MAT 121
Probability and Statistics for the Liberal Arts I
Fall 2011, p. 1 (UC)

Instructor: Ms. Sarah Janssen
Class time: MW, 5:30-7; Physics Building 115
Office: Carnegie, 4th floor, desk C2 Office hours: TBA

Course Supervisor: Professor U. Banerjee, 206B Carnegie, x1460.
Problems you cannot resolve with your instructor should be brought to the attention of the course supervisor.

Mathematical Prerequisites and Restrictions: MAT 121 has no formal prerequisites; however, it is desirable that students have a reasonable level of competence in high school algebra. MAT 121 is a prerequisite for MAT 122. A student cannot receive credit for MAT 121 after completing STT 101 or any MAT course numbered above 180 with a grade of C or better.

MAT 121 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 11th edition of Elementary Statistics by Mario F. Triola.

Computer Labs: Some class days are designated as "Computer". These meet in the Mathematics Department Computer Laboratory, Carnegie 100. There will be computer lab assignments to be done during these computer class times, which you must hand in to be graded. Please bring your text book, laboratory manual, and calculator to these computer class times.

Homework: Homework is for your practice. It will not be handed in; it will not be graded. Page 5 of the syllabus contains suggested problems for each section. 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: You should bring your textbook (not the lab manual) and calculator to each exam (including the final). You will be allowed to use your textbook (not the lab manual) and calculator during the exam, but will not be allowed to use any notes other than what you write in your textbook. See page 6 for more details. Student ID's will be checked during the exams.

Make-up Exams: Make-up exams will be given only in very exceptional circumstances. In most cases instead of a make-up exam the final exam will be counted extra. In either case, the student must convince the instructor that there is a very good reason for missing the exam. Please inform your instructor during the first two weeks of classes if you will require a make-up exam for religious reasons.

Calculation of Course Grade: Each midterm exam and the final exam will be graded on a scale of 0–100. Your computer 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 = (.15)(test 1) + (.15)(test 2) + (.15)(test 3) + (.15)(test 4) + (.20)(final exam) + (.20)(average of lab scores).

Your letter grade for the term then comes from the following table.

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

Final Exam: *Monday, December 12, during 5:15 p.m. – 7:15 p.m*. The final exam will not be given at any other time.

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.

Calculator: Your calculator should be able to take square roots.

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

Date		Sections	
Aug	29	1-1, 1-2, 1-3, 1-4, 1-5	All these sections are from the first
	31	2-1, 2-2, 2-3	part of the book. Taken from
Sept	7	2-4, 2-5	Elementary Statistics, Eleventh Edition
	12	Computer	by Mario F. Triola.
	14	Review, Catch up	
	19	Test 1	
	21	3-1, 3-2, 3-3	
	26	3-4	
	28	4-1, 4-2, 4-3	
Oct	3	Computer	
	5	4-4, 4-5	
	10	4-7	
	12	Review, Catch up	
	17	Test 2	
	19	5-1, 5-2	
	24	Computer	
	26	5-3, 5-4	
	31	6-1, 6-2	
Nov	2	6-3, 6-4	
	7	6-5, 6-6	
	9	Review, Catch up	
	14	Test 3	
	16	7-1, 7-2	
	28	Computer	
	30	7-3, 7-4, 7-5	
Dec	5	Review, Catch up	
	7	Test 4	
	12	Final Exam (5:15-7:15pm)	

Final Exam: Notice that the final exam time (5:15-7:15pm) is similar to but not the same as the regular class time on Monday, December 12, 2010.

Computer Labs

1. Instructor cover: Introduction to Computers; Chapter 1.

2. Instructor cover: Chapter 2.

3. Students do: Experiments 2-2, 2-10, 2-12, 2-13, 2-14, 2-18, 2-20.

4. Instructor cover: Chapter 3.

5. Students do: Experiments 3-1, 3-2, 3-3, 3-4, 3-9.

6. Instructor cover: Chapter 4.

7. Students do: Experiments 4-1, 4-2, 4-3, 4-19 (Count 1's not 6's.).

8. Instructor cover: Sections 5-1, 5-2, 5-4.

9. Students do: Experiments 5-1, 5-4, 5-6, 5-7, 5-8.

10. Instructor cover: Sections 6-1, 6-2, 6-3, 6-5.

11. Students do: Experiments 6-1, 6-3, 6-5.

12. Instructor cover: As much of chapter 7 as you have time for.

13. Students do: Experiments 7-1, 7-2, 7-5, 7-6, 7-13.

Suggested Homework Problems
1-2: 1-25 odd
1-3: 1-31 odd
1-4: 1-27 odd
1-5: 1-33 odd
2-2: 1-21 odd, 29
2-3: 1-13 odd
2-4: 1-25 odd
2-5: 1-9 odd
3-2: 1-23 odd, 29, 31, 33
3-3: 1-23 odd, 29-35 odd
3-4: 1-29 odd
4-2: 1-39 odd
4-3: 1-39 odd
4-4: 1-29 odd
4-5: 1-29 odd
4-7: 1-35 odd
5-2: 1-29 odd
5-3: 1-43 odd
5-4: 1-19 odd
6-2: 1-51 odd
6-3: 1-31 odd
6-4: 9, 13, 19
6-5: 1-19 odd
6-6: 1-31 odd
7-2: 1-43 odd
7-3: 1-27 odd, 31-35 odd
7-4: 1-29 odd
7-5: 1-23 odd

Recall the following rules from the syllabus for the exams.

Exams: You should bring your textbook (not the lab manual) and calculator to each exam (including the final). You will be allowed to use your textbook (not the lab manual) and calculator during the exam, but will not be allowed to use any notes other than what you write in your textbook. See page 6 for more details. Student ID's will be checked during the exams.

Some people do not like to write in their books (perhaps they want to resell them). Therefore I will also allow the following.

You may also write notes on small pieces of paper, which you attach to existing pages in the book under the following restrictions.

1. Each piece of paper can be no larger than a 6 in by 8 in rectangle.
2. Each piece of paper must be attached to an existing page in the book. It must be attached securely enough so that it is unlikely to fall off during an exam. Self adhesive note paper is probably the best way to go. Paper clips are not acceptable. You may use these attached pieces of paper as tabs to help you locate information in the book.
3. At most three pieces of paper may be attached to any one side of any one page in the book.

Remember no loose notes are allowed, and for attachment you must use existing pages in the book. You may not insert extra pages into the book.

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://academic integrity.syr.edu. For this course in particular, failure to obey the rules about what sorts of notes you are allowed to use during exams is considered to be a violation of the academic integrity policy. These rules are found on pages 1 and 6 of the syllabus.

Goals: The goal of MAT 121 is to provide the student the following.

A basic understanding of the notions fundamental to the use of statistics as a tool for understanding decision-making. These notions include the description of data (pictorially and numerically), frequency distributions, probability, some classical probability distributions (binomial, normal, Student -t, Chi-square), and confidence interval estimates.

Facility in naming, computing, and interpreting the various numeric quantities associated with the notions mentioned above. These quantities include several population parameters and sample statistics, notably measures of central tendency (mean, median, mode) and measures of spread (range, standard deviation and variance). They also include measures of position (percentiles and z-scores), probabilities, point estimates, and margins of error.

A foundation for the further study of statistical inference (for example, MAT 122).

Practical experience with statistical computer software (Minitab).