x				x	x	x	x			
4	Phenols:physical and chemical proparties ,deriv. of pharmacutical interest.	x	x	x				x	x	x	x			
5	Ethers(aliphatic and aromatic);nomenclature,preparations,chemistry and derv.of pharmacutical interest	x	x	x				x	x	x	x			
6	Aldehydes (aliphatic and aromatic): nomenclature, synthesis	x	x	x				x	x	x	x			
7	Ketones(aliphatic and aromatic): nomenclature and synthesis	x	x	x				x	x	x	x			
8	Aldehydes (aliphatic and aromatic): chemical reactivity	x	x	x				x	x	x	x			
9	Ketones (aliphatic and aromatic): chemical reactivity	x	x	x				x	x	x	x			
10	Carboxylic acid (Aliphatic and Aromatic): Nomenclature, preparation	x	x	x				x	x	x	x			
11	Carboxylic acid (Aliphatic and Aromatic): Physical and chemical properties	x	x	x				x	x	x	x			

12	Carboxylic acid (Aliphatic and Aromatic): chemical reactivity	x	x	x				x	x	x	x			
13	Carboxylic acid derivatives:nomenclature synthesis and physical proparties.	x	x	x				x	x	x	x			
14	Carboxylic acid derivatives:chemical reactivity,nitrils and carbonic acid derivatives.	x	x	x				x	x	x	x			
Practical sessions														
15	Laboratory safty measurment				x	x	x					x	x	x
16	Identification of phenol				x	x	x					x	x	x
17	Synthesis of tribromo-phenol				x	x	x					x	x	x
18	Identification of acetone and benzaldhyde				x	x	x					x	x	x
19	preparation of :Dibenzalacetone				x	x	x					x	x	x
20	Identification of aniline				x	x	x					x	x	x
21	Synthesis of Schiff's base				x	x	x					x	x	x
22	✓ Identification of salicylic acid. preparation of aspirin				x	x	x					x	x	x
23	✓ Identification of glucose, fructose, lactose, sucrose and starch				x	x	x					x	x	x
24	✓ Preparation of fructosazone				x	x	x					x	x	x
25	✓ preparation of β-pentaacetylglucose				x	x	x					x	x	x
	✓ Activity											x	x	x

Matrix II of Pharmaceutical organic chemistry 3 course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods		Method of assessment			
						Lecture	Practical session	student participation	Written exam	Practical exam	Oral exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A1	a1	Alcohols and phenols: classification, preparation	Student book Essential books	x			x		x
				Alcohols and phenols: Chemical and physical properties		x			x		x
				Hydroxyl compounds of pharmaceutical interest, thioalcohols	Student book Essential books Recommended books Internet	x			x		x
				Ethers (aliphatic and aromatic): classifications, preparations.	Student book Essential books	x			x		x
				Ethers (aliphatic and aromatic):Chemical properties, ethers of pharmaceutical interest		x			x		x
				Aldehydes (aliphatic and aromatic): nomenclature, synthesis		x			x		x
				Ketones(aliphatic and aromatic): nomenclature and synthesis		x			x		x

				Aldehydes (aliphatic and aromatic): chemical reactivity		x			x		x
				Ketones (aliphatic and aromatic): chemical reactivity		x			x		x
				Carboxylic acid (Aliphatic and Aromatic): Nomenclature, preparation		x			x		x
				Carboxylic acid (Aliphatic and Aromatic): Physical and chemical properties		x			x		x
				Carboxylic acid (Aliphatic and Aromatic): chemical reactivity		x			x		x
				Carboxylic acid derivatives (Aliphatic and Aromatic): nomenclature, synthesis and chemical properties.		x			x		x
2.5	Principles of drug design, development and synthesis.	A15	a2	Alcohols and phenols: classification, preparation	Student book Essential books	x			x		x
			a3	Hydroxyl compounds of pharmaceutical interest, thioalcohols	Student book Essential books Recommended books Internet	x			x		x
				Ethers (aliphatic and aromatic): classifications, preparations.	Student book Essential books	x			x		x
				Aldehydes (aliphatic and aromatic): nomenclature, synthesis		x			x		x

				Ketones(aliphatic and aromatic): nomenclature and synthesis		x			x		x
				Carboxylic acid (Aliphatic and Aromatic): Nomenclature, preparation		x			x		x
				Carboxylic acid derivatives (Aliphatic and Aromatic): nomenclature, synthesis and chemical properties.		x			x		x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	Laboratory safety measures	Practical notes		x	x		x	
				Identification of phenol			x	x		x	
				Synthesis of tribromo-phenol Identification of acetone and benzaldhyde							
				preparation of :Dibenzalacetone							
				Identification of aniline							
	3.4 Extract, isolate, synthesize, purify, identify, and /or standardize active substances	B6	b2	Synthesis of Schiff's base							
			b3	✓ Identification of salicylic acid. preparation of aspirin							

	from different origins			Identification of glucose, fructose, lactose, sucrose and starch Preparation of fructosazone preparation of β-pentaacetylglucose							
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C9	c1	Identification of alcohols, phenols, aldehydes, ketones,carboxylic acid and synthesis of different target compounds	Practical notes		x			x	
		C10	c2	Alcohols and phenols: classification, preparation	Student book Essential books	x			x		x
				Hydroxyl compounds of pharmaceutical interest, thioalcohols	Student book Essential books Recommended books Internet	x			x		x
			c3	Ethers (aliphatic and aromatic): classifications, preparations.	Student book Essential books	x			x		x
				Aldehydes (aliphatic and aromatic): nomenclature, synthesis		x			x		x
			c4	Ketones(aliphatic and aromatic): nomenclature and synthesis		x			x		x

				Carboxylic acid (Aliphatic and Aromatic): Nomenclature, preparation		x			x		x
				Carboxylic acid derivatives (Aliphatic and Aromatic): nomenclature, synthesis and chemical properties.		x			x		x
				Identification of alcohols, phenols, aldehydes, ketones,carboxylic acid and synthesis of different target compounds	Practical notebook		x	x		x	
5.1	Communicate clearly by verbal and means	D1	d1	Identification of alcohols, phenols, aldehydes, ketones,carboxylic acid and synthesis of different target compounds	Practical notebook		x	x		x	
5.3	Work effectively in a team.	D3	d2	Laboratory safety measures	Practical notes		x	x			
5.8	Demonstrate creativity and time management abilities.	D9		Identification of alcohols, phenols, aldehydes, ketones,carboxylic acid and synthesis of different target compounds			x	x		x	
5.9	Implement writing and presentation skills	D10	d3	Identification of alcohols, phenols, aldehydes, ketones,carboxylic acid	Practical notes		x	x		x	

				and synthesis of different target compounds							

Course Coordinator: Prof.dr.Hanan Abdel-Razik Abdel-Fattah

Head of Department: Prof.dr.Hanan Abdel-Razik Abdel-Fattah

تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ 2019 / 8/26 Date

COURSE SPECIFICATIONS

Pharmacognosy (2)

Second year – first Term
2019-2020

Course Specification of Pharmacognosy 2

University: Zagazig Faculty: Pharmacy

A- Course specifications:

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

Major or Minor element of programs: Major

Department offering the program: Pharmacognosy

Department offering the course: Pharmacognosy

Academic year/ Level: Second year/first term

Date of specification approval: 9/ 2019

B- Basic information:

Title: Pharmacognosy II Code: **PG212**

Credit Hours: ---

Lectures : 2 hrs/week

Practical: 2 hrs/week

Tutorials: ---

Total: 3hrs/week

C- Professional information:

1. Overall Aims of the Course:

On completion of the course, students will be able to describe morphological, histological characters and uses of medicinal fruits, seeds and subterranean organs as well as identification of different active constituents and adulteration, in addition to identification of some medicinally important unorganized and animal drugs.

