Course Description

Organic Chemistry I, First Stage
Second Course

• **Educational Institution**	Ministry of Higher Education and Scientific Research
• **University Department / Center**	Alzahrawi University-College of pharmacy
• **Course Name / Code**	Organic Chemistry I, PPCS 12
• **Programs in which it is included**	Bachelor of Pharmacy
• **Available Forms of Attendance**	Daily
• **Semester / Year**	Second course-2025/2026
• **Total Number of Study Hours**	45 hours
• **Date of preparing this description**	2025-2026
• **Course Objectives:** • To enable students to understand the chemistry of carbon, and the classification, properties and reactions of organic compounds. It includes understanding the basic structure and properties of alkanes, alkenes and alkynes, in addition to the principles of stereochemistry and features of aromatic compounds.	
• **Learning Outcomes, Teaching and Learning Methods, and Evaluation**	

Knowledge and Understanding: Basic concepts of organic reactions, their classification and reaction mechanisms. to be used as a gide in structure determination . Identification and

application of different organic compounds.

- **Subject-Specific Skills: Get experience in carrying out different organic reactions**

Teaching and Learning Methods: using white board and projector screen

- **Evaluation Methods**: Periodic exams, reports,seminars, routine homeworks, final exams.

- **Thinking Skills: Practical workshops, homeworks, exams**

Teaching and Learning Methods: using white board and projector screen. Lectures to ditinict students to textbooks, notes and on-line material. Laboratory practice. Assignments and researches done and presented by the students in seminars.

Evaluation Methods : Periodic exams, seminars,and reports

e. General and Transferable Skills:

Communicate clearly by verbal and written means. Retrieve and evaluate informa from different sources to improve professional competencies. Work effectively in a team. Use numeracy, calculation and statistical methods as well as information technology tools. Practice independent learning needed for continuous professiona development. Demonstrate creativity and time management abilities. Implement w and presentation skills. Demonstrate critical thinking, problem solving and decisio making abilities.

- **Course Structure**

Weeks	Hours	Required Learning Outcomes	Unit Name / Course or Topic	Learning Methods	Evaluation Method

1	3	Lecture	Introduction: importance of organic chemistry,atomic structure,covalent bonding,hybrid orbitals	Lecture	Quizes and reports
2	3	Lecture	Introduction:molecular geometry,polarity,intermolecular forces,physical properties	Lecture	Quizes and reports
3	3	Lecture	Alkenes:classification,IUPAC ,Nomenclature,physical properties	Lecture	Quizes and reports
4	3		Alkanes: Conformations of Ethane & Cyclohexane, Chemical Reactions		
5	3	Lecture	Alkenes & Dienes: Structure, Nomenclature, Isomerism, Stability	Lecture	Quizes and reports
6	3		Alkenes & Dienes: Electrophilic Addition Reactions, Oxidation, Polymerization		
7	3	Lecture	Alkynes: Structure, Nomenclature, Acidity, Preparation and Reactions	Lecture	Quizes and reports
8	3		Cycloalkanes:		
9	3	Lecture	Stereochemistry I: Chirality, Enantiomers, Optical Activity	Lecture	Quizes and reports
١٠	3		Stereochemistry II: R/S Configuration, Fischer Projection, Meso compounds		
١١	3		Stereochemistry III: Newman Projection, Conformations Diastereomers,		
١٢	3		Alkyl Halides: Classification, Preparation, Physical Properties		

١٣	3		Alkyl Halides: SN1, SN2, Mechanisms and Factors		
١٤	3		Alcohols and Ethers: Structure, Nomenclature, Physical Properties,preparation		
١٥	3		Alcohols and Ethers: Chemical Reactions, Epoxides, Pharmaceutical Applications		

• **Infrastructure**	
Required Readings:	**References:** 1.Organic Chemistry by Robert T.Morrison and Robert N.Boyd. 2. Organic Chemistry by McCurry: 8th ed.Thomson Learning ;CA,USA;2000
Special Requirements (Workshops, Journals, Software, Websites):	Electronic Websites: Molecules journal, Journal of medicinal chemistry.
Social Services (Guest Lectures, Professional Training, Field Studies, Others)	**Organizing workshops and courses for graduates:** Distance education and electronic lectures

• **Admission:**	
Prerequisites	Admission according to the central plan
Minimum Number of Students	120
Maximum Number of Students	Admission exceeds the capacity plan: 140

Course coordinator: assistant. Lecturer. Saif yahya ahmed

Head of Department:

Dr. Salam Waheed