

## Course Description Form

1. Course Name:	
Biology of Weeds	
2. Course Code:	
BIOWE459	
3. Semester / Year:	
First Semester (Autumn) / 2023-2024	
4. Description Preparation Date:	
1/2/2024	
5. Available Attendance Forms:	
Presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
(2 theoretical + 3 practical = 5 hours) × 15 weeks = 75 hours / 3.5 units	
7. Course administrator's name (mention all, if more than one name)	
Name: Lecturer dr. Dheyaa Fathi Aljuburi Email: <a href="mailto:dfhrdheyaa@uomosul.edu.iq">dfhrdheyaa@uomosul.edu.iq</a>	
8. Course Objectives	
<b>Theoretical:</b> <ul style="list-style-type: none"><li>- Enable the student to understand and understand the concept of weeds and its benefits, harms and regionalization.</li><li>- Enable the student to understand the concept of competition and reproduction of the weed.</li><li>- Enable the student to understand the spread and contradiction of life.</li><li>- Enable the student to detect the results of experiments and determine the danger of the weeds. The student can judge and evaluate the speed of metabolism processes and their impact on the growth rate and yield.</li></ul>	<ul style="list-style-type: none"><li>- Enable the student to identify the local and scientific naming and its conditions.</li><li>- Enable the student to identify the most important methods of germination and dormancy and the factors affecting them.</li><li>- Enable the student to identify how to implement experiments and estimate the percentage of competition for the weed.</li></ul>
9. Teaching and Learning Strategies	
<b>Theoretical:</b> <ul style="list-style-type: none"><li>- Interactive Lecture</li><li>- Brainstorming</li></ul>	<b>Practical:</b> <ul style="list-style-type: none"><li>- Commissioning teamwork to reveal leadership skills.</li></ul>

- Dialogue and discussion
- Assignment and report
- - Application of field experiments to combat germination and dormancy
- - Tasks the preparation of a report on one of the topics of weed biology, reproduction and propagation and discussed therein.
- Scientific visits.

- Assigning tasks and a report for each experiment.

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2Theoretical 3Practical	B1,A1 Theoretical: Identify, enumerate and explain weeds and recognize the harms and benefits of weeds. B7,A10 Practical: Defines and shows local and scientific nomenclature and types of classifications.	Theoretical: Introduction, some definitions, the importance of the weed, its harms and benefits. Practical: scientific and domestic nomenclature of the weed.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
2	2Theoretical 3Practical	B2 Theoretical: Illustrates and distinguishes between annuals, dioeces and perennials and the characteristics of the growth characteristics of each of them. C12,B8,A11 Practical: Shows, explains and explains the natural and artificial division of the weed, the benefits of each species.	Theoretical: diagnosis of the weed and its divisions. Practical: natural and artificial division of the weed.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
3	2Theoretical 3Practical	C1,A2 Theoretical: Defines the acclimatization of weed plants and shows the characteristics that relate to the characteristics of growth and seed production qualities. B9,A12 Practical: Definition, Explanation and Clarification of Regionalization and Weed Recipes for Nature of Growth and	Theoretical: acclimatization of weed plants. Practical: qualities of acclimatized plants for growing and seed production.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions



		Seed Production Recipes.			
4	2Theoretical 3Practical	B3 Theoretical: recognizes the phenotypic qualities of the weed in dry and desert areas B10 Practical: Shows, identifies and illustrates weed characteristics in dry and desert areas and their morphological changes	Theoretical: The influence of the environment on the phenotypic and anatomical structure of the weed and the resistance of the weed to drought. Practical: drought resistance methods for the weed and its adaptations.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report, scientific visit	Quizzes, assignments, discussions
5	2Theoretical 3Practical	C2 Theoretical: Determines the means of spread of weedseeds by human action, natural factors and factors affecting their spread B11 Practical: Illustrates and identifies the means of spread of jungles and the morphological and environmental traits that help in their spread.	Theoretical: weed propagation and factors affecting propagation. Practical: phenotypic qualities that help to spread.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
6	2Theoretical 3Practical	C3,A3 Theoretical: Defines and explains germination and dormancy factors affecting germination and dormancy. B12,A13 Practical: Explains, explains, identifies and shows methods of breaking dormancy in vitro and natural nature in the environment and agricultural fields.	Theoretical: Germination of weed seeds and factors affecting them and dormancy Practical: Methods of breaking dormancy naturally and in vitro.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
7	2Theoretical 3Practical	C4,A4 Theoretical: Recognizes the perennial jungle of Saad, Al-Thail, Al-Danan, Al-Halfa, Al-Halyan. 10 b. D4 B13 Practical: Illustrates and shows weeds and their diagnosis according to plant hosts or groups .	Theoretical: The most dangerous jungle in the world. Practical: Getting to know the presentation of videos and photos and field tours to identify the weeds.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
8	2Theoretical 3Practical	C5,A5 Theory: Shows and clarifies the concept of competition and the factors affecting the preparation of weeds in the fields and the	Theoretical: Competition between weeds and crops and the factors affecting it Practical: Jungle qualities for competition	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and	Quizzes, assignments, discussions

