



Course Weekly Outline

Course Instructor	Elaf Abdul wahab Shihab Ahmed				
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Title	Analytical chemistry				
Course Number	Second				
Credits:	2				
Lectures Hours:	3				
Practical Hours:	3				
Course Objective	Introducing students to the basics of analytical chemistry according to the vocabulary of the analytical chemistry curriculum for first-year students.				
Course Description	The curriculum items included introducing the science of analytical chemistry and its importance and studying (methods of expressing concentrations, neutralization reactions of acids and bases, calculating the pH of solutions of acids and bases, complex formation analysis, precipitation analysis, oxidation and reduction analysis, gravimetric analysis)				
Prequests					
Textbook References	1- The book "Foundations of Analytical Chemistry" written by (Douglas A. Skoog and Donald M. West) 2- Internet				
Course Assessment	The first month test	The second month test	Final exam.		Final grade
			Teoretical	Practical	
	20	20	40	20	100
General Notes					

Course weekly Outline

week	Data	Topics Covered	Practical Part
1	2024/2/25	The Foundations of Analytical chemistry	Introduction to laboratory instruments
2	2024/3/3	Methods of expressing concentrations	The Foundations of Analytical chemistry
3	2024/3/10	Neutralization reactions of acids and bases	Prepare a standard acid
4	2024/3/17	First exam	Prepare a standard base
5	2024/3/24	Calculating the pH in solutions of acids, bases, salts and buffers	First exam
6	2024/3/31	Derivation of the graph for the reaction of an acid and a base	Titration of an acid with a base (such as KHP with NaOH)
7	2024/4/7	Precipitation Titration	Titration of oxidation and reduction (such as KMnO_4 with $\text{Na}_2\text{C}_2\text{O}_4$)
8	2024/4/14	Titration of Complex formation	Titration of oxidation and reduction (KIO_3 with $\text{Na}_2\text{S}_2\text{O}_3$)
9	2024/4/21	Second exam	Titration of Complex formation (EDTA with CaCO_3)
10	2024/4/28	Titration of oxidation and reduction	Second exam
11	2024/5/5	Measurement methods in gravimetric analysis	
12	2024/5/12	Components of the color absorption spectrum	

Instructor Signature:

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