COURSE SPECIFICATIONS

Faculty of Pharmacy

Bachelor of Pharmacy

Second Year – Second Term

2017-2018

CONTENTS:

COURSE SPECIFICATIONS

Analytical Chemistry (4)

Second year – Second Term

2017-2018

Course Specification of Analytical Chemistry (4)

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 Department

Academic year / Level: Second year / Second term

Date of specification approval: 27 August 2017

B- Basic information:

Title: Analytical Chemistry (4) Code: **AC224**

Credit Hours: ---

Lectures : 2 hrs/week

Practical: 2 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 explain physical and chemical composition of fat, oil and water as well as the theory and applications of spectrophotometry, potentiometry, conductometry and gravimetry.

2-Intended Learning Outcomes of Analytical chemistry (4) (lLOs):

A- Knowledge and Understanding	
a1	Mention principles of gravimetric analysis.
a2	Illustrate theories of spectrophotometry, potentiometry and conductometry.
a3	Describe composition and types of potentiometer, conductometer and spectrophotometer.
a4	Enumerate standardization methods for water, fat, oil and some analytes.
B- Professional and Practical skills	
b1	Handle and dispose chemicals safely.
b2	Perform laboratory tests for examination of water, fat and oil.
b3	Apply spectrophotometric, potentiometric and conductometric techniques for determination of some compounds and mixtures.
C- Intellectual skills	
c1	Interpret results obtained from different methods applied for determination of different analytes.
c2	Comment on obtained analytical results.
c3	Decide the use of the most appropriate method for determination different compounds and their mixtures.
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	Implement writing and presentation skills.

D- Contents:

Week No.	Lecture (2 hrs/week)	Practical session (2 hrs/week)
1	- Introduction to fat and oil (physical properties, composition and classification)	- Determination of saponification value
2	- Chemical properties of oil and fat	- Color tests for fat and oil
3	- Rancidity, hydrogenation and analysis of butter fat	- Determination of water alkalinity and acidity - Limit test
4	- Physical and chemical examination of water	-Determination of water hardness (soap method)
5	- Metals in water and interpretation of analytical results	-Determination of water hardness (complexometric method)
6	Midterm exam	
7	- Water pollution and purification	- **Practical exam (1)**
8	- Theory of gravimetry, contamination and purification of precipitate	- Determination of some metals gravimetrically
9	- Application of gravimetric analysis	- Presentation - spectrophotometry
10	- Theory of potentiometry and types of electrodes	--Colorimetric determination of potassium permangate
11	- Application of potentiometry	- Colorimetric determination of copper with ferrocyanide
12	- Conductometry (theory and application)	- Presentation - potentiometry and conductometry - **Activity**
13	- Theory and instrumentation of spectroscopy	- **Practical exam (2)**
14	- Application of spectrophotometry	
15	- Revision & open discussion	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Demonstration videos
- Data analysis.
- Discussion sessions
- Self-learning (activity)

F- Student Assessment Methods:

1- Written exam to assess a1,a2,a3,a4,c3

2- Activity to assess c1, c2, d1, d3, d4

3- Practical exam to assess b1,b2,b3,c1.c2,d1,d2,d3,d4

4- Oral exam to assess a1,a2,a3,a4,c3

Assessment schedule:

Assessment (1): Written exams	Week 6, 16
Assessment (2): Activity	Week 12
Assessment (3): Practical exams	Week 7,13
Assessment (4): Oral exams	Week 16

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	50	50%
Practical exam	20	20%
Oral exam	15	15%
Periodical 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 4 approved by Analytical chemistry department 2017.

- Practical notes of Analytical chemistry 4 approved by Analytical chemistry department 2017.

2- Essential (textbooks):

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

ii- Quantitative Chemical Analysis (Sixth Edition); Daniel C. Harris. (2002).

3- Recommended books:

i- Chemical Analysis: Modern Instrumental Methods and Techniques (fourth edition); Rouessac F., Rouessac A.; John Wiley & Sons, Ltd., New York (1998).

ii- Instrumentation in Analytical Chemistry; Burman S.A.; American Chemical Society, Washington (1982).

4- Periodicals, Web Sites, etc

Analytical Letters Journal

Analyst Journal

Journal of pharmaceutical and biomedical analysis

Course Coordinator: Prof. Dr. Wafaa Hassan

Head of Department: Prof. Dr. Magda El Henawee

Date: تم مناقشة و إعتماد توصيف المقرر من مجلس القسم بتاريخ 27 / 8 /2017م

Course Contents		Knowledge and Understanding				Practical skills			Intellectual skills			General and transferable skills			
		a1	a2	a3	a4	b1	b2	b3	c1	c2	c3	d1	d2	d3	d4
Lectures															
1	Introduction to fat and oil				x										
2	Chemical properties of oil and fat				x										
3	Rancidity, hydrogenation and analysis of butter fat				x										
4	Physical and chemical examination of water				x					x					
5	Metals in water and interpretation of analytical results				x				x						
6	Water pollution and purification				x					x					
7	Theory of gravimetry and contamination and purification of precipitate	x													
8	Application of gravimetric analysis	x			x				x		x				
9	Theory of potentiometry and types of electrodes		x	x	x										
10	Application of potentiometry			x	x				x		x				
11	Conductometry(theory and application)		x	x	x				x		x				
12	Theory and instrumentation of spectroscopy		x	x											
13	Application of spectrophotometry				x				x		x				

Practical sessions		a1	a2	a3	a4	b1	b2	b3	c1	c2	c3	d1	d2	d3	d4
1	- Determination of saponification value					x	x		x	x	x	x	x	x	
2	Color tests for fat and oil					x	x		x	x	x	x	x	x	
3	Determination of water alkalinity and acidity Limit test					x	x		x	x	x	x	x	x	
4	Determination of water hardness (soap method)					x	x		x	x	x	x	x	x	
5	Determination of water hardness (complexometric method)					x	x		x	x	x	x	x	x	
6	-Practical exam (1)					x	x		x	x	v		x	x	
7	Determination of some metals gravimetrically							x	x	x	x	x	x	x	
8	Presentation - spectrophotometry								x	x	x	x			x
9	Colorimetric determination of potassium permangate					x		x	x	x	x	x	x	x	
10	Colorimetric determination of copper with ferrocyanide					x		x	x	x	x	x	x	x	
11	Presentation- potentiometry and conductometry								x	x	x	x			x

Matrix II of Analytical Chemistry 4 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	- Theory of gravimetry and contamination and purification of precipitate - Application of gravimetric analysis	Student book Essential books	x			x		x
2.3	Principles of different analytical techniques using GLP guidelines and validation procedures	A11	a2 a3	- Theory of potentiometry and types of electrodes - Application of potentiometry - Conductometry(theory and application) - Theory and instrumentation of spectroscopy - Application of spectrophotometry - Metals in water and interpretation of analytical results - Application of potentiometry - Conductometry(theory and	Student book Essential books Recommended books Internet	x		x	x		x
					Student book Essential books Recommended books Internet	x		x	x		x

				application) - Application of spectrophotometry							
			a4	- Chemical examination of water - Metals in water and interpretation of analytical results - Application of gravimetric analysis - Theory of potentiometry and types of electrodes - Application of potentiometry - Conductometry(theory and application) - Theory and instrumentation of spectroscopy - Application of spectrophotometry - Metals in water and interpretation of analytical results - Application of potentiometry - Conductometry(theory and application) - Application of spectrophotometry	Student book Essential books Recommended books Internet	x		x	x		x
2.4	Principles of isolation, synthesis, purification, identification, and	A13	a4	- Introduction to fat and oil - Chemical properties of oil and fat - Rancidity, hydrogenation	Student book Essential books	x			x		x

	standardization methods of pharmaceutical compounds.			and analysis of butter fat - Physical and chemical examination of water - Chemical examination of water - Metals in water and interpretation of analytical results - Theory of gravimetry and contamination and purification of precipitate							
2.17	Methods of biostatistical analysis and pharmaceutical calculations	A36	a4	- Introduction to fat and oil - Metals in water and interpretation of analytical results - Application of gravimetric analysis - Application of potentiometry - Conductometry (theory and application) - Theory and instrumentation of spectroscopy - Application of spectrophotometry	Student book Essential books	x			x		x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	- Determination of acid value in genuine and adulterated oil - Det. Of saponification value - Color tests for fat and oil - Det. Of water alkalinity and acidity - Det. Of water hardness(soap method)	Practical notes		x	x	x		

