COURSE SPECIFICATIONS

Faculty of Pharmacy

Bachelor of Pharmacy

First year – Second Term

2017-2018

CONTENTS:

COURSE SPECIFICATIONS

Analytical Chemistry (2)

First year – Second Term

2017-2018

Course Specification of Analytical Chemistry (2)

University: Zagazig Faculty: Pharmacy

A- Course specifications:

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

Major or Minor element of programs: Major

Department offering the program: ------

Department offering the course: Analytical Chemistry Department

Academic year / Level: First year / Second term

Date of specification approval: 27 August 2017

B- Basic information:

Title: Analytical Chemistry (2) Code: **AC122**

Credit Hours: ---

Lectures: 1 hr/week

Practical: 2 hrs/week

Tutorials: ---

Total: 2 hrs/week

C- Professional information:

1-Overall Aims of the Course

On completion of the course, students will be able to explain fundamentals of qualitative analysis of different inorganic compounds to overcome difficulties encountered during separation.

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

A- Knowledge and Understanding	
a1	Summarize principles of qualitative analysis of anions.
a2	Define methods of identification and separation of groups of anions.
a3	Recognize difficulties encountered during separation of metal ions
B- Professional and Practical Skills	
b1	Handle and dispose chemicals safely.
b2	Separate and identify various groups of anions.
C- Intellectual Skills	
c1	Apply qualitative analysis techniques for separation of anions.
c2	Solve difficulties encountered during separation of metal ions
D- General and Transferable Skills	
d1	Implement critical thinking and decision making abilities.

D- Contents:

Week No.	Lecture (1 hr/week)	Practical Session (2 hrs/week)
1	- Introduction - Carbonates and bicarbonates	- Anion mixture I
2	- Sulfur containing anions(S, SO_3 and S_2O_3)	- Anion mixture II
3	- Sulfur containing anions(SO_4 and $H_2S_2O_8$)	- Anion mixture III
4	- Halides	- Anion mixture IV
5	- Cyanogen anions (1)	- Simple mixture of cationsgp I & II and anion I
6	- Cyanogen anions (2)	- Simple mixture of cationsgp I & II and anion II
7	- Arsenic containing anions	- Simple mixture of cationsgp III & IV and anion I
8	- Phosphates and nitrates	- Simple mixture of cationsgp III & IV and anion II
9	- Difficulties: Oxidizing agents	- Simple mixture of cationsgp V & VI and anion I
10	- Difficulties: Phosphates	- Simple mixture of cationsgp V & VI and anion II
11	- Difficulties: Insolubles	- Simple mixture of cations and anion I, II

12	- Difficulties: Insoluble	**- Practical exam**
13	- Difficulties: Organic matter	
14	- Revision	
15	- Open Discussion	

E- Teaching and Learning Methods:

- Lectures
- Practical sessions
- Open discussion

F- Student Assessment Methods:

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

2- Practical exam to assess b1,b2,c1,c2,d1

3- Oral exam to assess a1,a2,c2

Assessment Schedule:

Assessment (1): Written exam	Week 16
Assessment (2): Practical exam	Week 12
Assessment (3): Oral exam	Week 16

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exam	30	60%
Practical exam	10	20%
Oral exam	10	20%
TOTAL	50	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 2 approved by analytical chemistry department (2017)

- Practical notes approved by analytical chemistry department (2017)

2- Essential Books

i- Vogel's Qualitative Inorganic Analysis (seventh edition); Svehla G. ;Longman Inc., London (1996).

ii- Vogel's Textbook of Macro and Semimicro Qualitative Inorganic Analysis (fifth edition) Svehla G.; Longman Inc., New York (1979).

iii- Analytical Chemistry: Qualitative Analysis by Treadwell F. (2011).

3- Recommended Books

i- Introduction to Semimicro Qualitative Analysis (fifth edition); Sorum C. H., Lagowski J. J.; Prentke-Hall, New Jersey (1977).

ii- Analytical Chemistry (sixth edition); Christian G.D.; John Wiley & Sons Inc. (2003).

4- Periodicals, Web Sites, etc

Analytical Letters Journal

Analyst Journal

Journal of pharmaceutical and biomedical analysis

Course Coordinator: **Prof. Dr. Hisham Ezzat**

Head of Department: **Prof. Dr. Magda El Henawee**

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

Matrix I of Analytical chemistry 2 course

Course Contents		ILOs of the course							
		Knowledge and understanding			Practical skills		Intellectual skills		General and transferable and skills
		a1	a2	a3	b1	b2	c1	c2	d1
Lectures									
1	Introduction -carbonates and bicarbonates	x	x						
2	Sulfur containing anions (S, SO_3 and S_2O_3)	x	x						
3	Sulfur containing anions (SO_4 and $H_2S_2O_8$)	x	x						
4	Halides	x	x						
5	Cyanogen anions	x	x						
6	Cyanogen anions	x	x						
7	Arsenic containing anions	x	x						
8	Phosphates and nitrates	x	x						
9	Difficulties: oxidizing agents	x		x				x	
10	Difficulties: phosphates	x		x				x	
11	Difficulties: insolubles	x		x				x	
12	Difficulties: insolubles	x		x					
13	Difficulties: organic matter	x		x					
Practical sessions									
1	Anion mixture I				x	x	x		

2	Anion mixture II				x	x	x		
3	Anion mixture III				x	x	x		
4	Anion mixture IV				x	x	x		
5	Simple mixture of cationsgp I & II and anion I				x	x	x		x
6	Simple mixture of cationsgp I & II and anion II				x	x	x		x
7	Simple mixture of cationsgp III & IV and anion I				x	x	x		x
8	Simple mixture of cationsgp III & IV and anion II				x	x	x		x
9	Simple mixture of cationsgp V & VI and anion I				x	x	x		x
10	Simple mixture of cationsgp V & VI and anion II				x	x	x		x
11	Simple mixture of cations and anions I				x	x		x	x
12	Simple mixture of cations and anions II				x	x		x	x

Matrix II of Analytical chemistry 2 course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods		Method of assessment		
						Lecture	Practical session	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	- Introduction - Carbonates And Bicarbonates - Sulfur Containing Anions - Halides - Cyanogen Anions - Cyanogen Anions - Arsenic Containing Anions - Phosphates And Nitrates - Difficulties	Student book Essential books Recommended books Internet	x		x		x
2.3	Principles of different analytical techniques using GLP guidelines and validation procedures.	A11	a2	- Introduction - Carbonates And Bicarbonates - Sulfur Containing Anions - Halides - Cyanogen Anions - Cyanogen Anions - Arsenic Containing Anions - Phosphates And Nitrates - Difficulties	Student book Essential books Recommended books Internet	x		x		x

