

Course Description Form Mechanization of Field Crops

Course Name
Mechanization of Field Crops
CourseCode
MECF305
Semester/ Year
First / 2025
Date of preparation of this description
15 January 2025
Available attendance forms
Full-time (theoretical lecture and practical lecture) weekly
Number of Credit Hours (Total)/ Number of Units (total)
2 theoretical hours and 3 working hours per week for 15 weeks, the number of units is 3.5 units
Name of the course administrator (if more than one name is mentioned)
Dr. Nasr Salem Hassan Email: nasirhassen@uodiyala.edu.iq
Dr. Amer Khaled
Course Objectives

Objectives of the course :	1- The science of field crop mechanization examines the most important equipment and machines used in agricultural crop fields and the extent of their usefulness 2- Includes knowledge of basic concepts in mechanization of field crops 3- Knowledge of the features and specifications of the types of field crop mechanization equipment 4- Knowledge of the theoretical basis in the work of field crop mechanization equipment and the scientific methods used in its operation 5- Studying the impact of field crop mechanization equipment in increasing agricultural production 6- Scientific methods used in the development of field crop mechanization equipment and according to the
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Teaching and Learning Strategies

Strategy	<ul style="list-style-type: none"> • 15-week in-person lectures interspersed with two monthly exams, weekly exams and scientific reports
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Theoretical

Course Structure

Week	Credits	Intended Learning Outcomes	Module / Course Name or	Teaching*method	Evaluation Method
1	2	Introduction to mechanization of field crops and its importance	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
2	2	Soil Preparation Equipment for Planting	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
3	2	Composting equipment	Mechanization of Field Crops	Explanation and model presentation and lecture	Examinations Weekly and Monthly Final and Reports

				Brainstorming Debating and discussing Brainstorming	Monthlies
4	2	Sowing, planting, sapling and precision farming equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
5	2	Crop Irrigation Equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
6	2	Planting equipment between plant lines	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
First Quarter Examination					
7	2	Agricultural Pest Control Equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
8	2	Cereal harvesters	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
9	2	Growing Crop Harvesting Equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies

				Brainstorming	
10	2	Cotton culprits	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports day
11	2	Equipment for trading and transporting agricultural crops	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports day
12	2	Agricultural Crop Cleaning and Grading Equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports day
13	2	Crop drying and storage equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
			Second Quarter Examination		
14	2	Green Feed Processing Equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies
15	2	Estimating the farm's need for drawers and agricultural equipment	Mechanization of Field Crops	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Weekly and Monthly Final and Reports Monthlies

Practical Part					
Week	Credits	Intended Learning Outcomes	Unit or Topic Name	Learning Method	Evaluation Method
1	3	Classification of field crop mechanization equipment	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
2	3	Learn about soil preparation equipment for planting and how it works in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
3	3	To know about the composting equipment and how it works in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
4	3	Identify the equipment of sowing, planting, seedling and cultivation equipment and its method of work in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
5	3	Learn about crop irrigation equipment and how it works in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies

6	3	Identify the planting equipment including the lines of plants and how they work in the field	Mechanization of Field Crops		Examinations Weekly and Monthly Final and Reports Monthlies
7	3	Learn about agricultural pest control equipment and how it works in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
8	3	Identify the grain harvesters and how they work in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
9	3	Learn about growing crop harvesting equipment and how it works in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
10	3	Identify the cotton culprits and how they work in the field	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
11	3	Identifying the equipment for trading and transporting agricultural crops	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
12		Identify the equipment for cleaning and grading agricultural crops	Second Exam	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies

13	3	Identify and store crop drying equipment	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
14	3	Identify green Forage preparation equipment	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	Examinations Weekly and Monthly Final and Reports Monthlies
15	3	Calculations on estimating the farm's need of drawers and agricultural equipment	Mechanization of Field Crops	Case history Brainstorming Debating and discussing	

Course Evaluation	
Weekly and monthly exams, reports and student effectiveness during the lecture .	
Learning and Teaching Resources;	
Required textbooks (methodology if any)	Field crops
Key References (Sources)	1- College and university website 2- University Directory 3- Central Library 4- The most important books and resources of the department Internet- 5
Recommended supporting books and references (scientific journals, reports)	C/N H. Roldos de la Sovera, Montevideo
E-References, Websites	