				- Det. Of water hardness(Soda reagent) - Det. Of some metals gravimetrically							
3.4	Extract, isolate, synthesize, purify, identify, and/or standardize active substances from different origins.	B6	b2	- Determination of acid value in genuine and adulterated oil - Det. Of saponification value - Color tests for fat and oil - Det. Of water alkalinity and acidity - Det. Of water hardness(soap method) - Det. Of water hardness(Soda reagent) - Det. Of some metals gravimetrically	Practical notes		x	x		x	
3.8	Apply techniques used in operating pharmaceutical equipment and instruments	B13	b3	- Presentations (conductometry, poteniometry, gravimetry)	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	C4	c1 c2	- Metals in water and interpretation of analytical results - Application of gravimetric analysis - Application of potentiometry - Application of conductometry - Application of spectrophotometry - Determination of acid value	Student book Essential books Recommended books Internet Practical notes	x	x	x	x	x	x

				in genuine and adulterated oil - Det. Of saponification value - Color tests for fat and oil - Det. Of water alkalinity and acidity - Det. Of water hardness(soap method) - Det. Of water hardness(Soda reagent) - Activity - Det. Of some metals gravimetrically - Presentations (conductometry, poteniometry, gravimetry)						
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C8	c3	- Metals in water and interpretation of analytical results - Application of gravimetric analysis - Application of potentiometry - Application of conductometry - Application of spectrophotometry - Determination of acid value in genuine and adulterated oil - Det. Of saponification value - Color tests for fat and oil - Det. Of water alkalinity and acidity - Det. Of water hardness(soap method) - Det. Of water hardness(Soda reagent)	Student book Essential books Recommended books Internet Practical notes	x	x	x	x	x	x

				- Det. Of some metals gravimetrically - Presentations (conductometry, poteniometry, gravimetry)							
5.3	Work effectively in a team	D4	d1	- Practical sessions - Activity - Presentations	Practical notes Internet		x	x		x	
5.6	Adopt ethical, legal and safety guidelines	D8	d2	- Practical sessions	Practical notes		x			x	
5.8	Demonstrate creativity and time management abilities	D10	d3	- Practical sessions - Activity - Presentations	Practical notes Internet		x	x		x	
5.9	Implement writing and presentation skills	D11	d4	- Activity - Presentations	Internet		x	x		x	

Course Coordinator: Prof. Dr. Wafaa Hassan

Head of Department: Prof. Dr. Magda El Henawee

Date: 2017/ 8 / 27 تم مناقشة و إعتماد توصيف المقرر من مجلس القسم بتاريخ

COURSE SPECIFICATIONS

Pharmaceutical Organic Chemistry (4)

Second year – Second Term

2017-2018

Course Specification of Pharmaceutical Organic Chemistry (4)

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

Academic year/ Level: Second year /Second term

Date of specification approval: 28/8/2017

B- Basic information:

Title: Pharmaceutical Organic Chemistry (4) Code: **POC223**

Credit Hours: ---

Lectures : 2 hrs/week

Practical: 2 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 understand the chemistry of heterocyclic compounds and the principles of spectroscopy.

2-Intended Learning Outcomes of Pharmaceutical Organic Chemistry (4) (lLOs):

A- Knowledge and Understanding	
a1	Illustrate the principles of UV, IR, NMR and Mass spectroscopy.
a2	Outline different synthetic pathways for pharmaceutical heterocyclic compounds including commercially available drugs.
B- Professional and Practical skills	
b1	Handle basic laboratory equipments and chemicals effectively and safely.
b2	Perform synthesis of different pharmaceutically active nuclei including pyrazole, triazole, thiophene and quinoxaline.
b3	Conduct a research on heterocyclic compounds.
C- Intellectual skills	
c1	Suggest a appropriate methods of synthesis of different heterocyclic compounds
D- General and Transferable skills	
d1	work effectively in a team
d2	Adopt ethical, legal chemistry lab's safety guidelines
d3	develop time management and critical thinking skills
d4	Implement writing skills through lab reports and discussion of results.

D- Contents:

Week No.	Lecture (2hrs/week)	Practical session (2hrs/week)
1	Classification of heterocyclic compounds	- Lab safety measures. - Preparation of 1,2,3-benzotriazole
2	Nomenclature of heterocyclic compounds	Purification & crystallization of benzotriazole
3	Five-membered heterocyclic with one heteroatom	Preparation of 3,5-dimethylpyrazole
4	Indole (benzo[b]pyrrole)	Purification & crystallization of 3,5-dimethylpyrazole
5	Five-membered rings containing two heteroatoms.	Application on heterocycles nomenclature (1)
6	Midterm exam	
7	Five-membered heterocyclic with one heteroatom: reactions and applications	Preparation of 3-methyl-2-[1H]quinoxalinone
8	Quinoline and isoquinoline	Application on heterocycles nomenclature (2)
9	Six-membered rings containing two heteroatoms + purine nucleus and application	Preparation of 5-nitrosalicylic acid
10	UV and visible spectroscopy	Purification & crystallization of 5-nitrosalicylic acid
11	Infrared spectroscopy	Preparation of ethyl 2-amino-4,5,6,7-tetrahydrobenzo[b]thiophene-3-carboxylate
12	Applications on infrared spectroscopy	Application on IR
13	^{1}H-NMR spectroscopy	Application on NMR
14	^{13}C-NMR spectroscopy	Activities on spectroscopy
15	Mass spectrometry & applications	Practical exam

E- Teaching and Learning Methods:

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

F- Student Assessment Methods:

Written exams	to assess	a1,a2,c2
Practical exam	to assess	b1,b2,c1,d1,d2
Activity	to assess	d2
Oral exam	to assess	a1,a2,c2

Assessment schedule:

Assessment (1): Written exams	Week 6, 16
Assessment (2): Activity	Week 5
Assessment (2): Practical exams	Week 15
Assessment (3): Oral exams	Week 16

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	60	60%
Practical exam and activities	25	25%
Oral exam	15	15%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

- For lectures: Black and white boards, data show and air conditioned classroom
- For practical: Well-equipped labs

H- List of References:

1- Course Notes: Student book of Pharmaceutical Organic chemistry approved by the department 2017.

2- Essential Books:

✓ Francis A. Carey, 2009, Organic Chemistry; 9th Edition, McGraw-Hill

✓ T. W. Graham Solomons and Craig B. Fryhle, 2010, Organic Chemistry; 11th Edition, John willy & Sons Inc, USA.