3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	Separation and identification of anions and cations	Practical notes		x		x	
3.4	Extract, isolate, synthesize, purify, identify, and/or standardize active substances from different origins.	B5	b2	Separation and identification of anions and cations	Practical notes		x		x	
					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	Separation and identification of anions	Practical notes		x		x	
			c2	Difficulties encountered in separation of anions	Student book Essential books Recommended books Internet	x	x	x		x
				Simple mixture of cations and anions I, II	Practical notes		x		x	
5.1 O	Demonstrate critical thinking, problem-solving and decision-making abilities	D12	d1	Simple mixture of cations and anions separation and identification	Practical notes		x		x	

Course Coordinator: Prof. Dr. Hisham Ezzat
Head of Department: Prof. Dr. Magda El Henawee
Date: 2017/8/27 تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ

COURSE SPECIFICATIONS

Pharmaceutical Organic Chemistry (2)

First year – Second Term

2017-2018

Course Specification of Pharmaceutical Organic Chemistry (2)

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

A- Course specifications:

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

Major or Minor element of programs: Major

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

Department offering the course: Pharm. Organic chemistry Department

Academic year/ Level: First year /second term

Date of specification approval: 9 September 2017

B- Basic information:

Title: Pharmaceutical Organic Chemistry (2) Code: **POC121**

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 the chemistry of Aromatic compounds and their reactions.

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

A- Knowledge and Understanding	
a1	Outline the principles of aromaticity and antiaromaticity
a2	Illustrate the chemical reactions of aromatic sulphonic acids nitro compounds, amines and halo compounds.
B- Professional and Practical skills	
b1	Handle basic laboratory equipments and chemicals effectively and safely.
b2	Identify qualitatively the main functional groups of organic raw materials of drugs.
b3	Write systematic laboratory reports including experimental procedures, observations and conclusions
C- Intellectual skills	
c1	Manipulate function groups attached to aromatic rings
c2	Classify organic compounds according to their chemical properties
D- General and Transferable skills	
d1	Communicate effectively with others.
d2	Work effectively as part of a team to collect data and/or produce reports and presentations
d3	Set realistic targets and mange time to meet targets within deadlines

D- Contents:

Week No.	Lecture (2hrs/week)	Practical session (2hrs/week)
1	Aromatic compounds: Criteria for aromaticity, Hückel rule, antiaromaticity, molecular orbital explanation of aromaticity and antiaromaticity, consequences of aromaticity on the reactivity of organic compounds	Laboratory safety measures
2	Nomenclature of benzene derivatives & electrophilic substitution reaction: Halogenation & sulphonation, desulphonation	Identification of aromatic compounds (e.g benzene).
3	Electrophilic Substitution reactions continued: Nitration and Friedle-Craft alkylation and acylation)	Preparation of nitrobenzene
4	Arenes: Structure, nomenclature, preparation and chemical properties	Identification of benzoic acid
5	Aromatic nitro compounds: Structure, nomenclature, preparation and chemical properties	Preparation of m-Nitrobenzoic acid
6	Midterm exam	
7	Aromatic sulphonic acids: Structure, nomenclature, preparation and chemical properties	Identification of phenol; Preparation of 2,4,6-Trinitrophenol (Picric acid)
8	Amines (aromatic and aliphatic): Physical properties, preparation and chemical properties	Identification of aniline
9	Reactions of amines continued	Preparation of monophenylurea
10	Aromatic diazonium salts: Nomenclature, preparation, stability and chemical properties	Preparations and reactions of aromatic diazonium salts
11	Halo compounds (aliphatic and aromatic): Classification and nomenclature, preparation and physical properties	Preparation of Tribromophenol
12	Halocompounds: Aliphatic substitution reaction S_N1, S_N2, and their stereochemistry	Identification of acetanilide; Preparation of p-bromoacetanilide
13	Halo compounds: Elimination reaction E1, E2, and their stereochemistry	Identification aniline HCl & urea
14	Halocompounds: Aromatic Nucleophilic substitution reactions and Electrophilic substitution reactions	Practical exam

15	Synthesis of aromatic drugs	Practical exam

E- Teaching and Learning Methods:

- Lectures
- Practical sessions

F- Student Assessment Methods:

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

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

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

Assessment schedule:

Assessment (1): Written exam	Week 6, 16
Assessment (2): Practical exams	Week 14, 15
Assessment (3): Students participation during practical labs	each lab
Assessment (4): Oral exams	Week 16

Weighting of Assessment:

Assessment method	Marks	Percentage
Written exams	60	60%
Practical exam	20	20%
Oral exam	15	15%
Students participation during practical labs	5	5%
TOTAL	150	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 Pharmaceutical Organic chemistry approved by the department 2017

2- Essential Books:

i- Organic Chemistry vol.1- The Fundamental principles; Finar L.; Long

man Group (2002).

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

3- Recommended Books:

i- Organic Chemistry (sixth edition); Morrison R.T. and Boyd R.N.; Allyn and Bacon, Prentice-Hall Inc, USA (1992).

ii- Organic Chemistry; McMurry; J. Brooks; Cole publishing company (2000).

4- Periodicals

Journal of Organic Chemistry

Journal of Chemical Society, Perkin Transactions I

Journal of American Chemical Society

Course Coordinator: Prof. Dr. Zakaria Abdelsamii

Head of Department: Prof. Dr. Hanan Abdelrazik Abdelfatah

تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ 28 / 7 / 2017م

Matrix I of pharmaceutical organic chemistry 2 course

Course Contents		ILOs of pharmaceutical organic chemistry 2 course									
		Knowledge and understanding		Professional and practical skills			Intellectual skills		General and transferable skills		
Lectures		a1	a2	b1	b2	b3	c1	c2	d1	d2	d3
1	Aromatic compounds: Criteria for aromaticity, Hückel rule, antiaromaticity, molecular orbital explanation of aromaticity and antiaromaticity, consequences of aromaticity on the reactivity of organic compounds	x									
2	Nomenclature of benzene derivatives & electrophilic substitution reaction: Halogenation & sulphonation, desulphonation	x									
3	Electrophilic Substitution reactions continued: Nitration and Friedle-Craft alkylation and acylation)	x									
4	Arenes: Structure, nomenclature, preparation and chemical properties	x	x				**x**	x			
5	Aromatic nitro compounds: Structure, nomenclature, preparation and chemical properties	x					x				
6	Aromatic sulphonic acids: Structure, nomenclature, preparation and chemical properties	x					**x**				
7	Amines (aromatic and aliphatic): Physical properties, preparation and chemical properties	x	x				x	x			
8	Aromatic diazonium salts: Nomenclature, preparation, stability and chemical properties	x					**x**				
9	Halo compounds (aliphatic and aromatic): Classification and nomenclature, preparation and physical properties	x	x				x	x			

