MAT 521, INTRODUCTION TO PROBABILITY AND STATISTICS
Spring Semester 2014

Course Description: Algebra of sets. Probability in finite sample spaces. Binomial and multinomial coefficients. Random variables. Expected value and standard deviation. Density functions. Statistical applications.

Text: *Probability and Statistics,* 4rd Edition, by Morris H. DeGroot and Mark J. Schervish. The material covered in this course appears in Chapters $1 - 6$.

Professor: Yuan Yuan (Carn 317A).

Office Hour: Tuesday 1:50-3:00.

Calculator Policy: It is important during the semester to learn how to use technology. The TI-83/84 calculators have the required capabilities. Policy on the use of calculators during tests will be set by your instructor, but under no circumstances is a calculator which can do symbolic integration and manipulation allowed on tests.

Mathematics Prerequisite: MAT 397.

Grading   Grades for the course will be based on the total number of points accumulated on two mid-term exams, the final examination and a combination of homework and/or quizzes. The mid-term exams will each count 25%, homework/quizzes 25% and the final exam 25% toward your grade. There will be no make-ups exams. If you miss an exam for a valid reason, the corresponding portion of the final will be used to make up the missing score.

Exams: The first mid-term will be given after we finish Chapter 1 and 2 and the second will be given after we finish Chapter 3 and 4.

Homework: In order to learn this material it is absolutely vital that you do the problems. Time will be allotted at the beginning of most class periods to discussing the homework assignments. The exams will have a very large overlap with homework, although it is important to have also studied the material covered in class.

Class Attendance and Participation: You are expected to attend and participate in class. Missing class is the most common reason for poor performance in the course. If you must miss a class, you are responsible for obtaining notes for that class from a student who attended. It is also your responsibility to find out about any announcements made in class.

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort.

Learning Goals and Expectations: Students are expected to master the basic notions of probability and to acquire the skills necessary for the application of these notions to the further

study of probability and/or statistics.

Disabilities: Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498 and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance. For more information contact the Office of Disability Services.

Office of Disability Services: Office of Disability Services, 804 University Avenue Room 309, Syracuse, New York 13244-2330 (315) 443-4498 TDD: (315) 443-1371 e-mail: odssched@syr.edu

Religious Observances Policy. SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online registration is available through MySlice (Student Services -> Enrollment -> My Religious Observances) from the first day of class until the end of the second week of classes.

Course Coordinator: Professor D. Quinn, 229D Physics Building. Telephone 443-1484. E-mail: dpquinn@syr.edu. Please inform your instructor of any problems you have. Problems not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor without delay.

Homework Assignments: (Attempt the relevant homework as soon as the section is covered in class.)

SECT. PROBLEMS

SECT.	PROBLEMS	SECT.	PROBLEMS
1.4	1, 6, 7	3.7	1, 5, 6, 7, 9, 12
1.5	1, 2, 3, 4, 5, 6, 7, 8, 10	3.8	1, 2, 4, 6, 7, 8, 15
1.6	1, 2, 3, 4, 5, 6, 8	3.9	1, 2, 3, 4, 5, 6, 7, 8, 14
1.7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	4.1	1, 2, 3, 4, 5, 6, 7, 8, 9
1.8	1, 4, 9, 10, 11, 12, 13, 14, 16, 17, 18	4.2	2, 3, 4, 6, 8, 9
1.9	1, 2, 3, 4, 6, 7, 8, 9, 10	4.3	1, 2, 3, 4, 6, 7
1.10	2, 3, 4, 6, 7, 8, 10, 11	4.4	1, 2, 3, 6, 7, 8, 10, 11, 12
2.1	1, 2, 3, 4, 6, 7, 8, 9, 11, 12	4.5	2, 3, 4, 6, 9, 12, 17
2.2	1, 4, 9, 10, 11, 12, 13, 16, 17, 18	4.6	1, 3, 5, 10, 12, 13, 14
2.3	1, 3, 4, 6, 7, 8, 13	5.2	1, 3, 4, 5, 6, 7, 11
3.1	1, 2, 3, 4, 5, 6, 7, 8, 10	5.3	2, 3, 4, 5
3.2	1, 2, 3, 4, 7, 8	5.4	2, 3, 4, 6, 7, 12, 13, 14
3.3	1, 2, 4, 5, 6, 7, 8, 11	5.6	2, 3, 5, 6, 7, 9, 10, 11, 13, 14
3.4	1, 2, 3, 4, 5, 6, 8	6.2	1, 5, 6, 8
3.5	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 15	6.3	1, 2, 3, 4, 7, 9
3.6	1, 2, 4, 6, 7, 8, 10, 12		