Course Description Form Experimental Design and Analysis

Course Name
Experimental Design and Analysis
Course Code
EXPD306
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 14 weeks, the number of units is 3.5 units
Name of the course administrator (if more than one name is mentioned)
Dr. Dania Salman Qahraman Email: daniasalman@uodiyala.edu.iq
Course Objectives

Objectives of the course :	1- The course discusses the importance of agricultural experiments and how to develop their own designs 2- Includes knowledge of statistical analysis for each experimental design 3- Know the features of each design and to what type of field crops can be appropriate. 4- Means of statistical analysis by manual methods or using a manual calculator. 5-Studying the types of modern software for statistical analysis of each experimental design.

Teaching and Learning Strategies	
Strategy	• In-person lectures for 14 weeks, interspersed with two monthly exams, daily exams and scientific reports

Theoretical

Course Structure					
Week	**Credits**	**Intended Learning Outcomes**	**Module / Course Name or**	**Teaching*method**	**Evaluation Method**
1	2	Revision in Statistics	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
2	2	Basic rules for experimental design - basic elements of experimental design (estimation of experimental error, control of experimental error, interpretation of results)	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
3	2	Definitions and concepts of terminology in experimental design	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
4	2	Full Random Design	Experimental Design and Analysis	Explanation and model presentation and lecture	Examinations Daily and Monthly Final and Reports

				Brainstorming Debating and discussing Brainstorming	day
5	2	Complete Randomization Design Complement	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
		First Quarter Examination			
6	2	Design of Full Random Sectors	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
7	2	Latin Square Design	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
8	2	Factor Trials for Complete Randomized Design	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
9	2	Factor Trials for Full Randomized Segment Design	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
10	2	Factorial Experiences of Latin Square Design	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing	Examinations Daily and Monthly Final and Reports day

				Brainstorming	
11	2	Splinter Sector Designs	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
12	2	Wrapping up	Experimental Design and Analysis	Explanation and model presentation and lecture Brainstorming Debating and discussing Brainstorming	Examinations Daily and Monthly Final and Reports day
			Second Quarter Examination		

Practical Part					
Week	**Credits**	**Intended Learning Outcomes**	**Experimental Design and Analysis**	**Learning Method**	**Evaluation Method**
1	3	Practical applications for solving statistics problems	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
2	3	Learn how to estimate the experimental error and how to reduce it	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
3	3	Practical Applications	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
4	3	Visit to the field	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
5	3	Practical Applications to solve full randomization	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
6		Month 1			

7	3	Practical Applications	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
8	3	Practical Applications	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
9	3	Practical Applications	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
10	3	Practical Applications	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and
11	3	Practical Applications	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and Reports
12	3	Visit to the field	Experimental Design and Analysis	Case history Brainstorming Debating and discussing	Examinations Daily and Monthly Final and Reports
			Second Exam		

Course Evaluation
Daily and monthly exams, reports and student effectiveness during the lecture .

Learning and Teaching Resources;	
Required textbooks (methodology if any)	The entry to the census is written by Dr. Khasha Mahmoud Al-Rawi, Ministry of Higher Education and Scientific Research, University of Mosul. Commission on the Status of Women, preparatory committee (PrepCom) for the special session of the GA: "Women 2000: gender equality, development and peace for the 21st century", New York 3-17 March

Key References (Sources)	Recent articles from the Internet, specialised scientific journals, the Journal of Agricultural Sciences - Iraq and the Virtual Library.
Recommended supporting books and references (scientific journals, Reports)	Iraqi academic scientific journals
E-References, Websites	