Course Coordinator: Prof. Dr. Eatedal Abdelaal
Head of Department: Prof. Dr. Hanan Abdelrazik Adelfattah

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Matrix I of pharmaceutical organic chemistry 4 course

Course Contents		ILOs of pharmaceutical organic chemistry 4 course									
		Knowledge and understanding		Professional and practical skills			Intellectual skills	General and transferable skills			
Lectures		a1	a2	b1	b1	b2	c1	d1	d2	d3	d4
1	Classification of heterocyclic compounds		x								
2	Nomenclature of heterocyclic compounds		x								
3	Five-membered heterocyclic with one heteroatom		x				**x**				
4	Indole (benzo[b]pyrrole)		x				**x**				
5	Five-membered rings containing two heteroatoms		x				x				
6	Five-membered heterocyclic with one heteroatom: reactions and applications.		x				**x**				
7	Quinoline and isoquinoline.		x				x				
8	Six-membered rings containing two heteroatoms + purine nucleus and application		x				**x**				
9	UV and visible spectroscopy	x								x	
10	Infrared spectroscopy	x								x	

11	Applications on infrared spectroscopy	x								**x**	
12	^{1}H-NMR spectroscopy	x								**x**	
13	^{13}C-NMR spectroscopy	x								**x**	
14	Mass spectrometry & applications	x								x	
Practical sessions											
1	Laboratory safety measures. Preparation of 1,2,3-benzotriazole			**x**	x			x	x		x
2	Purification & crystallization of benzotriazole			**x**	x			x	x		x
3	Preparation of 3,5-dimethylpyrazole			**x**	x			x	x		x
4	Purification & crystallization of 3,5-dimethylpyrazole			**x**	x			x	x		x
5	Application on heterocycles nomenclature (1)			**x**		x		x	x		x
6	Preparation of 3-methyl-2-[1H]quinoxalinone			**x**	x			x	x		x
7	Application on heterocycles nomenclature (2)			**x**		x		x	x		x
8	Preparation of 5-nitrosalicylic acid			**x**	x			x	x		x
9	Purification & crystallization of 5-nitrosalicylic acid.			**x**	x			x	x		x
10	Preparation of ethyl 2-amino-4,5,6,7-tetrahydrobenzo[b]thiophene-3-carboxylate			**x**	x			x	x		x
11	Application on IR									x	x
12	Application on NMR									x	x

Matrix II for pharmaceutical organic chemistry 4 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	UV and visible spectroscopy	Student book Essential books	x			x		x
				Infrared spectroscopy	Student book Essential books	x			x		x
				Applications on infrared spectroscopy	Student book Essential books	x			x		x
				^{1}H-NMR spectroscopy	Student book Essential books	x			x		x
				^{13}C-NMR spectroscopy	Student book Essential books	x			x		x
				Mass spectrometry & applications	Student book Essential books	x			x		x
2.5	Principles of drug design, development and synthesis.	A15	a2	Classification of heterocyclic compounds	Student book Essential books	x			x		x

				Nomenclature of heterocyclic compounds	Student book Essential books	x			x		x
				Five-membered heterocyclic with one heteroatom	Student book Essential books	x			x		x
				Indole (benzo[b]pyrrole)	Student book Essential books	x			x		x
				Five-membered rings containing two heteroatoms	Student book Essential books	x			x		x
				Five-membered heterocyclic with one heteroatom: reactions and applications	Student book Essential books	x			x		x
				Quinoline and isoquinoline.	Student book Essential books	x			x		x
				Six-membered rings containing two heteroatoms + purine nucleus and application	Student book Essential books	x			x		x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	Laboratory safety measures Preparation of 1,2,3-benzotriazole	Practical notes		x			x	
				Purification & crystallization of benzotriazole			x			x	

3.4	Synthesize, purify, identify, and/or standardize active substances from different origins.	B6	b2	Preparation of 3,5-dimethylpyrazole			x			x	
				Purification & crystallization of 3,5-dimethylpyrazole							
			b3	Application on heterocycles nomenclature (1)			x			x	
				Preparation of 3-methyl-2-[1H]quinoxalinone			x			x	
				Application on heterocycles nomenclature (2)			x			x	
				Preparation of 5-nitrosalicylic acid			x			x	
				Purification & crystallization of 5-nitrosalicylic acid.			x			x	
				Preparation of ethyl 2-amino-4,5,6,7-tetrahydrobenzo[b]thiophene-3-carboxylate			x			x	
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization	C7	c1	Preparation of 1,2,3-benzotriazole	Practical notes		x			x	
		C8		Purification & crystallization of benzotriazole			x			x	
				Preparation of 3,5-dimethylpyrazole			x			x	

	of active substances from different origins.			Purification & crystallization of 3,5-dimethylpyrazole			x			x	
				Preparation of 3-methyl-2-[1H]quinoxalinone			x			x	
				Preparation of 5-nitrosalicylic acid							
				Preparation of ethyl 2-amino-4,5,6,7-tetrahydrobenzo[b]thiophene-3-carboxylate							
5.3	Work effectively in a team	D4	d1	Laboratory safety measures. Preparation of 1,2,3-benzotriazole	practical notes		x			x	
5.6	Adopt ethical, legal and safety guidelines	D8	d2	Purification & crystallization of benzotriazole	Practical notes		x				
				Preparation of 3,5-dimethylpyrazole	Practical notes						
				Purification & crystallization of 3,5-dimethylpyrazole	Practical notes		x			x	
5.8	Demonstrate creativity and time management abilities	D10	d3	Application on heterocycles nomenclature (1)	Practical notes		x			x	

5.9	Implement writing, presentaion skills	D11		Activities (spectroscopy case study)	Practical notes		x	x		x	
5.1O	Demonstrate critical thinking, problem-solving and decision-making abilities	D12	d4	Preparation of 3-methyl-2-[1H]quinoxalinone	Practical notes		x			x	x
				Application on heterocycles nomenclature (2)	Practical notes		x			x	x
				Preparation of 5-nitrosalicylic acid	Practical notes		x			x	x
				Purification & crystallization of 5-nitrosalicylic acid	Practical notes		x			x	x
				Preparation of ethyl 2-amino-4,5,6,7-tetrahydrobenzo[b]thiophene-3-carboxylate	Practical notes		x			x	x
				Activity (spectroscopy case)	Recommended books Internet		x	x		x	

Course Coordinator: Prof. Dr. Eatedal Abdelaal
Head of Department: Prof. Dr. Hanan Abdelrazik Adelfattah

تم مناقشة و إعتماد توصيف المقرر من مجلس القسم بتاريخ 28/8/2017

COURSE SPECIFICATIONS

Pharmaceutics 4

Second year – Second Term

2017-2018

Course specification of Pharmaceutics-4

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/Second semester

Date of specification approval: 3 September 2017

B- Basic information:

Title: Pharmaceutics-4 Code: PC223

Credit Hours: ---

Lectures: 2 hrs/week

Practical: 2 hrs/week

Tutorials: ---

Total: 3 hrs/week

C- Professional information:

1-Overall aim of the course

On completion of the course, the student will be able to illustrate different types, preparation methods, applications, advantages and disadvantages of solid and semisolid dosage forms. As well, the student will be able to describe different types of incompatibilities, preformulation studies and pharmaceutical legislations.

2-Intended Learning Outcomes of pharmaceutics-4 (ILOs)

A- Knowledge and Understanding	
a1	Enumerate different solid and semisolid dosage forms
a2	Describe ideal characters, packaging, labeling, storing and distribution process of suppositories, capsules, microencapsulation ,powders and granules
a3	Illustrate different preparation methods of suppositories, capsules, microencapsulation , powders and granules.
a4	Summarize the most appropriate method for documentation and filing of drugs in industry and pharmacy
B- Professional and Practical skills	
b1	Formulate different solid and semisolid preparations
b2	Handle pharmaceutical preparations safely
b3	Dispense and label different solid and semisolid dosage forms safely and effectively
C- Intellectual skills	
c1	Suggest the most appropriate preparation method for different solid and semisolid dosage forms
c2	Solve different physical and chemical incompatibilities
D- General and Transferable skills	
d1	Develop team work and time management skills
d2	Demonstrate critical thinking and decision making skills

D- Contents:

Week No.	Lecture contents (2hrs/week)	Practical session (2 hrs/week)
1	- Types of suppository bases	- Calculation of displacement value
2	- Testing of suppositories - Vaginal suppositories	- Preparation of soap supp. (Lab evaluation)
3	-Other rectally administered dosage forms	- Preparation of glycero-gelatin supp.(Lab evaluation)
4	- Types of capsules - Methods of preparation of capsules	- Preparation of Zinc oxide supp. (Lab evaluation)
5	- Methods of preparation of microcapsules	- Preparation of Iodine supp. (Lab evaluation)
6	**Midterm exam**	
7	- Powders as dosage forms	**Revision**
8	- Flow properties - Effervescent granules	- Calculation of effervescent granules (Lab evaluation)
9	- Solubility - Partition coefficient	- Blank effervescent granules (Lab evaluation)
10	- Dissolution rate - Stability	- Heambiotic effervescent granules (Lab evaluation)
11	- Types of incompatibilities - Examples on incompatibilities	- Antispasmodic effervescent granules (Lab evaluation)
12	- Examples on incompatibilities	- Antigout effervescent granules - Incompatibility problems
13	-التشريعات الصيدلية	**- Practical exam**
14	-التشريعات الصيدلية	
15	- Revision & Open Discussion	

E- Teaching and Learning Methods:

- Lectures
- Practical session
- Self learning (Activities, open discussion)

F- Student Assessment methods:

1- Written exams to assess: a1, a2, a3, a4, c1, c2,d2

2- Practical exams to assess: b1, b2, b3, c1, c2, d1, d2

3- Oral exam to assess: a1, a2, a3, a4, c1, c2, d2

Assessment schedule

Assessment (1): Written exams	Week 16
Assessment (2): Practical exam	Week 13
Assessment (3): Oral exam	Week 16

Weighting of Assessment

Assessment method	Marks	Percentage
Written exams	60	60%
Practical exam and activities	25	25%
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-4 approved by pharmaceutics department (2017).

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, R. G, 17 th edn, Mack Publishing Company, USA. (1985).

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

4- Periodicals and websites:

Journal of pharmaceutical sciences

www.Pubmed.com

www.Sciencedirect.com

Course Coordinators: **Prof. Dr. Hanaa Abdel Fattah El Ghamry**

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

Date: **تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ 3 / 9 / 2017 م**

Matrix I of Pharmaceutics-4 course

Course Contents		ILOs of second term course										
		Knowledge and understanding				Professional and practical skills			Intellectual skills		Transferable and general skills	
Lectures		a1	a2	a3	a4	b1	b2	b3	c1	c2	d1	d2
1	Suppositories introduction	x										
2	Therapeutic uses		x									
3	Factors affecting drug absorption from suppositories			x	x							
4	Types of suppository bases		x	x	x							
5	Testing of suppositories		x	x	x				x			
6	Vaginal suppositories		x	x	x							
7	Other rectally administered dosage forms		x		x							
8	Advantages and disadvantages of suppositories			x								
9	Capsules	x										
10	Types of capsules		x									
11	Evaluation of capsules				x				x			
12	Methods of preparation of capsules		x	x	x							
13	Methods of preparation	x										
14	Powders as dosage forms	x										
15	Advantaged and disadvantages		x	x								

16	Flow properties			x	x							
17	Effervescent granules		x	x	x							
18	Solubility	x										
19	Partition coefficient	x	x	x								
20	Dissolution rate											
21	Physical parameters		x	x	x							
22	Stability		x									
23	Types of incompatibilities	x								x		
24	Examples on incompatibilities		x	x						x		
25	Complete examples on incompatibilities				x					x		
26	Importance of Incompatibilities		x		x					x		
27	التشريعات الصيدلية		x									
Practical sessions												
1	Calculation of displacement value (calculations)	x									x	x
2	Preparation of soap suppositories					x	x	x			x	x
3	Preparation of glycerogelatin suppositories					x	x	x			x	x
4	Preparation of Zinc oxide suppositories					x	x	x			x	x
5	Preparation of Iodine suppositories					x	x	x			x	x
6	calculation of effervescent granules					x	x	x	x		x	x
7	Blank effervescent granules										x	x
8	Heambiotic effervescent granules					x	x	x			x	x
9	Antispasmodic effervescent granules					x	x	x			x	x
10	Antigout effervescent granules					x	x	x			x	x
11	Incompatibility problems					x	x	x	x	x	x	x

Matrix II of Pharmaceutics 4 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	Suppositories introduction, Capsules and Methods of preparation Powders as dosage forms Solubility Partition coefficient Types of incompatibilities	Student book Essential books	x			x		x
					Student book Essential books						x
		A8	a2	Therapeutic uses Types of suppository bases Testing of suppositoriesVaginal suppositories Other rectally administered dosage forms Types of capsules Methods of preparation of capsules Advantaged and disadvantages of powders Effervescent granules Partition coefficient Physical parameters Stability Examples on incompatibilities Importance of Incompatibilities التشريعات	Student book Essential books	x			x		x

				الصيدلية							
2.6	Properties of different pharmaceutical dosage forms including novel drug delivery systems.	A16	a3	Factors affecting drug absorption from suppositories Types of suppository bases Testing of suppositories Vaginal suppositories Advantages and disadvantages of suppositories Methods of preparation of capsules Advantaged and disadvantages of powders Flow properties Effervescent granules Partition coefficient Physical parameters Examples on incompatibilities	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	A18	a4	Factors affecting drug absorption from suppositories Types of suppository bases Testing of suppositories Vaginal suppositories Other rectally administered dosage forms Evaluation of capsules Methods of preparation of capsules Flow properties Effervescent granules Physical parameters Complete examples on incompatibilities Importance of Incompatibilities	Student book Essential books	x			x		x
3.2	Handle and dispose chemicals in a safe way.	B2	b1	Safety laboratory guidelines for practical work	Practical notes		x				
			b2	Handle and dispense preparation in safe way	Practical notes		x				
3.3	Compound, dispense, label, store and distribute medicines effectively and safely	B4	b3	Compounding, dispensing and labeling of different pharmaceutical dosage forms safely and effectively	Practical notes		x			x	
4.1	Apply pharmaceutical knowledge in the formulation of safe and effective medicines as well as in dealing with	C1	c1	Testing of suppositories- Evaluation of capsules	Student book Essential books	x			x		x

	new drug delivery systems.			Compare between different methods of formulations for different dosage forms in a safe and effective way	Practical notes		x				
4.4	Recognize and control possible physical and/or chemical incompatibilities that may occur during drug dispensing.	C2	c2	Types of incompatibilities Examples of incompatibilities Importance of Incompatibilities Activity	Practical notes Internet		x	x		x	
5.5	Practice independent learning needed for continuous professional development	D7	d1	Develop a new methods for preparation of good pharmaceutical dosage forms	Internet		x	x		x	
5.1O	Implement writing and thinking, problem-solving and decision-making abilities.	D12	d2	Demonstrate critical thinking and decision making during pharmaceutical preparations	Internet & Practical notes		x	x		x	

Course Coordinators: **Prof. Dr. Hanaa Abdel Fattah El Ghamry**

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

Date: **2017 / 9 / 3** **تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ**

COURSE SPECIFICATIONS

Physiology

Second year – Second Term

2017-2018

Course Specification of Physiology

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: Pharmacology department

Academic year/Level: Second year /Second term

Date of specification approval: 3 September 2017

B- Basic information:

Title: Physiology Code: PT220

Credit Hours: ---

Lectures : 2 hrs/week

Practical: ----------

Tutorials: ---

Total: 2 hrs/week

C- Professional information:

1-Overall Aims of the Course:

On completion of the course, students will be able to summarize the physiological functions of the different body organs under normal and abnormal conditions related to the physiologic functions of some organs.

