THE GEORGE WASHINGTON UNIVERSITY
Department of Statistics

SYLLABUS
STAT 6202.11 – Mathematical Statistics - II
Spring 2012 - CRN 65314
Lectures: M 6:10–8:40 p.m. ROME 351

Instructor: Dr. Subrata Kundu, ROME Hall, room 557. kundu@gwu.edu Phone : (202)994-6355

Office Hours: M T : 4:30 - 5:30 p.m. and by appointment.

TA: Ms. Xirou Song. Your TA will grade homework assignments.
TA Office: TBA.
TA Office Hours: N/A.

Course Structure: The class consists of one three hour lecture per week. Your grade is based on homework, Quizzes, one midterm and the final.


Course Content: This is the second part of a two semester course in Mathematical Statistics. Our goal is to develop an appropriate level of mathematical and statistical literacy and competency. Full-fledged statistical theory with mathematical rigor, aimed at designing good statistical procedures will be developed. Topics will include Sampling distributions, principles of data reduction (sufficiency and ancillarity), theory of point and interval estimation, hypothesis testing etc. Chapters 5 - 10 from the text book will be covered. Some external readings will be assigned. Any changes will be announced in the class. Prerequisite: Stat 6201.

Learning Outcome: As a result of taking this course students
i) will have a firm grasp of the theoretical development of statistical techniques.
ii) should be able to formulate statistical models and find optimal solutions for statistical problems in business, engineering, and science.
iii) should be able to determine good and optimal estimators and tests according to statistical criteria; construct new estimators, tests and study their properties.
iv) Recognize and appreciate the interplay between probability and statistics.
v) will master the art of writing statistical proofs well, consistent with the written tradition of the discipline and have the skills to communicate statistical ideas effectively.

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
**Homework and Quizzes:** Homework will be assigned in the lecture every week. Your homework will be collected a week later. You must work independently. A few quizzes (possibly unannounced) will be given.

**Midterm:** One *closed–book* midterm examinations will be given around March 7th. If the midterm is missed, you will receive zero credit for that part of the grade. No make-up midterm will be given. In exceptional circumstances (e.g. well-documented medical problems), a missed midterm will not be counted when computing your course grade.

**Final Exam:** The Final examination (Time and Date to be announced) is cumulative. In the event that you are going to miss an examination, you must notify me prior to the examination. There will be no make-up final.

**Course Grading:** Your final letter grade will be based on a total score computed as follows:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Homework and quizzes</td>
<td>40%</td>
</tr>
<tr>
<td>Midterm</td>
<td>30%</td>
</tr>
<tr>
<td>Final</td>
<td>30%</td>
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</tbody>
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A grade of INCOMPLETE will *ONLY* be given to a student who is *passing* the course and cannot complete the course due to illness or other (documented) circumstances beyond their control.

**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](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/](http://gwired.gwu.edu/dss/)

UNIVERSITY COUNSELING CENTER (UCC): The University Counseling Center (UCC, 202-994-5300, [http://gwired.gwu.edu/counsel/CounselingServices/AcademicSupportServices](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.

SECURITY: 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. See Blackboard page for more information.

**Misc.:** Please keep your cell phones and laptops off. No eating in the classroom.