Course Description Form

1. Course Name:
Seed Technology
2. Course Code:
SETE364
3. Semester / Year:
Spring second 2024/2025
4. Description Preparation Date:
1/2/2025
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: Lect Rayan Fadhel Ahmed Email: rayanobady79@uomosul.edu.iq Name: Assist. Lect. Khalil Ibrahim Khalil Email:
8. Course Objectives
Communicating the concept and objectives of seed technology to students, which include: • Increasing agricultural production by developing good quality seeds from high-yielding varieties • Prepare the seeds at the specified time for sowing. • Ensuring the use of high-quality seeds to achieve expected profit and revenue. • Ensuring appropriate prices for seeds so that they are accessible to average farmers.
9. Teaching and Learning Strategies

Strategy	- Interactive lecture - Brainstorming - Dialogue and discussion - Assigning tasks and reporting - He is assigned to prepare a report on one of the topics of seed technology and it will be discussed therein. - Scientific visits. - Assigning group work to reveal leadership skills

10. Course Structure

Week	Hours	Required	Unit or subject	Learning	Evaluation

		Learning Outcomes	name	method	method
1	2Theoretical 3Practical	2theoretical: a1: getting to know the concept of seed technology, its goals and sciences 3practical: b4: list the objectives of seed technology	2Theoretical: Seed technology concept 3 practical: The concept of the seed in practice	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
2	2Theoretical 3Practical	2theoretical: a2: he is familiar with the environmental factor, radiation, and the mechanisms of using it to serve the crop 3practical: b5: explains the tools used to extract the sample or samples	2Theoretical: Seed production requirements (irradiation) 3Practical: Tools used to extract the sample	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
3	2Theoretical 3Practical	2theoretical: a3: identify the environmental factor, temperature, and the mechanisms for employing it to serve the crop 3practical: b6: shows the methods for obtaining the practical sample of the samples sent from the consignment	2Theoretical: Heat and temperature factor 3 process: Purity test	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
4	2Theoretical 3Practical	2theoretical: a4: identify the environmental factor, water, and the mechanisms for employing it to serve the crop 3practical: b7: shows the method of analyzing a laboratory seed screening sample	2Theoretical: Water factor 3 practical: Seed purity test components	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
5	2Theoretical 3Practical	2theoretical: a5: identify the soil environmental factor and the mechanisms for employing it to serve the crop 3practical: c4: explains the reasons for the appearance of abnormal (abnormal)	2Theoretical: Soil factor 3 practical: Germination check	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions

		signs.			
6	2Theoretical 3Practical	2theoretical: a6: identify the environmental factor, air and wind, and the mechanisms used to serve the crop 3practical: c5: specifies the issues to be considered in the germination test	2Theoretical: Air and wind factor 3 practical: Orders to be taken into account in the germination test	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
7	2Theoretical 3Practical	2theoretical: b1: explaining the interactions of green and non-green plants, insects, animals, and humans with the crop 3practical: c6: write a report on testing the germination vigor of seeds	2Theoretical: Abiotic factors 3Practical: Germination strength test	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
8	2Theoretical 3Practical	2theoretical: b2: distinguishing between the three natural seed propagation methods and documenting twenty seed treatment techniques and their role in serving the crop 3practical: b8: explains the concept of thethousand seed weight test	2Theoretical: Seed propagation 3Practical: Tests indicating seed quality	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
9	2Theoretical 3Practical	2theoretical: a7: understanding the term seed viability and possible ways to retain seed viability for as long as possible 3practical: d1: show the tests indicating the viability and vigor of seeds	2Theoretical: Vitality and life period of seeds 3Practical: Tests indicating the viability and strength of seeds	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
10	2Theoretical 3Practical	2theoretical: a7: understanding the term seed viability and possible ways to retain seed viability for as long as possible 3practical: d1: show the tests indicating the viability and vigor of seeds	2Theoretical: Cleaning and grading the seeds 3Practical: Seed safety testing	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
11	2Theoretical 3Practical	2theoretical: c1: that the student	2Theoretical: Cleaning and grading	(theoretical) Auditory	Quizzes, assignments,

		acquires the skill of operating and maintaining the cylinder separator 3practical: b9: benefits from harvesting and threshing	the seeds 3Practical: Seed safety testing	methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	discussions
12	2Theoretical 3Practical	2theoretical: c2: that the student acquires the skill of operating and maintaining the separation device according to the specific gravity 3practical: b10: explains how field inspection is conducted	2Theoretical: Separation device according to specific gravity 3Practical: Field inspection	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
13	2Theoretical 3Practical	2theoretical: c3: the student acquires the skill of operating and maintaining the color separator device 3practical: b11: writes about how to store seeds for agricultural purposes	2Theoretical: Chromatic separator device 3Practical: Storage	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
14	2Theoretical 3Practical	2theoretical: e1: the student understands how to receive samples, extract them, and estimate the required tests 3practical: e3: the student understands how to conduct a purity test, as well as being familiar with the tools needed for this test	2Theoretical: Solving a problem (a scientific visit to the Seed Inspection and Certification Department 3Practical: Problem solving (practical applications on how to conduct a purity test as well as identifying the tools needed for this test	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions
15	2Theoretical 3Practical	2theoretical: e2: the student is aware of the nature of work in the department, as well as being familiar with the most important laboratory equipment used 3practical: e4: the student understands how to conduct the seed germination process, as well as the tests that indicate the	2Theoretical: Solving a problem (a scientific visit to the fields of the Agricultural Technical College to see the grown fibrous crops, as well as learning about the most important equipment used in the laboratory, especially the cotton ginning machine used to separate the hairs from the seeds 3Practical: Practical	(theoretical) Auditory methods. Style of writing on the blackboard. Dialogue style Direct. (practical) Assigning tasks and reporting.	Quizzes, assignments, discussions

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		vitality, quality and strength of the seeds and laboratory tools and equipment.	applications on how to conduct the seed germination process, as well as tests indicating the vitality, quality and strength of seeds, and laboratory tools and devices.		

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)	Seed technology book - written by Prof. Dr. Ahmed Saleh Khalaf and Prof. Dr. Abdel Sattar Asmir Al Rajabo
Main references (sources)	Seed Science Book – Wheat Book – Seed Science and Technology
Recommended books and references (scientific journals, reports...)	Seed testing and certification (local and Arab books and publications) Catalogs of various made seed cleaning plants
Electronic References, Websites	Scientific research sites at Google and Research Gate

Practical Lecturer
Assist. Lec. Khalil Ibrahim Khalil

Theoretical Lecturer
Lect. Dr. Rayan Fadhel Ahmed

Chairman of scientific committe
Prof.dr. Weam Yahya Rasheed

Head department of field crops
Assist. Prof.dr. Moyassar Mohammed Aziz