2-Intended Learning Outcomes of Physiology (lLOs):

A- Knowledge & Understanding	
a1	Describe the physiological functions of different body systems.
a2	Illustrate the body functions in health and disease states.
B- Professional and Practical skills	
b1	Use the most common terminology related to each organ.
C- Intellectual skills	
c1	Suggest proper drug to treat certain disease based on physiology background.
D- General and Transferable skills	
d1	Evaluate the functions of different body organs in health and disease states.

D- Contents:

Week No.	Lecture (2 hrs/week)
1	- Physiology of the membrane, nerve and muscle
2	- Physiology of the autonomic nervous system (1)
3	- Physiology of the autonomic nervous system (2)
4	- Physiology of the central nervous system (1)
5	- Physiology of the central nervous system (2)
6	Midterm exam
7	- Physiology of the cardiovascular system (1)
8	- Physiology of the cardiovascular system (2)
9	- Physiology of the renal system
10	- Physiology of the pulmonary system
11	- Physiology of the gastrointestinal system
12	- Physiology of the endocrine system (1)
13	- Physiology of the endocrine system (2)
14	- Physiology of the endocrine system (3)
15	- Revision & open discussion

E- Teaching and Learning Methods:

- Lectures
- Open discussion

F- Student Assessment Methods:

1- Written exams to assess a1, a2, b1, c1, d1

Assessment schedule:

Assessment (1): Midterm exam	Week 6
Assessment (2): Final written exam	Week 16

Weighting of Assessment

Assessment method	Marks	Percentage
Midterm exam	20	20%
Final Written exam	80	80%
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 Physiology approved by the Pharmacology department (2017)

2- Essential Books :

Linda S. Costanzo (2007). Board Review Series: Physiology. Lippincott Williams & Wilkins. 4th ed

Essentials of anatomy and physiology (fifth edition); Scanlon V.C., Sanders T. (2007).

Course Coordinator: Ass.Prof. Shimaa El- Shazly

Head of Department: Prof. Mona Fouad

Date: م2018/ 10 / 29 تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

Matrix I of Physiology course

Course contents		ILOs for Physiology course				
		Knowledge and understanding		Professional and practical skills	Intellectual skills	General and transferable skills
Lectures		a1	a2	b1	c1	d1
1	Physiology of the membrane, nerve and muscle	x	x	x		x
2	Physiology of the autonomic nervous system (1)	x	x	x	x	x
3	Physiology of the autonomic nervous system (2)	x	x	x	x	x
4	Physiology of the central nervous system (1)	x	x	x	x	x
5	Physiology of the central nervous system (2)	x	x	x	x	x
6	Physiology of the cardiovascular system (1)	x	x	x	x	x
7	Physiology of the cardiovascular system (2)	x	x	x	x	x
8	Physiology of the renal system	x	x	x	x	x
9	Physiology of the pulmonary system	x	x	x	x	x
10	Physiology of the gastrointestinal system	x	x	x	x	x
11	Physiology of the endocrine system (1)	x	x	x	x	x
12	Physiology of the endocrine system (2)	x	x	x	x	x
13	Physiology of the endocrine system (3)	x	x	x	x	x

Matrix II of Physiology course							
National Academic Reference Standards (NARS)		**Program ILOs**	**Course ILOs**	**Course contents**	**Sources**	**Teaching and learning methods**	**Method of assessment**
						Lecture	Written exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A4	a1	- Physiology of the membrane, nerve and muscle - Physiology of the autonomic nervous system (1) - Physiology of the autonomic nervous system (2) - Physiology of the central nervous system (1) - Physiology of the central nervous system (2) - Physiology of the cardiovascular system (1) - Physiology of the cardiovascular system (2) - Physiology of the renal systemPhysiology of the pulmonary system - Physiology of the gastrointestinal system - Physiology of the endocrine system (1) - Physiology of the endocrine system (2) - Physiology of the endocrine system (3)	Student book Essential books Recommended books	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.	A24	a2	- Physiology of the membrane, nerve and muscle - Physiology of the autonomic nervous system (1) - Physiology of the autonomic nervous system (2) - Physiology of the central nervous system (1) - Physiology of the central nervous system (2) - Physiology of the cardiovascular system (1)	Student book Essential books Recommended books	x	x

				- Physiology of the cardiovascular system (2) - Physiology of the renal system - Physiology of the pulmonary system - Physiology of the gastrointestinal system - Physiology of the endocrine system (1) - Physiology of the endocrine system (2) - Physiology of the endocrine system (3)			
3.1	Use the proper pharmaceutical and medical terms, abbreviations and symbols in pharmacy practice.	B1	b1	- Physiology of the membrane, nerve and muscle - Physiology of the autonomic nervous system (1) - Physiology of the autonomic nervous system (2) - Physiology of the central nervous system (1) - Physiology of the central nervous system (2) - Physiology of the cardiovascular system (1) - Physiology of the cardiovascular system (2) - Physiology of the renal system - Physiology of the pulmonary system - Physiology of the gastrointestinal system - Physiology of the endocrine system (1) - Physiology of the endocrine system (2) - Physiology of the endocrine system (3)	Student book Essential books Recommended books	x	x

4.9	Utilize the pharmacological basis of therapeutics in the proper selection and use of drugs in various disease conditions.	C12	c1	- Physiology of the autonomic nervous system (1) - Physiology of the autonomic nervous system (2) - Physiology of the central nervous system (1) - Physiology of the central nervous system (2) - Physiology of the cardiovascular system (1) - Physiology of the cardiovascular system (2) - Physiology of the renal system - Physiology of the pulmonary system - Physiology of the gastrointestinal system - Physiology of the endocrine system (1) - Physiology of the endocrine system (2) - Physiology of the endocrine system (3)	Student book Essential books Recommended books	x	x
5.10	Implement writing and thinking, problem-solving and decision-making abilities.	D12	d1	- Physiology of the membrane, nerve and muscle - Physiology of the autonomic nervous system (1) - Physiology of the autonomic nervous system (2) - Physiology of the central nervous system (1) - Physiology of the central nervous system (2) - Physiology of the cardiovascular system (1) - Physiology of the cardiovascular system (2) - Physiology of the renal system - Physiology of the pulmonary system - Physiology of the gastrointestinal system - Physiology of the endocrine system (1) - Physiology of the endocrine system (2) - Physiology of the endocrine system (3)	Student book Essential books Recommended books	x	x

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Course Coordinator: Ass.Prof. Shimaa El- Shazly

Head of Department: Prof. Mona Fouad

Date: م 2018/ 10 / 29 تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

COURSE SPECIFICATIONS

General Microbiology + Immunology

Second Year –Second Term

2017-2018

Course Specification of General Microbiology + Immunology

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: Microbiology & Immunology Department

Academic year/ Level: Second year/ Second term

Date of specification approval: 25/12/2017

B- Basic information:

Title: General Microbiology + Immunology Code: MI22

Credit Hours: ---

Lectures: 3 hrs/week

Practical: 2 hrs/week

Tutorials: ---

Total: 4 hrs/week

C- Professional information:

1-Overall Aims of the Course:

On completion of the course, students will be able to summarize different types of microorganisms, microbial growth, metabolism, bases of bacterial genetics and laboratory diagnosis of immunological diseases as well as immunology principles.

