Course Specifications

General Information

Course name	Instrumental Analysis 1
Course number	CHEM3316
Faculty	
Department	
Course type	Major Needs
Course level	3
Credit hours (theoretical)	3
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - learning the principles of instrumental chemical analysis with different techniques including electro-analytical and spectroscopic methods

Intended Learning Outcomes

Knowledge and Understanding

* Provide the students information about different methods of instrumental analysis including electroanalytical and spectroscopic methods such as ion selective electrodes, potentiometry, conductometry, ultra violet, visible and Infra red , fluorescence and atomic absorption and atomic emission spectrospectroscopy

Course Contents

1 - This course involves an introduction to electrochemistry and electroanalytical methods including types of electodes and potentiomeric methods and polarography , conductometry and amperometry and their applications. Also this course cover the spectroscopic methods including an an introduction of spectroscopy and instruments for optical spectrpscopy including UV and Visible spectrpometer and IR spectrometer and flame photometer. Molecular absorption spectroscopy and molecular fluoresence spectroscopy, atomic spectroscopy based on ultra and visible including flame and flameless atomic spectrometer AAS , AES, ICP

Teaching and Learning Methods

1 - lecture performance

Students Assessment

Assessment Method	TIME	MARKS
First mid term exam 20% and Second Mid term exam 20% and attendance and activities home work 10%		Total 50% + Final exam 50%

Books and References

Essential books	Fundamental of analytical chemistry , Skoog, West, Holler and Principles of Instrumental analysis , Skoog