The University of Jordan
School of Engineering
Industrial Engineering Department
Spring semester 2023/2024

Course name:	Engineering Statistics II				
Course code:	0906356				
Credits hours	3				
Contact hours& room\office hours:					
Course instructor's name, E-mail, and phone:	Lamees Durgham l.aldurgham@ju.edu.jo 22942				
Course Coordinator:					
Text book:	Applied Statistics and Probability for Engineers, by D. Montgomery and G. Runger, 6th edition, Wiley.				
Other reference(s):					
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:	Method		Weight %	Date	
	Midterm Exam		30 %		
	Quizzes and project		30 %		
	Final Exam		40 %		
Course Learning Outcomes:	#	After successful completion of this course, the student will be able to		SO	
	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	
Brief list of topics	**No**	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:	• Do not hesitate to ask questions • You are 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 among yourselves • Don't Cheat; direct copying of others work will NOT be allowed or tolerated and will result in a reduction of grade. If you are found to be cheating in any way, on an exam or assignment, even signing the roll sheet for another student, you will be given an "F" for the course. There will be no exceptions. • All cases of academic dishonesty will be handled in accordance with university policies and regulations. JU policy requires the faculty member to assign 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 homeworks. • Any students with disabilities who need accommodations in this course are encouraged to speak with the instructor as soon as possible to make appropriate arrangements for these accommodations.	

The B.Sc. in industrial Engineering program enables students to achieve, by the time of graduation the following program learning outcome (SOs)	
1	*an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics*
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*
3	*an ability to communicate effectively with a range of audiences*
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*
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*
6	*an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions*
7	*an ability to acquire and apply new knowledge as needed, using appropriate learning strategies*