2-Intended Learning Outcomes of General Microbiology + Immunology (lLOs):

A- Knowledge and Understanding	
a1	Illustrate different types of microorganisms and their way of life.
a2	Define microbial growth conditions and metabolism.
a3	Illustrate the principles of immunology including natural and acquired immunity and antigen–antibody reactions
a4	Identify the functions of immune system in health state and during disease state
a5	Demonstrate the bases of bacterial genetics.
a6	Identify the laboratory diagnosis of immunological diseases
B- Professional and Practical skills	
b1	Use the proper terms of microbiology and immunology.
b2	Handle basic laboratory equipment, chemicals and biohazards effectively and safely.
b3	Perform microscopical examinations and serological reactions for identification of diseases
b4	Monitor the microbial growth and growth conditions on different types of common culture media.
b5	Perform microscopical examinations and biochemical tests for identification of different microorganisms
C- Intellectual skills	
c1	Interpret experimental results of serological reactions
c2	Analyze experimental results for differentiation between different microorganisms.
D- General and Transferable skills	
d1	Communicate effectively with public, patients and other health care professionals
d2	Develop research skills such as online search and writing reports
d3	Work effectively as a member of a team
d4	Adopt the ethical values, legal measures and safety guidelines

D- Contents:

Week No.	Lecture (3 hrs/week)	Practical sessions (2 hrs/week)
1	- General introduction to microbiology and historical review - Introduction to immunology	- Laboratory safety measures - Microscopy and general terms of microbiology
2	- Description of microorganisms - Classification and types of Microorganisms - Introduction to immunology	- Microscopical examination of Bacteria: preparation and staining of smear, simple stain and negative stain
3	- Brief description of viruses, fungi and protozoa - Immunity – innate immunity - Immune system	- Differential stains: Gram-stain
4	- Bacteria: description and classification - Cells of immune response - Immunogens or antigens	- Differential stains: Gram-stain of mixtures of microorganisms • Activity
5	- Anatomy and structure of bacterial cells - Acquired immune response - Cell mediated immunity	• Differential stain: Acid-fast stain (Ziehl Neelsen stain)
6	Midterm exam	
7	- Growth and cultivation of bacteria - Humoral immune response and Cytokines	Spore stain

8	- Bacterial growth curve and types of culture - Antigen- Antibody reactions, precipitation reactions	- Microscopic examination of fungi: lactophenol mount
9	- Microbial metabolism - Agglutination and complement fixation reactions	- Cultivation of bacteria: types of common culture media and growth conditions
10	- Microbial metabolism - Immunologic mechanisms of tissue damage	- Biochemical activities of and identification of bacteria
11	- Microbial metabolism - Hypersensitivity reactions	- Examination of living bacteria: hanging drop technique - Activity
12	- Microbial genetics - Transplantation immunology	- Serological reactions - (Precipitation reactions)
13	- Transcription and Protein synthesis - Autoimmune diseases	- Serological reactions - (Agglutination reactions)
14	- Genetic variation - Tumour immunology	- Serological reactions - (Complement fixation reaction)
15	- Genetic Transfer among bacteria - Immunoprophylaxis	**Practical exam**

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Self learning (activities, reports, group discussion, internet search…)
- Case study

F- Student Assessment Methods:

1- Written exam to assess a1,a2,a3,a4,a5, a6, c1

2- Practical exam to assess b1,b2,b3,b4,b5, c2,d1,d2,d3, d4

3- Activity to assess d1,d2,d3, d4

4- Oral exam to assess a1, a2, a3, a4, a5, a6, c1

Assessment schedule:

Assessment (1): Written exams	Week 6,16
Assessment (2): Activity	Week 5,11
Assessment (3): Practical exam	Week 15
Assessment (4): Oral exams	Week 16

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	60	60%
Practical exam and activities	25	25%
Oral exam	15	15%
TOTAL	100	100%

G- Facilities Required for Teaching and Learning:

1. For lectures: Black (white) boards, and data show.
2. For Labs.: Chemicals, Autoclaves, Incubators, Ovens, Water bathes, staining dyes, microscopes, refrigerators and microbiological culture media

H- List of References:

1- Student book of General Microbiology and Immunology approved by microbiology and Immunology department (2017).

2- Essential Books (Text Books):

Jackson M, Lowey A. Handbook of extemporaneous preparation. A guide to pharmaceutical compounding. Published by Pharmaceutical Press, 2010.

3- Recommended Books:

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

4- Periodicals and websites:

- Aquilina A. The extemporaneous compounding of paediatric medicines at Mater Dei Hospital. Journal of the Malta College of Pharmacy Practice.Issue 19, 28 – 30, 2013.

http://canadianpharmacistsletter.therapeuticresearch.com/ce/ceCourse.asp...

Course Coordinator: Prof. Dr/Ashraf Kadry

- **Head of Department:** Prof. Dr/Nehal El-sayed.

Date: 25 / 12 /2017 م تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

Matrix I of General Microbiology & Immunology Course

Course Contents		ILOs of General Microbiology & Immunology course																
		Knowledge and understanding						Professional and practical skills					Intellectual skills		General and transferable skills			
	Lectures	a1	a2	a3	a4	a5	a6	b1	b2	b3	b4	b5	c1	c2	d1	d2	d3	d4
1	General introduction to microbiology and historical review - Introduction to immunology	x	x				x		x							x		
2	Description of microorganisms, classification and types of microorganism Introduction to immunology	x					x	x	x	x	x		x	x	x	x		
3	Brief description of viruses, fungi and protozoa - Immunity – innate immunity - Immune system	x	x				x									x		
4	- Bacteria: description and classification - Cells of immune response - Immunogens or antigens						x											
5	- Anatomy and structure of bacterial cells - Acquired immune response - Cell mediated immunity	x	x				x									x		
6	Growth and cultivation of bacteria - Humoral immune response and Cytokines	x	x	x			x			x						x		
7	- Bacterial growth curve and types of culture - Antigen- Antibody reactions, precipitation reactions						x											
8	Microbial metabolism - Agglutination and complement fixation reactions	x	x	x	x	x	x									x		
9	- Microbial metabolism - Immunologic mechanisms of tissue damage	x				x	x							x	x	x	x	
10	- Microbial metabolism - Hypersensitivity reactions		x	x		x	x						x			x		

11	- Microbial genetics - Transplantation immunology	x	x	x	x	x	x						x	x	x	x	x	
12	- Transcription and Protein synthesis - Autoimmune diseases			x	x	x	x						x			x		
13	- Genetic variation - Tumour immunology	x	x	x	x	x	x						x	x	x	x		
14	- Genetic Transfer among bacteria - Immunoprophylaxis			x			x						x	x	x	x		
Practical sessions																		
15	Lab. Safety rules and microscopy- General terms of microbiology		x	x	x	x		x	x						x			
16	Microscopical examination of bacteria simple stain and negative stain				x	x				x	x	x		x	x			
17	Differentiasl stain: Gram stain									x	x	x		x	x			
18	Differential stain: Gram stain for mixtures of microorganisms									x	x	x		x	x	x	x	
19	Differential stain: acid fast stain, spore stain and capsule stain									x	x	x		x	x			
20	Examination of living bacteria: hanging drop technique microscopical examination of fungi: lactophenol mount									x	x	x		x	x			
21	Cultivation of bacteria: types of common culture media and growth conditions									x	x	x		x	x			
22	Biochemical activities and identification of bacteria									x	x	x	x	x	x	x		
23	- Examination of living bacteria: hanging drop technique									x	x	x	x	x	x	x		
24	- Serological reactions - (Precipitation reactions)									x			x	x				
25	- Serological reactions - (Agglutination reactions)									x			x	x				
26	- Serological reactions - (Complement fixation reaction)									x			x	x				
27	Activity														x	x	x	x

Matrix II of General Microbiology & Immunology Course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Assessment method		
						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	General introduction to microbiology and historical review Lab. Rules and microscopy	Student book Essential books	x			x		x
				Discription of microorganisms Classification and types of microorganism Introduction to immunology	Student book Essential books	x			x		x
				Brief discription of viruses, fungi and protozoa - Immunity – innate immunity - Immune system	Student book Essential books	x			x		x
				Bacteria: description and classification - Anatomy and physiology of bacterial cells Cells of immune response - Immunogens or antigens - Acquired immune response - Cell mediated immunity	Student book Essential books	x			x		x
			a2	Growth and cultivation of bacteria - Humoral immune response and Cytokines	Student book Essential books	x			x		x
			a3	- Bacterial growth curve and types of culture - Antigen- Antibody reactions, precipitation reactions							

