



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	<i>An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics</i>	5	<i>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</i>
2	<i>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</i>	6	<i>An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions</i>
3	<i>An ability to communicate effectively with a range of audiences</i>		
4	<i>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</i>	7	<i>An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.</i>