2. Intended Learning Outcomes of Pharmacognosy 2.

A- Knowledge and Understanding	
a1	Describe morphological, histological characters and uses of medicinal fruits, herbs and subterranean organs.
a2	Identify adulteration of different medicinal fruits, herbs and subterranean organs.
a3	List different active constituents of fruits, seeds and subterranean organs and unorganized plant and animal drugs.
B- Professional and Practical skills	
b1	Handle and dispose chemicals in a safe way.
b2	Examine drugs of plant origin in entire and powdered form.
b3	Determine the active constituents of the studied drugs.
C- Intellectual skills	
c1	Differentiate between drugs in entire and powdered form.
c2	Investigate active constituents of different drugs.
D- General and Transferable skills	
d1	Work as a member of a team.
d2	Develop internet search and communications skills.
d3	Manage time and plan of work.

D- Course contents:

Week No	Lecture (2hrs/week)	Practical session (2hrs/week)
1	General introduction for what will be taught all over the term Introduction for the fruits and giving the students the possible references, web sites, text books. Description of the common characters of umbelliferous.	Laboratory Safety Measures Dealing With Microscope. Morphology of some important fruits
2	Description of morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Fennel, Ammi visnaga and Ammi majus.	Identification of Fennel in entire and powdered form.
3	Description of morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Coriander, Anise, , Capsicum, Colocynth, Lemon, bitter orange peel and Senna pods.	Identification of Anise and Ammi visnaga, Ammi majus and coriander in entire and powdered form. Identification of Capsicum and colocynth in entire and powdered form.
4	Evening primrose, Colchicum and mustard macro- and, micro-morphology of the entire and powdered drugs, chemical identification. Unofficial fruits.	Mustard and nux vomica: macro-, and Micro-morphology, powders and chemical identification Activity (report on different pharmaceutical fruits)
5	Introduction to herbs. Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Lobelia.	Morphology of some important herbs. Identification of Mentha and Thyme.
6	Study Morphological And Histological Characters, Constituents, Uses, Chemical Tests And Detection Of Adulteration In Entire And Powdered Form Of Piperment, Thyme, Alfalfa and Echinaceae. Unofficial herbs	Identification of Vinica Activity (report on medical uses of common herbs)
7	Midterm exam	
8	Introduction to subterranean organs. Activity. Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of, Liquorice	Morphological demonstration for some important roots and rhizomes. Identification of Liquorice
9	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of senega	Macro-morphology; micro-morphology powder and chemical identification of Ginger

	and Ipeca	and Rhubarb.
10	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Rhubarb, Ginger.	Identification of un-organized drugs(morphology and chemical tests
11	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Hydrastis, Valeriana., Unofficial rhizomes	Revision
12	Introduction to Unorganized drugs Study the preparation, collection, active constituents, uses and chemical tests of resins, oleo-resins	Practical exam
13	Study preparation, collection, active constituents, uses and chemical tests of balsams, latex, juice, extracts and gum.	Practical exam
14	Revision	
15	Written and oral exam	

E- Teaching and Learning Methods:

- Lectures (interactive lecture, data show and board)
- Practical sessions
- Self-learning (Group discussion, Group assignment)

F- Student Assessment Methods:

1- Written exam to assess a1, a2, a3, c1, c2

2- Practical exam & students' participation to assess b1, b2, b3, d1, d2, d3

3- Oral exam to assess a1, a2, a3, a1, a2, a3, c1, c2

4- Activities (group discussion, presentation, net search and pamphlets' of natural drugs) to assess d1, d2, d3

5-

Assessment schedule:

Assessment (1): Final Written exam	Week 15
Assessment (2): Activity	Week 4,6
Assessment (3): Practical exams	Week 12,13
Assessment (4): Oral exams	Week 15
Assessment (5): midterm	Week 7

Weighting of Assessment:

Assessment method	Marks	Percentage
Midterm exam	10	10%
Final Written exam	50	50%
Activity	5	5%
Practical exam	20	20%
Oral exam	15	15%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- For Labs: Chemicals, glassware, instruments, Digital balances, water bathes.
- Faculty of pharmacy Zagazig University Farm

H- List of References:

1- Student´s book approved by Pharmacognosy Department on 2019.

2- Essential Books;

- Textbook of pharmaognosy, 5th" Ed.,T.E. Wallis (1967)

- Trease G.E. (a text book of pharmacognosy) 15th Ed. London. , New York **2002**.

3- Recommended Books

- Janice, Glimn-Lacy and Peter B. Kaufman, Botany Illustrated, Introduction to plants, major groups, flowering plants families, 2nd ed. Springer **2006**.

- Martindale, "The extrapharmacopeia". 31st Edn., by James, E.F Reynolds. And Kathleen Parfitt, Royal Pharmaceutical Society, London (2007).

Betty P, Derek W (2000) Atlas of microscopy of medicinal plants, culinary Herbs and species. CBS publisher New Delhi:17-42

De Smet PA, Keller K, H?nsel R, Chandler RF (1992) Adverse effects of herbal drugs. Springer,

4- Periodicals, web sites, etc

- A. Fahan, Plant Anatomy, Pergamon Press. **2002.**
- http://www.scribd.com/doc/75980088/Atlas-of-Medicinal-Plants-II
- http://pharmacystudent-prep.blogspot.com
- http://www.pharma-board.com/board/fopgal/index.php
-

https://www.google.com/search?safe=active&sxsrf=ACYBGNT1wfCQl6DGxZ5ouZYl1QZZfJSrYg:1568843605556&q=Pharmacognosy4all&tbm=isch&source=univ&sa=X&ved=2ahUKEwiel8TurdvkAhVIrxoKHcTHDMAQ7Al6BAgBECQ&biw=1008&bih=584#imgrc=7NmuWomEPl70WM:

Course Coordinator: Prof. Dr. Afaf El-Sayed
Head of Department: Prof. Dr. Amal Amin Al-Gendy

Date: تم مناقشة و إعتماد توصيف المقرر من مجلس القسم بتاريخ ..... 9\2019

Matrix I of Pharmacognosy-II Course

Course Contents		ILOs of Pharmacognosy II										
		Knowledge and understanding			Professional and practical skills			Intellectual skills		Transferable and general skills		
		a1	a2	a3	b1	b2	b3	c1	c2	d1	d2	d3
Lectures												
1	General introduction for what will be taught all over the term Introduction for the fruits and giving the students the possible references, web sites, text books. Description of the common characters of umbelliferous.	×										
2	Description of the common characters of umbelliferous. Description of morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Ammi visnaga and Ammi majus.	×										
3	Description of morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Coriander, Anise, Fennel, Capsicum, Colocynth, Lemon, bitter orange peel and Senna pods.	×		×								

4	Evening primrose, Colchicum and mustard macro-and, micro-morphology of the entire and powdered drugs, chemical identification. Unofficial fruits.		**x**	×								
5	Introduction to herbs. Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Lobelia.	×	**x**	×								
6	Study Morphological And Histological Characters, Constituents, Uses, Chemical Tests And Detection Of Adulteration In Entire And Powdered Form Of Piperment, Thyme, Alfalfa and Echinaceae. Unofficial herbs	×		×					**X**			
7	Introduction to subterranean organs. Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of, Liquorice	×		×				x				
8	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of senega and Ipeca	×		×								
9	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Rhubarb, Ginger.	**x**	**x**	×					X			
10	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Hydrastis, Valeriana. Unofficial rhizomes	**x**		×					**X**			
11	Introduction to Unorganized drugs Study the preparation, collection, active constituents, uses and chemical tests of resins, oleo-resins	**x**		×					**x**			

12	Study preparation, collection, active constituents, uses and chemical tests of balsams, latex, juice, extracts and gum.	×		×					**x**			
Practical												
17	Laboratory Safety Measures Dealing With Microscope. Morphology of some important fruits				x							
18	Identification of Fennel in entire and powdered form.					×	x					
19	Identification of Anise and Ammi visnaga, Ammi majus and coriander in entire and powdered form. Identification of Capsicum and colocynth in entire and powdered form.					x	x					
20	Mustard and nux vomica: macro-, and Micro-morphology, powders and chemical identification Activity (report on different pharmaceutical fruits)					x	x			x	x	
21	Morphology of some important herbs. Identification of Mentha and Thyme.					x	x					
22	Identification of Vinica Activity (report on medical uses of common herbs)					x	x			x	x	
23	Morphological demonstration for some important roots and rhizomes. Identification of Liquorice					x	×					
24	Macro-morphology; micro-morphology powder and chemical identification of Ginger and Rhubarb.					x	×					
25	Identification of un-organized drugs(morphology and chemical tests					x				x		

26	Revision.									x		

Matrix II of Pharmacognosy-II Course

National Academic Reference Standards NARS		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Weighting of assessment			
						Lecture	Practical session/ group discussion	field visit	Written exam	Practical exam	Report writing	Oral exam
Lecture												
2.1 **Ex NARS**	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice. Outline the basics of macro and microscopical characters of different medicinal plant organs, detection of	A2 A3	a1	General introduction for what will be taught all over the term. Introduction to the fruits and giving the students the possible references, web sites, text books. Description including Macro- and micro-morphological study for entire drug and for powdered Anise, fennel and caraway Description including Macro- and micro-morphological study	Student's book	×			×	×		×

	adulteration as well as, their proper collection, storage and marketing in addition to chemo taxonomical classification of medicinal plants.			for entire drug and for powdered Ammivisnaga, Ammimajus and Capsicum. Introduction to herbs Introduction to subterranean organs Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Rhubarb, Ginger. Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Hydrastis, Valeriana. Unofficial rhizomes Introduction to								

				Unorganized drugs Study the preparation, collection, active constituents, uses and chemical tests of resins, oleo-resins Study preparation, collection, active constituents, uses and chemical tests of balsams, latex, juice, extracts and gum								
			a2	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Rhubarb, Ginger. Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Hydrastis, Valeriana. Unofficial rhizomes	Student's book	×			×			×
			a3		Student's book	×			×			×

2.4	Principles of isolation, synthesis, purification, identification, and standardization methods of pharmaceutical compounds.	A12		Lemon and orange peel and other medicinally used berries fruits: macro- and; micro- morphology - powder and chemical identification. Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Lobelia.	Student's book	×			×			×

				Liquorice, Ipeca and senega macro-morphology; micro-morphology powder and chemical identification.								
				Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Rhubarb, Ginger.								

				Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Hydrastis, Valeriana. Unofficial rhizomes								
Practical sessions												
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	- Safety measures lab - Dealing with microscope	Practical notes		×			×		
3.4	Extract, isolate, synthesize, purify, identify, and/or standardize active substances from different origins.	B6	b2	Identification of Fennel in entire and powdered form. Identification of Anise and Ammi visnaga, Ammi majus and coriander in entire and powdered form. Identification of Capsicum and colocynth in entire and powdered	Practical notes		×			×		

				form. Senna pods (Morphology, histology, powder and chemical test, when it is possible Morphology of some important fruits Identification of Mentha and Thyme. Activity(net search) Identification of Vinica Morphological demonstration for some important roots and rhizomes Liquorice: macro-morphology; micro-morphology powder and chemical identification Identification of Ginger and Rhubarb. Activity (pamphlet containing A.C) Identification of unorganized drugs							
			b3	Identification of Anise and Ammi visnaga, Ammi majus and coriander in entire and powdered form. Identification of Capsicum and colocynth in entire and powdered form.	Practical notes		×			×		

				Senna pods (Morphology, histology, powder and chemical test, when it is possible Morphology of some important fruits Identification of Mentha and Thyme. Activity(net search) Identification of Vinica Morphological demonstration for some important roots and rhizomes Liquorice: macro-morphology; micro-morphology powder and chemical identification Identification of Ginger and Rhubarb. Activity (pamphlet containing A.C)								

4.3	Apply qualitative and quantitative analytical and biological methods for QC and assay of raw materials as well as pharmaceutical preparations	C7	c1	Identification of unorganized drugs	Student's book	×			×			×
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C9	c2	General revision	Student's book	×			×			×
5.3	Work effectively in a team	D3	d1	• report writing	Internet, essential and recommended books.			×			**x**	
5.8	Demonstrate creativity and time management abilities.	D9	d3		Internet, essential and recommended books.			**x**			**x**	
5.1	Communicate clearly by	D1	d2		Internet, essential and			×			**x**	

	verbal and means				recommended books.							
5.2	Retrieve and evaluate information from different sources to improve professional competencies	D2										

Course Coordinator: Prof. Dr. Afaf El-Sayed

Head of Department: Prof. Dr. Amal Amin Al-Gendy

Date: تم مناقشة و إعتماد توصيف المقرر من مجلس القسم بتاريخ ..... 9\2019

COURSE SPECIFICATIONS

Pharmaceutics (3)

Second year – first Term
2019-2020

Course specification of Pharmaceutics-3

University: Zagazig **Faculty: Pharmacy**

A- Course specifications:

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

Major or Minor element of programs: Major

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

Department offering the course: Pharmaceutics Department

Academic year Level: Second year/First semester

Date of specification approval: November2019

B- Basic information:

Title: Pharmaceutics-3 Code: **PC212**

Credit Hours: ---

Lectures: 2 hrs/week

Practical: 2 hrs/week

Tutorials: ---

Total: 3hrs/week

C- Professional information:

1-Overall aim of the course

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

- Enumerate different types of dispersed systems
- Identify different methods of preparations of dispersed systems
- Recognize different applications of dispersed systems
- Describe transdermal drug delivery systems
- Identify different advantages and disadvantages of TDDS
- Describe different types of cosmetics preparations
- Recognize different types of topical preparations

2-Intended Learning Outcomes of pharmaceutics-3 (ILOs)

A- Knowledge and Understanding	
a1	Outline different dispersed systems and structure of skin
a2	Enumerate the ideal characters of different pharmaceutical dosage forms; emulsions, suspensions, colloids, creams, ointments, gels, pastes,cosmetics preparations and transdermal drug delivery systems.
a3	Describe the different methods for preparation of emulsions, suspensions, colloids, creams, ointments, gels , pastes and other cosmetics preparations
a4	Illustrate the ideal characters for packaging, labeling, storing and distribution process in industry
B- Professional and Practical skills	
b1	Apply good handling and disposal skills of different chemicals and pharmaceutical preparations.
b2	Perform different pharmaceutical calculations
b3	Compound, dispense and label different pharmaceutical dosage forms safely and effectively
C- Intellectual skills	
c1	Compare between different dispersed systems
c2	Select the appropriate ingredients used in formulation of different liquid and semisolid dosage forms
c3	Discuss optimum storage conditions for different dosage forms
D- General and Transferable skills	
d1	Develop calculation skills
d2	Adopt ethical and safety guidelines
d3	Demonstrate critical thinking, decision making and problem solving

	skills

D- Contents:

Week No.	Lecturer content	Practical session (2 hrs/Lab)
1	- Introduction to disperse system - Colloids (definition, pharmaceutical applications)	- Methods of preparation of emulsions- wet method
2	- Types of colloidal systems, preparation of colloids, purification.	- Methods of preparation of emulsions- dry method (Lab evaluation)
3	-Properties of colloids -Stability of colloids	- Methods of preparation of emulsions -Bottle method (Lab evaluation)
4	- Transdermal drug delivery: structure and function of the skin, mechanism of drug transport through the skin	- Determination of sedimentation rate (Lab evaluation)
5	-Factors affecting percutaneous absorption (biological and physicochemical factors)	-Difference between flocculated and deflocculated suspensions (Lab evaluation)
6	- methods of maximizing the bioavailability of drugs applied to the skin -Transdermal therapeutic patches(TTS) - Cosmetics (definition, creams, cleansing creams, vanishing creams	-Preparation of Cold cream(Lab evaluation)
7	Mid term exam	----------
8	- toilet powders, lipstick, shaving	- Preparation of

	preparations, hair preparations - Nail lacquers, depilatories, dentifrice	Vanishing cream (Lab evaluation)
9	- Types of emulsion - Theories of emulsification	- Preparation of sulfur ointment (Lab evaluation)
10	- Emulsifying agents - Stability of emulsions	- Preparation of White field ointment (Lab evaluation) - **Activity:** marking of different sketches prepared by students
11	- Reasons for preparing suspension - Characters of ideal suspension	- Preparation of Unna's paste - Preparation of Tooth paste
12	- Formulation and evaluation of suspensions - Stability of suspensions	- Revision
13	- Topical preparations, formulation of semisolid dosage forms (Ointments-Creams)	**- Practical exam**
14	- Topical preparations, formulation of semisolid dosage forms (Gels-Pastes)	
15	- Final written exam	

E- Teaching and Learning Methods:

- Lectures
- Practical session (formulation of different dosage forms)
- Assignment (students were asked to draw sketches about skin structure and electric double layer)

F- Student Assessment methods:

1- Written exams to assess: a1, a2, a3, a4, c1, c2, c3

2- Practical exam &students participation to assess: b1, b2, b3, d1, d2, d3

3- Oral exam to assess: a1, a2, a3, a4, c1, c3

Assessment schedule

Assessment (1): Midterm exam	Week 7
Assessment (2): Practical exam	Week 13
Assessment (3): Final exam	Week 15
Assessment (4): Assignment	Week 10
Assessment (5): Oral exam	Week 15

Weighting of Assessment

Assessment method	Marks	Percentage
Midterm exam	10	10%
Final Written exam	50	50%
Practical exam	20	20%
Assignment	5	5%
Oral exam	15	15%
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: Student book of pharmaceutics-3 approved by pharmaceutics department (2019).

2- Essential Books:

i- Physical pharmacy, Martin, A., 4th edition, Philadelphia, London. (1993).

ii- The science of dosage form design, Aulton, M. E., 2nd edition, Churchill Livingstone, London. (2002).

iii- Pharmaceutical Dosage Forms: Rational design and formulation with excipients, Larry L. Augsburger, Stephen W. Hoag, Informa Healthcare USA, (2008)

3- Recommended Books:

i- Remington's Pharmaceutical Science. Alfonso, Gennaro, R., 17 thedn, Mack Publishing Company, USA. (1985).

ii- Handbook of Pharmaceutical Manufacturing Formulations: Liquid products, SarfarazNiazi, Sarfaraz K. Niazi, CRC Press, (2004).

4- Periodicals and websites:

Journal of pharmaceutical sciences

www.Pubmed.com

www.Sciencedirect.com

Course Coordinators: Assistant Prof. Dr. Azza Ali Hassan

Head of Department: Prof. Dr. Nagia Ahmed El-Megrab

Date:2019/11 تم مناقشة واعتماد توصيف المقرر من مجلس القسم بتاريخ

Course Contents		Knowledge and understanding				Professional and practical skills			Intellectual skills			Transferable and general skills		
Lectures		**a1**	**a2**	**a3**	**a4**	**b1**	**b2**	**b3**	**c1**	**c2**	**c3**	**d1**	**d2**	**d3**
1	-Types of emulsion		x	x	x									
	-Theories of emulsification		x	x	x									
2	-Emulsifying agent		x	x	x									
	Stability of emulsions		x	x										
3	Introduction to disperse system	x												
4	-Reasons for preparing suspension		x	x										
	-Characters of ideal suspension		x	x										
5	Formulation and evaluation of suspensions			x	x				x	x	x			
	‘-Stability of suspensions			x										
	-Pharmaceutical application of colloids		x	x										
	-Types of colloidal systems		x	x										
7	-Properties of colloids		x	x	x									
	-Stability of colloids	x												
8	Transdermal drug delivery systems factors affecting percutaneous absorption	x	x	x										
9	Formulation of semisolid dosage forms(Ointments-Creams-Gels-Pastes)		x	x					X	x	x			
10	-Transdermasl therapeutic patches(TTS)	x	x	x										
11	Cosmetics-Types of hair		x	x										

12	Cosmetics-Hairs preparations		x	x										
13	Cosmetics-nail laquers	x	x	x										
Practical Sessions														
1	a- wet method					x	x							
	b-dry method					x	x							
	c- Bottle method					x	x	x				x	x	x
2	determination of sedimentation rate							x				x	x	x
3	Difference between flocculated and deflocculated suspensions					x		x	x	x	x			
4	Cosmetics													
	Preparation of Cold cream					x	x							
	Preparation of Vanishing cream					x	x					x	x	x
	Preparation of sulfur ointment					x	x							
	Preparation of White field ointment					x	x							
	Preparation of Unna's paste					x	x							
	Preparation of Tooth paste					x	x		x	x	x	x	x	x
5	Activity	x												

Matrix II of Pharmaceutics 3 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
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A2	a1	- Introduction to disperse system - Colloids (definition, pharmaceutical applications) - Types of colloidal systems, preparation of colloids, purification. -Properties of colloids - Transdermal drug delivery: structure and function of the skin, mechanism of drug transport through the skin -Factors affecting percutaneous absorption (biological and physicochemical factors) - methods of maximizing the bioavailability of drugs applied to the skin -Transdermal therapeutic patches(TTS) - Cosmetics (definition, creams, cleansing creams, vanishing creams - toilet powders, lipstick,	Student book Essential books	x			x		x
			a2		Student book Essential books	x			x		x
2.6	Properties of different pharmaceutical dosage forms including novel drug delivery systems.	A16	a3		Student book Essential books	x			x		x

				shaving preparations, hair preparations - Nail lacquers, depilatories, dentifrice - Types of emulsion - Theories of emulsification - Emulsifying agents - Reasons for preparing suspension - Characters of ideal suspension - Formulation and evaluation of suspensions - Topical preparations, formulation of semisolid dosage forms (Ointments-Creams) - Topical preparations, formulation of semisolid dosage forms (Gels-Pastes)							
2.7	Principles of various instruments and techniques including sampling, manufacturing, packaging, labeling, storing and distribution processes in pharmaceutical industry	A18	a4	Stability of colloids Stability of emulsions Stability of suspensions	Student book Essential books	x			x		x
3.2	Handle and dispose chemicals in a safe way.	B2	b1	- Methods of preparation of emulsions- wet method - Methods of preparation of emulsions- dry method - Methods of preparation of emulsions -Bottle method	Practical notes		x				

				- Determination of sedimentation rate -Preparation of Cold cream - Preparation of Vanishing cream - Preparation of sulfur ointment - Preparation of White field ointment - Preparation of Unna's paste - Preparation of Tooth paste							
	Ex NARs	B21	b2	- Determination of sedimentation rate -Preparation of Cold cream - Preparation of Vanishing cream	Practical notes		x				
3.3	Compound, dispense, label, store and distribute medicines effectively and safely	B4	b3	- Methods of preparation of emulsions- wet method - Methods of preparation of emulsions- dry method - Methods of preparation of emulsions -Bottle method - Determination of sedimentation rate -Preparation of Cold cream - Preparation of Vanishing cream - Preparation of sulfur ointment - Preparation of White field ointment - Preparation of Unna's paste - Preparation of Tooth paste	Practical notes		x			x	

4.1	Apply pharmaceutical knowledge in the formulation of safe and effective medicines as well as in dealing with new drug delivery systems.	C1	c1 c2 c3	Formulation and evaluation of suspensions- Formulation of semisolid dosage forms(Ointments-Creams-Gels-Pastes) - toilet powders, lipstick, shaving preparations, hair preparations - Nail lacquers, depilatories, dentifrice	Student book Essential books	x			x		x
					Student book Essential books	x			x		x
5.4.	Use numeracy, calculation and statistical methods as well as information technology tools	D4	d1	- Determination of sedimentation rate -Preparation of Cold cream - Preparation of Vanishing cream	Practical notes						
5.6	Adopt ethical, sales and safety guidelines.	D7	d2	- Methods of preparation of emulsions- wet method - Methods of preparation of emulsions- dry method - Methods of preparation of emulsions -Bottle method - Determination of sedimentation rate -Preparation of Cold cream - Preparation of Vanishing cream - Preparation of sulfur ointment - Preparation of White field ointment - Preparation of Unna's paste	Practical notes		x			x	
5.1O	Implement writing and thinking, problem- solving and decision- making abilities.	D11	d3		Practical notes		x			x	

				- Preparation of Tooth paste Activity							

Course Coordinator: Assistant Prof. Dr. Azza Ali Hassan

Head of Department: Prof. Dr. Nagia Ahmed El-Megrab

Date: **تم مناقشة واعتماد توصيف المقرر من مجلس القسم بتاريخ 11/2019**

COURSE SPECIFICATIONS

Anatomy & Histology

Second year – first Term 2019-2020

Course Specification of Anatomy

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

A- Course specifications:

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

Major or Minor element of programs: Major

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

Department offering the course: Anatomy / Faculty of medicine

Academic year/ Level: Second year / first term

Date of specification approval: September 2019

B- Basic information:

Title: Anatomy Code: **MD210**

Credit Hours: ---

Lectures : 2 hr/week

Practical: 2 hr/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 the anatomy of body organs and structures as well as apply the anatomical information in identification of different diseases.

2-Intended Learning Outcomes of Anatomy (lLOs):

A- Knowledge and Understanding	
a1	Recognize the principles of anatomy, including anatomical terms, anatomical positions and anatomical movements.
a2	Describe surface anatomy of body organs.
B- Professional and Practical skills	
b1	Use the anatomical terms in describing the anatomy of body structure.
C- Intellectual skills	
c1	Evaluate and interpret the radiological pictures of body structures.
c2	Apply the anatomical information in identification of different diseases, including joints and nerve injuries as well as occlusion of blood vessels.
D- General and Transferable skills	
d1	Write and present reports.
d2	Develop critical thinking in describing surface anatomy of important parts of body organs.

D- Contents:

Week No.	Lecture (2 hr/ week)	Practical sessions (2 hr/week)
1	- Introduction (anatomical terms- anatomical positions- anatomical movements)	-Demonstration of scapula - clavicle
2	- Joints and muscular system	- Demonstration of humerus – radius -ulna
3	- Cardiovascular system	- Demonstration of ribs – thoracic vertebra
4	- Respiratory system	- Demonstration of lumbar – cervical vertebra
5	- Lymphatic system	- Demonstration of sternum - sacrum
6	Midterm exam	
7	- Digestive system	- Demonstration of skull - **Activity (report)**
8	- Urinary system	- Demonstration of mandible
9	- Male genital system	- Demonstration of heart
10	- Female genital system	- Demonstration of kidney – spleen - liver
11	- Endocrine glands	- Demonstration of lung- brain
12	- Nervous system	- Demonstration of hip - femur
13	- Special senses and skin	**- Practical exam**
14	- Skeletal system and vertebral column	
15	- final written exam	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Self learning (activity, internet search, group discussion…)

F- Student Assessment Methods

1- Written exam	to assess	a1,a2,c2
2- Practical exam	to assess	b1,c1,d1,d2
3- Activity	to assess	d1

Assessment schedule:

Assessment (1): Midterm exam	Week 6
Assessment (2): Activity	Week 7
Assessment (3): Practical exam	Week 13
Assessment (4): final Written exam	Week 15

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	40 (35 +5)	80%
Practical exam and activities	10	20%
TOTAL	50	100%

G- Facilities Required for Teaching and Learning:

- Black (white) board, Data show, Laboratory bones and models of organs.

H- List of References:

1- Course Notes: Student book of Anatomy approved by Anatomy Department (2019)

2- Essential Books (text books)

Kindersley D.& Medi-Mation: The Concise Human Body Book: An Illustrated Guide to Its Structure, Function and Disorders (2009).

Course Coordinator: Prof. Mohie ElSayed Khaliel

Date: /9/2019

Matrix I of Anatomy course

Course Contents		ILOs of Anatomy course						
		Knowledge and understanding		Professional and practical skills	Intellectual skills		General and Transferable skills	
Lectures		**a1**	**a2**	**b1**	**c1**	**c2**	**d1**	**d2**
1	Introduction (anatomical terms- anatomical positions- anatomical movements)	x						
2	Joints and muscular system		x			x		
3	Cardiovascular system		x			x		
4	Respiratory system		x					
5	Lymphatic system		x					
6	Digestive system		x					
7	Urinary system		x					
8	Male genital system		x					
9	Female genital system		x					
10	Endocrine glands		x					
11	Nervous system		x			x		
12	Special senses and skin		x					
13	Skeletal system and vertebral column		x					
Practical sessions								
1	Demonstration of scapula - clavicle			x	x			x
2	Demonstration of humerus –radius -ulna			x	x			x
3	Demonstration of ribs – thoracic vertebra			x	x			x
4	Demonstration of lumbar – cervical vertebra			x	x			x

5	Demonstration of sternum - sacrum			x	x			x
6	Demonstration of skull			x	x			x
7	Demonstration of mandible			x	x			x
8	Demonstration of heart			x				x
9	Demonstration of kidney – spleen - liver			x				x
10	Demonstration of lung- brain			x				x
11	Demonstration of hip - femur			x	x			x
12	Activity (Report)						x	

