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# Math 502AB – Probability and Statistics I & II

**Fall 2007 - Section 1, MH 390, MW 5:30-6:45 and 7:00-8:15**

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**Instructor:** Mortaza (Mori) Jamshidian, Ph.D. **Office:** MH 180 **Phone:** 714-278-2398

**Office Hours:** Mon. 2:20 – 3:30, Wed. 4:30-5:25 p.m., or *by appointment*

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**Text:** *Mathematical Statistics and Data Analysis* by John Rice, Third Edition, Thompson/Brooks/Cole, 2007.

**Software:** We will use R, Matlab, and SAS for the projects and homework assignments. Instructions for use of these packages will be given, as necessary. R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To download R, please choose your preferred [CRAN mirror](#). SAS and Matlab are available to students in the Mathematics Department Computing Laboratory in MH 452. Please download and install R on your computers as soon as possible.

**Your e-mail address wanted:** You are *required* to fill out the “Student Information Form” ([click here](#)) and submit it to [mori@fullerton.edu](mailto:mori@fullerton.edu) no later than **Saturday, August 25**. **Do not** save the pdf file and attach to an e-mail. The file that I need is an XML file. You need to **use the submit button** on the form and follow the instructions. I will send various communiqué, **take home quizzes**, and last minute announcements about our class through e-mail. Please provide an e-mail address that you check frequently. I will send a “test e-mail” on Sunday August 26 to everyone. If you do not receive this test e-mail, please see me on Monday to resolve any problems there may be. **Note:** Any credits that you lose due to not establishing your e-mail connection with me on time will be your responsibility.

**Course Description:** This course has two parts. In the first part we learn fundamentals of probability theory, including random variables, joint and conditional distributions, expected values, major probability limit theorems, and some well-known distributions. The objective in the second part is to utilize the probability theory learnt in the first part mainly for statistical inference. We will learn topics including survey sampling methods, parameter estimation specially maximum likelihood and method of moments, Bayesian estimation, properties of estimators, test of hypothesis and goodness of fit, exploratory data analysis, analysis of variance, regression analysis, and analysis of categorical data.

**Course requirements and Grading Policy:** Homework/projects (**30%**) will be assigned and graded. I often give a quiz related to the homework problems, and use the quiz grade instead of the homework grade. Two midterm exams (**40%**) and a final exam (**30%**) will be given. Portions of the exams may be take-home. For in-class exams you will be allowed to bring in one page of information during each midterm exam and two pages of information during the final exam. Letter grades will be assigned according to the distribution of the overall grades. Plus-minus grading will be used.

The exam dates are as follows:

<i>Exam I</i>	<i>Exam II</i>	<i>Final Exam</i>
Wednesday, Oct. 3	Wednesday, Nov. 7	Monday, Dec. 10, 5:00-6:50 p.m.
		Wednesday, Dec. 12, 7:30-9:20 p.m.

Late homework/projects will not be accepted. Make-up exams will be given only in extreme instances and only with advance permission of the instructor. Any student who does not take an exam at the scheduled time without prior consent of the instructor will receive a grade of zero on that exam. If any student feels that a sudden illness is sufficiently extreme to warrant a make-up exam, the instructor must be provided with documentation prepared by an appropriate authority.

**Academic Integrity:** Students who violate university standards of academic integrity are subject to disciplinary sanctions, including failure in the course and suspension from the university. Since dishonesty in any form harms the individual, other students and the university, policies on academic integrity are strictly enforced. I expect that you will familiarize yourself with the academic integrity guidelines found in the current student handbook (see <http://www.fullerton.edu/deanofstudents/judicial/policies.htm>).

Examples of actions that constitute academic dishonesty include, but are not limited to:

1. Unacceptable examination behavior – communicating with fellow students, copying material from another student’s exam or allowing another student to copy from an exam, possessing or using unauthorized materials, or any behavior that defeats the intent of an exam.
2. Plagiarism – taking the work of another and offering it as one’s own without giving credit to that source, whether that material is paraphrased or copied in verbatim or near-verbatim form.
3. Unauthorized collaboration on a project, homework or other assignment.
4. Documentary falsification including forgery, altering of campus documents or records, tampering with grading procedures, fabricating lab assignments, or altering medical excuses.

**Emergency Evacuation:** In the event of an emergency such as earthquake or fire:

- Take all your personal belongings and leave the classroom. Use the stairways located at the east, west, or center of the building.
- Do not use the elevator. They may not be working once the alarm sounds.
- Go to the lawn area towards Nutwood Avenue. Stay with class members for further instruction.
- For additional information on exits, fire alarms and telephones, **Building Evacuation Maps** are located near each elevator.
- Anyone who may have difficulty evacuating the building, please see the instructor.

**Some Important dates:**

**September 4 (Tuesday):** Last day for students to drop **without** a grade of “W”. Students drop using Titan.

**September 28 (Friday):** Last day the Math Department will be flexible on the approval of late withdrawal requests. Beginning Monday, October 1, students must have a serious and compelling reason for withdrawing (e.g. medical reason) and must provide supporting documentation for their reason. **Please encourage students who are considering withdrawing to do so BY September 28.**

**November 9 (Friday):** Last day to withdraw with a truly serious and compelling reason that is beyond the student’s control. Students must document their reason.