ISyE 3039 – Methods for Quality Improvement
Georgia Tech Europe – Summer 2025
Monday and Wednesday 8:00-9:55 am
Centrale Supelec Building

Instructor:	Parisa Yousefi Zowj
Email:	pyz@gatech.edu
Office hours:	Monday 12:30-1:30 pm Location TBA

Textbook:	"Introduction to Statistical Quality Control", 7th edition, Douglas C. Montgomery, Wiley, ISBN: 978-1-118-14681-1©2013 768 pages
Website:	Canvas http://canvas.gatech.edu/ Zoom
Software:	RStudio at https://www.rstudio.com Minitab® 17. You can access Minitab through Vlab at http://mycloud.gatech.edu/
Prerequisite:	ISyE 3030

Note: All the information and dates in the syllabus are tentative and subject to change.

Delivery Mode:

- The classes will be held in-person
- Exams are in-person
- HWs and solutions will be posted on Canvas

Catalog Course Description:

An introductory course on statistical quality control and improvement, which covers a variety of topics including statistical process control, measurement system analysis, acceptance sampling, design of experiments, etc.

Course Outcomes:

By the end of the semester, you will be able to:

- Perform preliminary data analysis and suggest improvement plans
- Develop control charts for monitoring continuous and discrete quality characteristics
- Assess statistical process capability
- Assess product specifications and tolerances
- Implement CUSUM and EWMA charts
- Design and analyze of factorial experiments

Grading Policy:

- Project 30%
- Exam I (TBA) 30%
- Exam II (TBA) 30%
- Participation 10%

Course Policy:

1. **Homework**

- There is approximately biweekly homework which will be posted with the solution
- No submission is needed

2. **Exam**

- Exams are in-person during the class time
- For each exam you have **1 hour 55 min**
- No make-up exams will be given unless prior arrangement is made with the instructor (with written documentation BEFORE the exam, e.g., a note from the dean of students' office).
- Exams are cumulative but concentration of each exam will be on the parts after the previous exam.
- Students are allowed to have one or two (double-sided) sheets of equations for exam I or II respectively.

3. **Project**

- A group of 2 or 3 students will work on a project
- An abstract and a report should be submitted
- At the end of semester, the group will present their project in class
  Note: Refer to the project handout for details

- Abstract (TBA) 20%
- Report (TBA) 30%
- Presentation (TBA) 50%

Academic Honor Code:

It is your responsibility to get familiar with the Georgia Tech Honor Code and you are bound by its requirements.

Use of any previous semester course materials is allowed for this course; however, I remind you that while they may serve as examples for you, they are not guidelines for any tests, quizzes, homework, projects, or any other coursework that may be assigned during the semester.

For any questions involving these or any other Academic Honor Code issues, please consult me, my teaching assistants, or www.honor.gatech.edu.

Related chapters of the textbook:

In addition to lecture slides you can refer to the related chapters in the textbook.

Topics	References
Course overview + Introduction	Ch1
Review of Modeling Process Quality	Ch3
Review of Inferences About Quality	Ch4
Methods and Philosophies	Ch2+ Ch5
Charting Variables	Ch6
Charting Attributes	Ch7
CUSUM	Ch9
EWMA	Ch9
Process Capability	Ch 8

Semester Schedule at a glance:

May

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		14		**16**		
19		**21**				
26		**28**				

June

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
2		**4**				
		11		**13**		
16		**18**				
23		**25**				
30						

July

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		2				
7		**9**				
		16		**18**		
21 Last Day						