10	Halocompounds: Aliphatic substitution reaction S_N1, S_N2, and their stereochemistry	x	x				x	x			
11	Halo compounds: Elimination reaction E1, E2, and their stereochemistry	x	x				**x**	x			
12	Halocompounds: Aromatic Nucleophilic substitution reactions and Electrophilic substitution reactions	x	x				**x**	x			
13	Synthesis of aromatic drugs	x									
Practical sessions											
1	Laboratory safety measures			x	**x**	**x**			x	**x**	**x**
2	Identification of aromatic compounds (e.g benzene).			x	x	**x**			x	**x**	**x**
3	Preparation of nitrobenzene			x	x	x	x		x	x	x
4	Identification of benzoic acid			**x**	x	x			x	x	x
5	Preparation of m-Nitrobenzoic acid			**x**	x	x			x	x	x
6	Identification of phenol; Preparation of 2,4,6-Trinitrophenol (Picric acid)			**x**	x	x			x	x	x
7	Identification of aniline			**x**	x	x			x	x	x
8	Preparation of monophenylurea			**x**	x	x			x	x	x
9	Preparations and reactions of aromatic diazonium salts			**x**	x	x			x	x	x
10	Preparation of Tribromophenol			**x**	x	x			x	x	x
11	Identification of acetanilide; Preparation of p-bromoacetanilide			**x**	x	x			x	x	x
12	Identification aniline HCl & urea			**x**	x	x			x	x	x

Matrix II of pharmaceutical organic chemistry 2 course

National Academic Reference Standards (NARS)		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods		Method of assessment			
						Lecture	Practical session	Self learning	Written exam	Practical exam	Oral exam
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A1	a1	Aromatic compounds: Criteria for aromaticity, Hückel rule, antiaromaticity, molecular orbital explanation of aromaticity and antiaromaticity, consequences of aromaticity on the reactivity of organic compounds	Student book Essential books	x			x		x

				Nomenclature of benzene derivatives & electrophilic substitution reaction: Halogenation & sulphonation, desulphonation	Student book Essential books Recommended books Internet	x			x		x
				Electrophilic Substitution reactions continued: Nitration and Friedle-Craft alkylation and acylation)	Student book Essential books	x			x		x
				Arenes: Structure, nomenclature, preparation and chemical properties		x			x		x
				Aromatic nitro compounds: Structure, nomenclature, preparation and chemical		x			x		x

				properties							
				Aromatic sulphonic acids: Structure, nomenclature, preparation and chemical properties		x			x		x
				Amines (aromatic and aliphatic): Physical properties, preparation and chemical properties		x			x		x
				Aromatic diazonium salts: Nomenclature, preparation, stability and chemical properties		x			x		x
				Halo compounds (aliphatic and aromatic): Classification and nomenclature,		x			x		x

				preparation and physical properties							
				Halocompounds: Aliphatic substitution reaction S_N1, S_N2, and their stereochemistry		x			x		x
				Halo compounds: Elimination reaction E1, E2, and their stereochemistry	Student book Essential books Recommended books Internet	x			x		x
				Halocompounds: Aromatic Nucleophilic substitution reactions and Electrophilic substitution reactions	Student book Essential books	x			x		x
				Synthesis of aromatic drugs	Student book	x			x		x
2.5	Principles of drug design, development	A15	a2	Arenes: Structure, nomenclature,	Student book Essential	x			x		x

	and synthesis.			preparation and chemical properties	books						
				Amines (aromatic and aliphatic): Physical properties, preparation and chemical properties		x			x		x
				Halo compounds (aliphatic and aromatic): Classification and nomenclature, preparation and physical properties		x			x		x
				Halocompounds: Aliphatic substitution reaction S_N1, S_N2, and their stereochemistry		x			x		x
				Halo compounds: Elimination reaction E1, E2,		x			x		x

				and their stereochemistry							
				Halocompounds: Aromatic Nucleophilic substitution reactions and Electrophilic substitution reactions		x			x		x
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	Laboratory safety measures	Practical notes		x			x	
				Identification of aromatic compounds (e.g benzene).			x			x	
			b2	Preparation of nitrobenzene			x			x	
				Identification of benzoic acid			x			x	
			b3	Preparation of m-Nitrobenzoic acid			x			x	
				Identification of phenol; Preparation of 2,4,6-Trinitrophenol (Picric acid)			x			x	

3.4	Synthesize, purify, identify, and/or standardize active substances from different origins.	B6		Identification of aniline			x			x	
				Preparation of monophenylurea			x			x	
				Preparations and reactions of aromatic diazonium salts			x			x	
				Preparation of Tribromophenol			x			x	
				Identification of acetanilide; Preparation of p-bromoacetanilide			x			x	
				Identification aniline HCl & urea			x			x	
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C7	c1	Arenes: Structure, nomenclature, preparation and chemical properties	Student book	x			x		x
				Aromatic nitro compounds: Structure, nomenclature, preparation and							

				chemical properties								
				Aromatic sulphonic acids: Structure, nomenclature, preparation and chemical properties								
				Amines (aromatic and aliphatic): Physical properties, preparation and chemical properties								
				Aromatic diazonium salts: Nomenclature, preparation, stability and chemical properties								
				Halo compounds (aliphatic and aromatic): Classification and								

				nomenclature, preparation and physical properties							
				Halocompounds: Aliphatic substitution reaction S_N1, S_N2, and their stereochemistry							
				Halo compounds: Elimination reaction E1, E2, and their stereochemistry							
				Halocompounds: Aromatic Nucleophilic substitution reactions and Electrophilic substitution reactions		x			x		x
		C8	c2	Arenes: Structure, nomenclature, preparation and chemical properties	Student book Essential books	x			x		x

				Amines (aromatic and aliphatic): Physical properties, preparation and chemical properties		x			x		x
				Halo compounds (aliphatic and aromatic): Classification and nomenclature, preparation and physical properties		x			x		x
				Halocompounds: Aliphatic substitution reaction S_N1, S_N2, and their stereochemistry		x			x		x
				Halo compounds: Elimination reaction E1, E2, and their stereochemistry		x			x		x

					Student book Essential books Recommend ed books Internet	x			x		x
5.6	Adopt ethical, legal and safety guidelines	D8	d1	Laboratory safety measures	Practical notes		x	x		x	
5.8	Demonstrate creativity and time management abilities	D10	d2	Identification of aromatic compounds (e.g benzene).	Practical notes Recommend ed books Internet		x	x		x	
				Preparation of nitrobenzene							
				Identification of benzoic acid							
			d3	Preparation of m-Nitrobenzoic acid			x	x		x	
				Identification of phenol; Preparation of 2,4,6-Trinitrophenol (Picric acid)							
				Identification of aniline							
				Preparation of monophenylurea							
				Preparations and							

				reactions of aromatic diazonium salts							
				Preparation of Tribromophenol							
				Identification of acetanilide; Preparation of p-bromoacetanilide							
				Identification aniline HCl & urea							

Course Coordinator: Prof. Dr. Zakaria Abdelsamii

Head of Department: Prof. Dr. Hanan Abdelrazik Abdelfatah

تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ 28 / 7 / 2017م

COURSE SPECIFICATIONS

Pharmaceutics-2

First year – Second Term

2017-2018

Course specification of pharmaceutics-2

University: Zagazig **Faculty: Pharmacy**

A- Course specifications:

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

Major or Minor element of programs: Major

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

Department offering the course: Pharmaceutics Dept.