Matrix II of Anatomy

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
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A4	a1	Introduction (anatomical terms- anatomical positions- anatomical movements)	Student book	x			x	
			a2	Joints and muscular system	Student book	x			x	
				Cardiovascular system	Student book	x			x	
				Respiratory system	Student book	x			x	
				Lymphatic system	Student book	x			x	
				Digestive system	Student book	x			x	
				Urinary system	Student book	x			x	
				Male genital system	Student book	x			x	
				Female genital system	Student book	x			x	
				Endocrine glands	Student book, essential books and internet	x		x	x	
				Nervous system	Student book	x			x	
				Special senses and skin	Student book	x			x	
				Skeletal system and vertebral column	Student book	x			x	
3.1	Use the proper pharmaceutical and medical terms and abbrevations and symbols in pharmacy	B1	b1	Demonstration of scapula - clavicle	practical notes		x			x
				Demonstration of humerus –radius -ulna			x			x
				Demonstration of ribs – thoracic vertebra			x			x
				Demonstration of lumbar – cervical vertebra			x			x
				Demonstration of sternum - sacrum			x			x
				Demonstration of skull			x			x

	practice.			Demonstration of mandible			x			x
				Demonstration of heart			x			x
				Demonstration of kidney – spleen - liver			x			x
				Demonstration of lung- brain			x			x
				Demonstration of hip - femur			x			x
4.13	Analyze and interpret experimental results as well as published literature	C18	c1	Demonstration of scapula - clavicle	Practical notes		x			x
				Demonstration of humerus –radius -ulna			x			x
				Demonstration of ribs – thoracic vertebra			x			x
				Demonstration of lumbar – cervical vertebra			x			x
				Demonstration of sternum - sacrum			x			x
				Demonstration of skull			x			x
				Demonstration of mandible			x			x
				Demonstration of hip - femur			x			x
4.14	Analyze and evaluate evidence-based information needed in pharmacy practice.	C19	c2	Joints and muscular system	Student book	x			x	
				Cardiovascular system		x			x	
				Nervous system		x			x	
5.9	Implement writing and presentation skills	D10	d1	Activity (report)	internet			x		x
5.1O	Demonstrate critical thinking, problem-solving and decision-making abilities	D11	d2	Demonstration of scapula - clavicle	practical notes		x			x
				Demonstration of humerus –radius -ulna			x			x
				Demonstration of ribs – thoracic vertebra			x			x
				Demonstration of lumbar – cervical vertebra			x			x
				Demonstration of sternum - sacrum			x			x
				Demonstration of skull			x			x
				Demonstration of mandible			x			x
				Demonstration of heart			x			x
				Demonstration of kidney – spleen - liver			x			x

				Demonstration of lung- brain			x			x
				Demonstration of hip - femur			x			x

Course Coordinator: **Prof. Mohie ElSayed Khaliel**

Date: **/9/2019**

Course Specification of Histology

University: Zagazig Faculty: Pharmacy

A- Course specifications:

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

Major or Minor element of programs: Major

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

Department offering the course: Histology Department/ Faculty of Medicine

Academic year/ Level: second year /first term

Date of specification approval: September 2019

B- Basic information:

Title: Histology Code: **MD210**

Credit Hours: ---

Lectures : 2 hr/week

Practical: 2 hr/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 describe cellular components, tissues, organs structure and staining techniques and DNA structure.

2-Intended Learning Outcomes of Histology (lLOs):

A- Knowledge and Understanding	
a1	Outline cellular components structure and functions.
a2	Illustrate principles of histological staining techniques.
a3	Demonstrate different types of microscopes and their functions.
a4	Underline DNA and chromosome structure.
a5	Describe histological features of different tissues in normal and pathological conditions as well.
B- Professional and Practical skills	
b1	Use proper medical terms, abbreviation and symbols of histology.
b2	Construct a research study and analyze the results.
C- Intellectual skills	
c1	Evaluate both scientific and library based information.
D- General and Transferable skills	
d1	Write and present reports.
d2	Develop critical thinking, decision-making and problem-solving skills.

D- Contents:

Week No.	Lecture (1hrs/week)	Practical session (1hrs/week)
1	- Types of microscopes (LM&EM) Types of stains Membranous organoids (cell membrane, mitochondria, Golgi bodies, rough& smooth endoplasmic reticulum and lysosomes).	Projector slides for: 1- types of microscopes 2- cell membrane 3- mitochondria 4- Golgi bodies 5- rough& smooth endoplasmic reticulum 6- lysosomes
2	- Non-membranous organoids Structure of the nucleus	Projector slides for: 1- ribosomes 2- centriolesc 3- cilia and falgella 4- nucleus 5- fat and liver glycogen
3	- DNA structure Chromosomes structure Cell cycle	Projector slides for: 1-Chromosomes (krayotyping)
4	- Epithelial tissues (structure, types, sites)	Projector slides for: 1-Simple epithelium 2-Stratified epithelium
5	- Connective tissues and fibers (structure, types). - Connective tissues proper (structure, types).	Projector slides for: 1-fat cells 2- mast cells 3- adipose c.t. 4- areolar c.t. 5- yellow elastic c.t 6- tendon
6	Midterm exam	
7	- Histological structure of bone and cartilage.	Projector slides for: 1-hyaline and elastic cartilage 2- compact decalcified,ground and

		spongy bones **Practical exam (1)**
8	- RBCs and WBCs (histological structure, function)	Projector slides for: blood film showing RBCs and leucocytes
9	- Histological structure of skeletal, smooth and cardiac muscles	Projector slides for: skeletal, smooth and cardiac muscles **Activity**
10	- Histological structure of neurons, synapse, neurological cells and nerve endings	Projector slides for: nerve trunk (H&E and osmic acid) Projector slides for: 1- aorta 2- medium sized artery and vein 3- basilar artery
11	- Histological structure of arteries and veins	Projector slides for: 1- thymus 2- tonsils 3- spleen 4- lymph node Projector slides for: 1- fundus and pylorus 2- small intestine 3- large intestine
12	- Histological structure of thymus, tonsils, spleen and lymph node	Projector slides for: 1- liver 2- pancreas 3- salivary glands Projector slides for: 1- kidney 2- trachea 3- lung
13	- Histological structure of tongue, oesophagus, stomach, small and large intestine	Projector slides for: 1- pituitary gland 2- supra-renal gland 3- thyroid and

		paparathyroid glands **Practical exam (2)**
14	- Histological structure of liver, pancreas and salivary glands - Histological structure of trachea, lung and kidney - Histological structure of pituitary, supra-renal, thyroid and parathyroid glands	
15	Final written exam	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Self learning (Activities)

F- Student Assessment Methods

1- Written exam to assess a1, a2, a3, a4, a5, c1

2- Practical exam to assess b1,b2,c1,d1,d2

3- Activity to assess c1,d1,d2

Assessment schedule:

Assessment (1): Written exam	Week 15
Assessment (2): Midterm exam	Week 6
Assessment (3): Activity	Week 9
Assessment (4): Practical exam	Week 7,13

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	65	65%
Practical exam and activities	25	25%
Midterm 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 Histology approved by Histology Department (2019)

2- Essential Books (text books)

Ross M.H.& Pawlina W.: Histology: A Text and Atlas (Histology (Ross)) (2010).

