MAT 121: Probability and Statistics for the Liberal Arts I   Fall 2018 Syllabus

Section M100	Tue & Thu 3:30-4:50 PM	Stolkin Auditorium (Physics Building)	Prof. Ronald Margrey, Carnegie 206B Ph:315-443-1490, email: rfmargre@syr.edu
Section M200	Mon & Wed 2:15-3:35 PM	Gifford Auditorium (HBC Building)	Prof. Abdellatif Bourhim, Carnegie 313J Ph:315-443-2549, email: abourhim@syr.edu
Section M300	Mon & Wed 3:45-5:05 PM	Watson Auditorium (Watson Hall)	Prof. Abdellatif Bourhim, Carnegie 313J Ph:315-443-2549, email: abourhim@syr.edu
Section M400	Mon & Wed 3:45-5:05 PM	Stolkin Auditorium (Physics Building)	Prof. Muhammed Alan, Carnegie 313J Ph:315-443-2549, email: malan@syr.edu

Course Supervisor: Prof. Abdellatif Bourhim, 313J Carnegie, 315-443-2549, abourhim@syr.edu. 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, Math 121 & 122, 5th Custom Edition for SU, **and** Minitab Manual that goes with the 13th 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 (27 Aug. – 31 Aug.) will be introductory; no work will be submitted. Thereafter, for 12 recitations (3 Sep. – 7 Dec.) there will be computer lab assignments to be done during these recitation times. The lab assignments must be handed in to be graded. _All 12 computer lab assignment submissions_ 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 missed labs can be made up. The recitation instructors are not required to allow making up labs that are more than two weeks outstanding. **Note:** *Switching lab section is not allowed unless it is done through MySlice.*

Homework: Homework is for your practice. No homework will be collected. Page 4 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 devices capable of wireless communication (for example, smart watches) are not allowed. Textbooks and calculators cannot be shared during exams. Student ID's will be checked during the exams. Each instructor will clarify any additional policies for their section(s).

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 <u>three</u> in-class exams and a final exam. Once these four exam 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 final 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, December 12, 2018, between 8 AM to 2:30 PM. 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 12, 2018.**

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

Available student assistance: Instructor office hours, TA office hours, and Math Clinic. Information will be made available by the instructor as well as at math.syr.edu (http://math.syr.edu/people/office-hours.html and http://math.syr.edu/undergraduate/math-help.html) by the second week of the semester. You are also encouraged to attend the free small group tutoring sessions for MAT 121 available through the **Center for Learning and Student Success (CLASS)**. Several tutoring sessions for MAT 121 will be offered each week. The tutors will be trained undergraduate and graduate students who have access to our course information and can help you study efficiently and effectively. Visit class.syr.edu to learn when and where these sessions meet and how to reserve a spot.

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 Sep 26
	TTh classes – Thu Sep 27
Exam 2 (up to somewhere in chapter 5)	MW classes – Wed Oct 24
	TTh classes – Thu Oct 25
Exam 3 (up to somewhere in chapter 7)	MW classes – Wed Nov 28
	TTh classes – Thu Nov 29
Final Exam (whole course)	A 2-hour period in **8AM – 2:30PM**
	on Wednesday December 12, 2018

Attendance: You are expected to attend every class, every 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 that were made during that class.

Cell phones: All electronic devices other than calculators should be turned off and put away during class.

Students with Disabilities: If you believe that you need academic adjustments (accommodations) for a disability, please contact the Office of Disability Services (ODS), visit the ODS website http://disabilityservices.syr.edu, located in Room 309 of 804 University Avenue, or call (315) 443-4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting academic adjustments. ODS is responsible for coordinating disability-related academic adjustments and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since academic adjustments may require early planning and generally are not provided retroactively, please contact ODS as soon as possible. Making arrangements with ODS takes time. Do not wait until just before the first test. Students taking exams at ODS should take them at times which overlap the exam time for the rest of the class.

Academic Integrity: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice.

Specifically for this course (MAT-121), the key academic integrity aspect relates to the exam rules as specified in the "Exams" section at the beginning of the syllabus as well as any other exam policy specified by the section instructor.

The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. _**Any established violation in this course may result in course failure regardless of violation level.**_

Related link: http://class.syr.edu/academic-integrity/policy/

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 (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

Important Dates:

- **First Day of Classes:** Monday, August 27, 2018.
- **Add Deadline:** Tuesday, September 4, 2018.
- **Financial/Academic Drop Deadline:** Monday, September 17, 2018.
- **Withdrawal Deadline:** Friday, November 16, 2018.
- **Last Day of Classes:** Friday, December 7, 2018.

Suggested Homework Problems:

Chapter 1	Sec 1-1: 1-35 odd	Sec 1-2: 1-31 odd	Sec 1-3: 1-27 odd		
Chapter 2	Sec 2-1: 1-27 odd	Sec 2-2: 1-15 odd	Sec 2-3: 1-19 odd		
Chapter 3	Sec 3-1: 1-33 odd	Sec 3-2: 1-43 odd	Sec 3-3: 1-35 odd		
Chapter 4	Sec 4-1: 1-39 odd	Sec 4-2: 1-29 odd	Sec 4-3: 1-23 odd	Sec 4-4: 1-35 odd	
Chapter 5	Sec 5-1: 1-25 odd	Sec 5-2: 1-39 odd			
Chapter 6	Sec 6-1: 1-47 odd	Sec 6-2: 1-33 odd	Sec 6-3: 1-17 odd	Sec 6-4: 1-19 odd	Sec 6-6: 1-19 odd
Chapter 7	Sec 7-1: 1-37 odd	Sec 7-2: 1-35 odd	Sec 7-3: 1-21 odd		

Computer Labs

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

2. Instructor cover: Chapter 2.

3. Students do: Experiments 2-2, 2-4, 2-6, 2-8, 2-12, 2-14, 2-16, 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, 4-17 (Count 1's not 6's.).

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

9. Students do: Experiments 5-2, 5-4, 5-6, 5-7, 5-12.

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: Sections 7-1, 7-2, 7-3.

13. Students do: Experiments 7-1, 7-2, 7-5, 7-6, 7-20.