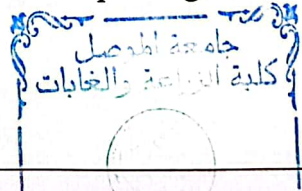


# Course Description Form

1. Course Name:	
Environment and climate	
2. Course Code:	
ENCL318	
3. Semester / Year:	
First semester / 2023-2024	
4. Description Preparation Date:	
1/2/2024	
5. Available Attendance Forms:	
Life in person	
6. Number of Credit Hours (Total) / Number of Units (Total)	
75 hr. / 3.5	
7. Course administrator's name (mention all, if more than one name)	
Name: Prof. Dr . Anwer Noori Mohammed alkhero aanwer_noori@uomosul.edu.iq Name: Shaymaa dhayaa Email: shaymaa_dhayaa@uomosul.edu.iq	
8. Course Objectives	
<b>Course Objectives</b> <ul style="list-style-type: none"><li>- Enable the student to understand and comprehend what is related to soil morphology and its relationship to soil science and water resources</li><li>- Enable the student to know the most important features of the stove</li><li>- Enable the student to become familiar with the most important factors affecting the development of horizons<ul style="list-style-type: none"><li>- Empowering the student with the ability to detect diagnostic horizons</li></ul></li><li>- The student can explain the development of horizons and address the differences in results for the future over time</li></ul>	<b>practical:</b> <ul style="list-style-type: none"><li>- Enabling the student to become familiar with the most important laboratory methods in studying macro- and micro-morphological characteristics and the important chemical and physical analyzes in distinguishing and studying soil horizons.</li></ul>
9. Teaching and Learning Strategies	
<b>Strategy</b> <ul style="list-style-type: none"><li>- Interactive lecture</li><li>- Brainstorming</li><li>- Dialogue and discussion</li><li>- Assigning tasks and reporting</li><li>- Presentations of models of soil horizons and their detailed study</li></ul>	<b>practical:</b> <ul style="list-style-type: none"><li>- Assigning group work to reveal leadership skills</li><li>- Assigning tasks and reporting for each experimenter</li></ul> 

## 10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2+3	<p>a1Lecture: knows the principles and foundations of environmental science, climate, and the components of society</p> <p>Familiarizes with the historical development of ecology and ocean factors</p> <p>A9 Practical: Recognizes the principles and foundations of environmental and climate science and related sciences</p>	<p>Lecture: Introduction to ecology, the historical development of ecology and ocean factors</p> <p>Practical: Principles and foundations of environmental and climate science</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a report</p>	<p>Assignments, discussions, Quiz</p>
2	2+3	<p>a2Lecture: : Learn about the types of radiation Recognizes the importance of light for plants</p> <p>Familiarize yourself with the effect of light on plants and trees</p> <p>a10Practical: understands radiation, units of measurement for wavelengths</p>	<p>Lecture: energy (radiation) ( Radiation )</p> <p>Practical: Elements of climate and its relationship to other sciences</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a report</p>	<p>Assignments, discussions, Quiz</p>
3	2+3	<p>a3Lecture: presents the factors affecting temperatures Shows the methods of heat flow It memorizes the</p>	<p>Lecture: Energy (temperatures)</p> <p>Practical: Ecosystem characteristics and temperatures</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a</p>	<p>Assignments, discussions, Quiz</p>

		<p>preferred and unfavorable temperatures of plants and methods for calculating them</p> <p>B3 Practical: Temperatures, their definition, and methods of storing the thermometers used for measurement</p>		report	
4	2+3	<p>a4 Lecture: Identify the effects of atmospheric pressure and identify the factors that affect atmospheric pressure</p> <p>Knows the distribution of atmospheric pressure .</p> <p>Recognizes the main ranges of atmospheric pressure</p> <p>a11 Practical: Knows atmospheric pressure, its units, and the factors affecting it</p>	<p>Lecture: Atmospheric pressure</p> <p>Practical: Atmospheric pressure</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a report</p>	Assignments, discussions, Quiz
5	2+3	<p>a5 Lecture: Learn about wind movement</p> <p>Explains the types of wind and their damage</p> <p>He is familiar with the movement of the wind</p> <p>a12 Practical: uses wind measurement methods and</p>	<p>Lecture: Wind and its effects on plants</p> <p>Practical: Wind</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a report</p>	Assignments, discussions, Quiz