Course Coordinators: Prof. Azza Saeid Ahmad

Date: /9/2019

Matrix I of Histology course

Course Contents		ILOs of Histology course									
		Knowledge and understanding					Professional and practical skills		Intellectual skills	General and transferable skills	
Lectures		a1	a2	a3	a4	a5	b1	b2	c1	d1	d2
1	Types of microscopes (LM&EM), types of stains, membranous organoids (cell membrane, mitochondria, Golgi bodies, rough& smooth endoplasmic reticulum and lysosomes).	x	x	x							
2	Non-membranous organoids, structure of the nucleus	x									
3	DNA structure, chromosomes structure, cell cycle				x				x		
4	Epithelial tissues (structure, types, sites)					x					
5	Connective tissues and fibers (structure, types), connective tissues proper (structure, types)					x					
6	Histological structure of bone and cartilage					x					
7	RBCs and WBCs (histological structure, function)					x					
8	Histological structure of skeletal, smooth and cardiac muscles					x					
9	Histological structure of neurons, synapse, neurological cells and nerve endings					x			x		
10	Histological structure of arteries and veins					x					
11	Histological structure of thymus, tonsils, spleen and lymph node					x					
12	Histological structure of tongue, oesophagus, stomach, small and large intestine					x					
13	Histological structure of liver, pancreas and salivary glands					x					
14	Histological structure of trachea, lung and kidney Histological structure of pituitary, supra-renal, thyroid and parathyroid glands					x					

Practical sessions											
1	Projector slides for:types of microscopes, cell membrane, mitochondria, Golgi bodies, rough& smooth endoplasmic reticulum and lysosomes						x				
2	Projector slides for: ribosomes, centriolesc,cilia and falgella, nucleus, fat and liver glycogen						x				
3	Projector slides for: Chromosomes (krayotyping)						x				
4	Projector slides for: Simple epithelium,Stratified epithelium							x			
5	Projector slides for: fat cells, mast cells, adipose c.t., areolar c.t., yellow elastic c.t, tendon							x			
6	Projector slides for: hyaline and elastic cartilage, compact decalcified, ground and spongy bones							x			
7	Projector slides for: blood film showing RBCs and leucocytes							x			
8	Projector slides for: skeletal, smooth and cardiac muscles							x			
9	Projector slides for: nerve trunk (H&E and osmic acid)							x			
10	Projector slides for: aorta, medium sized artery and vein, basilar artery							x			
11	Projector slides for: thymus, tonsils, spleen, lymph node							x			
12	Projector slides for: fundus and pylorus, small intestine, large intestine							x			
13	Projector slides for: liver, pancreas, salivary glands							x			
14	Projector slides for: kidney, trachea, lung							x			
15	Projector slides for: pituitary gland, supra-renal gland, thyroid and paparathyroid glands							x			
16	Activity								x	x	x

Matrix II of Histology

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
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A4	a1	Types of microscopes (LM&EM), types of stains, membranous organoids (cell membrane, mitochondria, Golgi bodies, rough& smooth endoplasmic reticulum and lysosomes). Non-membranous organoids, structure of the nucleus	Student book	x			x	
			a2	Types of microscopes (LM&EM), types of stains, membranous organoids (cell membrane, mitochondria, Golgi bodies, rough& smooth endoplasmic reticulum and lysosomes).	Student book	x			x	

2.7	Principles of various instruments and techniques including sampling, manufacturing, packaging, labeling, storing and distribution processes in pharmaceutical industry	A 18	a3	Types of microscopes (LM&EM), types of stains, membranous organoids (cell membrane, mitochondria, Golgi bodies, rough& smooth endoplasmic reticulum and lysosomes).	Notebook	x			x	
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.	A 24	a4	DNA structure, chromosomes structure, cell cycle	Notebook	x			x	
2.12	Etiology, epidemiology, laboratory diagnosis and clinical features of different diseases and their pharmaco-therapeutic	A27	a5	Epithelial tissues (structure, types, sites) connective tissues and fibers (structure, types), connective tissues proper (structure, types) Histological structure of bone and cartilage	Student book	x			x	

	approaches			RBCs and WBCs (histological structure, function) Histological structure of skeletal, smooth and cardiac muscles Histological structure of neurons, synapse, neurological cells and nerve endings Histological structure of arteries and veins Histological structure of thymus, tonsils, spleen and lymph node Histological structure of tongue, oesophagus, stomach, small and large intestine Histological structure of liver, pancreas and salivary glands Histological structure of trachea, lung and kidney Histological structure of pituitary, supra-renal, thyroid and parathyroid glands						
3.1	Use the proper pharmaceutical and medical terms and abbrevations and symbols in pharmacy practice	B1	b1	Projector slides for:types of microscopes, cell membrane, mitochondria, Golgi bodies, rough& smooth endoplasmic reticulum and lysosomes	Practical Notes		x			x

				Projector slides for: ribosomes, centriolesc,cilia and falgella, nucleus, fat and liver glycogen						
				Projector slides for: Chromosomes (krayotyping)						
3.11	Conduct research studies and analyze the results	B19	b2	Projector slides for: Simple epithelium,Stratified epithelium	Practical Notes		x			x
				Projector slides for: fat cells, mast cells, adipose c.t., areolar c.t., yellow elastic c.t, tendon						
				Projector slides for: hyaline and elastic cartilage, compact decalcified, ground and spongy bones						
				Projector slides for: blood film showing RBCs and leucocytes						
				Projector slides for: skeletal, smooth and cardiac muscles						
				Projector slides for: nerve trunk (H&E and osmic acid)						
				Projector slides for: aorta, medium sized artery and vein, basilar artery						

				Projector slides for: thymus, tonsils, spleen, lymph node Projector slides for: fundus and pylorus, small intestine, large intestine Projector slides for: liver, pancreas, salivary glands Projector slides for: kidney, trachea, lung Projector slides for: pituitary gland, supra-renal gland, thyroid and paparathyroid glands						
4.14	Analyze and evaluate evidence- based information needed in pharmacy practice	C19	c1	Activity DNA structure, chromosomes structure, cell cycle, Histological structure of neurons, synapse, neurological cells and nerve endings	Student book, essential book, internet	x	x	x	x	x
5.9	Implement writing and presentation skills	D10	d1	Activity	Internet		x	x		x
5.10	Implement writing and thinking, problem-solving and decision-making abilities.	D11	d2	Activity	Internet		x	x		x

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Course Coordinators: Prof. Azza Saeid Ahmad

Date: /9/2019

COURSE SPECIFICATIONS

Drug Marketing and Communication Skills

Second year – first Term 2019-2020

توصيف مقرر التسويق الدوائى و مهارات الاتصال

أ- مواصفات المقرر:

البرنامج الذي يقدم المقرر: بكالوريوس الصيدلة

المقرر يمثل عنصرا رئيسيا أو ثانويا بالنسبة للبرامج: ثانوياً

القسم العلمي المسئول عن البرنامج: : ----------

القسم العلمي المسئول عن تدريس المقرر: كلية التجارة - قسم ادارة الاعمال

السنة الدراسية: الفرقة الثانية – التيرم الأول.