Academic year Level: First year/Second semester

Date of specification approval: September 2017

B- Basic information:

Title: Pharmaceutics-2 Code: **PC121**

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 the physical characters and rheology of pharmaceutical compounds.

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

A- Knowledge and Understanding	
a1	List types of flow, viscosity, rheology, surfactants, complexation and adsorption
a2	Define buffer, isotonicity, adsorption, kinetic molecular theory, solubility and colligative properties of solution
a3	Outline intermolecular forces and states of matter
a4	Illustrate liquid-solid, liquid-gas and liquid-liquid interfaces
a5	Summarize the structure of micelles and liquid crystals
B- Professional and Practical Skills	
b_1	Perform techniques for measurement of liquids viscosity
b_2	Perform experiments for determination of liquids surface tension & adsorption
b_3	Compare between different methods to measure solubility of certain substances
b4	Apply techniques to measure critical micelle concentration of surfactants
b5	Write laboratory report about analysis of experimental results
C- Intellectual Skills	
c1	Distinguish between different classes of surface active agents and different types of flow
c2	Solve problems of pharmaceutical buffer and isotonic solutions
c3	Interpret different results from physical measurements
D- General and Transferable Skills	
d1	Work effectively in a team
d2	Develop the decision making and problem solving abilities
d3	Communicate pharmaceutical ideas effectively

D- Contents:

Week No.	Lecture contents (2hrs/week)	Practical session (2hrs/week)
1	State of matter and intermolecular forces: -Types of inter and intra molecular	

	forces	
2	State of matter: Gaseous state, Liquid state and solid state	
3	Phase equilibrium and Phase rule	
4	Rheological flow characteristics of liquids and semi-solids	Determination of viscosity of certain liquids
5	The rheology of pharmaceutical dosage forms	Determination of viscosity of certain liquids
6	Midterm exam	
7	Surface and Interfacial phenomenon	Determination of surface tension of liquids
8	Surface characteristics and surface active agents	Determination of surface tension of liquids
9	Adsorption	Determination of percentage of adsorbed substances
10	Solubility of solid in liquid Properties of solutions	Determination of solubility of certain substances Determination of solubility of certain substances
11	Buffer solutions	Solve problems of pharmaceutical buffer solutions
12	Isotonic solutions	Solve problems of isotonic solutions
13	Complexation and protein binding: Metal complexes Organic molecular complexes	Practical Exam
14	inclusion compounds Complexation and drug action Method of analysis	
15	- Open Discussion	

E- Teaching and Learning Methods:

- Lectures
- Practical session

F- Student Assessment methods:

1-Written exams to assess: a1, a2, a3, a4, a5, c1, c2, c3, d2, d3

2- Practical exams to assess: b1, b2, b3, b4, b5, d2

3- Activity within labs: d1, d2, d3

3- Oral exam to assess: a1, a2, a3, a4, a5, c1, c2, c3, d3

Assessment schedule

Assessment (1): Written exams	Week 6, 16
Assessment (2): Practical exams	Week 13
Assessment (3): Activity within labs	each lab
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:

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-2 approved by pharmaceutics department 2017

2- Essential Books:

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

ii- Pharmaceutical calculations, Stoklosa, M., and Ansel, H. C., Philadelphia, London. (1997).

iii- Martin's physical pharmacy and pharmaceutical sciences: Patrick J. Sinko, Alfred N. Martin, Lippincott Williams & Wilkins, (2006).

3- Recommended Books

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

ii- Applied physical pharmacy, Mansoor M. Amiji, Beverly J. Sandmann, McGraw-Hill,(2003).

- ✓ Remington: the Science and Practice of Pharmacy" Genars, Alfonso R edition, 2000.

Course Coordinator: Nagia Ahmed El-megrab

Head of Department: Nagia Ahmed El-megrab

تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ 25 / 9 / 2017 م

Matrix I of pharmaceutics 2 course

Course Contents		ILOs of pharmaceutics 2 course															
		Knowledge and understanding					Professional and practical skills					Intellectual skills			Transferable and general skills		
Lectures		a1	a2	a3	a4	a5	b1	b2	b3	b4	b5	c1	c2	c3	d1	d2	d3
1	State of matter and intermolecular forces: -Types of inter and intra molecular forces		x	x													
2	State of matter: -Gaseous state, Liquid state and solid state		x	x													
3	Phase equilibrium and Phase rule		x	x										x			
4	Rheological flow characteristics of liquids and semi-solids :	x										x		x			
5	The rheology of pharmaceutical dosage forms	x										x		x			
6	Surface and Interfacial phenomenon	x			x	x											
7	Surface characteristics and surface active agents	x				x			x			x					

8	Adsorption	x	x		x									x			
9	Solubility of solid in liquid	x	x											x			
10	Properties of solutions	x	x											x			
11	Buffer solutions	x	x										x	x			
12	Isotonic solutions	x	x										x	x			
13	Complexation and protein binding: Metal complexes Organic molecular complexes	x				x											
14	inclusion compounds Complexation and drug action Method of analysis	x	x														
Practical Session																	
15	Determination of viscosity of certain liquids						x				x				x	x	x
16	Determination of surface tension of liquids							x		x	x				x	x	x
17	Determination of percentage of adsorbed substances							x			x		x		x	x	x
18	Determination of solubility of certain								x		x				x	x	x

	substances																
19	Solve problems of pharmaceutical buffer solutions												x		x	x	x
20	Solve problems of isotonic solutions								x				x		x	x	x

Matrix II of Pharmaceutics 2 course									
NARS	**Program ILOS**	**Course ILOS**	**Course content**	**Sources**	**Teaching and learning methods**		**Method of assessment**		
					Lecture	Practical session	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	a_1	State of matter and intermolecular forces: -Types of inter and intra molecular forces	Student book Essential books	x		x		x
			State of matter: -Gaseous state, Liquid state and solid state						
			Phase equilibrium and Phase rule						
			Rheological flow characteristics of liquids and semi-solids						
			The rheology of pharmaceutical dosage forms						
			Surface and						

