Course specification
2017- 2018
Faculty of Pharmacy
Mansoura University

First level

Course Specification: Inorganic Chemistry

University: Mansoura
Faculty : Pharmacy
Department : Pharmaceutical Analytical Chemistry
Course title: Inorganic Chemistry

Program on which the course is given	B. Pharm
Academic Level	First Level, second semester
Date of course specification approval	

1- Basic Information : Course data :

Course title:	**Inorganic Chemistry**	**Code:**	PA122
Specialization:	**pharmaceutical**		
Prerequisite:	**registration**		
Teaching Hours:	**Lecture:1**	**Practical:**	2
Number of units: (credit hours)	**2**		

2- Course Aims:

Give the basic principle of qualitative inorganic reactions and the qualitative analysis of anions and cations and their mixtures.

Intended learning outcomes (ILOs):

a- Knowledge and understanding

At the end of this course the student will be able to:

a1	Recognize the principles of basic, pharmaceutical sciences.
a2	Identify the chemical characteristics of inorganic compounds.

b- Intellectual skills

At the end of this course the student will be able to:

b1	Propose suitable methods of chemical analysis.
b2	Interpret experimental data based on relevant chemical and pharmaceutical principles.

c- Professional and practical skills

At the end of this course the student will be able to:

c1	Apply proper handling and disposal of chemicals.
c2	Show the ability to conduct experimental studies and apply different qualitative methods for analysis of inorganic compounds

d- General and transferable skills

At the end of this course the student will be able to:

d1	Interact effectively in team working.
d2	Apply calculations for chemical analysis.
d3	Acquire the ability to learn independently.
d4	Present information clearly in written, electronic and oral forms.
d5	Show the ability for critical thinking, problem-solving, decision-making, and time managing capabilities.

3- Contents:-

Week No	Topics	No.of hours	Lecture	Practical
1.	Introduction to Inorganic Analysis. The mole: Defn, Avogadro's number (NA.(The Mole Concept, Stoichiometry & Conversion factors & Problems on mole concept.	1	1	
2.	Ways of expressing concentrations. Reactions between Ions Types of chemical equations: Molecular equation Ionic equation Net Ionic equation	1	1	
3.	Definition of anions & cations Classification of anions according to their reactions Class A: reactions which involve the identification by volatile products obtained on treatment with acids	1	1	
4.	Carbonate and sulphur groups	1	1	
5.	Halide Group	1	1	

6	Cyanogen and arsenate groups	1	1	
7	Mid-term exam			
8	Cations: Classification of Cations	1	1	
9	Analysis of group I, II cations	1	1	
10	Analysis of group III, cations	1	1	
11	Analysis of group IV cations	1	1	
12	Analysis of group V, VI cations	1	1	
15	Week 15 Final written & oral			
	Practical topics			
1	anions: carbonate	2		1
2	anions: Sulphur	2		1
3	anions: halides	2		1
4	cyanogen	2		1
5	nitrogen	2		1
6	phosphorous	2		1
7	Mid-Term	2		1
8	Cations Group I, II	2		1
9	Group III, IV	2		1
10	Groups V, VI	2		1
11	Revision	2		1
12	Final Practical Exam	2		1
13	Final Practical Exam	2		1

4- 17Teaching and learning Methods:

5.1	Lectures using white board and data show.
5.2	Practical session using laboratory equipment
5.3	Research assignments

5- Student Assessment:

a- Assessment methods:

1-Written exam	To assess understanding, intellectual, professional
2-Practical exam	To assess professional and practical skills
3-Oral	To assess Knowledge, understanding, intellectual skills, general skills and confidence
4-Quizzes	To assess Knowledge, understanding and intellectual skills

b- Assessment schedule

Assessment 1	Practical	12th and 13 thweek
Assessment 2	Quiz	5thweek
Assessment 3	Mid-term	7thweek
Assessment 4	Oral	15thweek
Assessment 5	Written	15thweek

c- Weighting of assessments

1	Mid-term examination	10 %
2	Final-term examination	50 %
3	Oral examination	15 %
4	Practical examination & Semester work	25 %
Total		100%

6 - List of References

N0.	Reference	type
1	Lectures notes, prepared by Staff Members of the Department	Course note
2	Practical notes, prepared by Staff Members of the Department	Course notes
3	M.M. Amer, H. Abdine, M. Tawfik" Qualitative Inorganic Analysis", The scientific book center, Cairo, Egypt.	Book
4	Vogel's Qualitative Inorganic Analysis	Book

7- Matrix of knowledge and skills of the course

No	Course contents	Study Week	ILOS			
			Knowledge & understanding	Intellectual skills	Professional and practical skills	General & transferable skills
1.	Introduction to Inorganic Analysis	1-2	a1,a2	b1	c1,c2	d3,d4,d5
2.	Definition of anions & cations Classification of anions according to their reactions	3	a1, a2	b1, b2	c2	d1,d3,d4
3.	Anions	4-6	a1	b2	c2	d2,d3,d5
4.	Cations	8-12	a1,a2	b1	c1,c2	d3,d5

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Course Coordinator :	**Mohey Mohamed Khalid Sharaf Eldin**
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