

Course Description Form

1. Course Name:	Cereal Crops
2. Course Code:	CECR361
3. Semester / Year:	2023/2024 Second Semester (Spring)
4. Description Preparation Date:	1/2/2024
5. Available Attendance Forms:	Attended
6. Number of Credit Hours (Total) / Number of Units (Total)	2 Theoretical + 3 Practical / 3.5 Unit
7. Course administrator's name (mention all, if more than one name)	Name: Dr. Zaid Mohammed Talal Alhabbar Email: zaid.alhabbar@uomosul.edu.iq
8. Course Objectives	<ul style="list-style-type: none">• Learn about the most important countries producing, exporting and importing grain crops in general• Learn about the economic importance, production centers, the original habit the emergence of the wheat crop, and the appropriate environment for its growth• Determines the important stages in the vegetative and fruitful growth stage the wheat crop and the most important divisions according to chromosomes and temperatures.• Identify the appropriate conditions for growing wheat in the northern and southern regions of Iraq• Understands what the agricultural cycle is, how it is conducted, and what are the benefits and advantages of the agricultural cycle• Learn about the stages of wheat flour production and the relationship of protein to the quality of wheat flour• Learn about the most important insects, diseases and pests that affect wheat crops and how to combat them• Learn about the economic importance, production centers, the original habit the emergence of the barley crop, and the appropriate environment for its growth• Learn about the economic importance, production centers, the original habit the emergence of the rice crop, and the appropriate environment for its growth

- Learn about the most important methods of cultivation of rice and the stages the pruning process
- Learn about the economic importance, production centers, the original habit the emergence of the yellow corn crop, and the appropriate environment for growth
- Learn about the processes of soil service, such as plowing, cultivation, a fertilization, on the productivity of the yellow corn crop

9. Teaching and Learning Strategies

Theoretical:

- Interactive lecture
- Brainstorming
- Dialogue and discussion
- Assigning tasks and reporting
- The student is assigned to prepare reports based on his own diligent and prepared for discussion with the students

Practical

- Assigning group work to reveal leadership skills
- Assigning tasks and a report for each lecture

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2 Theoretical + 3 Practical	A1: Identify the most important countries producing grain crops - Identify the most important countries exporting grain crops - Identify the most important countries importing grain crops - Memorize the botanical division of grain crops by kingdom, family, type and gender A9: Learn about the general botanical description of the shoots of grains	Theoretical: economic importance For grain crops Practical: General botanical description For grain crops	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
2	2 Theoretical + 3 Practical	A2: Explains the economic importance of the wheat crop - wheat production centers in the world and Iraq Determines the appropriate temperatures for the growth of the wheat crop - Determines the humidity and rain suitable for the growth of the wheat crop - Divides the wheat crop into	Theoretical: (wheat) Practical: botanical description of wheat crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning	Short exams, assignment of duties, discussions

		types based on the conditions suitable for its growth A10: Learn about the botanical description of the vegetative and fruit collection of the wheat crop		tasks and reporting	
3	2 Theoretical + 3 Practical	: B1 Identify the vegetative and fruiting phases - Learn about the division of wheat according to the group of chromosomes, mentioning examples - Learn about the division of wheat according to the temperatures suitable for its growth, mentioning examples - Learn about the varieties of wheat B5: Learn about the botanical description of the vegetative and fruit collection of the wheat crop	Theoretical: growth stages of wheat Practical: botanical description of a crop Wheat	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
4	2 Theoretical + 3 Practical	B2: identifies the most important main components of the wheat grain - classifies wheat varieties based on protein content - identifies the appropriate conditions for cultivation according to the northern and southern regions of Iraq - distinguishes the most important differences between soft and regular wheat varieties B6: Identify the botanical description of the vegetative and fruiting systems of the barley crop	Theoretical: Nutritional value of grains Wheat Practical: botanical description of barley crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
5	2 Theoretical + 3 Practical	A3: Understands what the agricultural cycle is and how to conduct it - Understands what the term yoke and yoke (fallowing) is - Recognizes the most important benefits of the plowing process - Recognizes the appropriate planting time for wheat in the northern and southern regions of Iraq - A11: Learn about the botanical description of the vegetative and fruiting systems of the barley crop	Theoretical: Wheat in the agricultural cycle Practical: Botanical description of the barley crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions

6	2 Theoretical + 3 Practical	A4: Determines the most important factors that lead to failure and how to reduce it - Knows the extent of the decrease occurring at different growth stages of wheat - Determines the harvest date for wheat - Differentiates between harvesting methods - Advantages of mechanical harvesting A12: Learn about the botanical description of the vegetative and fruit collection of the rice crop	Theoretical: Harvest of wheat crop Practical: Botanical description of the rice crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
7	2 Theoretical + 3 Practical	B3: Enumerate the most important diseases that infect wheat - Distinguish the most important pathological symptoms for each disease - Methods of resistance to each disease - Enumerate the most important insects that infect wheat - Distinguish the most important pathological symptoms of each insect - Methods of control for each insect B7: Identify the botanical description of the vegetative and fruiting systems of the yellow corn crop	Theoretical: Pests affecting wheat Practical: Botanical description of the yellow corn crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
8	2 Theoretical + 3 Practical	A5: Explains the economic importance of the barley crop - Barley production centers in the world and Iraq - Identify the original habitat and emergence of the barley crop and the environment suitable for its growth - Distinguishes between wheat and barley plants - Determines the appropriate temperatures for the growth of the barley crop - Divides the barley crop into types based on the conditions suitable for its growth A13: Learn about the botanical description of the vegetative and fruiting systems of the white corn crop	Theoretical: barley Practical: botanical description of white corn crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
9	2 Theoretical + 3 Practical	A6: Explains the economic importance of the rice crop - rice production centers in	Theoretical: rice	Theoretical: auditory methods	Short exams, assignment of duties,

