



Course Description Template for organic chemistry second Year First Semester (practical)

Performance Review of Higher Education Institution ((Academic Program Review))

Course Description

Practical Organic Chemistry is a laboratory-based course that teaches students essential techniques such as measuring melting and boiling points, and performing purification methods like recrystallization, distillation, and extraction. It also emphasizes safe handling of chemicals and proper use of laboratory equipment.

1. Educational Institution	Ministry of Higher Education and Scientific Research / Al-Zahrawi University
2. University Department / Center	College of Pharmacy
3. Course Name / Code	Organic chemistry II practical
4. Programs in which it is included	Bachelor of Pharmaceutical Sciences
5. Available Forms of Attendance	Daily Attendance
6. Semester / Year	first Semester / second year
7. Total Number of Study Hours	2 hours weekly
8. Date of preparing this description	2025-2026
Course Objectives: To equip students with essential laboratory skills in organic chemistry, including safe handling of chemicals, use of equipment, determination of physical properties, and application of basic purification and separation techniques.	
9. Learning Outcomes, Teaching and Learning Methods, and Evaluation	

A. Knowledge and Understanding

Students will demonstrate understanding of fundamental concepts of organic chemistry, including physical properties of compounds, laboratory techniques, and principles of purification and separation methods.

1. Subject-Specific Skills

Students will be able to perform essential organic chemistry laboratory techniques, including measuring physical properties, conducting purification and separation processes, and handling chemicals and equipment safely and accurately.

Teaching and Learning Methods

- ☐ **Practical laboratory sessions (hands-on experiments)**
- ☐ **Demonstrations of techniques and equipment**
- ☐ **Guided step-by-step experimental procedures**
- ☐ **Group work and collaborative learning**
- ☐ **Discussion of results and problem-solving exercises**

2. Evaluation Methods

- ☐ **Practical laboratory performance**
- ☐ **Lab reports and written assignments**
- ☐ **Quizzes or short tests**
- ☐ **Final practical or written examination**
- ☐ **Participation and adherence to safety rules**

3. Thinking Skills

Students will develop the ability to analyze experimental results, solve laboratory problems, interpret data, and apply logical reasoning to identify and evaluate organic compounds and processes.

4. General and Transferable Skills

Students will develop transferable skills such as teamwork, communication, time management, accurate record-keeping, and adherence to safety practices, along with the ability to apply scientific methods in problem-solving.

11. Course Structure					
Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method
1	٢	Knowledge	Laboratory Safety Rules	Whiteboard and PowerPoint Presentations	Group discussion, oral exams, and assignments
2	2	Knowledge	Determination of Melting Point –known sample	PowerPoint Presentations and practical experiment	practical lab performance, written reports, quizzes
3	٢	Knowledge	Determination of Melting Point –unknown sample	PowerPoint Presentations and practical experiment	practical lab performance, written reports, quizzes
4	٢	Knowledge	Determination of Boiling Point –known sample	PowerPoint Presentations and practical experiment	practical lab performance, written reports, quizzes
5	2	Knowledge	Determination of Boiling Point –unknown sample	PowerPoint Presentations and practical experiment	practical lab performance, written reports, quizzes
6	٢	Knowledge	Purification by Crystallization	PowerPoint Presentations and practical experiment	practical lab performance, written reports, quizzes
7	2	Knowledge	Isolation & Vacuum Filtration	PowerPoint Presentations and practical experiment	practical lab performance, written reports, quizzes
8	2	Knowledge	Distillation I – Simple Distillation	Whiteboard and PowerPoint Presentations	Group discussion, quizzes exams, and assignments
9	2	Knowledge	Distillation II – Practical application	Whiteboard and PowerPoint Presentations	Group discussion, quizzes exams, and assignments
10	2	Knowledge	Fractional Distillation	PowerPoint Presentations and practical experiment	practical lab performance, written reports, quizzes
11	2	Knowledge	Extraction I	Whiteboard and PowerPoint Presentations	Group discussion, quizzes exams, and assignments
12	2		Extraction II – Practical Application		

13	2		Refluxing	Whiteboard and PowerPoint Presentations	Group discussion, quizzes exams, and assignments
14	2		Integrated Practical Applications		
15	2		Comprehensive Practical Review & Assessment		

12. Infrastructure	
Required Readings:	References: □ Vogel's Practical Organic Chemistry (Most popular and widely used worldwide for lab techniques and experiments) □ Practical Organic Chemistry – Mann & Saunders (Clear explanations of basic laboratory methods and experiments) □ Organic Chemistry Laboratory Techniques – Pavia, Lampman, Kriz & Engel (Modern and very commonly used in universities) □ Experimental Organic Chemistry – Gilbert & Martin (Focuses on fundamental lab skills and procedures)
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites: https://youtu.be/esBgihsv02A?si=Q9Grm1tdLx3Rfh0h
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	Organizing workshops and courses for graduates: Organizing workshops and courses to enhance graduates' practical skills, provide advanced training in organic chemistry techniques, and support their professional development for careers in pharmacy and related fields.

13. Admission:	
Prerequisites	Admission according to the central plan
Minimum Number of Students	/
Maximum Number of Students	Admission exceeds the capacity plan.

Name of the Instructor:

Assistant teacher saif yahya ahmed