				Microbial metabolism - Agglutination and complement fixation reactions	Student book Essential books	x			x		x
2.1O	Principles of public health issues including sources and control of microbial contamination as well as sanitation, disinfection, sterilization methods and microbiological QC of pharmaceutical products	A23	a4	- Microbial metabolism - Immunologic mechanisms of tissue damage	Student book, Essential books	x			x		x
				- Microbial metabolism - Hypersensitivity reactions	Student book, Essential books	x			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	A26	a5	Microbial genetics	Internet Recommended books	x		x	x		x
			a6	- Transcription and Protein synthesis - Autoimmune diseases	Student book, Essential	x		x	x		x

				- Genetic variation - Tumour immunology	books						
				- Genetic Transfer among bacteria - Immunoprophylaxis							
3.1	Use the proper pharmaceutical and medical terms, abbreviations and symbols inpharmacy practice	B1	b1	Lab. Safety rules and microscopy- terms of microbiology	Practical notes		x			x	
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b2	Lab. Safety rules and microscopy - terms of microbiology	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	B8	b3	Microscopical examination of bacteria - simple stain and negative stain	Practical notes		x			x	
				Differentiasl stain: Gram stain	Practical notes		x			x	
				Differential stain: Gram stain for mixtures of microorganisms	Practical notes		x			x	
				Differential stain: acid fast stain, spore stain and capsule stain	Practical notes		x			x	
				Examination of living bacteria: hanging drop technique - microscopical examination of fungi: lactophenol mount	Practical notes		x			x	

				Methods of sterilization in Lab.	Practical notes		x			x	
				Cultivation of bacteria: types of common culture media and growth conditions	Practical notes		x			x	
				Description of bacterial growth	Practical notes		x			x	
				Demonstration of widespread distribution of microorganism Isolation and purification of mixture of bacteria	Practical notes		x			x	
		B9	b4	Microscopical examination of bacteria- simple stain and negative stain	Practical notes		x			x	
				Differentiasl stain: Gram stain	Practical notes		x			x	
			b5	Differential stain: Gram stain for mixtures of microorganisms	Practical notes		x			x	
				Differential stain: acid fast stain, spore stain and capsule stain	Practical notes		×			x	
				Examination of living bacteria: hanging drop technique microscopical examination of fungi: lactophenol mount	Practical notes		x			x	
				Description of bacterial growth	Practical notes		x			x	
				Biochemical activities and identification of bacteria	Practical notes		x			x	
4.8	Select and assess appropriate	C11	c1	Control of microorganisms by sterilization and survival curve	Student book Essential books	x			x		x

	methods of infection control to prevent infections and promote public health			Sterilization parameters and sterility assurance	Student book Essential books	x			x		x
				Methods of sterilization and sterilizers	Student bookEssential books	x			x		x
				Applications of sterilization	Internet Recommended books	x		x	x		x
				Sterilization of pharmaceutical products	Student book Essential books	x			x		x
				Sterilization control and sterility testing	Student book Essential books	x			x		x
4.13	Analyze and interpret experimental results as well as published literature	C16	c2	Microscopical examination of bacteria - simple stain and negative stain	Practical notes		x			x	
				Differentiasl stain: Gram stain	Practical notes		x			x	
				Differential stain: Gram stain for mixtures of microorganisms	Practical notes		x			x	
				Differential stain: acid fast stain, spore stain and capsule stain	Practical notes		x			x	
				Examination of living bacteria: hanging drop technique microscopical examination of fungi: lactophenol mount	Practical notes		x			x	
				Methods of sterilization in Lab.	Practical notes		x			x	
				Cultivation of bacteria: types of common culture media and growth conditions	Practical notes		x			x	

				Description of bacterial growth	Practical notes		x			x	
				Biochemical activities and identification of bacteria	Practical notes		x			x	
				Demonstration of widespread distribution of microorganism Isolation and purification of mixture of bacteria	Practical notes		x			x	
5.3	Work effectively in a team	D4	d1	Lab. Safety rules and microscopy-General terms of microbiology	Practical notes		x			x	
				Microscopical examination of bacteria simple stain and negative stain	Practical notes		x			x	
				Differentiasl stain: Gram stain	Practical notes		x			x	
				Differential stain: Gram stain for mixtures of microorganisms	Practical notes		x			x	
				Differential stain: acid fast stain, spore stain and capsule stain	Practical notes		x			x	
				Examination of living bacteria: hanging drop technique microscopical examination of fungi: lactophenol mount	Practical notes		x			x	
			d3	Methods of sterilization in Lab.	Practical notes		x			x	
				Cultivation of bacteria: types of common culture media and growth conditions	Practical notes		x			x	
				Description of bacterial growth	Practical notes		×			x	
			d4	Biochemical activities and identification of bacteria	Practical notes		x			x	

				Demonstration of widespread distribution of microorganism Isolation and purification of mixture of bacteria	Practical notes		x			x	
				Activity	Internet and Recommended books		x			x	
5.5	Practice independent learning needed for continuous professional development	D7	d2	General introduction to microbiology and historical review Lab. Rules and microscopy	Student book Essential books	x			x		x
				Description of microorganisms, classification and types of microorganims	Student book Essential books	x			x		x
				Brief description of viruses, fungi and protozoa	Student book Essential books	x			x		x
				Bacteria: description and classification Anatomy and physiology of bacterial cells	Student book Essential books	x			x		x
				Growth and cultivation of bacteria	Student book Essential books	x			x		x
				Microbial metabolism	Student book, Essential books	x			x		x
				Microbial genetics	Student book, Essential books	x		x	x		x

				Control of microorganisms by sterilization and survival curve	Student book Essential books	x			x		x
				Sterilization parameters and sterility assurance	Student book, Essential books	x			x		x
				Methods of sterilization and sterilizers	Student book, Essential books	x			x		x
				Applications of sterilization	Student book, Essential books	x		x	x		x
				Sterilization of pharmaceutical products	Student book Essential books	x			x		x
				Sterilization control and sterility testing	Student book Essential books	x			x		x
				Revision	Student book Essential books	x			x		x
				Open discussion	Student book Essential books	x			x		x
				Activity	Internet Recommended books		x	x		x	
5.9	Implement writing and presentation skills	D11		Activity	Internet Recommended books		x	x		x	

Course Coordinator: Prof. Dr/Ashraf Kadry

- **Head of Department:** Prof. Dr/Nehal El-sayed.

Date: 2017/ 12 / 25 تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

COURSE SPECIFICATIONS

Psychology-علم النفس

Second Year –Second Term

2017-2018

توصيف مقرر علم النفس

أ- مواصفات المقرر:

البرنامج أو البرامج التى يقدم من خلالها المقرر: بكالوريوس الصيدلة

المقرر يمثل عنصرا رئيسيا أو ثانويا بالنسبة للبرامج: ثانوياً

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

القسم العلمي المسئول عن تدريس المقرر: قسم علم النفس-كلية التربية.

السنة الدراسية: الفرقة الثانية – التيرم الثاني.

