COURSE SPECIFICATIONS

Faculty of Pharmacy

Second Year – Second Term

2018-2019

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COURSE SPECIFICATIONS

Analytical chemistry (4)

Second year – second Term
2018-2019

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

Academic year / Level: Second year / Second term

Date of specification approval 8/10/2018

B- Basic information:

Title: Analytical Chemistry (4) Code: AC 224

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	- Explain theories of quantitative analysis using gravimetry, spectrophotometry, potentiometry and conductometry.
a2	- Describe standardization methods for water, fat, oil
a3	Demonstrate the application of different techniques in quantitative analysis
B- Professional and Practical skills	
b1	Handle and dispose chemicals safely.
b2	Perform laboratory tests for examination of water, fat and oil.
b3	Perform gravimetric, and spectrophotometric techniques for determination of some compounds and mixtures.
C- Intellectual skills	
c1	Interpret obtained analytical results into concentrations.
c2	Interpret results obtained from different methods applied for determination of different analytes.
c3	Select 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 oil and fat (physical properties, composition and classification)	- Determination of saponification value
2	- Chemical properties of oil and fat	- Determination of water alkalinity
3	- Rancidity, hydrogenation and analysis of butter fat	-Determination of water hardness (complexometric method)
4	- Physical and chemical examination of water	- Limit test
5	- Metals in water and interpretation of analytical results	-Determination of Ni^{2+} gravimetrically
6	- Water pollution and purification	Colorimetric determination of potassium permangate (Beer's law)
7	**Midterm exam**	
8	- Theory of gravimetry, contamination and purification of precipitate	-Colorimetric determination of potassium permangate (unknown conc)
9	- Application of gravimetric analysis	-Colorimetric determination of copper with ferrocyanide(Beer's law)
10	- Theory of potentiometry and types of electrodes	Colorimetric determination of copper with ferrocyanide (unknown conc)
11	- Application of potentiometry -Conductometry (theory & application)	- Presentation (potentiometry and conductometry) -**Problem Solving**
12	- Theory of spectroscopy	- **Practical exam**
13	- Instrumentation	
14	- Application of spectrophotometry	
15	- **Final Exam**	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Discussion sessions
- Problem Solving

F- Student Assessment Methods:

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

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

3- Problem Solving to assess d3

4- 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): Problem Solving	Week 11

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	50	50%
Practical exam	20	20%
Oral exam	15	15%
Periodical exam	10	10%
Problem Solving	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 2018.

- Practical notes of Analytical chemistry 4 approved by Analytical chemistry department 2018.

2- Essential (textbooks):

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

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

3- Recommended books:

i. D. C. Harris, Quantitative Analytical Chemistry (9th 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 Coordinator: Prof. Dr. Gamal Ragab

Head of Department: Prof. Dr. Hisham Ezzat

Date: 8/10/2018 **تم مناقشة واعتماد توصيف المقرر من مجلس القسم بتاريخ**

Matrix I of Analytical Chemistry 4 course

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

	Conductometry(theory and application)													
12	Theory and instrumentation of spectroscopy	x												
13	Instrumentation	x												
14	Application of spectrophotometry			x					x	x				
Practical sessions		**a1**	**a2**	**a3**	**b1**	**b2**	**b3**	**c1**	**c2**	**c3**	**d1**	**d2**	**d3**	**d4**
1	Determination of saponification value				x	x		x	x		x	x	x	
2	Determination of water alkalinity				x	x		x	x		x	x	x	
3	Determination of water hardness (complexometric method)				x	x		x	x		x	x	x	
4	Limit test				x	x		x	x		x	x	x	
5	Determination of Ni^{2+} gravimetrically				x		x	x	x		x	x	x	
6	Midterm Exam													
7	Colorimetric determination of potassium permangate (Beer's law)				x		x	x	x		x	x	x	
8	Colorimetric determination of potassium permangate (unknown conc)				x		x	x	x		x	x	x	
9	Colorimetric determination of copper with ferrocyanide(Beer's law)				x		x	x	x		x	x	x	
10	Colorimetric determination of copper with ferrocyanide (unknown conc)				x		x	x	x		x	x	x	
11	-Presentation (potentiometry and conductometry)												x	
	-Problem Solving												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 - Theory of potentiometry and types of electrodes - Conductometry(theory and application) - Theory and instrumentation of spectroscopy	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	a1	-Theory of gravimetry and contamination and purification of precipitate -Theory of potentiometry and types of electrodes -Theory and instrumentation of spectroscopy	Student book Essential books Recommended books Internet	x		x	x		x
			a2	- Introduction to oil and fat - Chemical properties of oil and fat - Rancidity, hydrogenation and analysis of butter fat - Physical and chemical examination of water - Chemical examination of water - Metals in water and interpretation of							

