Course Description Form

1. Course Name:
Plant Chemistry
2. Course Code:
3. Semester / Year:
Second semester/ 2024-2025
4. Description Preparation Date:
15/1/2025
5. Available Attendance Forms:
Attending Full time (theoretical lecture and practical lecture) weekly
6. Number of Credit Hours (Total) / Number of Units (Total)
2 theoretical hours and 3 practical hours per week for 14 weeks. The number of units is 3.5 units
7. Course Administrator's Name (Mention All, If More Than One Name)
Name : : Dhilal Mehdi Abdul-kadir Mohammed Hassan Alrubaye **Email : : dhilalmahdi@uodiyala.edu.iq** **Abeer Najim Abdullah**
8. Course Objectives

Course Objectives: **Graduating students who are able to:**	**The student should learn the basic and concepts of chemistry of some chemical compounds spread in nature especially in plants such as alkanes, alkenes, .carbohydrate, proteins, etc**
9. Teaching and Learning Strategies	
Strategy	**lectures immanence for 14 weeks, including two monthly exams, daily exams, and scientific reports**

10. Course Structure					
Theoretical part					
Week	Hours	Required learning outcomes	Unit or Subject	Learning Method	Evaluation Method
1	2	Introduction to science chemistry and its types	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and
2	2	Saturated hydrocarbons (alkanes)- Unsaturated	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and
3	2	Alchols - Carboxylic acids	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and
4	2	Water- Solution	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and
5	2	Carbohydrates - Proteins	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and
6	2	Amino acids - Enzymes	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and
7	2	Exam	Plant chemistry	Lecture Dialogue & discussion	Daily, monthly and final
8	2	Lipids- Fatty acids	Plant chemistry	Lecture Dialogue & discussion	Daily, monthly and final
9	2	Metabolic products in plant	Plant chemistry	Lecture Dialogue & discussion	Daily, monthly and final
10	2	Bio – industrial pathway in plants	Plant chemistry	Lecture Dialogue & discussion	Daily, monthly and final
11	2	Phenol compounds	Plant chemistry	Lecture Dialogue & discussion	Daily, monthly and final
12	2	Terpenes	Plant chemistry	Lecture Dialogue & discussion	Daily, monthly and final
13	2	Alkaloids	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and daily

14	2	Exam	Plant chemistry	Lecture Dialogue & discussion Brainstorming	Daily, monthly and final exams and
Practical part					
Week	Hours	Required learning outcomes	Unit or Subject Name	Learning Method	Evaluation Method
1	3	General instructions and tips when entering the laboratory	Plant chemistry	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
2	3	Methods of decomposition , separation and identification of plant material-Filration and Crystallization	Plant chemistry	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
3	3	Extraction with organic solvents	Plant chemistry	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
4	3	Distillation of all kinds (Simple and Fractional)	Plant chemistry	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
5	3	Steam distillation – Under distillation	Plant chemistry	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
6	3	Chromatography separation	Plant chemistry	Observation Dialogue & discussion	Daily, monthly and final exams and daily reports
7	3	Exam	Plant chemistry	Observation Dialogue & discussion	Daily, monthly and final exams and daily

					reports
8	**3**	**Boiling point measurement**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**
9	**3**	**Melting measurement**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**
10	**3**	**Sublimation**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**
11	**3**	**Molisch test for carbohydrates**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**
12	**3**	**General protein test**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**
13	**3**	**Iodine test for lipids**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**
14	**3**	**Exam**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**
15	**3**	**Review**	**Plant chemistry**	**Observation Dialogue & discussion**	**Daily, monthly and final exams and daily reports**

11. Course Evaluation	
Daily and monthly exams, reports, and student effectiveness during the lecture	
12. Learning and Teaching Sources	
Required Textbooks (Curricular Books, If Any)	1.Al- fatahi, y.A, 1989. Fundamentals of organic chemistry. College of agriculture and life science. Baghdad university
Main References (Sources)	1..Al-Badarawi,Y.2011Biochemistry.W.ebsite;www,massira.Jo 2.Alchemy,An.2000.Organnicchemistry.
Recommended Books and References (Scientific Journals, Reports...)	Iraqi academic journal
Electronic References, Websites	Net