

MAT 521 Section 1
Introduction to Probability and Statistics
Spring Semester 2014

MW 2:15 pm - 3:35 pm Carnegie 114

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Office Hours: MWF 10:30 - 11:30 am and 1:00 - 2:00 pm

Mathematics Prerequisite: MAT 397

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

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.

Grading: Grades for the course will be based on the total number of points accumulated on two mid-term exams, the final exam and quizzes. The mid-term exams will each count 25%, 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: We will have two mid-term exams and a final exam on the following dates:

Exam 1: Wed, Feb 12
Exam 2: Wed, Apr 2
Final Exam: Thu, May 1, 12:45 pm - 2:45 pm

The final exam will only be given at this time. Arrange your travel plans accordingly.

Homework/Quiz: Attached is a list of assigned homework problems. In order to learn the course 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 quizzes will have a very large overlap with homework, although it is important to have also studied the material covered in class. Quizzes will take place every Monday in the beginning of class except for the Mondays after the exams.

Attendance: 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.

Calculator Policy: It is important during the semester to learn how to use technology. The TI-83/84 calculators have the required capabilities. Calculators that can do symbolic integration and manipulation are not allowed in this class.

Cell Phones: Cell phones should be turned off and put away during class. Calculators on cell phones may not be used on tests or quizzes.

Students with Disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) at

<http://disabilityservices.syr.edu>

located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. Related link:

<http://disabilityservices.syr.edu/faculty-staff/syllabus-statement/>

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 notification process is available through MySlice (Student Services → Enrollment → My Religious Observances) from the first day of class until the end of the second week of class. Related link:

http://supolicies.syr.edu/studs/religious_observance.htm

Academic Integrity: Syracuse University sets high standards for academic integrity. Those standards are supported and enforced by students, including those who serve as academic integrity hearing panel members and hearing officers. The presumptive sanction for a first offense is course failure, accompanied by the transcript notation Violation of the Academic Integrity Policy. The standard sanction for a first offense by graduate students is suspension or expulsion. Students should review the Office of Academic Integrity online resource Twenty Questions and Answers About the Syracuse University Academic Integrity Policy and confer with instructors about course-specific citation methods, permitted collaboration (if any), and rules for examinations. The Policy also governs the veracity of signatures on attendance sheets and other verification of participation in class activities. Additional guidance for students can be found in the Office of Academic Integrity resource: What does academic integrity mean? Related links:

The Academic Integrity Policy:

<http://academicintegrity.syr.edu/academic-integrity-policy/>

Twenty Questions and Answers about the Academic Integrity Policy:

<http://academicintegrity.syr.edu/faculty-resources/>

What does academic integrity mean?

<http://academicintegrity.syr.edu/what-does-academic-integrity-mean/>

Learning Goal: Students are expected to master the basic ideas of probability and to acquire the skills needed for the application of these ideas to the further study of probability and/or statistics.

HOMEWORK ASSIGNMENTS

Attempt the relevant homework as soon as the section is covered in class.

SECTION	PROBLEMS
1.4	1, 6, 7
1.5	1, 2, 3, 4, 5, 6, 7, 8, 10
1.6	1, 2, 3, 4, 5, 6, 8
1.7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
1.8	1, 4, 9, 10, 11, 12, 13, 14, 16, 17, 18
1.9	1, 2, 3, 4, 6, 7, 8, 9, 10
1.10	2, 3, 4, 6, 7, 8, 10, 11
2.1	1, 2, 3, 4, 6, 7, 8, 9, 11, 12
2.2	1, 4, 9, 10, 11, 12, 13, 16, 17, 18
2.3	1, 3, 4, 6, 7, 8, 13
3.1	1, 2, 3, 4, 5, 6, 7, 8, 10
3.2	1, 2, 3, 4, 7, 8
3.3	1, 2, 4, 5, 6, 7, 8, 11
3.4	1, 2, 3, 4, 5, 6, 8
3.5	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 15
3.6	1, 2, 4, 6, 7, 8, 10, 12
3.7	1, 5, 6, 7, 9, 12

- 3.8 1, 2, 4, 6, 7, 8, 15
- 3.9 1, 2, 3, 4, 5, 6, 7, 8, 14
- 4.1 1, 2, 3, 4, 5, 6, 7, 8, 9
- 4.2 2, 3, 4, 6, 8, 9
- 4.3 1, 2, 3, 4, 6, 7
- 4.4 1, 2, 3, 6, 7, 8, 10, 11, 12
- 4.5 2, 3, 4, 6, 9, 12, 17
- 4.6 1, 3, 5, 10, 12, 13, 14
- 5.2 1, 3, 4, 5, 6, 7, 11
- 5.3 2, 3, 4, 5
- 5.4 2, 3, 4, 6, 7, 12, 13, 14
- 5.6 2, 3, 5, 6, 7, 9, 10, 11, 13, 14
- 6.2 1, 5, 6, 8
- 6.3 1, 2, 3, 4, 7, 9