

MAT 122 Probability and Statistics for the Liberal Arts II, Summer II 2015

Instructor: Mr. Stephen Farnham, 400A Carnegie, sdfarnha@syr.edu

Course Supervisor: Professor Graham Leuschke, 317G Carnegie, 315-443-1500. Problems that cannot be resolved with the instructor should be brought to the attention of the course supervisor.

Dates: July 6-August 14

Class Times: Monday-Thursday 8:00-10:25 am

Class Location: BH 119, PB 115

Office Hours: Monday, Wednesday, Thursday 10:30-11:30 and by appointment

Mathematical Prerequisites and Restrictions: MAT 121 is a prerequisite for MAT 122. A student cannot receive credit for MAT 122 after completing any MAT course numbered above 180 with a grade of C or better. MAT 122 and the Liberal Arts Core: The sequence MAT 121 – MAT 122 can be used to satisfy the quantitative skills requirement of the liberal arts core in the College of Arts and Sciences.

Texts: Elementary Statistics with Finite Mathematics, Custom Edition for Syracuse University, Math 121 & 122, and the Minitab Manual that goes with the 12th edition of Elementary Statistics by Mario F. Triola.

Labs: As part of this course, some of the class time will be spent in the computer lab. I will let you know a few days in advance each time this will happen. During this lab time, students will complete projects on Minitab to be submitted as part of their grade. If a student is unable to attend class during one of the times scheduled in the lab, it is his or her responsibility to make up the lab for a grade. **NO LAB GRADES WILL BE DROPPED!**

Homework: Homework is a way to become proficient in the materials learned in class. It will not be handed in nor will it be graded. I will write down homework problems on the board at the end of each class. It is also a good idea to try the statistical literacy and critical thinking, chapter quick quiz, and review exercises at the end of each chapter.

Exams: All exams (including the final exam) are **open book**. The exams will be given in the last hour of class with a review of materials on the exam during the first half of class. Students may use their textbooks as well as any other books or notes they wish. Students may use any type of calculator they wish except for calculators capable of wireless communication. Cell phones or any other device capable of wireless communication are not allowed. Any questions about the grading of the four exams during the term must be brought to the instructor before the day of the final exam.

Make-up Exams: Makeups for exams will only be given as required by the University Religious Holliday policy and perhaps a few other very special circumstances. Do not assume you know what constitutes a very special circumstance without first discussing the matter with me. With a good reason I may agree to replace a missed test with the grade on the final exam grade. Again, do not assume you know what constitutes a good reason without first discussing the matter with me. It is much better to contact me before the exam.

Calculation of Course Grade: Each midterm exam and the final exam will be graded on a scale of 0–100. Your labs will also be graded on a scale of 0- 100. Your overall score for the term is then computed by the following formula.

Overall score (x) = (.20)(test 1) + (.20)(test 2) + (.20)(test 3) + (.25)(final exam) + (.15)(average of lab scores). Your letter grade for the term then comes from the following table:

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|-------------|--------------|-------------|-------------|
| 0<=x<60 F | 60<=x<70 D | 70<=x<73 C- | 73<=x<76 C |
| 76<=x<80 C+ | 80<=x<83 B- | 83<=x<86 B | 86<=x<90 B+ |
| 90<=x<93 A- | 93<=x<=100 A | | |

Final Exam: The Final Exam for this course will be held in class on August 13. It will be cumulative, but more material will be pulled from the last two chapters of the course.

Attendance: Students are expected to attend all classes. Since each class is approximately 2.5 hours, missing even one class is detrimental to learning the materials required to be successful. If a class is missed, it is the student’s responsibility to get notes and utilize one of the available resources listed below to learn the material.

Available student assistance: Instructor office hours, Math Clinic, Review sessions.

Calculator: Your calculator should be able to take square roots. Some of the book’s practice problems require the use of a Graphing Calculator, but no graded material will require this.

Tentative Schedule*:

July

| | |
|----|----------------------------------------------------------|
| 6 | Introductions, 8-1, 8-2 |
| 7 | 8-3, 8-4 |
| 8 | 8-4, 8-5 |
| 9 | Testing Hypothesis Lab Minitab Experiments 8.1, 8.2, 8.3 |
| 13 | Review and Exam 1 |
| 14 | 10-1, 10-2 |
| 15 | 10-3 |
| 16 | Exam 1 Return, Minitab Experiments 8.6, 8.10, 8.14 |
| 20 | 11-1, 11-2 |
| 21 | 11-3 |
| 22 | Review and Exam 2 |
| 23 | 13-1, 13-2 |
| 27 | Exam 2 Return, Minitab Experiments 10.2, 10.3, 10.4 |
| 28 | 13-7, 14-1, 14-2 |

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|--------|------------------------------|
| 29 | 14-2, 14-3 |
| 30 | 7.6, Minitab Experiments TBD |
| August | |
| 3 | 2.1, 2.2 |
| 4 | Review and Exam 3 |
| 5 | 2.3, 2.4 |
| 6 | 2.5, 2.6 |
| 10 | Return Exam 3 10.1, 10.2 |
| 11 | 10.2, 10.3 |
| 12 | Review for Final |
| 13 | Final Exam |

From July 6 to July 29 sections are from the first part of the book. From July 30 onward sections are from the second part of the book. The chapters do not go in order numerically between books.

*These dates are tentative, we may cover more material on some days and less on other days.

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. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations. Making arrangements with ODS takes time. Do not wait until just before the first test.

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: 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. For more information and the complete policy, see http://supolicies.syr.edu/ethics/acad_integrity.htm

Goals: The goal of MAT 122 is to provide the student the following. A basic understanding of several types of the statistical process hypothesis testing. Some knowledge about how to find the line closest to passing through a set of points and how that line can be used. Familiarity with matrices and solving systems of linear equations. An introduction to Markov chains. Practical experience with statistical computer software (Minitab).