تاريخ اعتماد التوصيف: سبتمبر 2019

(ب) البيانات الأساسية:

العنوان : التسويق الدوائى و مهارات الاتصال الكود : **DM21**

الساعات المعتمدة : ---

المحاضرات : ساعتين أسبوعيا

العملي: ---

الدروس العملية : ---

المجموع : 2 ساعة في الأسبوع

(ج) البيانات المهنية:

1) الأهداف العامة للمقرر:

عند إتمام المقرر سوف يكون الطلاب قادرين على تطبيق التخطيط الاستراتيجي فى التسويق، كذلك تحليل البيئة التسويقية، الالمام بالمزيج الترويجى و التسويق الدولي

2) النتائج التعليمية المستهدفة لمقرر التسويق الدوائى و مهارات الاتصال :

أ- المعرفة و الفهم	
أ1	يلم بتعريف التخطيط الاستراتيجى، خطواته، تنفيذه
أ2	يلم بمباديء علم الإعلان و البيع، انواعه، وسائله
أ3	يلم بمفاهيم التسويق الدولي و التصدير
ج- المهارات الفكرية	
ج1	يقوم بتحليل البيئة التسويقية
د- مهارات عامة و تواصلية	
د1	يجيد التواصل مع الاخرين
د2	يجيد حساب نسب قياس كفاءة وظيفة الانتاج، نسبة التسويق، نسبة التمويل، نسب الافراد
د3	يكتسب مهارات حل المشكلات و اتخاذ القرارات.

د- المحتويات:

رقم الأسبوع	المحاضرة (2ساعة/الأسبوع)
1	ما هى الاستراتيجية ماهية التخطيط الاستراتيجي
2	خطوات التخطيط الاستراتيجي
3	تكوين الاستراتيجيات
4	تنفيذ الاستراتيجية
5	عناصر المزيج التسويقى (4 س)
6	العوامل البيئية التى تتعامل معها ادارة التسويق
7	امتحان النصف فصلى
8	أهداف الاعلان أنواع الاعلان
9	قسم / ادارة الاعلان وكالات الاعلان
10	خطوات تكوين و تنفيذ الاعلان
11	وسائل الاعلان
12	وسائل تنشيط المبيعات
13	ادارة المبيعات
14	التسويق الدولى
15	الامتحان التحريرى

هـ- أساليب التعليم و التعلم:

- المحاضرة
- التعلم الذاتي

و-أساليب تقييم الطلبة:

1- الامتحان التحريري يقيم: أ1و أ2و أ3و ج1ود1و د2 و د3

الجدول الزمني التقييم:

تقييم (1): الامتحان نصف الفصلي	**الاسبوع السابع**
تقييم (2): الامتحان التحريري	**الأسبوع الخامس عشر**

ترجيح التقييم:

طريقة التقييم	الدرجات	النسب المئوية
الامتحان نصف الفصلي	20	%20
الامتحان التحريري	80	%80
الإجمالي	100	%100

ز- التسهيلات اللازمة للتعليم و التعلم:

1- للمحاضرات: اللوحات (البيضاء) و السوداء.

ي- قائمة المراجع:

1- مذاكرات المقرر: كتاب الطالب التسويق الدوائى (2019)

2- كتب مقترحة

Kolter P. Marketing management, 8th ed., N.J. Practice-Hal, 2000

Kolter P. and Armstrong G. Principles of marketing. 9th edition, NJ. Prentice-Hall, 2001

منسق المقرر: أ.د / محمد غمرى الشوادفى

التاريخ: 2019/9/

مصفوفة (1) مقرر التسويق الدوائى

	محتويات المقرر	النتائج التعليمية المستهدفة						
		المعرفة و الفهم			المهارات الفكرية	مهارات عامة و تواصلية		
		أ1	أ2	أ3	ج1	د1	د2	د3
1	ما هى الاستراتيجية ماهية التخطيط الاستراتيجي	x				x		
2	خطوات التخطيط الاستراتيجي	x			x	x	x	
3	تكوين الاستراتيجيات	x				x	x	x
4	تنفيذ الاستراتيجية	x			x	x	x	x
5	عناصر المزيج التسويقى (4 س)			x		x		
6	العوامل البيئية التى تتعامل معها ادارة التسويق			x		x		x
7	أهداف الاعلان أنواع الاعلان		x			x		
8	قسم / ادارة الاعلان وكالات الاعلان		x			x		
9	خطوات تكوين و تنفيذ الاعلان		x			x		x
10	وسائل الاعلان		x			x		
11	وسائل تنشيط المبيعات			x		x		x
12	ادارة المبيعات			x		x		
13	التسويق الدولى			x		x		x
14								

مصفوفة (2) مقرر التسويق الدوائى

المعايير الأكاديمية المرجعية القومية (NARS)	نتائج التعلم المنشودة للبرنامج	نتائج التعلم المنشودة للمقرر	محتويات المقرر	المصدر	أساليب التعليم و التعلم				أسلوب التقييم
					المحاضرة	الدروس العملية	التعلم الذاتي		الامتحان التحريري
2-1 الأساسية و مباديء العلوم و الطبية و الاجتماعية و الصيدلانية و الصحة و السلوكية الإدارة فضلا عن ممارسة العلوم البينية الصيدلة	أ6	أ1	ما هى الاستراتيجية ماهية التخطيط الاستراتيجي خطوات التخطيط الاستراتيجي تكوين الاستراتيجيات تنفيذ الاستراتيجية	كتاب الطالب	x				x
		أ2	أهداف الاعلان أنواع الاعلان قسم / ادارة الاعلان وكالات الاعلان خطوات تكوين و تنفيذ الاعلان وسائل الاعلان	كتاب الطالب	x				x
2-19 مبادئ الدعاية، الاعلان، التسويق الدوائى ، ادارة الاعمال، المحاسبة، اقتصاديات الدواء	أ38	أ3	عناصر المزيج التسويقى (4 س) العوامل البيئية التى تتعامل معها ادارة التسويق وسائل تنشيط المبيعات ادارة المبيعات التسويق الدولى	كتاب الطالب	x				x
				كتاب الطالب	x				x

					كتاب الطالب		x		
4-14 تحليل و تفسير النتائج المبنية علي البراهين	ج19	ج1	خطوات التخطيط الاستراتيجي تنفيذ الاستراتيجية		كتاب الطالب و الكتب المقترحة والانترنت	x			x
1-5 يتواصل بوضوح مع الاخرين	د1	د1	ما هى الاستراتيجية ماهية التخطيط الاستراتيجي خطوات التخطيط الاستراتيجي تكوين الاستراتيجيات تنفيذ الاستراتيجية عناصر المزيج التسويقى (4 س) العوامل البيئية التى تتعامل معها ادارة التسويق أهداف الاعلان أنواع الاعلان قسم / ادارة الاعلان وكالات الاعلان خطوات تكوين و تنفيذ الاعلان وسائل الاعلان وسائل تنشيط المبيعات ادارة المبيعات التسويق الدولى		كتاب الطالب	x			x

5-4 **يستخدم الأرقام و الحساب و الطرق الإحصائية فضلا عن تكنولوجيا المعلومات**	د4	د2	خطوات التخطيط الاستراتيجي تكوين الاستراتيجيات تنفيذ الاستراتيجية	كتاب الطالب و كتب مقترحة و الانترنت	x		x		x

ينمي مهارات التفكير حل المشكلات و اتخاذ القرارات	**5-10 النقدي و**	د11	د2	تكوين الاستراتيجيات تنفيذ الاستراتيجية العوامل البيئية التى تتعامل معها ادارة التسويق خطوات تكوين و تنفيذ الاعلان وسائل تنشيط المبيعات التسويق الدولي	كتاب الطالب	x				x

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منسق المقرر: أ.د / محمد غمرى الشوادفى

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