		competitiveness of weeds crops B14 Practical: deduces the qualities that weeds possess to compete in agricultural and non-agricultural environments		report, scientific visit	
9	2Theoretical 3Practical	C6,B4 Theory: Explains the concept of propagation and renewal and the benefits and harms of fires on the plant environment C13 Practical:Identifies the role of fires, floods and storms in the regeneration of plant environments	Theoretical: Jungle fires and plant adaptations to fires. Practical: weed adaptations after exposure to fires, floods and dust storms.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
10	2Theoretical 3Practical	C7,B5 Theoretical: Identify the concept of allelopathy, parts of plants containing allelopathy, and methods of entry of allelopathy into the environment C14 Practical: analyzes the qualities possessed by vegetatively and radically parasitic weeds on crop plants.	Theoretical: Allelopathy. Practical: qualities of parasitic weeds.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
11	2Theoretical 3Practical	B6,A6 Theoretical: Differentiates between aquatic and saline jungles compared to field jungle C15 Practical: Defines and shows the characteristics of aquatic weed plants and jungle saline areas.	Theoretical: water jungles and salt jungles. Practical: qualities of aquatic and salt weeds.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
12	2Theoretical 3Practical	C8,A7 Theoretical: Recognize and Reason, Parasitic Jungles, Dodder and Haluk B15 Practical: illustrates and deduces the pros and cons of weed biotagonism on crops .	Theoretical: parasitic weed. Practical: the pros and cons of the biosynthesis of the weed on crops.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
13	2Theoretical 3Practical	A8 Theoretical: Understands reproduction in weed plants and its types B16 Practical: Shows the types of	Theoretical: Reproduction in weed plants. Practical: factors affecting the breeding processes in the weeds.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style	Quizzes, assignments, discussions



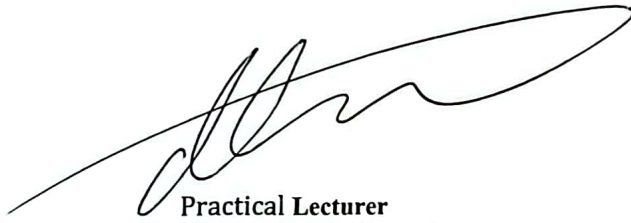
		reproduction, the strengths of each species and the factors affecting each.		<b>Practical:</b> assignment and report	
14	2Theoretical 3Practical	C9 Theoretical: Recognize and explain the problems of weeds in agricultural fields and their impact on the production of seeds of higher grades of crops. C16 Practical: Infringes the problems of weeds in agricultural fields and their impact on the production of seeds of higher grades of crops.	Theoretical: A scientific visit to the Department of Seed Inspection and Certification. Practical: A scientific visit to the Department of Seed Inspection and Certification.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions
15	2Theoretical 3Practical	C10 Theoretical: Explains the methods of carrying out agricultural experiments and estimating the impact of weeds on them. B17 Lab: Experiments with sampling methods and cutting method in determining the amount of weed and interpreting results in agricultural research.	Theoretical: Agricultural Experiments on Jungle Plants. Practical: Methods of collecting weed samples and dealing with them Discussion of sample results and methods of interpretation.	<b>Theoretical:</b> auditory styles, blackboard writing style, direct dialogue style <b>Practical:</b> assignment and report	Quizzes, assignments, discussions

### 11. Course Evaluation

Sequence	Calendar methods	Calendar date (week)	Class
1	Report 1	fourth week	2.5
2	Report 2	fifth week	2.5
3	Short test (1) Quiz	sixth week	2
4	Short test (2) Quiz	fourteenth week	2
5	Short test (3) Quiz	fifteenth week	1
6	Semester test (1)	sixth week	7.5
7	Semester test (2)	eleventh week	7.5
8	Final theoretical test	Final semester exams	40
9	Practical field project	fifteenth week	5
10	Field evaluation	third and fifth week	2
11	Practical short test (1) Quiz	first week	1
12	Short practical test (2) Quiz	fourth week	0.5
13	Short practical test (3) Quiz	fourteenth week	1
14	Live drawings and homework	Weeks 6, 8, 9, 10, 11, 12 and 13	5.5
15	Final practical test	Final semester exams	20
	The total	100	100%

### 12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Lectures prepared by the subject teacher
Main references (sources)	<ul style="list-style-type: none"> <li>- Barbara D. Booth &amp; Clarence J. Swanton AND Stephen D. Murphy.2003.Weed Ecology in Natural and Agricultural Systems -</li> <li>- Robert L. Zimdahl / 2007.Fundamentals of Weed Science .</li> </ul> <p><b>THOMAS J. MONACO &amp; STEPHEN C. WELLER AND FLO M. ASHTOM. 2002.WEED SCIENCE</b></p>
Recommended books and references (scientific journals, reports...)	<ul style="list-style-type: none"> <li>- <a href="https://magrj.mosuljournals.com/">https://magrj.mosuljournals.com/</a></li> <li>- <a href="https://www.tjas.org/index.php/tjas">https://www.tjas.org/index.php/tjas</a></li> <li>- <a href="https://journals.sagepub.com/">https://journals.sagepub.com/</a></li> </ul>
Electronic References, Websites	<p>Journal of Plant Physiology  <a href="https://www.sciencedirect.com/journal/journal-of-plant-physiology">https://www.sciencedirect.com/journal/journal-of-plant-physiology</a>  Plant Physiology Reports  <a href="https://www.springer.com/journal/40502">https://www.springer.com/journal/40502</a>  Google Scholar  <a href="https://scholar.google.com/">https://scholar.google.com/</a></p>



Practical Lecturer  
. Dr. Dheyaa Fathi Aljuburi



Theoretical Lecturer  
. Dr. Dheyaa Fathi Aljuburi



Chairman of the Scientific Committee  
Prof. Dr. Weam Yahya Rashid



Head of Field Crops Dep.  
Assist. Prof. Dr. Moyassar Mohammed Aziz