			Interfacial phenomenon Surface characteristics and surface active agents Adsorption Solubility of solid in liquid Properties of solutions Buffer solutions Isotonic solutions Complexation and protein binding: Metal complexes Organic molecular complexes inclusion compounds Complexation and drug action Method of analysis						
		a_2	Adsorption Solubility of solid in liquid Properties of	Student book Essential books	x		x		x

		solutions Buffer solutions Isotonic solutions inclusion compounds Complexation and drug action Method of analysis						
	a_3	State of matter and intermolecular forces: -Types of inter and intra molecular forces State of matter: -Gaseous state, Liquid state and solid state	Student book Essential books	x		x		x
	a_4	Surface and Interfacial phenomenon Adsorption	Student book Essential books	x		x		x

		a_5	Surface and Interfacial phenomenon Surface characteristics and surface active agents Complexation and protein binding: Metal complexes Organic molecular complexes	Student book Essential books	x		x		x
3.8 Apply techniques used in operating pharmaceutical equipment and instruments	B13	b_1	Determination of viscosity of certain liquids	Practical notes		x		x	
		b_2	Determination of surface tension of liquids Determination of percentage of adsorbed substances	Practical notes		x		x	
		b_3	Determination of solubility of certain substances	Practical notes		x		x	
		b4	Determination of surface tension of	Practical notes		x		x	

4.5 Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins			liquids						
	C8	c_1	Rheological flow characteristics of liquids and semi-solids : The rheology of pharmaceutical dosage forms Surface characteristics and surface active agents	Student book Essential books Internet	x		x		x
		c2	Solve problems of pharmaceutical buffer solutions Solve problems of isotonic solutions	Practical notes	x	x	x	x	
		c3	Phase equilibrium and Phase rule Rheological flow characteristics of liquids and semi-solids The rheology of pharmaceutical dosage forms	Student book Essential books Internet	x		x		x

5.4 Use numeracy, calculation and statistical methods as well as information technology tools			Adsorption						
			Solubility of solid in liquid						
			Properties of solutions						
			Buffer solutions						
			Isotonic solutions						
	D5	d1	Determination of viscosity of certain liquids	Practical notes		x		x	x
		d_2	Determination of surface tension of liquids						
		d3	Determination of percentage of adsorbed substances						
			Determination of solubility of certain substances						
			Solve problems of pharmaceutical buffer solutions						
			Solve problems of isotonic solutions						

Course Coordinator: Nagia Ahmed El-megrab

Head of Department: Nagia Ahmed El-megrab

تم مناقشة و اعتماد توصيف المقرر من مجلس القسم بتاريخ 25 / 9 / 2017 م

COURSE SPECIFICATIONS

Human Rights and Professional Ethics

First year – Second Term

2017-2018

توصيف مقرر حقوق الإنسان و أخلاقيات المهنة

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: كلية الحقوق-جامعة الزقازيق.

السنة الدراسية: الفرقة الأولى – التيرم الثاني.

تاريخ اعتماد التوصيف: سبتمبر 2017 .

(ب) البيانات الأساسية:

العنوان : حقوق الإنسان و أخلاقيات المهنة الكود : **HR120**

الساعات المعتمدة : ---

المحاضرات : ساعتان أسبوعيا

العملي: ---

الدروس العملية : ---

المجموع : 2 ساعة في الأسبوع

(ج) البيانات المهنية:

1) الأهداف العامة للمقرر:

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

2) النتائج التعليمية المستهدفة لمقرر حقوق الإنسان:

أ – المعرفة والفهم	
أ1	يعرف المقصود بحقوق الإنسان ومصدرها.
أ2	يفهم أنواع حقوق الإنسان الفردية والجماعية.
أ3	يعرف كيفية حماية هذه الحقوق.
ج- المهارات الذهنية	
ج1	يدرك حقوق الإنسان .
ج2	يلم بواجباته نحو الآخرين.
ج3	ينمي قدرات الطالب على تقييم سلوك الآخرين في مجال حقوق الإنسان.

د- المهارات العامة والمنقولة	
د1	يعمل بكفاءة كأحد أفراد الفريق.
د2	ينمي شخصية الفرد من خلال معرفة الحقوق الفردية و الجماعية للإنسان.
د3	ينمي مهارات التفكير النقدي و اتخاذ القرارات و حل المشكلات.

د- المحتويات:

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

هـ- أساليب التعليم و التعلم:

- المحاضرة
- المناقشة

و-أساليب تقييم الطلبة:

1- الامتحان التحريري يقيم: أ1و أ2و أ3و ج1و ج2و ج3 و 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 (حقوق الإنسان) (2017)

2- الكتب الدراسية

حقوق الإنسان

3- كتب مقترحة

القانون الدولي الإنساني

4- مجلات دورية، مواقع انترنت، الخ

مجلات حقوق الإنسان

منسق المقرر: د. طارق عبد العزيز الشيخ
التاريخ: 2017/9/

مصفوفة 1 مقرر حقوق الإنسان و أخلاقيات المهنة

	محتويات المقرر	نتائج التعلم المنشودة لمادة حقوق الإنسان								
		المعرفة و الفهم			المهارات الفكرية			مهارات عامة و تواصلية		
		أ1	أ2	أ3	ج1	ج2	ج3	د1	د2	د3
1	مقدمة	x								
2	التعريف بحقوق الإنسان	x								
3	قانون حقوق الإنسان (1)	x								
4	قانون حقوق الإنسان (2) تكملة	x								
5	قانون حقوق الإنسان (3) تكملة	x								
6	مصادر قانون حقوق الإنسان (1)	x								
7	مصادر قانون حقوق الإنسان (2) تكملة	x								
8	أنواع حقوق الإنسان (فردية)		x		x					
9	أنواع حقوق الإنسان (جماعية)		x		x					
10	حماية حقوق الإنسان (1)			x		x				
11	حماية حقوق الإنسان (2) تكملة			x		x				
12	تطبيقات حقوق الإنسان في المجال الطبي (1)		x	x		x	x	x	x	x
13	تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة		x	x		x	x	x	x	x
14	تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة		x	x		x	x	x	x	x
15	مراجعة عامة و مناقشة حره		x	x		x	x	x	x	x

مصفوفة 2 مقرر حقوق الإنسان و أخلاقيات المهنة

المعايير الأكاديمية المرجعية القومية (NARS)		نتائج التعلم المنشودة للبرنامج	نتائج التعلم المنشودة للمقرر	محتويات المقرر	المصدر	أساليب التعليم و التعلم			أسلوب التقييم
						المحاضرة	الدروس العملية	التعلم الذاتي	الامتحان التحريري
2.1	مباديء العلوم الأساسية و الصيدلانية و الطبية و الاجتماعية و السلوكية و الإدارة و الصحة و العلوم البيئية فضلا عن ممارسة الصيدلة	5أ	1أ	مقدمة	كتاب الطالب	x			x
				التعريف بحقوق الإنسان	كتاب الطالب	x			x
				قانون حقوق الإنسان (1)	كتاب الطالب	x			x
				قانون حقوق الإنسان (2) تكملة	كتاب الطالب	x			x
				قانون حقوق الإنسان (3) تكملة	كتاب الطالب	x			x

