The University of Jordan
School of Engineering
Industrial Engineering Department
2ND SEMESTER 2020/2021

Course name:	Engineering Statistics I
Course code:	0936251
Credits hours	3
Contact hours/room:	Sec 1: Sun, Tue, Thu: 10:30 – 11:30, Sec. 2: Mon. Wed.: 11:30-13:00
Course instructor's name, E-mail, and phone:	Mohammad Shbool, Ph.D. m.shbool@ju.edu.jo
Course Coordinator:	Mohammad Shbool, Ph.D.
Text book:	Applied Statistics and Probability for Engineers, by D. Montgomery and G. Runger, 6th edition, Wiley.
Other reference(s):	
Course Description:	Quantitative and graphical descriptive statistics, probability concepts, discrete and continuous random variables and distributions, joint probability distributions, covariance and correlation of random variables, point and interval estimation, sampling distributions, hypothesis testing, introduction to simple linear regression. Practical exercises on the application of statistical methods in engineering
Providing Department:	Industrial Engineering
Prerequisite Course:	0301102
Course type	Mandatory

Assessment Methods:	Method	Weight %	Date
	Midterm Exam	30 %	
	Quizzes and Homework	20 %	
	Final Exam	50 %	

Course Learning Outcomes:	#	After successful completion of this course, the student will be able to	SO
	CLO1	To compute and interpret sample parameters like (mean, variance, standard deviation, median, range ... etc.).	1
	CLO2	To Produce and interpret graphical displays for simple data sets (histogram, box plot, ….).	1
	CLO3	To Produce and interpret graphical displays for simple data sets (histogram, box plot, ….).	1, 6
	CLO4	To explain the important role of the normal distribution as a sampling distribution.	1, 6
	CLO5	To learn how to find a point estimator and interval estimator for a certain parameter	1
	CLO6	Apply the techniques the student learned in the course using statistical software.	6

Revised on: February 28, 2021

	No	Topic
Brief list of topics		Introduction
		Probability
		Discrete Random Variables and Probability Distributions
		Continuous Random Variables and Probability Distributions
		Random Sampling and Data Description
		Point Estimation of Parameters and sampling distribution
		Statistical interval for a single sample
		Test of hypothesis for a single sample
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 home works. - 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*	**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*			
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*	**7**	*An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.*	