



The University of Jordan
School of Engineering
Industrial Engineering Department
Fall Semester 2024/2025

Course name:	Engineering Statistics II			
Course code:	0906356			
Credits hours	3			
Contact hours/room:	Sec1: Sun, Tue, Thu 9:30-10:30 (Room: IE 001)- Blended			
Course instructor's name, E-mail, and phone:	Dr Mohannad Jreissat			
	m.jreissat@ju.edu.jo			
Course Coordinator:	Dr Mohannad Jreissat			
Textbook:	Applied Statistics and Probability for Engineers, by D. Montgomery and G. Runger, 7 th edition, Wiley.			
Other references:	Will be given if needed			
Course Description:	Analysis of Variance, linear regression, full and fractional factorial design of experiments.			
Providing Department:	Industrial Engineering			
Prerequisite Course:	Engineering Statistics I (0936251)			
Course Type	Mandatory			
Assessment Methods: (Tentative)	Method	Weight %	Date	
	Midterm Exam	30 %		
	Quizzes, Homework, Participation, and Mini-project (any or all)	30 %		
	Final Exam	40 %		
Course Learning Outcomes:	#	After successful completion of this course, the student will be able to	SO	Target
	CLO1	Demonstrate understanding of confidence intervals and hypothesis testing for single and two samples.	1	
	CLO2	Recognize and conduct statistical inference for single and two samples to solve engineering problems.	1, 6	
	CLO3	Perform linear and multiple linear regression analyses.	1	
	CLO4	Demonstrate ability to design and analysis of single-factor experiments.	1, 6	
	CLO5	Demonstrate ability to do design of experiments with several factors.	1, 6	

A brief list of topics	#	Topic
	1	Introduction
	2	Review of Statistical Intervals for a Single Sample and Tests of Hypotheses for a Single Sample
	3	Statistical Inference for Two Samples
	4	Simple Linear Regression
	5	Multiple Linear Regression
	6	Analysis of Variance (ANOVA)
	7	Design of Experiments with several factors
Important Notes:	<ul style="list-style-type: none"> • Class notes, in-class drills, and any handout you receive from the instructor are required as part of the course. • Do not hesitate to ask questions • The student is required to bring a notebook and take notes in classes. • Students are expected to attend every class session, and they are responsible for all material, announcements, schedule changes, etc., discussed in class. • Discuss the assignments (the ungraded assignments) with your classmates. • If the assignment is declared graded, students MUST work on it individually. No late assignment will be accepted. • Do not Cheat; direct copying of others' work will NOT be allowed or tolerated and will result in a grade reduction. If a student is found cheating in an exam or assignment, even signing the roll sheet for another student, he/she will be given an "F" for the course. There will be no exceptions. • All cases of academic dishonesty will be handled per university policies and regulations. JU policy requires the faculty member to assign a ZERO grade (F) if a student misses 15% of the classes that are not excused and 20% of the classes that are excused • Students are expected to be ready to take a quiz any time they have a class. There will be no make-up quizzes or homework. • Any student with disabilities who needs accommodations in this course is encouraged to speak with the instructor as soon as possible to make appropriate arrangements for these accommodations. 	

<i>The B.Sc. in Industrial Engineering program enables students to achieve, by the time of graduation, the following program learning outcomes (SOs)</i>			
1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	5	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	6	An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
3	An ability to communicate effectively with a range of audiences	7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
4	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts		