COURSE AND CONTACT INFORMATION

Course: Statistics 6201-10 – Mathematical Statistics  
Semester: Fall 2012 (08/28/12 - 12/07/2012)  
Class: Time: MW Day 12:45-2 pm, Location: BELL 106

INSTRUCTOR
Name: Professor John Ferguson  
Campus Address: 2140 Pennsylvania Avenue, room 302  
Phone: (202) 994-9025  
E-mail: jferguson@gwu.edu  
Office hours: 2:10-3:10pm Monday, Wednesday

TA: Quan Zou  
Campus Address: Pennsylvania Avenue, basement room #6  
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Email: qzou@gwu.edu  
Office hours: Thursday 12:00pm – 12:45pm;1:35pm-2:20pm; 3:10pm – 3:40pm and by appointment

Text : Statistical Inference (Second Edition) by Casella, George and Berger, Roger  
Publisher: Duxbury Press. ISBN/ISSN 0-534-24312-6  
Supplementary Text: Introduction to Mathematical Statistics (7th Edition), by Hogg, McLean and Craig; Publisher: Prentice Hall; ISBN 9780321795434

Course Content: This is the first part of a two semester course in Mathematical Statistics. Probability theory is presented as a mathematical foundation for statistical inference. Axiomatic probability is introduced and then some standard discrete and continuous probability distributions are presented. Joint distributions and transformations are discussed. Probabilistic convergence concepts are introduced. Chapters 1 - 5 from the text book will be covered. Some external readings may be assigned. Any changes will be announced in the class.

Course Prerequisites: Math 33 (Multivariable Calculus), Math 124 (Linear Algebra). Please refresh your calculus and algebra if you have not taken these courses recently.

Homework Assignments, Quizzes and Exams  Weekly homework will be assigned in class on Wednesday and will be due in two weeks, starting from Wednesday September 5. There will be a midterm and a Final exam. All exams are closed book. However you can bring a sheet of formulas (defined as a one page sheet of A4 paper with writing on both sides if necessary) to the exams.
There will also be two 30 minute in-class closed book quizzes roughly around Week 4 and Week 11 and will be announced in advance.

Midterm Exam: Tentatively Scheduled for Wednesday, October 10, 2012
Final Exam: Tentatively Scheduled for Monday, December 17th, 12:40-2:40pm

Course Homepage: http://blackboard.gwu.edu. Please check this page frequently. I will post important information such as lecture notes and homework.

Grading Policy
Final grade is computed as follows:
Homework Assignments: 30%
Quizzes 10%
Midterm Exam: 25% Final Exam: 35%

Learning Outcomes
As a result of taking this course students should be able to:

- Make probabilistic arguments and use key theoretical tools to explore the properties of random variables.
- Derive fundamental results in the theory of probability and random variables.
- Formulate probabilistic models for science, engineering, economics, public policy and many other areas of application.
- Recognize and appreciate the interplay between probability and statistics.
- Apply core skills in new contexts

Code of Academic Integrity: All examinations, papers, and other graded work products and assignments are to be completed in conformance with The George Washington University Code of Academic Integrity. It states: “Academic dishonesty is defined as cheating of any kind, including misrepresenting one’s own work, taking credit for the work of others without crediting them and without appropriate authorization, and the fabrication of information.” For the remainder of the code, see: http://www.gwu.edu/~ntegrity/code.html

Class Policy: Late work will not be accepted. Except for medical cases (with proper documentation) there will be no make-ups. If you miss an exam or miss a deadline you get zero credit for that part. For university policies on teaching see http://www.gwu.edu/~academic/teaching/main.htm

Student Services: If you experience difficulty in this course for any reason, please consult with me. If you have a disability and require accommodations, please notify me
with a letter from DSS so that we can make arrangements. DISABILITY SUPPORT SERVICES (DSS): Any student who may need an accommodation based on the potential impact of a disability should contact the Disability Support Services office at 202-994-8250 in the Marvin Center, Suite 242, to establish eligibility and to coordinate reasonable accommodations. For additional information please refer to: http://gwired.gwu.edu/dss/

UNIVERSITY COUNSELING CENTER (UCC): The University Counseling Center (UCC, 202-994-5300, http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices) offers 24/7 assistance and referral to address students’ personal, social, career, and study skills problems. Services for students include: i) crisis and emergency mental health consultations, ii) confidential assessment, counseling services (individual and small group), and referrals.

EMERGENCY INFORMATION
In the case of an emergency, if at all possible, the class should shelter in place. If the building that the class is in is affected, follow the evacuation procedures for the building. After evacuation, seek shelter at a predetermined rendezvous location.

To Report an Emergency or Suspicious Activity
Call the University Police Department at 202-994-6111

Shelter in Place

Although it is unlikely that we will ever need to shelter in place, it is helpful to know what to do just in case. No matter where you are, the basic steps of shelter in place will generally remain the same.

• If you are inside, stay where you are unless the building you are in is affected. If it is affected, you should evacuate. If you are outdoors, proceed into the closest building or follow instructions from emergency personnel on the scene.
• Locate an interior room to shelter inside. If possible, it should be above ground level and have the fewest number of windows. If sheltering in a room with windows, move away from the windows. If there is a large group of people inside a particular building, several rooms maybe necessary.
• Shut and lock all windows (tighter seal) and close exterior doors.
• Turn off air conditioners, heaters, and fans. Close vents to ventilation systems as you are able. (University staff will turn off ventilation as quickly as possible).
• Make a list of the people with you and ask someone to call the list in to UPD so they know where you are sheltering. If only students are present, one of the students should call in the list.
• Await further instructions. If possible, visit Campus Advisories for incident updates (http://CampusAdvisories.gwu.edu) or call the GW Information Line 202-994-5050.
• Make yourself comfortable and look after one other. You will get word as soon as it is safe to come out.
Alert DC
Alert DC provides free notification by e-mail or text message during an emergency. Visit Campus Advisories for a link and instructions on how to sign up for alerts pertaining to GW.