			مصادر قانون حقوق الإنسان (1)	كتاب الطالب	x				x
			مصادر قانون حقوق الإنسان (2) تكملة	كتاب الطالب	x				x
			أنواع حقوق الإنسان (فردية)	كتاب الطالب	x				x
			أنواع حقوق الإنسان (جماعية)	كتاب الطالب	x				x
			تطبيقات حقوق الإنسان في المجال الطبي (1)	كتاب الطالب	x				x
			تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة	كتاب الطالب	x				x
			تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة	كتاب الطالب	x				x
			مراجعة عامة و مناقشة حره	كتاب الطالب وكتب مقترحة	x				x
2.21	الشئون المنظمة و قوانين الصيدلة و المباديء الأخلاقية للرعاية الصحية و مهنة الصيدلة	40أ	3أ	حماية حقوق الإنسان (1)	كتاب الطالب	x			x
				حماية حقوق الإنسان (2) تكملة	كتاب الطالب	x			x

					تطبيقات حقوق الإنسان في المجال الطبي (1)	كتاب الطالب	x		x
					تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة	كتاب الطالب	x		x
					تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة	كتاب الطالب	x		x
					مراجعة عامة و مناقشة حره	كتاب الطالب وكتب مقترحة	x		x
4.14	يحلل مجموعة من المعلومات متعددة المصادر في مجال الصيدلة	17ج	1ج		أنواع حقوق الإنسان (فردية)	كتاب الطالب	x		x
					أنواع حقوق الإنسان (جماعية)	كتاب الطالب	x		x
			2ج		أنواع حقوق الإنسان (فردية)	كتاب الطالب	x		x
					أنواع حقوق الإنسان (جماعية)	كتاب الطالب	x		x
					تطبيقات حقوق الإنسان في المجال الطبي (1)	كتاب الطالب	x		x
					تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة	كتاب الطالب	x		x
					تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة	كتاب الطالب	x		x

5.3	يعمل بكفاءة كأحد أفراد الفريق	د4	ج3	مراجعة عامة و مناقشة حره	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (1)	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة	كتاب الطالب	x			x
				مراجعة عامة و مناقشة حره	كتاب الطالب وكتب مقترحة	x			x
			د1	تطبيقات حقوق الإنسان في المجال الطبي (1)	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة	كتاب الطالب	x			x
				مراجعة عامة و مناقشة حره	كتاب الطالب وكتب مقترحة	x			x
5.7	ينمي المهارات الإدارية و التي تشمل التمويل و التسويق و المبيعات	د9	د2	تطبيقات حقوق الإنسان في المجال الطبي (1)	كتاب الطالب	x			x

				تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة	كتاب الطالب	x			x
				مراجعة عامة و مناقشة حره	كتاب الطالب وكتب مقترحة	x			x
5.1O	ينمي مهارات التفكير النقدي و حل المشكلات و اتخاذ القرارات	12د	3د	تطبيقات حقوق الإنسان في المجال الطبي (1)	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (2) تكملة	كتاب الطالب	x			x
				تطبيقات حقوق الإنسان في المجال الطبي (3) تكملة	كتاب الطالب	x			x
				مراجعة عامة و مناقشة حره	كتاب الطالب وكتب مقترحة	x			x

منسق المقرر: د. طارق عبد العزيز الشيخ

رئيس القسم:

التاريخ: /2017/9

COURSE SPECIFICATIONS

Mathematics and Statistics

First year – Second Term

2017-2018

توصيف مقرر الرياضيات و الاحصاء

أ- مواصفات المقرر:

البرنامج الذي يقدم المقرر: بكالوريوس الصيدلة

المقرر يمثل عنصرا رئيسيا أو ثانويا بالنسبة للبرامج: ثانوياً

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

القسم العلمي المسئول عن تدريس المقرر: كلية العلوم- قسم الرياضيات

السنة الدراسية: الفرقة الأولى – التيرم الثاني.

تاريخ اعتماد التوصيف: سبتمبر 2017

(ب) البيانات الأساسية:

العنوان : رياضيات و احصاء الكود : **MS120**

الساعات المعتمدة : ---

المحاضرات : ساعة أسبوعيا

العملي: ---

الدروس العملية : ---

المجموع : 1ساعة في الأسبوع

(ج) البيانات المهنية:

1) الأهداف العامة للمقرر:

عند إتمام المقرر سوف يكون الطلاب قادرين على تطبيق علم الرياضيات والاحصاء في مجال الصيدلة.

2) النتائج التعليمية المستهدفة لمقرر الرياضيات و الاحصاء:

أ- المعرفة و الفهم	
أ1	يلم بمباديء علم الرياضيات.
أ2	يلم بمباديء علم الإحصاء.
أ3	يحدد الطرق المختلفة للتحليل الإحصائي.
ج- المهارات الفكرية	
ج1	يستخدم الطرق الإحصائية المختلفة لتفسير نتائج الأبحاث المعملية.
د- مهارات عامة و تواصلية	
د1	يجيد التعامل مع الأرقام و الطرق الإحصائية.
د2	يكتسب مهارات حل المشكلات و اتخاذ القرارات.

د- المحتويات:

رقم الأسبوع	المحاضرة (2ساعة/الأسبوع)
1	- المقدمة - نظرية ذي الحدين
2	- الكسور الجزئية
3	- توفيق المنحنيات
4	- المصفوفات و المحددات
5	- جبر المصفوفات و المحددات
6	- حل المعادلات الخطية باستخدام المصفوفات أو المحددات
7	- النهايات و حساب التفاضل
8	- بعض التطبيقات في حساب التفاضل: المعدلات الزمنية
9	- معادلة المماس و العمودي
10	- النهايات العظمى و الصغرى للدوال
11	- رسم المنحنى
12	- مقدمة في الاحتمالات و الإحصاء: - حساب المتوسط الحسابي
13	- الانحراف القياسي
14	- التباين - اختبار ت - اختبار ف

15	- بعض التطبيقات الرياضية في مجال الصيدلة

هـ- أساليب التعليم و التعلم:

- المحاضرة
- التعلم الذاتي

و-أساليب تقييم الطلبة:

1- الامتحان التحريري يقيم: أ1و أ2و أ3و ج1ود1و د2

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.