				analytical results							
			a3	-Application of gravimetric analysis -Application of potentiometry -Conductometry(theory and application) - Application of spectrophotometry	Student book Essential books Recommended books Internet	x		x	x		x
2.17	Methods of biostatistical analysis and pharmaceutical calculations	A36	a3	-Application of gravimetric analysis -Application of potentiometry -Conductometry(theory and application) - Application of spectrophotometry	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	
3.8	Apply techniques used in operating pharmaceutical equipment and instruments	B15	b3	-Colorimetric determination of potassium permangate -Colorimetric determination of copper with ferrocyanide	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	C6	c1 c2	-Chemical properties of oil and fat -Rancidity, hydrogenation and analysis of butter fat -Physical and chemical examination of water -Metals in water and interpretation of analytical results -Water pollution and purification -Application of gravimetric analysis -Application of potentiometry -Conductometry(theory and application) -Application of spectrophotometry -Practical sessions	Student book Essential books Recommended books Internet Practical notes	x	x	x	x	x	x
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C10	c3	- Metals in water and interpretation of analytical results -Application of gravimetric analysis -Application of potentiometry -Conductometry(theory and application) - Application of spectrophotometry	Student book Essential books Recommended books Internet	x		x	x		x
4.13	Analyze and interpret experimental results as well as published literature	C18	c1	-Chemical properties of oil and fat -Rancidity, hydrogenation and analysis of butter fat -Physical and chemical examination of water -Metals in water and interpretation of	Student book Essential books Recommended books Internet	x	x	x	x	x	x

			c2	analytical results -Water pollution and purification -Application of gravimetric analysis -Application of potentiometry -Conductometry(theory and application) -Application of spectrophotometry -Practical sessions	Practical notes						
5.3	Work effectively in a team	D3	d1	- Practical sessions	Practical notes		x			x	
5.6	Adopt ethical, legal and safety guidelines	D7	d2	- Practical sessions	Practical notes		x			x	
5.8	Demonstrate creativity and time management abilities	D9	d3	- Practical sessions - Problem solving	Practical notes		x			x	
5.9	Implement writing and presentation skills	D10	d4	- Practical sessions - Problem solving	Practical notes		x			x	

Course Coordinator: Prof. Dr. Gamal Ragab

Head of Department: Prof. Dr. Hisham Ezzat

Date: 8/10/2018 تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

COURSE SPECIFICATIONS

Pharmaceutical organic chemistry (4)

Second year – second Term
2018-2019

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: 27 /8/2018

B- Basic information:

Title: Pharmaceutical Organic Chemistry (4) Code: POC 223

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, benzotriazole, benzothiophene and quinoxalinone.
b3	Conduct a research on heterocyclic compounds.
C- Intellectual skills	
c1	Suggest the 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) (activity)
6	Five-membered heterocyclic with one heteroatom: reactions and applications	Preparation of 3-methyl-2-[1H]quinoxalinone
7	**Midterm exam**	
8	Quinoline and isoquinoline	Application on heterocycles nomenclature (2) (activity)
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 & Application on NMR
13	^{1}H-NMR spectroscopy	Practical exam
14	^{13}C-NMR spectroscopy& Mass spectrometry & applications	
15	Final written exam	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Case study (interpretation of different spectroscopic charts), internet search about drugs followed by nomenclature.

F- Student Assessment Methods:

Written exams	to assess	a1, a2, c1
Practical exam	to assess	b1, b2, d2, d3, d4
Activity	to assess	d1, d3, d4
Oral exam	to assess	a1, a2, c1

Assessment schedule:

Assessment (1): Written exam	Week 15
Assessment (2): Activity	Week 5, 8
Assessment (3): Practical exams	Week 13
Assessment (4): Oral exams	Week 15
Assessment (5): Periodical exam	Week 7

Weighting of Assessment:

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

G- Facilities Required for Teaching and Learning:

- For lectures: White boards and data show.
- For practical: Well-equipped labs

H- List of References:

1- Course Notes: Student book of Pharmaceutical Organic chemistry approved by the department 2018-2019.

