Alanya Alaaddin Keykubat University | Rafet Kayış Faculty of Engineering
Engineering Fundamental Sciences Department
2024-2025 Fall Semester

Syllabus	
Code/Name	GBM 107L/ Chemistry Lab
Type	Required
Credit/ECTS	1/1
Hour per Week	2 (0+2)
Level/Year	Undergraduate/1
Semester	Fall
Classroom	WWF | L016
Content	This course provides an introduction to basic laboratory techniques, the experimental method and the presentation of scientific data, as well as direct experience with chemical principles and the properties and reactions of substances. The course provides a strong foundation in chemistry laboratory skills, performance of science investigations, use of scientific equipment and calculations with experimental data.
Prerequisites	-
Textbooks	***Primary*** Class Notes ***Supplementary*** Daniel R. Albert, Chemistry Techniques and Explorations, The Pennsylvania Alliance for Design of Open Textbooks, 2023. J. A. Beran, Mark Lassiter, Laboratory Manual for Principles of General Chemistry John Wiley & Sons, 2022.
Objectives	• To learn chemical principles and experimental methods investigating the basic operation within a chemistry laboratory, as well as some properties and reactions of chemical substances • To perform calculations that relate atoms, molecules, moles and mass • To convert quantities in related units and systems of measurement
Course Outcomes	In this course you will be able to: CO1 Learn and practice safety standards in a chemical laboratory environment CO2 Develop skills in handling scientific equipment and making measurements CO3 Classify substances based on their physical and chemical properties CO4 Use scientific instruments to make quantitative measurements of the properties of samples CO5 Write formal reports in the style of scientific publications

Weekly Schedule of Topics

W	Topic
1	Safety, Measurement and Record Keeping
2	General Laboratory Techniques
3	Recognition of Substances
4	Investigation of Solubility
5	Preparing Solutions
6	Indicators
7	Sublimation and Solubility of Iodine
8	Determination of Acetic Acid Content of Vinegar
9	Fluidity and Viscosity in Liquids

10	Stoichiometry
11	Chemical Equilibrium
12	Distillation
13	Ionization and Classification of Electrolytes
14	Heat of Reactions

Professional Contribution	Ability to apply recordkeeping and reporting methods that reflect the integrity and ethics associated with scientific data and information

Contribution to Program Outcomes*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
CO1	4	5	4	3	4	4	2	0	4	4	4
CO2	5	5	5	3	4	4	2	0	5	4	4
CO3	5	5	5	3	4	4	2	0	5	4	4
CO4	5	5	5	3	4	4	2	0	5	4	4
CO5	5	5	5	3	4	4	2	2	5	5	4

* Contribution Level | 0: None | 1: Very Low | 2: Low | 3: Medium | 4: High | 5: Very High

Special Conditions	-
Requirements	Laboratory coats and gloves must be worn during the experiments.
Course Policy	• Be in the class on time. • English should always be used to communicate with one another. • At least 70% attendance is required, otherwise a grade of **DZ** will be assigned.
Cheating & Plagiarism	• Copying or letting someone copy your work on exams, assignments, or reports is cheating. • Cutting and pasting text, figures and tables from web sources or any other electronic source is plagiarism. • The consequence of academic dishonesty is to receive a grade of **FF** for the course.
Evaluation	Reports 30% Midterm 30% Final Exam 40% Total 100%

Instructor

Name/Surname	Çiğdem Dülgerbaki	Email	cigdem.dulgerbaki@alanya.edu.tr
Room	417	Office Hours	W 15.30-16.30 | T 10.30-12.30

Prepared by Çiğdem Dülgerbaki on October 21st, 2024.