

INDE 430: Statistical Quality Control

Fall 2016

Administrative details

Instructor: Nadine Marie Moacdieh

Email: nm102@aub.edu.lb

Office hours: MW 2-4 pm (or by appointment)

Office location: Annex 107

Class time: MWF 11-12 pm

Class location: IOEC 224A

Course textbook: Montgomery, Douglas (2013). *Introduction to Statistical Quality Control* (7th edition). John Wiley & Sons, Inc.

Catalog description

Design of quality control systems; quality methods for establishing product specifications; process control; variables and attributes charts; acceptance sampling; operating characteristics curves; process capabilities; QC software.

Course topics

1. Introduction to quality (Chapters 1 and 2)
2. Engineering statistics fundamentals (Chapter 3)
3. Inferences about process quality (Chapter 4)
4. Statistical process control (Chapters 5, 6, 7, 9)
5. Process capability analysis (Chapter 8)
6. Acceptance sampling (Chapter 15)

Course learning outcomes

After completing INDE 430, students should be able to

1. Define quality and the factors that contribute to quality
2. Carry out the steps of the DMAIC process for a Six Sigma system
3. Recognize the different discrete and continuous distributions and their basic characteristics
4. Be able to make inferences about process quality using the appropriate tools and techniques

5. Be able to construct appropriate process control charts and use them to evaluate a process or system
6. Perform process capability analysis and use the results to evaluate the system
7. Perform acceptance sampling on a given lot and use that to determine whether or not to reject that lot

Course grading

Component	Percent	Details
Attendance	5%	
Quizzes and homework assignments	15%	All quizzes will be announced beforehand
Midterm	35%	Monday, October 17 at 6:30 pm
Final exam	45%	TBD by registrar

Notes

1. It is expected that all material for this course will be a student's own original work.
2. AUB strives to make learning experiences as accessible as possible. If you anticipate or experience academic barriers due to a disability (including mental health, chronic or temporary medical conditions), please inform me immediately so that we can privately discuss options. In order to help establish reasonable accommodations and facilitate a smooth accommodations process, you are encouraged to contact the Accessible Education Office: accessibility@aub.edu.lb; +961-1-350000, x3246; West Hall, 314