2- Essential Books:

✓ Chauden Jaidey, 2018, Organic Spectroscopy; Delhy.

- ✓ 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
تم مناقشة و إعتماد توصيف المقرر من مجلس القسم بتاريخ 27 /8/2018

matrix I of pharmaceutical organic chemistry 4 course (2018-2019)

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 (2018-2019)

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Method of assessment		
						Lecture	Practical session	Case study	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	

			b2	Preparation of 3,5-dimethylpyrazole			x			x	
				Purification & crystallization of 3,5-dimethylpyrazole							
3.4	Synthesize, purify, identify, and/or standardize active substances from different origins.	B6	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	C10	c1	Preparation of 1,2,3-benzotriazole	Practical notes		x			x	
				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	D3	d1	Laboratory safety measures. Preparation of 1,2,3-benzotriazole	practical notes		x			x	
5.6	Adopt ethical, legal and safety guidelines	D7	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	D9	d3	Application on heterocycles nomenclature (1)	Practical notes		x			x	

5.9	Implement writing, presentaion skills	D10	d4	Activities (spectroscopy case study)	Practical notes		x	x		x	
				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	

Head of department: **Prof. Dr. Hanan Abdel-Razek**

Date:

COURSE SPECIFICATIONS

Pharmaceutics (4)

Second year – second Term
2018-2019

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: September 2018

B- Basic information:

Title: Pharmaceutics-4 Code: **PC223**

Credit Hours: ---

Lectures: 2 hrs/week

Practical: 2 hrs/week

Tutorials: ---

Total: 3hrs/week

C- Professional information:

1-Overall aim of the course: At the end of the course the student will be able to describe properties, formulation and quality control tests of solid dosage forms including: Suppositories, Capsules , Microcapsules, Powders and granules. Students will recognize the importance of preformulation studies, types of incompatibilities, as well as Pharmacy legislation including a detailed presentation of law that governs and affects the practice of pharmacy.

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

A- Knowledge and Understanding	
a1	Describe properties and active ingredients of different solid dosage forms as well as their preparation and quality control tests
a2	Outline different techniques used for microencapsulation.
a3	Describe different tests used in preformulation studies including solubility, partitioning coefficient,Dissolution rate, physical parameters and stability.
a4	State different laws governing pharmacy practice.
B- Professional and Practical skills	
b1	Handle pharmaceutical preparations safely
b2	Formulate different pharmaceutical preparations including suppositories, effervescent granules.
b3	Perform different pharmaceutical calculations.
C- Intellectual skills	
c1	Compare between different methods of formulations for different dosage forms in a safe and effective way
c2	Select the appropriate ingredients used in formulation of different solid dosage forms and solve different physical and chemical incompatibilities problems.
D- General and Transferable skills	
d1	Work effectively as a Team member.
d2	Demonstrate critical thinking, decision making and problem solving skills

D- Contents:

Week No.	Lecture contents (2hrs/week)	Practical session (2 hrs/Lab)
1	- Powders: definition, advantages and disadvantages, powder dosage forms, particle size reduction, size reduction methods	- Calculation of displacement value
2	- Flow properties, blending of powders, packaging, special problems arises during manufacture, granules (definition, advantages, and effervescent granules).	- Preparation of soap supp. (Lab evaluation)
3	- Capsules: definition, types (hard and soft gelatin capsules), advantages and disadvantages of capsules	- Preparation of glycero-gelatin supp.(Lab evaluation)
4	- Quality control test of capsules, methods of preparations	- Preparation of Zinc oxide supp. (Lab evaluation)
5	- Vegicaps soft gelatin capsules, enteric coated capsules, sustained release capsules, spansules and medules.	- Preparation of Iodine supp. (Lab evaluation)
6	- Microencapsulation: Definition, applications and advantages of microcapsulation, classification, methods of preparations of microcapsules and microspheres, release mechanisms.	- Calculation of effervescent granules (Lab evaluation)
7	Mid-term exam	
8	- Incompatibility: definition, types, examples, importance, intentional incompatibilities.	- Blank effervescent granules (Lab evaluation)

