

Course Description Form

1.	Course Name:	Cereal Crops
2.	Course Code:	CECR361
3.	Semester / Year:	2025
4.	Description Preparation Date:	1/2/2024
5.	Available Attendance Forms:	Attended
6.	Number of Credit Hours (Total) / Number of Units (Total)	75 hours including 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 habitat, the emergence of the yellow corn crop, and the appropriate environment for growth
- Learn about the processes of soil service, such as plowing, cultivation, and 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 or her diligence 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 types based on the conditions suitable for its growth a10: learn about the	Theoretical: (wheat) Practical: botanical description of wheat crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions

		botanical description of the vegetative and fruit collection of the wheat crop			
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	Theoretical: Harvest of wheat crop Practical: Botanical description of the	Theoretical: auditory methods Style of writing on the blackboard	Short exams, assignment of duties, discussions

		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	rice crop	Direct dialogue style Practical: Assigning tasks and reporting	
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 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	Theoretical: rice Practical: botanical description of millet crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical:	Short exams, assignment of duties, discussions

		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 a14: identify the botanical description of the vegetative and fruit collection of the millet crop		Assigning tasks and reporting	
10	2 Theoretical + 3 Practical	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 a15: learn about the botanical description of the vegetative and fruiting systems of the oat crop	Theoretical: The location of rice in the course agricultural Practical: Botanical description of the oat crop 	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	Short exams, assignment of duties, discussions
11	2 Theoretical + 3 Practical	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 a16: learn about the botanical description of the vegetative and fruit collection of the rye crop	Theoretical: yellow corn Practical: Botanical description of the rye crop	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style Practical: Assigning tasks and reporting	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	Theoretical: Soil service processes Practical: agricultural courses	Theoretical: auditory methods Style of writing on the blackboard Direct dialogue style	Short exams, assignment of duties, discussions

		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		Practical: Assigning tasks and reporting	
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 اللجنة العلمية: أ.د. ونام رشيد يحيى