Spring 2024

IE 672-854: Industrial Quality Control

George Abdou

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NEW JERSEY INSTITUTE OF TECHNOLOGY
Department of Mechanical & Industrial Engineering

IE 672
Industrial Quality Control   **Spring 2024**
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INSTRUCTOR: **George Abdou**, Associate Professor, Room ME306
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OFFICE HOURS: Wednesday: 3:00 - 5:00 p.m. and by appointment or good fortune
LECTURE: Tuesday: 6:00 -8:50 p.m.

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This course is Synchronous online by log in to Webex: **njit.webex.com/meet/abdou**
Course Lectures and Requirements: available at   **http://canvas.njit.edu/**

TEXT: "**Introduction to Statistical Quality Control**" Montgomery, 7th Ed., Wiley, 2013.
GRADING: **Final Exam …**30%   **Mid-term** ...30%   **HWs**….40%

Week	Topics	Chapter	HW
1/15	Statistical Process Control	**5**	18,20,24,32
1/22	Control Charts for Variables	**6**	45, 52, 65,76,80,81
1/29	Control Charts for Attributes	**7**	20, 29, 30,31,32,76
2/5	Capability Analysis/Tolerance Spec	**8**	16, 34, 35,38,40,42
2/12	Other Control Chart Techniques	**9-10**	**9.** 13, 14,17,32,36 **10.** 16,17,18,19
2/19	Acceptance Sampling for Attributes	**15**	7,15,19,26
2/26	Acceptance Sampling for Variables	**16**	1, 9, 10, 11
3/4	*** ***Mid Term Exam*** *** ***Chapters 5-10, 15-16***		
(3/10-16)	***Spring Recess-No Classes Scheduled***		
3/18	Reliability	**Handout**	**Handout**
3/25	Factorial/Fractional Design	**13**	12,19,20,21
3/29	**Good Friday *** No Classes***		
4/1	Orthogonal Design	**13**	14,15,16,17
4/8	Design of Experiments	**14**	8,9,15
4/15	Taguchi Method	**Handout**	**Handout**
4/22	Simulation	**Handout**	**Handout**
4/29	*** **Final Exam** ***		

Important Notes

1. The use of any electronic devices during classes; including but not limited to: laptops, cell phones, tablets, social media, etc.., is **prohibited** for non-class related functions.
2. There will be no deviations from scheduled due dates and test dates. Assignments **will not be accepted after the noted deadline**. **Exams will consider all materials covered in the lectures**, **which may not be in the book**.
3. **HONOR & ETHICS**
   The code of unspoken ethics in a professional work environment in the US will apply in the classroom. That is, honesty and ethical conduct will not only be expected, but demanded. Please see me if you have any confusion on what I mean. Clearly, cheating on an exam is not permitted. Students caught in violation of this policy will earn a failing grades on their exam. Cooperation in responding to homework questions is not only permitted, but encouraged, as part of the cooperative learning framework of the course. You may discuss homework problems but not copy someone else's work. Any persons caught copying as well as the person providing the homework will be penalized.

Software Applications

To help reinforce the use of computer software to solve assignments & exams, **you will be required to submit your work only in Excel software or Minifab, and with explanation**. In some cases, the computations that you perform must be visualized by a graph.