9	- Types of suppository bases	- Heambiotic effervescent granules (Lab evaluation)
10	- Testing of suppositories - Vaginal suppositories	- Antispasmodic effervescent granules (Lab evaluation)
11	-Other rectally administered dosage forms	- Antigout effervescent granules - Incompatibility problems
12	التشريعات الصيدلية-	- Revision
13	التشريعات الصيدلية-	**Practical exam**
14	-Preformulation studies: definition, solubility, partitioning coefficient, Dissolution rate, physical parameters, stability.	
15	Final exam	

E- Teaching and Learning Methods:

- Lectures
- Practical session
- Demonstrative videos

F- Student Assessment methods:

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

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

3- Oral exam to assess: a1, a2, a3, a4, c1, d1

Assessment schedule

Assessment (1): Midterm exam	Week 7

Assessment (2): final Written exams	Week 15
Assessment (3): Practical exam	Week 13
Assessment (4): Activity (lab evaluation)	Each lab
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%
Activity	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

I- List of References:

1- Course Notes: Student book of pharmaceutics-4 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:

- Aulton, M.E. Pharmaceutics: the Science of Dosage Form Design.1993.
- Lachman, L., Lieberman, H.A., Kanig, J. L. and Febiger. The theory and Practice of Industrial Pharmacy.Philidelphia, USA.1976.
- Nally, Joseph, D. Good manufacturing practice for pharmaceuticals.Informa Healthcare. 2007.
-

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:تم مناقشة واعتماد توصيف المقرر من مجلس القسم بتاريخ

26/11/2018

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	X
2	Preparation of soap suppositories					x	x	x				
3	Preparation of glycerogelatin suppositories					x	x	x				
4	Preparation of Zinc oxide suppositories					x	x	x				
5	Preparation of Iodine suppositories					x	x	x				
6	calculation of effervescent granules					x	x	x	x			
7	Blank effervescent granules										x	X
8	Heambiotic effervescent granules					x	x	x				
9	Antispasmodic effervescent granules					x	x	x				
10	Antigout effervescent granules					x	x	x				
11	Incompatibility problems					x	x		x	x		
12	Activity									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
2.6	Properties of different pharmaceutical dosage forms including novel drug delivery systems.	A16	a2 a3	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	Student book Essential books	x			x		x

				Stability Examples on incompatibilities Importance of Incompatibilities							
2.21	Regulatory affairs, pharmacy laws and ethics of health care and pharmacy profession.	A40	a4	التشريعات الصيدلية	Student book Essential books	x			x		x
3.2	Handle and dispose chemicals in a safe way.	B2	b1	Preparation of soap suppositories Preparation of glycerogelatin suppositories Preparation of Zinc oxide suppositories Preparation of Iodine suppositories Blank effervescent granules Heambiotic effervescent granules Antispasmodic effervescent granules Antigout effervescent granules Incompatibility problems	Practical notes		x			x	
3.3	Compound, dispense, label, store and distribute medicines effectively and safely	B4	b2		Practical notes		x			x	

	Ex NARs	B21	b3	Calculation of displacement value (calculations) Preparation of soap suppositories Preparation of glycerogelatin suppositories Preparation of Zinc oxide suppositories Preparation of Iodine suppositories calculation of effervescent granules Heambiotic effervescent granules Antispasmodic effervescent granules Antigout effervescent granules	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	Testing of suppositories- Evaluation of capsules	Student book Essential books	x			x		X
				Types of suppository bases Testing of suppositoriesVaginal suppositories Other rectally administered dosage forms Types of capsules Methods of preparation of	Student book Essential books		x				

				capsules Effervescent granules							
4.4	Recognize and control possible physical and/or chemical incompatibilities that may occur during drug dispensing.	C8	c2	Types of incompatibilities Examples of incompatibilities Importance of Incompatibilities Activity	Practical notes Internet		x	x		x	
5.3	Work effectively in a team.	D3	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.	D11	d2	Demonstrate critical thinking and decision making during pharmaceutical preparations	Internet & Practical notes		x	x		x	

Course Coordinators: Ass. Prof. Dr. Azza Ali Hasan

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

Date: **تم مناقشة واعتماد توصيف المقرر من مجلس القسم بتاريخ / / 20 م**

COURSE SPECIFICATIONS

General Microbiology & Immunology

Second year – second Term
2018-2019

Course specification of General Microbiology and 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 and Immunology

Academic year Level: second year students

Date of specification approval: September 2018

B- Basic information:

Title: General Microbiology and Immunology Code: **M122**

Lectures: 3 hrs/week

Practical: 2 hrs/week

Total hours: 4 hrs/week

C- Professional information:

1-Overall aim of the course

On completion of the course, the student will have good knowledge about, Classification and types of microorganisms, Brief description of viruses, fungi and protozoa, Bacteria (description, classification, growth and cultivation), Microbial metabolism, Microbial genetics. Immunology (innate immunity, immune system, cells of immune response, antigens, acquired immune response, cell mediated immunity, humoral immune response, cytokines, Antigen- Antibody reactions, immunologic mechanisms of tissue damage, hypersensitivity reactions, transplantation immunology, tolerance, autoimmune diseases, immune deficiency, tumour immunology, immunoprophylaxis). they will also be able to analyze and interpret experimental results for differentiation between

different microorganisms & Work effectively as a member of a team, write and present reports.

2- Intended Learning Outcomes of General Microbiology and Immunology (ILOs)

A- Knowledge and Understanding	
a1	Illustrate different types of microorganisms and their way of life
a2	Define the basic 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	Outline the basis of bacterial genetics
B- Professional and Practical skills	
b1	Use the proper terms of microbiology and immunology
b2	Handle basic laboratory equipments, chemicals and biohazards effectively and safely.
b3	Perform microscopical examinations, biochemical tests and serological reactions for identification of microorganisms
b4	Monitor the microbial growth and growth conditions on different types of common culture media
C- Intellectual skills	
c1	Analyze and interpret experimental results of serological reactions
c2	Analyze and interpret experimental results for differentiation between different microorganisms
D-General and Transferable skills	
d1	Communicate effectively both in oral and written manners
d2	Develop internet search and computer skills
d3	Work effectively as a member of a team
d4	Write and present reports

D- Contents:

Week No.	Lecture contents (3hrs/week)	Practical session (2hrs/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 1. Cell mediated immunity	• Differential stain: Acid-fast stain (Ziehl Neelsen stain) • Examination of living bacteria: hanging drop technique
6	• Growth and cultivation of bacteria, bacterial growth curve • Humoral immune response And Cytokines	• Spore stain • Microscopic examination of fungi: lactophenol mount
7	**Mid-term exam**	
8	• Microbial metabolism • Agglutination and complement fixation reactions	• Cultivation of bacteria: types of common culture media and growth conditions
9	• Microbial metabolism • Immunologic mechanisms of tissue damage	• Biochemical activities of and identification of bacteria
10	• Microbial metabolism • Hypersensitivity reactions	• Serological reactions (Precipitation reactions) • **Activity**

11	• Microbial genetics • Transplantation immunology	• Serological reactions (Agglutination reactions)
12	• Transcription and Protein synthesis • Autoimmune diseases	• Serological reactions (Complement fixation reaction
13	• Genetic variation • Tumour immunology	**Final practical exam**
14	• Genetic Transfer among bacteria • Immunoprophylaxis	
15	• Written exam	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Internet search and poster preparation
- Others : videos

F- Student Assessment methods:

1- Written exams to assess: a1, a2, a3, a4, a5, c1, c2

2- Activity to assess: d1, d2, d3, d4

3- Practical exams to assess: b1, b2, b3, b4

4- Oral exam to assess: a1, a2, a3, a4, a5, c1, c2, d1

Assessment schedule

Assesment (1): Midterm exam	Week 7
Assessment (2): Activity (Poster)	Week 4, 10
Assessment (3): Practical exams	Week 13
Assessment (4): Final written exam	Week 15
Assessment (5): Oral exams	Week 15

Weighting of Assessment

Assessment method	Marks	Percentage
Midterm	15	10%
Activity	10	6.7 %

Practical practice & exam	30	20%
Final written exam	75	50%
Oral exam	20	13.3%
TOTAL	150	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- Course Notes: Student book of **General Microbiology and Immunology**

Approved by **Microbiology and Immunology** department

2- Essential 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/ Nehal Elsayed