		<p>the world and Iraq - identifies the original habitat and emergence of the rice crop and the environment suitable for its growth - identifies the three stages of rice development - determines the appropriate temperatures for the growth of the rice crop - identifies the humidity and rain suitable for the growth of the rice crop - identifies the growth phases Six in rice crop</p> <p>A14: Identify the botanical description of the vegetative and fruit collection of the millet crop</p>	<p>Practical: botanical description of millet crop</p>	<p>Style of writing on the blackboard Direct dialogue style</p> <p>Practical: Assigning tasks and reporting</p>	discussions
10	2 Theoretical + 3 Practical	<p>A7: Learn about the most important cultivation methods for the rice crop - Advantages of growing rice by seedling method - Determine the appropriate amount of seed - Determine the appropriate amount of fertilization and irrigation - Learn about the stages of preparing the rice crop for consumption - Learn about quality cooking methods - Learn about the most important diseases and insects that infect rice</p> <p>A15: Learn about the botanical description of the vegetative and fruiting systems of the oat crop</p>	<p>Theoretical: The location of rice in the course agricultural</p> <p>Practical: Botanical description of the oat crop</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style</p> <p>Practical: Assigning tasks and reporting</p>	Short exams, assignment of duties, discussions
11	2 Theoretical + 3 Practical	<p>A8: Explains the economic importance of the yellow corn crop - centers of yellow corn production in the world and Iraq - identifies the original habitat and emergence of the yellow corn crop and the environment suitable for its growth - determines the appropriate temperatures and humidity for the growth of the yellow corn crop</p> <p>A16: Learn about the botanical description of the vegetative and fruit collection of the rye crop</p>	<p>Theoretical: yellow corn</p> <p>Practical: Botanical description of the rye crop</p>	<p>Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style</p> <p>Practical: Assigning tasks and reporting</p>	Short exams, assignment of duties, discussions

12	2 Theoretical + 3 Practical	B4: Learn about the appropriate method and depth of plowing - Learn about the appropriate amount and time to add fertilizer - Learn about the effect of nitrogen on the growth stages of the yellow corn plant - Learn about the important methods for raising and improving the yellow corn crop - Learn about the most important insects and diseases that affect the yellow corn crop and ways to combat them B8: Enumerate agricultural cycles for grain crops	Theoretical: Soil service processes Practical: agricultural courses	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
13	2 Theoretical + 3 Practical	:D1 Suggests the most important differences and similarities in phenotypic appearance and nutritional value between grain crops D2: Suggests the most important differences in appearance and nutritional value between grain crops	Theoretical + practical: report and discussion	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
14	2 Theoretical + 3 Practical	E1: Estimate the most important parts and main stages in Silo Grains - the most important laboratory equipment in the Silo Laboratory E3: Estimates the most important parts and main stages in the grain silo - and the most important laboratory equipment in the silo	Theoretical + practical: A field visit to the grain silo in Mosul	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
15	2 Theoretical + 3 Practical	E2: Decides how to conduct the process of examining and certifying seeds E4: Decides how to conduct the process of examining and certifying seeds	Theoretical + practical: A field visit to examine and certify seeds	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions

11. Course Evaluation

	Evaluation methods	Evaluation date (week)	Degree	Percentage weight %
1	Report 1	Fourth week	2.5	2.5
2	Report 2	Fifth week	2.5	2.5

3	Short test (1) Quiz	Sixth week	2	2
4	Short test (2) Quiz	Fourteenth week	2	2
5	Short test (3) Quiz	Fifteenth week	1	1
6	Semester test (1)	Sixth week	7.5	7.5
7	Semester test (2)	Eleventh week	7.5	7.5
8	Final theoretical test	Final semester test	40	40
9	Practical field project	The fifteenth week	5	5
10	Field evaluation	Third and fifth week	2	2
11	Practical short test (1) Quiz	First week	1	1
12	Short practical test (2) Quiz	Fourth week	0.5	0.5
13	Short practical test (3) Quiz	Fourteenth week	1	1
14	Live drawings and homework	Weeks 6, 8, 9, 10, 11, 12 and 13	5.5	5.5
15	Final practical test	Final semester test	20	20
	Total	100	100%	100%


12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Younis, Dr. Abdel Hamid Ahmed, Mahfouz Abdel Qader Muhammad, Zaki Abdel Elias (1978). Grain production. Ministry of Higher Scientific Education - Iraq. University of Mosul. 369 pages
Main references (sources)	Grain and legume crops
Recommended books and references (scientific journals, reports...)	Non
Electronic References, Websites	Non


مدرس المادة العملي: م.م خليل


مدرس المادة النظري: م.د. زيد محمد طلال الحبار


رئيس القسم: أ.م.د ميسر عزيز


رئيس اللجنة العلمية: أ.د. ونام رشيد يحيى