Math 120 – Introduction to Probability and Statistics

Fall 2011 - Section 3, MH 438, MW 10:00-11:15 a.m.

Section 5, MH 438, MW 11:30-12:45 p.m.

Instructor: Mortaza (Mori) Jamshidian, Professor
Office: MH 182i, Phone: 657-278-2398
Office Hours: MW 12:45-1:30 p.m., 3:45 – 5:00 p.m., or by appointment
Homepage: http://math.fullerton.edu/mori E-mail: mori@fullerton.edu


Calculator: A scientific calculator that includes statistical functions is required.

Software: We will use R for the projects and homework assignments that require software. 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, go to CRAN mirror. R is also available during business hours in the Math Department’s computer lab MH 452 (except when classes are held there), and it is also available in MH 26. Please see http://math.fullerton.edu/framesets/Simlab/simlab_set.htm for open lab hours. I recommend that you also download and use Rstudio (http://rstudio.org/) which is a new integrated development environment for R. I will explain most of what you need to know about this software in class.

Your e-mail address wanted: You are required to send e-mail containing the following information to me, no later than TODAY 8:00 p.m.
The e-mail should contain the following information:
1. The subject line should indicate Math 120, Section 2 or Section 5, depending on what section you are enrolled in.
   The body should include:
2. Your complete name (First and last name)
3. An e-mail address that you check very regularly (not necessarily your school e-mail).
4. Your major/concentration/minor.
5. Any comments or suggestions
I will send various communiqué, including class notes, through e-mail. A “test e-mail” will be sent to everyone before our next Wednesday class. If you do not receive this test e-mail, please see me ASAP 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 Objectives: Our main objective is to discuss the “big ideas” in analysis of data without being too bugged down on computational formulas. In this course, you will learn statistical terminologies, methods
of exploring, summarizing, and presenting data, methods of performing sample surveys, designing experiments, and critiquing results of surveys and experiments. On the more theoretical side, we will learn concepts of probability, random variable, and sampling distributions. These will form the foundation for further topics of estimation, confidence intervals, and tests of hypothesis which we will cover.

**Course requirements and Grading Policy:**

**Homework:** There will be weakly homework assignments, due every Wednesday, except for the exam days (see my webpage for homework assignments).

**Projects:** We will have both in-class and outside class projects that involve data collection, data presentation, and data analysis. To get credit for the projects you must be present in class the day that I will distribute the project. The projects and in-class activities dates will not be announced in advance.

**Exams:** There will be two midterm exams, and a comprehensive final exam. All the exams will be closed book and closed notes. However, you will be allowed to bring in one page of information during each midterm exam and five pages of information during the final exam.

**Percentages and Exam Dates:**

<table>
<thead>
<tr>
<th>Hwk/Proj/lab exam</th>
<th>Exam I</th>
<th>Exam II</th>
<th>Final Exam</th>
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<tbody>
<tr>
<td>20%</td>
<td>25%</td>
<td>25%</td>
<td>30%</td>
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<tr>
<td>9/26 (Mon.)</td>
<td>10/31 (Mon.)</td>
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<td>Section 3: 12/12 (Mon. 12:00-1:50)</td>
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<td></td>
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<td>Section 5: 12/16 (Fri. 12:00-1:50)</td>
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**Letter Grades:**

<table>
<thead>
<tr>
<th>Percent</th>
<th>Grade</th>
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<tbody>
<tr>
<td>97-100</td>
<td>A+</td>
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<tr>
<td>90-96</td>
<td>A</td>
</tr>
<tr>
<td>88-89</td>
<td>A-</td>
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<tr>
<td>85-87</td>
<td>B+</td>
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<tr>
<td>80-84</td>
<td>B</td>
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<td>78-77</td>
<td>B-</td>
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<td>76-75</td>
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<td>70-69</td>
<td>C</td>
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<td>D+</td>
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<td>50-49</td>
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A grade of “C” (2.0) or better is required to meet this General Education requirement. A grade of “C-” (1.7) or below will not satisfy this General Education requirement.”
Late homework/projects will not be accepted. Make-up exams will be given only in extreme instances and only with advanced 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://hhd.fullerton.edu/MSW/documents/StudentHandbook.pdf](http://hhd.fullerton.edu/MSW/documents/StudentHandbook.pdf)).

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.

**Important Dates to Remember:**

**September 6 (Tuesday):** Last day for students to ADD with a permit. All permits expire at midnight on September 6.

**September 6 (Tuesday):** Last day for students to DROP without a grade of “W”. Students drop using Titan Online.

**September 30 (Friday):** Last day the Math Department will be flexible on the approval of late withdrawal requests. Beginning Monday, October 3, 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 30.**

**November 10 (Thursday):** Last day to withdraw with a truly serious and compelling
reason that is clearly beyond the student’s control. Students must document their reason.

I. A statement of the specific General Education requirement(s) that the course meets. *(GE subarea B.4.)*

II. An inclusion of the learning goals for the General Education Area or subareas in which the course carries credit.

*Courses that fulfill GE subarea B.4. include the following learning goals:*

a. To understand and appreciate the varied ways in which mathematics is used in problem-solving.

b. To understand and appreciate the varied applications of mathematics to real-world problems.

c. To perform appropriate numerical calculations, with knowledge of the underlying mathematics, and draw conclusions from the results.

d. To demonstrate knowledge of fundamental mathematical concepts, symbols, and principles.

e. To solve problems that require mathematical analysis and quantitative reasoning.

f. To summarize and present mathematical information with graphs and other forms that enhance comprehension.

g. To utilize inductive and deductive mathematical reasoning skills in finding solutions, and be able to explain how these skills were used.

h. To explain the overall process and the particular steps by which a mathematical problem is solved.

i. To demonstrate a sense of mastery and confidence in the ability to solve problems that require mathematical concepts and quantitative reasoning.