Head of Department: Prof / Nehal Elsayed Yousef

Date 2019/9/ 30 تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

Matrix1 of General Microbiology and Immunology

Course content		ILOs														
		Knowledge and Understanding					Professional & Practical skills				Intellectual skills		Transferable & general skills			
		a1	a2	a3	a4	a5	b1	b2	b3	b4	c1	c2	d1	d2	d3	d4
1	• General introduction to microbiology and historical review • Introduction to immunology **Practical** • Microscopy & general terms of microbiology	x		x			x	x								
2	• Description of microorganisms and types of Microorganisms • Introduction to immunology **Practical** • Microscopical examination of Bacteria by simple and negative stain	x		x				x	x			x				
3	• Brief description of viruses, fungi and protozoa • Immunity – innate immunity Immune system **Practical** • Differential stains: Gram-stain	x		x				x	x			x				
4	• Bacteria: description and classification • Cells of immune response Immunogens or antigens **Practical** • : Gram-stain: mixture • **Activity**		x	x					x			x	x	x	x	x
5	• Anatomy & structure of bacterial cells • Acquired immune response: Cell mediated immunity **Practical** • Differential stain: (Acid-fast stain)	x		x												

	• Examination of living bacteria:															
6	• Growth and cultivation of bacteria, bacterial growth curve • Humoral immune response and Cytokines **Practical** • Spore stain • Microscopic examination of fungi		**x**					**x**	**x**							
7	• **Midterm exam**															
8	Microbial metabolism Agglutination and CFT **Practical** Cultivation of bacteria: types of common culture media and growth conditions		**x**							**x**	**x**					
9	• Microbial metabolism Immunologic mechanisms of tissue damage **Practical** Biochemical activities of and identification of bacteria		**x**		**x**				**x**	**x**						
10	• Microbial metabolism • Hypersensitivity reactions **Practical** • serological reactions **Activity**		**x**		**x**				**x**				**x**	**x**	**x**	**x**
11	• Microbial genetics Transplantation immunology **Practical** • serological reactions		**x**		**x**				**x**							
12	• Transcription and Protein synthesis • Autoimmune diseases **Practical** • serological reactions				**x**	**x**	**x**		**x**							
13	• Genetic variation • Tumour immunology				**x**	**x**	**x**									
14	• Genetic Transfer among bacteria • Immunoprophylaxis				**x**	**x**	**x**									

Matrix2 of General Microbiology and Immunology

NARS		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Method of assessment			
						lecture	practical session	Activity	written exam	practical exam	oral exam	Midterm exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice	A2	a2	•Growth and cultivation of bacteria, bacterial growth curve	Student book Essential books	x			x		x	x
			a5	•Microbial genetics •Genetic variation •Genetic Transfer among bacteria	Student book Essential books	x			x		x	x
		A4	a3	•Introduction to immunology •Acquired immune response 1.Cell mediated immunity •Humoral immune response And Cytokines	Student book Essential books	x			x		x	x
			a4	Cells of immune response Immunogens or antigens •Agglutination and complement fixation reactions •Hypersensitivity reactions	Student book Essential books	x			x		x	x

2.12	Etiology, epidemiology, laboratory diagnosis and clinical features of different diseases and their pharmacotherapeutic approaches.	A27	a1	•Description of microorganisms Classification and types of Microorganisms •Bacteria: description and classification •General introduction to microbiology and historical review	Student book Essential books	x			x		x	x
3.1	Use the proper pharmaceutical and medical terms, abbreviations and symbols in pharmacy practice.	B1	b1	•General introduction to microbiology and historical review •Introduction to immunology	Practical notes		x	x		x		
3.2	Handle and dispose chemicals and pharmaceutical preparations safely.	B2	b2	•General introduction to microbiology and historical review •Introduction to immunology	Practical notes		x	x		x		

3.6	Monitor and control microbial growth and carry out laboratory tests for identification of Infectious and non- infections in biological specimens.	B11	b3, b4	•Agglutination and complement fixation reactions •Growth and cultivation of bacteria, bacterial growth curve	Practical notes		x	x		x		
4.13	Evaluate and interpret experimental results and published literature	C18	c1, c2	•Agglutination and complement fixation reactions	Student book practical notes			x			x	x
5.1	Communicate clearly by verbal and means	D1	d1		Internet search			x				
5.3	Work effectively in a team .	D3	d3		Practical notes Recommended books Internet Internet search			x				x
5.4	Practice computer skills including word, spreadsheet, database use and internet communications	D5	d2					x			x	

5.9	Implement writing and presentation skills	D10	d4					x			x		

COURSE SPECIFICATIONS

Physiology

Second year – second Term
2018-2019

Course specification of physiology

University: Zagazig **Faculty: Pharmacy**

A- Course specifications:

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

Minor element of programs: Major

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

Department offering the course: Pharmacology and Toxicology Department

Academic year Level: Second year/ second term

Date of specification approval: 2019

B- Basic information:

Title: Physiology Code: PT220

Credit Hours: ---

Lectures: 2 hrs/week

Tutorials: ---

C- Professional information:

1-Overall aim of the course

On completion of the course, the student will be able to understand the role of molecules, cells, tissues, organs, and organ systems (endocrine, nervous, muscular, cardiovascular, renal, pulmonary and immune systems) in human health and disease and understand the overall mammalian physiological functions of the different body organs as well as certain abnormal conditions. The student also will be able to understand the integration of different body systems to achieve homeostasis and to develop the basic scientific research skills as well as effective communication and team work attitudes.

2- Intended Learning Outcomes of physiology (ILOs)

A- Knowledge and Understanding	
a1	Describe cellular functions at the organelle and molecular level, as well as structure, properties and functions of different body systems (nervous, cardiovascular, pulmonary, renal and enteric)
a2	Classify the functional organization of sympathetic and parasympathetic nervous systems.
a3	Outline the basis of excitability (membrane potentials) in living cells especially in nerve and muscle cells.
a4	Illustrate the endocrine physiology and its role in maintenance of homeostasis
B- Professional and Practical skills	
b1	Express the basic terminology of physiology functions.
C- Intellectual skills	
c1	Interpret the most important physiological laboratory results (blood, Respiratory, neuromuscular), to distinguish a physiological from a pathological condition.
D-General and Transferable skills	
d1	Manage time to meet targets within deadlines.

D- Contents:

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

E-Teaching and Learning Methods:

- Lectures
- Think/pair/share
- Self-learning

F- Student Assessment methods:

1- Written exam to assess: a1, a2, a3,a4, b1, c1

2- Periodical exam to assess: a1, a2, a3,a4, b1, c1, d1

Assessment schedule:

Assessment (1): Midterm exam	Week 7
Assessment (2): Final written exam	Week 15

Weighting of Assessment

Assessment method	Marks	Percentage
Periodical exam	20	20%
Final written exam	80	80%
TOTAL	100	100%

G- Facilities required for teaching and learning:

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

H- List of References:

1- Course Notes:

Student book of physiology approved by pharmacology department (2019)

2- Essential Books:

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

3- Recommended Books:

Essentials of Human Physiology and Pathophysiology for Pharmacy and Allied Health

4- Periodicals and websites:

McGraw-Hill Animations; https://www.youtube.com/channel/UCxUHVv2k31uTOiCm4njuRfQ

Course Coordinator: Prof. Dr. Hany El-Bassossy

Head of Department: Prof.Dr. Mona Fouad

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

Matrix I of Physiology course

Course Contents		ILOs of Physiology course						
		Knowledge and understanding				Professional and practical skills	Intellectual skills	Transferable and general skills
Lecture		**a1**	**a2**	**a3**	**a4**	**b1**	**c1**	**d1**
1	Physiology of the membrane, nerve and muscle	√		√		√	√	√
2	Physiology of the autonomic nervous system	√	√			√	√	√
3	Physiology of the somatic nervous system	√				√	√	√
4	Physiology of the central nervous system (1)	√				√	√	√
5	Physiology of the central nervous system (2)	√				√	√	√
6	Physiology of the cardiovascular system (1)	√				√	√	√
7	Physiology of the cardiovascular system (2)	√				√	√	√
8	Physiology of the renal system	√				√	√	√
9	Physiology of the pulmonary system	√				√	√	√
10	Physiology of the gastrointestinal system	√				√	√	√
11	Physiology of the endocrine system (1)	√			√	√	√	√
12	Physiology of the endocrine system (2)	√			√	√	√	√
13	Physiology of the endocrine system (3)	√			√	√	√	√
14	Revision	√	√	√	√	√	√	√
15	Final exam	√	√	√	√	√	√	√

Matrix II of Physiology course									
National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods		Weighting of assessment	
						Lecture	Think-pair-share	Written exam	Periodical exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	**A4**	**a1**	All lectures	Student book Essential books	√	√	√	√
			a2	Physiology of the autonomic nervous system	Student book Essential books	√		√	√
			a3	Physiology of the membrane, nerve and muscle	Student book Essential books	√		√	√
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**	**a1**	Physiology of the cardiovascular system (1)	Student book Essential books	√		√	
			a4	Physiology of the cardiovascular system (2)	Student book Essential books	√	√	√	

