MAT 121
Probability and Statistics for the Liberal Arts I

Section M100: Tuesday/Thursday, 12:30 – 1:50, Watson Theater
Section M200: Tuesday/Thursday, 3:30 – 4:50, Stolkin Aud., Physics Bldg.
Instructor: Dr. Abdellatif Bourhim, 313J Carnegie, 443-2549, abourhim@syr.edu
Office Hours: Tuesday and Thursday: 11:00 – 12:10

Course Supervisor: Prof. Vincent Fatica

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, Fourth 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.

Computer Labs: When you registered for this course you should have also registered for a recitation section that goes with it. All the scheduled recitations will meet; attendance is required. The ones during the first week of classes (8/29 – 9/2) will be introductory; no work will be submitted. After that, for 12 recitations (Tue, 9/6 to Mon, 12/5), there will be computer lab assignments to be done, handed in, and graded. All twelve computer labs will count toward your grade. Bring your textbook, laboratory manual, and calculator to these recitations. The recitation instructors will have office hours (times and places to be announced) during which labs missed for an acceptable reason can be made up. The recitation instructors are not required to allow making up labs that are more than one week outstanding.

Homework: Homework is for your practice. No homework will be collected. 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, or attach modestly to, your textbook. Cell phones or any other devices capable of wireless communication are not allowed. Student ID's will be checked during the exams.

Make-up Exams: There will be no make-up exams. When an exam is missed for a reason deemed valid by the instructor, the missing grade will be replaced, without penalty, by a student's score on the final exam.

Calculation of Course Grade: There will be three in-class exams and a final exam. Once these four grades, and a student's lab average, have been converted to a 100-based scale, the five scores will be averaged to get a raw score. To be more precise, each of three in-class exams, the computer labs, and the final exam will count as 20% of your grade.

Raw scores will not be rounded. They will turn into letter grades as follows.

Raw score x	Letter Grade	Raw 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: Final exam will be given on Wednesday, 14 December 2016, between 8:00am to 2:30pm. The exact time and location for the 2-hour time slot for the final exam will be announced in lecture near the end of the term. The final exam will not be given at any other time. Therefore, **do not make plans to leave campus before 2:30pm on Wednesday, December 14**.

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. I will insist that students taking exams at ODS, take them at times which overlap the exam time for the rest of the class.

Calculator: Your calculator should be able to take square roots.
Available student assistance: Instructor office hours, TA office hours, Math Clinic

Exam schedule: The exam days are firm. How much is covered by those days may differ from section to section. Your instructor will make clear what topics will be covered on each exam.

Exam 1 (up to somewhere in chapter 3)	MW classes – Wed 9/28 TTh classes – Thu 9/29
Exam 2 (up to somewhere in chapter 5)	MW classes – Wed 10/26 TTh classes – Thu 10/27
Exam 3 (up to somewhere in chapter 7)	MW classes – Wed 11/30 TTh classes – Thu 12/1
Final Exam (whole course)	a 2-hour period in 8:00 – 2:30 on Wed 12/14

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

Learning Outcomes: Completing MAT 121 will provide the student with 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).

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

Suggested Homework Problems

1-2: 1-35 odd
1-3: 1-31 odd
1-4: 1-25 odd

2-2: 1-31 odd
2-3: 1-17 odd
2-4: 1-23 odd

3-2: 1-31 odd
3-3: 1-41 odd
3-4: 1-35 odd

4-2: 1-41 odd
4-3: 1-37 odd
4-4: 1-29 odd
4-5: 1-31 odd
4-6: 1-35 odd

5-2: 1-21 odd
5-3: 1-39 odd
5-4: 1-19 odd

6-2: 1-47 odd
6-3: 1-33 odd
6-4: 1-17 odd
6-5: 1-21 odd
6-7: 1-23 odd

7-2: 1-37 odd
7-3: 1-29 odd
7-4: 1-22 odd

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.