ي- قائمة المراجع:

1- مذاكرات المقرر: كتاب الطالب الرياضيات العامة والاحصاء (2017)

2- الكتب الدراسية

الرياضيات العامة والاحصاء

3- كتب مقترحة

التفاضل والتكامل سلسلة شوم والاحصاء الرياضي

منسق المقرر: أ.د / ياسر عبد العزيز عامر

التاريخ: 2017/9/

مصفوفة (1) مقرر الرياضيات و الاحصاء

	محتويات المقرر	النتائج التعليمية المستهدفة لمادة الرياضيات					
		المعرفة و الفهم			المهارات الفكرية	مهارات عامة و تواصلية	
		أ1	أ2	أ3	ج1	د1	د2
1	المقدمة- نظرية ذات الحدين	x					
2	الكسور الجزئية	x				x	x
3	توفيق المنحنيات	x				x	x
4	المصفوفات و المحددات	x				x	x
5	جبر المصفوفات و المحددات	x				x	x
6	حل المعادلات الخطية باستخدام المصفوفات أو المحددات	x				x	x
7	النهايات و حساب التفاضل	x				x	x
8	بعض التطبيقات في حساب التفاضل: المعدلات الزمنية	x				x	x
9	معادلة المماس و العمودي	x				x	x
10	النهايات العظمى و الصغرى للدوال	x				x	x
11	رسم المنحنى	x				x	x
12	مقدمة في الاحتمالات و الإحصاء: حساب المتوسط الحسابي		x	x		x	x
13	الانحراف القياسي			x		x	x
14	التباين- اختبار ت- اختبار ف			x		x	x
15	بعض التطبيقات الرياضية في مجال الصيدلة				x		

مصفوفة (2) مقرر الرياضيات و الاحصاء								
المعايير الأكاديمية المرجعية القومية (NARS)	نتائج التعلم المنشودة للبرنامج	نتائج التعلم المنشودة للمقرر	محتويات المقرر	المصدر	أساليب التعليم و التعلم			أسلوب التقييم
					المحاضرة	الدروس العملية	التعلم الذاتي	الامتحان التحريري
2-1 الأساسية و مبادىء العلوم و الطبية و الاجتماعية و الصيدلانية و الصحة و السلوكية الإدارة فضلا عن ممارسة العلوم البينية الصيدلة	1أ	1أ	المقدمة- نظرية ذي الحدين	كتاب الطالب	x			x
		2أ	مقدمة في الاحتمالات و الإحصاء: حساب المتوسط الحسابي	كتاب الطالب	x			x
2-17 طرق التحليل الاحصائية و الحسابات الدوائية	35أ	3أ	مقدمة في الاحتمالات و الإحصاء: حساب المتوسط الحسابي	كتاب الطالب	x			x
			الانحراف القياسي	كتاب الطالب	x			x

		التباين- اختبار ت- اختبار ف	كتاب الطالب	x			x	
4-14 تحليل و تفسير النتائج التجريبية و كذلك الأبحاث المنشورة	ج16	ج1	بعض التطبيقات الرياضية في مجال الصيدلة	كتاب الطالب و الكتب المقترحة والانترنت	x		x	x
5-4 يستخدم الأرقام و الحساب و الطرق الإحصائية فضلا عن تكنولوجيا المعلومات	د5	د1	الكسور الجزئية	كتاب الطالب و كتب مقترحة و الانترنت	x		x	x
			توفيق المنحنيات					
			المصفوفات و المحددات					
			جبر المصفوفات و المحددات					
			حل المعادلات الخطية باستخدام المصفوفات أو المحددات					
			النهايات و حساب التفاضل					
			بعض التطبيقات في حساب التفاضل: المعدلات الزمنية					
			معادلة المماس و العمودي					
			النهايات العظمى و الصغرى للدوال					
			رسم المنحنى					

					مقدمة في الاحتمالات و الإحصاء: حساب المتوسط الحسابي			
					الانحراف القياسي			
					التباين- اختبار ت- اختبار ف			
					الكسور الجزئية			
					توفيق المنحنيات			
					المصفوفات و المحددات			
					جبر المصفوفات و المحددات			
					حل المعادلات الخطية باستخدام المصفوفات أو المحددات			
x			x	كتاب الطالب	النهايات و حساب التفاضل	2د	12د	**ينمي مهارات التفكير النقدي و اتخاذ القرارات حل المشكلات و 5-10**
					بعض التطبيقات في حساب التفاضل: المعدلات الزمنية			
					معادلة المماس و العمودي			
					النهايات العظمى و الصغرى للدوال			
					رسم المنحنى			

			مقدمة في الاحتمالات و الإحصاء: حساب المتوسط الحسابي					
			الانحراف القياسي					
			التباين- اختبار ت- اختبار ف					

منسق المقرر: أ.د / ياسر عبد العزيز عامر

التاريخ: 2017/9/

COURSE SPECIFICATIONS

Pharmacognosy 1

Second Year – First Term

2017-2018

Course Specification of Pharmacognosy 1

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: Pharmacognosy

Academic year/ Level: First year/Second term

Date of specification approval: 25 September 2017

B- Basic information:

Title: Pharmacognosy 1 Code: **PG121**

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 illustrate microscopical and macroscopical characters and uses of medicinal flowers, barks, woods and seeds as well as identification of different active constituents and adulteration.

2. Intended Learning Outcomes of Pharmacognosy 1:

A- Knowledge and Understanding	
a1	Describe morphological and histological characters of medicinal flowers, barks, woods and seeds.
a2	Outline adulteration of different medicinal flowers, barks, woods and seeds.
a3	Identify different active constituents of medicinal uses of flowers, barks, woods and seeds.
B- Professional and Practical Skills	
b1	Handle and dispose chemicals in a safe way.
b2	Use equipments effectively.
b3	Examine drugs of plant origin in entire and powdered form.
b4	Determine the active constituents of the studied drugs.
C- Intellectual Skills	
c1	Adopt GLP and safety guidelines in the lab.
c2	Differentiate between drugs in entire and powdered form.
c3	Investigate active constituents of different drugs.
D- General and Transferable Skills	
d1	Work as a member of a team.
d2	Develop internet search and communications skills.
d3	Manage time and plan of work.
d4	Write and present reports.

D-Course contents:

Week No	Lecture (3 hrs/week)	Practical session (2 hrs/week)
1	Overview on the course in pharmacognosy 1	Laboratory safety measures. Identification of Clove in entire and powdered form.
2	Introduction to medicinal flowers.	Identification of Chamomile and Santonica in entire and powdered form.
3	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of clove, German and Roman chamomile.	Identification of Cinchona in entire and powdered form.
4	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Pyrethrum and Santonica.	Identification of Cinnamon in entire and powdered form.
5	Unofficial flowers.	**Activity**
6	Introduction to medicinal barks.	**Practical exam (1)**
7	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Cinnamon, Cassia, Cascarilla, Canella and Quillaia.	Identification of Cassia in entire and powdered form.
8	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Pomegranate, Cinchona, Cascara and Frangula.	Identification of Quassia wood in entire and powdered form.
9	Introduction to medicinal Wood.	Identification of Galls in powdered form.
10	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and	Identification of Linseed in entire and powdered form.

	powdered form of Quassia wood and Galls.	
11	Introduction to medicinal seeds.	Identification of Fenugreek in entire and powdered form. Identification of Cardamom, Nux vomica and Black mustard in powdered form.
12	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Linseed, Cardamom and Nutmeg.	**Practical exam (2)**
13	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Foenugreek, Colchicum and Nux vomica.	
14	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Strophanthus and Mustard.	
15	Study other medicinally importance seeds (unofficial seeds).	

