

Planning and Quality Assurance Affairs

Form (A)

Course Specifications

General Information

Course name	Analytical Chemistry lab.
Course number	PHCH2106
Faculty	
Department	
Course type	Major Needs
Course level	2
Credit hours (theoretical)	0
Credit hours (practical)	1
Course Prerequisites	

Course Objectives

- 1 - Identification of inorganic substance qualitatively
- 2 - Expectation of interference liabilities in a sample
- 3 - Specification tests
- 4 - Titration of drugs as described in pharmacopeia
- 5 - Choose the titrimetric method to quantify an analyte

Intended Learning Outcomes

Knowledge and Understanding	<ul style="list-style-type: none"> <li>* Performance of experimental qualitative analysis of inorganic sample</li> <li>* Selection of quantitative assay for a substance</li> <li>* Titrimetry in pharmacopeia</li> </ul>
Intellectual Skills	<ul style="list-style-type: none"> <li>* Drugs a candidate for titrimetry of different types</li> </ul>
Professional Skills	<ul style="list-style-type: none"> <li>* Avoiding sources of errors in quantitative analysis</li> <li>* Effect of experimental conditions on success of procedure</li> <li>* Toxicity of chemicals</li> </ul>
General Skill	<ul style="list-style-type: none"> <li>* Safety precaution in laboratory</li> <li>* Management of time in laboratory to perform an experiment successfully</li> </ul>

Course Contents

- 1 - Introduction to methods of qualitative and quantitative assays
- 2 - Analysis of inorganic salt: Selected cations and anions
- 3 - Analysis of salt mixture
- 4 - Acid-base titration: aqueous and non aqueous media
- 5 - Redox titration
- 6 - Precipitation titration
- 7 - Complexometry

## Teaching and Learning Methods

- 1 - Explanation of experiment
- 2 - Presentation of practical work
- 3 - Discussion of some topics and calculations

## Students Assessment

<u>Assessment Method</u>	<u>TIME</u>	<u>MARKS</u>
Result of each experiment	During semester	50
Quizes and special activities	During semester	10
Practical Midterm exam	Fivth week	20
Practical final exam	End of semester	20

## Books and References

Course note	Course note for practical work
Essential books	Textbook of Practical Analytical Chemistry, Alam M, Akhtar M, Asif H, Elsevier Health Sciences, 2012 Fundamentals of Analytical Chemistry, Skoog DA, West DM, Holler FJ, 7th Edition, Saunders College Publishing, Philadelphia, 1996