

Course Specifications

Programme(s) on which the course is given: **M.Sc. Chemistry**

Major or Minor element of programmers: **Major**

Department offering the programmer: **Chemistry**

Department offering the course: **Chemistry**

Academic year / Level: 2012/2013

Date of specification approval: **2012**

A- Basic Information

Title: Instrumental Analysis

Code: CH6313

Credit Hours: 2h

Lecture: 2h

Tutorial: 2

Practical: 0h

Total: 2h

B- Professional Information

1 – Overall Aims of Course

Provide the basic principles of non potentiometric methods of analysis such as Voltammetry, Polarography and Conductometry in addition to basic principles of analytical separation

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

After completing the course the student should be able to

a1) Use these different methods in determining the identity or quantity of the analyte

a2- show the basic concepts of Molecular Phosphorescence Spectroscopy

b- Intellectual Skills

b1- collect electrochemical data and use this data in determining either the identity or the quantity of the analyte.

B2-clarify the meaning of polarography

c- Professional and Practical Skills

c1- apply different methods in the analysis of a sample

c2-discuss the principles of analytical separation

c3- tabulate the chemiluminescence methods

d- General and Transferable Skills

d1- Enhance the writing and oral communication capabilities

3- Contents

Topic	No. of hours	Lecture	Tutorial/ Practical
Molecular Fluorescence Spectroscopy	6	3	
Molecular Phosphorescence Spectroscopy	6	3	
Chemiluminescence methods	6	3	

4– Teaching and Learning Methods

4.1-lectures

4.2 Lab studies

5- Student Assessment Methods

5.1 written examination to assess the understanding

5.2- practical exam to assess the performance

Assessment Schedule

Assessment 1 short exam (class activities) Week every two weeks

Assessment 2 mid-term (written and practical) Week 8

Assessment 3 final-term (written and practical) Week 13 and 14

Weighting of Assessments

Mid-Term Examination	20%
Final-term Examination	60%
Semester Work	20%
Total	100%

6- List of References

6.1- Essential Books (Text Books)

Advanced analytical chemistry 2nd

7- Facilities Required for Teaching and Learning

Overhead projector and data show

Course Coordinator: Dr: Sayed El Samanody

Head of Department: Prof. Dr. Ahmed Abd-Elmged

Date: 2012

University Menofiya

Faculty of science