1. Course Name:

Chemistry

2. Course Code:

CIV12201

3. Semester / Year:

Second/ First Year

4. Description Preparation Date:

1 September 2025

5. Available Attendance Forms:

Class

6. Number of Credit Hours (Total) / Number of Units (Total)

4/3

7. Course administrator's name (mention all, if more than one name)

Name: Dr. Lubna Abdulrahman Khdier
Email: lubna.abddulrahman@muc.edu.iq

8. Course Objectives

Course Objective	Aims The module is designed for students to understand the basic principles and learn the experimental techniques of classical titrimetric and gravimetric methods of analysis.

9. Teaching and Learning Strategies

Strategy	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through classes, interactive tutorials, asking questions, discussions and solving samples of problems in class and homework

1. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	4	Introduction to Chemistry and its branches, Qualitative and quantitative analysis	Introduction	Theoretical + laboratory	Several Ways (Exams + Assignments)
2	4	Expressions of concentration of solutions	Solution propert & concentration	Theoretical+ laboratory	Several Ways (Exams + Assignments)
3	4	Aqueous solution, Dilution	Solution propert & concentration	Theoretical+ laboratory	Several Ways (Exams + Assignments)
4	4	Stoichiometric relationships	Stoichiometric	Theoretical+ laboratory	Several Ways (Exams + Assignments)
5	4	Standard Solution	Preparation for analysis	Theoretical+ laboratory	Several Ways (Exams + Assignments)
6	4	Chemical Equilibrium	Reversible reactions & constants	Theoretical+ laboratory	Several Ways (Exams + Assignments)

7	1	Mid Exam 1			Exams
8	4	Gravimetric analysis	Mass-based analysis	Theoretical+ laboratory	Several Ways (Exams + Assignments)
9	4	Volumetric analysis	Volume-based analysis	Theoretical+ laboratory	Several Ways (Exams + Assignments)
10	4	Titration	Finding unknown concentration	Theoretical+ laboratory	Several Ways (Exams + Assignments)
11	4	Acid and Bases	Properties & pH	Theoretical+ laboratory	Several Ways (Exams + Assignments)
12	4	The Electrochemistry reactions	Redox reactions cells	Theoretical+ laboratory	Several Ways (Exams + Assignments)
13	4	Gases	Gas laws & behavior	Theoretical+ laboratory	Several Ways (Exams + Assignments)
14	1	Mid Exam 2			Exams
15	4	Preparatory week before the final Exam			

2. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc

1. Course cumulative:
a. Assignments: 5
b. Quizzes: 10
c. Midterm Exams: 20
d. Laboratory: 15

2. Final Exam: 50

3. Learning and Teaching Resources

Required textbooks (curricular books any)	Analytical Chemistry. By Douglas A. Skoog
Main references (sources)	
Recommended books and references (scientific journals, reports…)	
Electronic References, Websites	