SYRACUSE UNIVERSITY

MAT 521, INTRODUCTION TO PROBABILITY AND STATISTICS

SPRING, 2016 SYLLABUS

SECTION 1, TTH 9:30-10:50

***Instructor***    Professor Philip Griffin
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***Office Hours***  TTh 11:00-12:00 and by appointment

***Course Description.*** Chapters 1-6 of DeGroot and Schervish cover the topics of this course. These include basic probability theory, random variables, expectation, limit theorems, statistical applications, and analysis of large random samples.

***Text*** Probability and Statistics, 4th Edition, by Morris H. DeGroot  and Mark J. Schervish.

***Mathematics Prerequisite*** MAT 397.

***Grading*** Grades for the course will be based on the total number of points accumulated on homework, two tests and the final exam. Each test will count 25%, the homework 20% and the final exam 30% toward your course grade. There will be absolutely no make-ups for any reason. If you miss a test for a valid reason, the final will count correspondingly more.

***Exams.*** The dates for the exams are;

Test 1: Th, Feb 18

Test 2: Th, Mar 31

Final Exam: Th, May 5, 12:45pm-2:45pm

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

***Homework.*** Attached is a list of assigned homework problems for the course. Unless otherwise indicated, on Tuesday of each week you will be expected to turn in the problems from this list for the sections covered during the previous week.  Some of the problems will be graded by a part-time grader.  **Be sure to show your work (reasoning)**. You may discuss these problems among yourselves, but each of you is expected to write up your own solutions independently. An important way to learn this material is to do the problems. Homework turned in late cannot be graded, and you will not receive credit for it.

***Attendance*** You are expected to attend every class, every hour exam, and the final exam. If you miss a class, it is your responsibility to obtain a copy of the lecture notes for that class from another student. You are also responsible for any announcements about changes to the course schedule, the exam schedule, or the course requirements made during that class.

***Calculator.*** You will need a calculator which contains tables of the binomial, normal and Poisson distributions. The TI-83+ will be used to demonstrate these functions in class.

***Students with disabilities.*** If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS), 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 are 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 Goals.* 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.

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

### HOMEWORK ASSIGNMENTS

| SECTION | PROBLEMS |
|---------|----------|
| 1.4 | 6,7 |
| 1.5 | 1, 2, 3, 4, 5, 6, 7, 8 |
| 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, 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 |
| 2.2 | 1, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18 |
| 2.3 | 2, 3, 4, 5, 6 |
| 3.1 | 1, 2, 3, 4, 5, 6, 7, 8 |
| 3.2 | 1, 2, 3, 4, 7, 8 |
| 3.3 | 1, 2, 4, 5, 6, 7, 8 |

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|---|---|
| 3.4 | 1, 2, 3, 4, 5, 6, 8 |
| 3.5 | 1, 2, 3, 4, 5, 6, 7, 8, 10, 11 |
| 3.6 | 1, 2, 4, 6, 7, 8 |
| 3.7 | 1, 5, 6, 7 |
| 3.8 | 1, 2, 4, 6, 7, 8 |
| 3.9 | 1, 2, 3, 4, 5, 6, 7 |
| 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 |
| 4.6 | 1, 3, 5, 10, 12, 13, 14 |
| 5.2 | 1, 3, 4, 5, 6, 7 |
| 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 |
| 6.4 | 2, 4, 5 |