				Physiology of the endocrine system (1,2,3)	Student book Essential books	√	√	√	
3.1	Use the proper pharmaceutical and medical terms, abbreviations and symbols in pharmacy practice.	B1	**b1**	All lectures	Student book Essential books	√		√	√
4.9	Utilize the pharmacological basis of therapeutics in the proper selection and use of drugs in various disease conditions.	C14	**c1**	All lectures	Student book Essential books	√	√	√	√
5.8	Demonstrate creativity and time management abilities.	D9	d1	All lectures	Recommended books Internet		√	√	√

COURSE SPECIFICATIONS

Psychology

Second year – second Term
2018-2019

توصيف مقرر علم النفس

جامعة الزقازيق كلية الصيدلة

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 - أنواع الدوافع و خصائصها و أهميتها في التعلم
6	- الشخصية و تعريفاتها و محدداتها و مكوناتها - الشخصية و نظرياتها و طرق قياسها
7	امتحان نصف الفصل
8	- الذاكرة و تعريفاتها و نماذجها وأنواعها
9	- معنى التنشئة الاجتماعية و ديناميات
10	- السلوك و أنواع العلاقات الاجتماعية - الجماعة و خصائصها و أهميتها للفرد و المجتمع و أنواع الجماعات
11	- التوجيه و الاختيار المهني و الفروق الفردية
12	- الذكاء و حل المشكلات
13	- العمليات العقلية النفسية (الإحساس- الانتباه- الإدراك- التذكر- التفكير) خطواتها و خصائصها و أنواعها
14	- الصحة النفسية و الأمراض النفسية و العقلية
15	الامتحان التحريري النهائى

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

ترجيح التقييم:

طريقة التقييم	الدرجات	النسب المئوية
امتحان نصف الفصل	10	%20
الامتحان التحريري	40	%80
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 (2019)

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

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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 الشخصية و نظرياتها و طرق قياسها									x	
8	الذاكرة و تعريفاتها و نماذجها وأنواعها						x				
9	معنى التنشئة الاجتماعية و ديناميات السلوك و أنواع العلاقات الاجتماعية				x						
10	الجماعة و خصائصها و أهميتها للفرد و المجتمع و أنواع الجماعات	x							x		
11	التوجيه و الاختيار المهني و الفروق الفردية						x				
12	الذكاء و حل المشكلات										x
13	العمليات العقلية النفسية (الإحساس- الانتباه- الإدراك- التذكر- التفكير) خطواتها و خصائصها و أنواعها	x									
14	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

			أ3	الدافعية و تعريفاتها و أهمية الدوافع و خصائصها	كتاب الطالب	x		x
				أنواع الدوافع و خصائصها و أهميتها في التعلم	كتاب الطالب	x		x
			أ4	معنى التنشئة الاجتماعية و ديناميات السلوك و أنواع العلاقات الاجتماعية	كتاب الطالب	x		x
			أ5	الصحة النفسية و الأمراض النفسية و العقلية	كتاب الطالب وكتب مقترحة	x		x
4.14	يحلل مجموعة من المعلومات متعددة المصادر في مجال الصيدلة	ج19	ج1	التوجيه و الاختيار المهني و الفروق الفردية	كتاب الطالب	x		x
			ج2	الدافعية و تعريفاتها و أهمية الدوافع و خصائصها	كتاب الطالب	x		x
				أنواع الدوافع و خصائصها و أهميتها في التعلم	كتاب الطالب	x		x
5.3	يعمل بكفاءة كأحد أفراد الفريق	د3	د1	الجماعة و خصائصها و أهميتها للفرد و المجتمع و أنواع الجماعات	كتاب الطالب	x		x
5.7	ينمي المهارات الإدارية و التي تشمل التمويل و التسويق و المبيعات	د8	د2	الشخصية و تعريفاتها و محدداتها و مكوناتها	كتاب الطالب	x		x

				الشخصية و نظرياتها و طرق قياسها			الكتاب	x		x
5.10	ينمي مهارات التفكير النقدي و حل المشكلات و اتخاذ القرارات	د11	د3	الذكاء و حل المشكلات		x	كتاب الطالب وكتب مقترحة			x

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