تاريخ اعتماد التوصيف: سبتمبر 2017

(ب) البيانات الأساسية:

العنوان : علم النفس الكود : PS220

الساعات المعتمدة : ---

المحاضرات : ساعة أسبوعيا

العملي: ---

الدروس العملية : ---

المجموع : 1 ساعة في الأسبوع

ج) البيانات المهنية:

1) الأهداف العامة للمقرر:

عند إتمام المقرر سوف يكون الطلاب قادرين على توضيح مباديء علم النفس و التعلم و مفاهيم الصحة النفسية و العقلية

2) النتائج التعليمية المستهدفة لمقرر علم النفس:

أ- المعرفة و الفهم	
أ1	يلم بمباديء علم النفس.
أ2	يحدد القواعد الأساسية للتعلم الشرطي و تطبيقاته.
أ3	يذكر أنواع الدوافع و خصائصها و أهميتها في التعلم.
أ4	يحدد مفهوم التنشئة الاجتماعية و ديناميات السلوك و أنواع العلاقات الاجتماعية.
أ5	يذكر مفاهيم الصحة النفسية و العقلية.
ج- المهارات الذهنية	
ج1	يستخدم المعلومات السابقة في التوجيه و الاختيار بناء على الفروق الفردية.
ج2	يحلل الدوافع المختلفة و علاقتها بالتعلم.
د- المهارات العامة والمنقولة	
د1	يعمل بكفاءة كأحد أفراد الفريق.
د2	ينمي شخصية الفرد للقيام بالمهام الإدارية و تسويق المبيعات.
د3	ينمي مهارات التفكير النقدي و اتخاذ القرارات و حل المشكلات.

د- المحتويات:

الأسبوع	المحاضرة (2ساعة/الأسبوع)
1	- مدخل إلى علم النفس
2	- ما هو التعلم؟
3	- التعلم الشرطي و الوقائع التجريبية و تفسيره
4	- القواعد الأساسية للتعلم الشرطي و تطبيقاته
5	- الدافعية و تعريفاتها و أهمية الدوافع و خصائصها
6	- أنواع الدوافع و خصائصها و أهميتها في التعلم
7	- الشخصية و تعريفاتها و محدداتها و مكوناتها
8	- الشخصية و نظرياتها و طرق قياسها
9	- الذاكرة و تعريفاتها و نماذجها وأنواعها
10	- معنى التنشئة الاجتماعية و ديناميات
11	- السلوك و أنواع العلاقات الاجتماعية - الجماعة و خصائصها و أهميتها للفرد و المجتمع و أنواع الجماعات
12	- التوجيه و الاختيار المهني و الفروق الفردية
13	- الذكاء و حل المشكلات
14	- العمليات العقلية النفسية (الإحساس- الانتباه- الإدراك- التذكر- التفكير) خطواتها و خصائصها و أنواعها
15	- الصحة النفسية و الأمراض النفسية و العقلية

هـ- أساليب التعليم و التعلم:

- المحاضرة

و-أساليب تقييم الطلبة:

1- الامتحان التحريري يقيم: أ1و أ2و أ3وأ4و أ5وج1و ج2و د1و د2 و د3

الجدول الزمني التقييم:

تقييم (1): الامتحان التحريري	**الأسبوع السادس عشر**

ترجيح التقييم:

طريقة التقييم	الدرجات	النسب المئوية
الامتحان التحريري	50	%100
الإجمالي	50	%100

ز- التسهيلات اللازمة للتعليم و التعلم:

1- للمحاضرات: اللوحات (البيضاء) و السوداء و جهاز العرض المرئي (داتا شو).

ي- قائمة المراجع:

1- مذاكرات المقرر: كتاب الطالب محاضرات في علم النفس (2011)

2- الكتب الدراسية

مذكرة محاضرات في علم النفس

3- كتب مقترحة

– المدخل إلى علم النفس: عبدالرحمن عدس، محي الدين توق.ط، عمان: دار الفكر للطباعة والنشر(1998).

- في علم النفس: محمود الطيب، محمود منسي ط3، القاهرة: الانجلو(1993).

4- مجلات دورية، مواقع انترنت، الخ

منسق المقرر: أ.د/ الشناوى عبد المنعم الشناوى

التاريخ: 2017/9/

مصفوفة (1) مقرر علم النفس

	محتويات المقرر	نتائج التعلم المنشودة لمادة علم النفس									
		المعرفة و الفهم					المهارات الفكرية		مهارات عامة و تواصلية		
		أ1	أ2	أ3	أ4	أ5	ج1	ج2	د1	د2	د3
1	مدخل إلى علم النفس	x									
2	ما هو التعلم?		x								
3	التعلم الشرطي و الوقائع التجريبية و تفسيره		x								
4	القواعد الأساسية للتعلم الشرطي و تطبيقاته		x								
5	الدافعية و تعريفاتها و أهمية الدوافع و خصائصها			x				x			
6	أنواع الدوافع و خصائصها و أهميتها في التعلم			x				x			
7	الشخصية و تعريفاتها و محدداتها و مكوناتها									x	
8	الشخصية و نظرياتها و طرق قياسها									x	
9	الذاكرة و تعريفاتها و نماذجها وأنواعها						x				
10	معنى التنشئة الاجتماعية و ديناميات السلوك و أنواع العلاقات الاجتماعية				x						
11	الجماعة و خصائصها و أهميتها للفرد و المجتمع و أنواع الجماعات	x							x		
12	التوجيه و الاختيار المهني و الفروق الفردية						x				
13	الذكاء و حل المشكلات										x
14	العمليات العقلية النفسية (الإحساس- الانتباه- الإدراك- التذكر- التفكير) خطواتها و خصائصها و أنواعها	x									
15	الصحة النفسية و الأمراض النفسية و العقلية					x					

مصفوفة (2) مقرر علم النفس

المعايير الأكاديمية المرجعية القومية (NARS)		نتائج التعلم المنشودة للبرنامج	نتائج التعلم المنشودة للمقرر	محتويات المقرر	المصدر	أساليب التعليم و التعلم		أسلوب التقييم
						المحاضرة	التعلم الذاتي	الامتحان التحريري
2.1	مباديء العلوم الأساسية و الصيدلانية و الطبية و الاجتماعية و السلوكية و الإدارة و الصحة و العلوم البيئية فضلا عن ممارسة الصيدلة	5أ	1أ	مدخل إلى علم النفس	كتاب الطالب	x		x
				الجماعة و خصائصها و أهميتها للفرد و المجتمع و أنواع الجماعات	كتاب الطالب	x		x
				العمليات العقلية النفسية (الإحساس- الانتباه- الإدراك- التذكر- التفكير) خطواتها و خصائصها و أنواعها	كتاب الطالب	x		x
				ما هو التعلم؟	كتاب الطالب	x		x
			2أ	التعلم الشرطي و الوقائع التجريبية و تفسيره	كتاب الطالب	x		x
				القواعد الأساسية للتعلم الشرطي و تطبيقاته	كتاب الطالب	x		x

				الدافعية و تعريفاتها و أهمية الدوافع و خصائصها	أ3			x
				أنواع الدوافع و خصائصها و أهميتها في التعلم				x
				معنى التنشئة الاجتماعية و ديناميات السلوك و أنواع العلاقات الاجتماعية	أ4			x
				الصحة النفسية و الأمراض النفسية و العقلية	أ5			x
4.2	يحلل مجموعة من المعلومات متعددة المصادر في مجال الصيدلة	ج17	ج1	التوجيه و الاختيار المهني و الفروق الفردية				x
			ج2	الدافعية و تعريفاتها و أهمية الدوافع و خصائصها				x
				أنواع الدوافع و خصائصها و أهميتها في التعلم				x
5.3	يعمل بكفاءة كأحد أفراد الفريق	د4	د1	الجماعة و خصائصها و أهميتها للفرد و المجتمع و أنواع الجماعات				x
5.7	ينمي المهارات الإدارية و التي تشمل التمويل و التسويق و المبيعات	د9	د2	الشخصية و تعريفاتها و محدداتها و مكوناتها				x

			الشخصية و نظرياتها و طرق قياسها			الكتاب	x		x
5.1	ينمي مهارات التفكير النقدي و حل المشكلات و اتخاذ القرارات	د12	د3	الذكاء و حل المشكلات		كتاب الطالب وكتب مقترحة	x		x

منسق المقرر: أ.د/ الشناوى عبد المنعم الشناوى

التاريخ: 2017/9/