		wind speed measurement units			
6	2+3	<p>a6 Lecture: Explains the types of winds and their damage Knows air masses and fronts</p> <p>d4 Practical: shows methods of wind measurement and wind speed measurement units with viewing devices</p>	<p>Lecture: Wind and its effects on plants Practical: Wind measurement methods</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method Practical: Assigning tasks and writing a report</p>	<p>Assignments, discussions, Quiz</p>
7	2+3	<p>a7 Lecture: Water and its quantity on the surface of the earth Water cycle in nature Water cycle diagram in nature and source</p> <p>A13 Practical: Water knows its importance and distribution</p>	<p>Lecture: Water Practical: the importance of water</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method Practical: Assigning tasks and writing a report</p>	<p>Assignments, discussions, Quiz</p>
8	2+3	<p>a8 Lecture: Learn about atmospheric humidity Familiar with types of humidity</p> <p>A14 Practical: Knows relative humidity, its sources, and the factors affecting it</p>	<p>Lecture: Air humidity Practical: Relative humidity</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method Practical: Assigning tasks and writing a report</p>	<p>Assignments, discussions, Quiz</p>
9	2+3	<p>a2 1 Lecture: Familiarity with the types of air humidity Forms of atmospheric</p>	<p>Lecture: Air humidity Practical: Relative humidity</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method Practical:</p>	<p>Assignments, discussions, Quiz</p>

		<p>humidity</p> <p>a15 Practical: is familiar with the types of moisture and methods of extracting it</p>		Assigning tasks and writing a report	
10	2+3	<p>b1 Lecture: The most important types of precipitation</p> <p>C3 Practical: installs a weekly and daily Recording Rain Geese</p>	<p>Lecture: Rain</p> <p>Practical: Rain recorder</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a report</p>	Assignments, discussions, Quiz
11	2+3	<p>c1 Lecture: Distribution of rainfall in the world</p> <p>d5 Practical: shows the biological factors, their definition and biological divisions</p>	<p>Lecture: Rain</p> <p>Practical: Classifications of biological factors</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a report</p>	Assignments, discussions, Quiz
12	2+3	<p>c2 Lecture: Plant adaptation to water</p> <p>c4 Practical: Identifies clouds and measures the height of the cloud base and its types</p>	<p>Lecture: Plant adaptation to water</p> <p>Practical: the clouds</p>	Lecture:	Assignments, discussions, Quiz
13	2+3	<p>c1 Lecture: Understand plant adaptation to water</p> <p>c5 Practical: The characteristics of the ecosystem justify its divisions and the extent of its importance</p>	<p>Lecture: Plant adaptation to water</p> <p>Practical: Ecosystem components</p>	<p>Auditory methods, writing style on the blackboard, direct dialogue method</p> <p>Practical: Assigning tasks and writing a report</p>	Assignments, discussions, Quiz
14	2+3	b2 Lecture:	Lecture: Plant	Auditory	Assignments,

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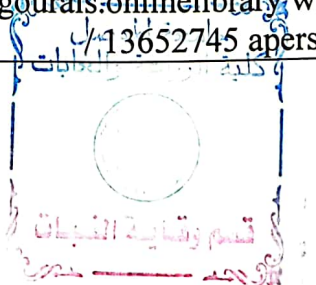
		Learn about plant adaptation to water (aquatic plants). a16 Practical: distinguishes the layers of the atmosphere, its components, its divisions, and the specifications of each layer	adaptation to water Practical: Components of the atmosphere and what ozone is made of	methods, writing style on the blackboard, direct dialogue method Practical: Assigning tasks and writing a report	discussions, Quiz
15	2+3	a1 Lecture: Learn about the applied benefits of fires Plant adaptations to fire Applied benefits of fires  a17 Practical: classifies forest fires by their types and severity	Lecture: Fires and their types Practical: Forest fires	Auditory methods, writing style on the blackboard, direct dialogue method Practical: Assigning tasks and writing a report	Assignments, discussions, Quiz

#### Course Evaluation

No	Evaluation methods	Evaluation date	Grade	Relative weight
1	Theoretical final report + practical experience reports	week 15 week 15	7 + 6	13 %
2	Quiz (1)	Week 3	4 + 2	6 %
3	Midterm Exam	Week 9	10+ 5	15 %
4	Quiz (2)	Week 12	4 + 2	6 %
5	Final practical Exam	Exam week	20	20 %
6	Final Exam	Final Exam week	40	40 %
	Total		100	100 %

#### Learning and Teaching Resources

Required textbooks (curricular books, if any)	Ecology , Hikmat A. Al-ani and Raad H. Baker , second press ,university of mosul ,2014
Main references (sources)	Journal of ecology
Recommended books and references (scientific journals, reports...)	Agricultural Ecology , 1979 ,Cox, G,W and M.D. Atkins
Electronic References, Websites	<a href="http://besgourals.onlinelibrary.wily.com/journal/13652745">http://besgourals.onlinelibrary.wily.com/journal/13652745</a> apers

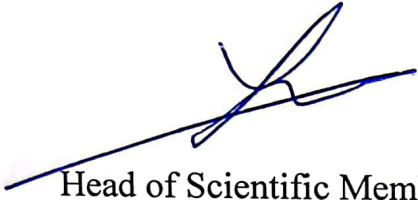




Assi. Prof. Dr. Anwer Noori Mohammed AL-Khero



Assi. Lectu. Shaymaa dhayaa Ali



Head of Scientific Member



Head of Department

