

ST 370, Spring 2000

Probability and Statistics for Engineers

Instructor:

Dr. Sujit K. Ghosh

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Webpage: http://www.stat.ncsu.edu/~st370_info/ghosh/

(Include this website in your Bookmark for frequent use.)

Office Hours: Wednesday, 2:30-4:30 or by appointment.

HW TA:

Chris Potocky (cfpotock@unity.ncsu.edu)

Office: 2416 Hillsborough St. (Rm# 102), Ph.#: 515-5769.

Office hours: By appointment. (check out the web for updates)

Course prerequisites:

MA 241 (analytic geometry and calculus sequence). Differentiation and integration of exponential, logarithmic and trigonometric functions. Techniques of integration. Sequences, series, power series and Taylor's Theorem.

Textbook:

Modern Engineering Statistics, Lawrence L. Lapin, 1997, Duxbury Press. ISBN 0-534-50883-9

(Available in NCSU Central Bookstore*).

Lab manual:

M-Lab for Engineers, Instructional Labs on Statistics using MATLAB, Boos et al. 1999. (Available on the web: www.stat.ncsu.edu/~boos/mlab)

Suggested reading:

The Cartoon Guide to STATISTICS, L. Gonick and W. Smith, 1993, HarperPerennial, HarperCollins Publishers. (need this as a supplement to only chapter 6)

Schedule:

Sec. 002: 11:20 - 12:10, MWF, HA 210.

HomeWork:

HW's will usually be assigned approximately weekly. You will get a week time to turn in the HW's. As a rule, usually late HW's are not accepted. Assigned HW's and submission deadlines will be posted on the web. Some submissions can also be done through web. For online HW submissions check out <http://webassign.ncsu.edu>. For more details, ask your HW T.A.

Lab:

Two Labs will be held on alternate weeks starting in the second week of the classes. Labs are held in SICL, located on the ground floor of Harrelson (Room# HA G100).

Exams:

1st, exam: February 18, 2000 (50 minutes),

2nd, exam: March 24, 2000 (50 minutes).

Final exam: May 08, 2000 (8:00-11:00) First two exams are not cumulative and are based on the materials covered in the class and HW's. Final exam will be cumulative. Sample exams will be posted on the web. Solutions to exams and their respective grades will also be posted on the web. All exams are held in the usual classroom.

Project:

Deadline to submit Abstract of the project: March 03, 2000.

Deadline to submit the project: April 17, 2000.

As a rule late abstracts and projects are not accepted. For more information on how to complete a project check out the course web page.

Attendance requirement:

At least 90% attendance is required. Class participation score will largely be based on attendance (sampled randomly) during semester.

Grading policy:

The course grade will be based on HW's, class participation (CP), project and Exams. The relative weight given to each of these components is

HW's: 30%, CP: 5%, Project: 15%, Exam-I: 15%, Exam-II: 15% and Final exam: 20%.

The final grade will be expressed as a percent between 0 and 100. Letter grade cut-offs will then be assigned. The following letter-grades are guaranteed:

96-100 A+, 91-95 A, 90 A-, 89 B+, 81-88 B, 80 B-, 79 C+, 71-78 C, 70 C-, 69 D+, 61-68 D, 60 D-, 0-59 F.

Missed work policy:

If appropriate documentation is provided, missing HW's will be accepted under the following policies:

Grader will take off 10% of the total if late by at least a day.

Grader will take off 20% of the total if late by at least 5 days.

Grader will not accept if late by more than 10 days.

Make-up exams will usually not be given. If appropriate documentation is given for a legitimate absence, then missing exam will be replaced by the average of the student's other exams (Possibly adjusted if the exam missed has a particularly high or low average). Final exam can not be missed.

Objectives:

Students will:

1. Understand the basic framework of probability models and populations and their relationship to empirical data.
2. Be able to display empirical data graphically and to summarize the important features.
3. Be able to estimate population parameters, to estimate the variability of the associated estimators, and to express the variability in a confidence statement.
4. Be able to fit curves and surfaces to empirical data and to understand the inferences obtained from the fitted models.

5. Be able to design and analyze simple factorial experiments with the goal of improving the quality of processes.

Academic Integrity:

While submitting hard copies of HW's, Lab's, Quizzes, Project and Final exam., students should sign the **Honor pledge**: *I have neither given nor received unauthorized aid on this test or assignment.* For details on student conduct, check out the web at <http://www.fis.ncsu.edu/ncsulegal/codeof.htm>

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*don't panic if the text is not in the store, will arrive soon!

January 10, 2000.