Course specification

University/Academy: Damanhour University

Faculty/Institute: Faculty of Science

Department: Chemistry

1. Course Data:

Course code:	**Course title:**	**Academic year/level:**
Chem. 202	Analytical chemistry7	2008-2009 (second term) / 2nd year
Specialization: Chemistry and Physics + Biology	**No. of instructional units:** lecture 4 tutorial 2 practical 4	

course Aim	The course gives the students the principles s of Analytical Chemistry Where it is important for the student to earn the skills of analysis.

2. Intended learning outcome

Knowledge and understanding	**At the end of this course the students should know and understand the following.** A1 define what is ment by, concentration units, acid – base reactions, precipitation reactions, complex formation reaction and oxidation – reduction reactions A2 list the applications of each type of the reactions mentioned.
Intellectual skills	**At the end of this course the student will be able to :** B1 formulate the titration curve and obtain the E.P. B2 choose calculations to obtain the unknown concentrations. B1 Compare between different samples depending on the obtained data.

Professional skills	By the end of the course, students will be able to: Analyse any compounds depending on on the four types of studied reactions in the laboratory to obtain true data.
a) General skills	**At the end of this course students will have the ability to:** D1 IT and web search. D2 Communication with the Lecturer and colleagues. Solving problem about volumetric analysis and concentration units in general.
course content	Quantitative analysis Concentration units Volumetric analysis: • Acid Base Reactions • Precipitation Reactions • Oxidation Reduction Reactions • Complex Formation Reactions • General Applications
Teaching and learning methods	4.1. Lectures. 4.2. Laboratory work. 4.3. Assignments 4.4.Group Tutorials. 4.5. Reports.
Taching and learning methods for students with special needs	a. Computer hall to be used in visual labs and simulation experiments. b. Data show, overhead projector, Molecular models and chemistry computer programs. **c.** Changing to credit hours system, it is more effective**.**

Student Assessment	5.1. Mid term exam. 5.2. Practical exam. 5.3. Final term exam.
Procedures used:	
Schedule:	Assessment 1: Mid term exam. Week: 8 Assessment 2: Practical exam Week: 5, 11, 14 Assessment 3: Final term exam Week: 15
Weighing of Assessment:	**Weighing of Assessments** Mid-Term Examination: - Final-Term Examination: 60 Oral Examination: - Practical Examination : 40 Semester Work: - Total: 100
List of Textbooks and References:	
Course Notes	Lecture notes of physical chemistry for 4th year students - faculty of science – Damanhour University.
Required Books (Textbooks)	Skoog, D.A.; West, D.M.; Holler, F.J. Fundamentals of Analytical Chemistry New York: Saunders College Publishing, 5th Edition, 1988.
Recommended Books	Skoog, D.A.; West, D.M.; Holler, F.J. Fundamentals of Analytical Chemistry New York: Saunders College Publishing, 5th Edition, 1988.
Periodicals, web sites,…,etc	www.Elesevier.com Periodicals, Web Sites, . . . etc

Course Instructor **Head of Department**

Dr. Alaa E Ali **Dr. Medhat A. Shaker**

Date: **20 / 9 / 2008**