Instructor: Dr. Arda Vanli
Office: COE B373D  Tel: 410-6354  Email: oavanli@eng.fsu.edu
Office Hours: Tuesday, Thursday 11:00am -12:00 noon, or by appointment

Teaching Assistant: Kevin Wang (wangkan@eng.fsu.edu)
Office hours: Monday, 2:00 – 5:00 pm (COE A208)

Class Hours: Tuesday, Thursday 8:45am -10:00 am, Room: COE – B0136

Course Objectives and Outcomes

The objective of the course is to provide students with the understanding of the descriptive and analytical methods for dealing with variability in observed data in engineering applications. Upon successful completion of the course, students will be able to (i) formulate engineering problems as statistical hypotheses and make statistical inferences on the behavior of engineering systems, (ii) understand the role that the variability of a random sample plays in a statistical inference, (iii) be able to describe and interpret results from statistical analysis computer program outputs.

Additionally, the following departmental program outcomes are expected of each student on completion of the course:
1. Ability to apply knowledge of mathematics and computing
2. Ability to design and conduct experiments, as well as to analyze and interpret data
3. Ability to use modern industrial engineering techniques, skills and tools necessary to design, develop, implement, and improve integrated systems that include people, materials, information, equipment and energy.
4. Ability to identify, formulate, and solve engineering problems

Textbook


Prerequisite

MAC 2312 (Calculus II).

It is the policy of the Department of Industrial Engineering that a student must receive passing grades in all prerequisite courses prior to enrolling in an Industrial Engineering course. Concurrent registration in a course and its prerequisites is not allowed. All prerequisites to prerequisites must also be completed. Failure to abide by this policy can result in the cancellation of your enrollment in the course at any time during the semester and with no refund of fees.
Software Use

We will use Minitab to perform data analysis. Minitab is available in the computer labs in Strozier, Carothers, the union, and Engineering. A personal, student version may be obtained from http://estore.e-academy.com for a fee.

Topics

• Introduction (Chapter 1)
• Probability (Chapter 2)
• Discrete random variables and probability distributions (Chapter 3)
• Continuous random variables and probability distributions (Chapter 4)
• Joint probability distributions (Chapter 5)
• Random sampling and data description (Chapter 6)
• Sampling distributions and point estimation of parameters (Chapter 7)
• Statistical intervals for a single sample (Chapter 8)
• Tests of hypotheses for a single sample (Chapter 9)
• Statistical inference for two samples (Chapter 10)
• Simple linear regression (Chapter 11)

Grading Policy:

Your course grade is based on 3 exams and homework assignments. The weights of these components in your final grade will be as follows:

• Exam 1 : 25%
• Exam 2 : 25%
• Exam 3 : 25%
• Assignments : 25%

There will be no extra work available to enhance your grade, so put in the appropriate effort on the assigned homework.

Examinations

The exams will be in-class, closed-book and closed-notes. You may bring your calculator and a letter-sized formula sheet to the exams.

Make-up Exam Policy:

No make-up, late or early exams will be given unless prior approval has been granted by the course instructor. Approvals for make-up exams will only be granted for medical emergencies. If a make-up examination is not granted, you will receive a score of zero (0) for the exam that you missed.
Grading Scale.
The grades will be based on the following scale:

- 90 – 100 : A
- 80 – 89 : B
- 70 – 79 : C
- 60 – 69 : D
- 0 -59  : F

Academic Honor Code:
Students are expected to uphold the Academic Honor Code published in The Florida State University Bulletin and the Student Handbook. The Academic Honor System of The Florida State University is based on the premise that each student has the responsibility (1) to uphold the highest standards of academic integrity in the student's own work, (2) to refuse to tolerate violations of academic integrity in the university community, and (3) to foster a high sense of integrity and social responsibility on the part of the university community.

Americans with Disabilities Act:
Students with disabilities needing academic accommodation should:
1. Register with and provide documentation to the appropriate university office. For FAMU students, this is the Learning Development and Evaluation Center (LEDC). For FSU students this is the Student Disability Resource Center (SDRC); and
2. Bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to students with disabilities:

FAMU students should contact:
Learning Development and Evaluation Center
667 Ardelia Court
Tallahassee, FL 32307
(850) 599.3180

FSU students should contact:
Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Tallahassee, FL 32306-4167
(850) 644-9566 (Voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

Syllabus Change Policy:
This syllabus is a guide for the course and is subject to change.