E- Teaching and Learning Methods:

- Lectures (data show, board)
- Practical sessions
- Self-learning (activities, internet search…)

F- Student Assessment Methods

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

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

3- Practical exam to assess b1, b2, b3, b4, c1, d1

4- Oral exam to assess a1, a2, a3, c2, c3

Assessment schedule:

Assessment (1): Written exams	Week 6, 16
Assessment (2): Activity	Week 5
Assessment (3): Practical exams	Week 6,12
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:

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

H- List of References:

1- Student´s book approved by Pharmacognosy Department on 2017.

2- Essential Books:

ii-Trease and Evans, Pharmacognosy, 15thed., Saunders company, Nottingham,U.K. Willium Charles Evans (2003).

3- Recommended Books

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

4- Periodicals, web sites, etc

Amer. J. Nat. Prod.

Phytochemistry

Planta Medica

Fitoterapia

Course Coordinators: Prof. Dr. Afaf abd El-Ghany

Head of department : Prof. Dr. Azza Mohammed E-Shafae

Date: **تم مناقشة و إعتماد توصيف المقرر من مجلس القسم بتاريخ 2017/9/25**

Matrix I of Pharmacognosy-1 Course

Course Contents		ILOs of Pharmacognosy-1													
		Knowledge and understanding			Professional and practical skills				Intellectual skills			Transferable and general skills			
		a1	a2	a3	b1	b2	b3	b4	c1	c2	c3	d1	d2	d3	d4
Lectures															
1	Overview on the course in Pharmacognosy I	x	×	×						×	×				
2	Introduction to medicinal flowers.	×	×	×						×	×				
3	Study morphological and histological characters of flowers as well as their constituents, uses, chemical tests and detection of adulteration in entire and powdered form of clove, German and Roman chamomile.	×	×	×						×	×				
4	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Pyrethrum and Santonica.	×	×	×						×	×				
5	Unofficial flowers	×	×	×						×	×				
6	Introduction to medicinal barks.	×	×	×						×	×				
7	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Cinnamon, Cassia, Cascarilla, Canella and Quillaia.	×	×	×						×	×				

8	Study the morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Pomegranate, Cinchona, Cascara and Frangula.	×	×	×						×	×					
9	Introduction to medicinal Wood.	×	×	×						×	×					
10	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Quassia wood and Galls.	×	×	×						×	×					
11	Introduction to medicinal seeds.	×	×	×						×	×					
12	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Linseed, Cardamom and Nutmeg.	×	×	×						×	×					
13	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Foenugreek, Colchicum and Nux vomica.	×	×	×						×	×					
14	Study morphological and histological characters, constituents, uses, chemical tests and detection of adulteration in entire and powdered form of Strophanthus and Mustard.	×	×	×						×	×					
15	Study other medicinally importance seeds (unofficial seeds).	×	×	×						×	×					
Practical sessions																
16	Laboratory safety measures				×				×							
17	Dealing with microscope.					×			×							

18	Identification of Clove in entire and powdered form.						×	×	×							
19	Identification of Chamomile and Santonica in entire and powdered form.						×	×	×							
20	Identification of Cinchona in entire and powdered form.						×	×	×							
21	Identification of Cinnamon in entire and powdered form.						×	×	×							
22	Identification of Cassia in entire and powdered form.						×	×	×							
23	Identification of Quassia wood in entire and powdered form.						×	×	×							
24	Identification of Galls in powdered form.						×	×	×							
25	Identification of Linseed in entire and powdered form.						×	×	×							
26	Identification of Fenugreek in entire and powdered form.						×	×	×							
27	Identification of Cardamom, Nux vomica and Black mustard in powdered form.						×	×	×							
28	Activity (net search).											×	×	×	×	

Matrix II of Pharmacognosy-1 Course

National Academic Reference Standards NARS		Program ILOs	Course ILOs	Course contents	Sources	Teaching and learning methods			Weighting of assessment		
						Lecture	Practical session	Self learning	Written exam	Practical exam	Oral exam
Lectures											
2.1	Principles of basic, pharmaceutical, medical, social, behavioral, management, health and environmental sciences as well as pharmacy practice.	A3	a1	- Overview of pharmacognosy I. - Introduction to medicinal flowers. - Study morphological and histological characters of flowers, barks, woods and seeds in entire and powdered form	Student's book	×			×		×
			a2	Outline adulteration of different plant organs using microscope and chemical tests.	Student's book	×			×		×
2.4	Principles of isolation, synthesis, purification, identification, and standardization methods of pharmaceutical compounds.	A12	a3	- Identify different active constituents and medicinal uses of flowers, barks, wood and seeds.	Student's book	×			×		×
4.5	Select the appropriate methods of isolation, synthesis, purification, identification, and standardization of active substances from different origins.	C9	c2	- Differentiate between drugs obtained from different medicinal flowers, barks, wood and seedsin entire and powdered form.	Student's book	×			×		×
			c3	- Study the active constituents of medicinal flowers, barks, wood and seeds.	Student's book	×			×		×

Practical sessions											
3.2	Handle and dispose chemicals and pharmaceutical preparations safely	B2	b1	- Safety measures lab.	Practical notes					×	
			b2	- Dealing with microscope.	Practical notes					×	
3.4	Extract, isolate, synthesize, purify, identify, and/or standardize active substances from different origins.	B5	b3	- Examine the entire and powdered forms of different medicinal flowers, barks, wood and seeds.	Practical notes					×	
			b4	- Identification of different secondary metabolites using chemical tests.	Practical notes					×	
4.2	Comprehend and apply GLP,GPMP, GSP and GCP guidelines in pharmacy practice	C3	c1	- Safety measures lab.	Practical notes					×	
5.3	Work effectively in a team	D4	d1	- Activity	Internet, essential and recommended books.			×			
5.4	Use numeracy, calculation and statistical methods as well as information technology tools	D6	d2	- Activity	Internet, essential and recommended books.			×			
5.8	Demonstrate creativity and time management abilities	D10	d3	- Activity	Internet, essential and recommended books.			×			
5.9	Implement writing and presentation skills	D11	d4	- Activity	Internet, essential and			×			

					recommended books.						

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