



The University of Jordan
School of Engineering
Industrial Engineering Department
2nd semester 2024/2025

Course name:	Statistical Quality Control			
Course code:	0906358			
Credits hours	3			
Contact hours/room:	Online			
Course instructor's name, E-mail, and phone:	Prof. Abbas Al-Refaie			
	abbas.alrefai@ju.edu.jo			
Course Coordinator:	Prof. Abbas Al-Refaie			
Text book:	Statistical Quality Control			
Other reference(s):	Hand outs			
Course Description:	General introduction to quality management, application of statistical methods and probability to monitor and control product quality. Variables and attributes Shewhart control charts, acceptance sampling. Process capability and measurement systems analysis, process improvement. Specifications and international standards.			
Providing Department:	Industrial Engineering			
Prerequisite Course:	Statistics (2) 0906356			
Course type	Mandatory			
Assessment Methods:	Method	Weight %	Date	
	Quizzes	10%		
	Participation and assignment	10%		
	midterm	30%		
	Final Exam	50%		
Course Learning Outcomes:	#	After successful completion of this course, the student will be able to		SO
	CLO1	Identify and analyze quality costs in practical applications		4
	CLO2	Analyze probability distributions for quality responses in practical applications		1
	CLO3	Apply the magnificent seven tools in industrial and service industries		5
	CLO4	Establish and analyze the variables and attributes control charts in real applications		6
	CLO5	Conduct sampling data, analyze, interpret and then draw conclusions regarding measured quality responses and process capabilities		6
	CLO6	The student should be able to work within teams and be prospective managers by a course project, which is accomplished by teams		5

Brief list of topics	Week #	Topic
	1	Introduction to quality Management
	2	Statistical models for quality improvement
	3-4	Six sigma and Magnificent seven tools
	5-8	Six sigma and Magnificent seven tools
	9-11	Variable control charts
	12-13	Attributes control charts
	14-15	Process and measurement system capability
	16	Acceptance Sampling and Military standards
Important Notes:	<ul style="list-style-type: none"> • 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. 	

<i>The B.Sc. in industrial Engineering program enables students to achieve, by the time of graduation the following program learning outcome (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		