MAT 221 - Elementary Probability and Statistics I - Fall 2018 Syllabus

This is the common syllabus for all MAT-221 sections. Each section and recitation instructors will provide their own contact information. Contact information for all math faculty and teaching assistants are also available at http://math.syr.edu/people/office-hours.html .

Special Note on the Drop Deadline: Academic Drop Deadline and the Financial Drop deadline will both occur on Monday, September 17 (three weeks from the first day of classes). Students may still withdraw from courses after September 17 but before the withdraw deadline Fri, November 16, 2018; this would place a "WD" grade on their transcripts.

Course Description: This course is the first course in the Quantitative Skills sequence MAT 221-222. The primary objective of MAT 221 is to provide students with knowledge of elementary probability and statistics. Students will learn the basic concepts of descriptive statistics, design of experiments, probability theory, sampling distributions, and estimation of parameters. Students continuing to MAT 222 will learn how to use statistics to make various decisions.

Mathematics Prerequisite: Algebra competency

Textbook: *Introduction to the Practice of Statistics*, D. S. Moore, G. P. McCabe, and B.A. Craig, 9th edition. Chapters 1-6 will be covered in MAT 221.

Classroom clickers: In the lectures for this course, we will be using classroom clickers by Turning Point Technology. Clickers are available at the bookstore. If you already have the clicker for another course, it will work in this course also. You will need to have your clicker and bring it to lecture with you each lecture starting from the first lecture. It is highly recommended that you put in new batteries at the start of the semester. You may only use your own clicker; using someone else's clicker in their absence will be considered a violation of academic integrity policies of the University (see also the academic integrity policy section later in this syllabus).

Calculator: You will need a calculator to do the computations that will arise throughout the course. No specific calculator is required, but TI 84 or TI 83 graphing calculator is highly recommended. Calculators are not to be shared during exams and quizzes.

Attendance: You are expected to attend each course meeting (lectures and recitations). 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.

Exams: All exams, including the final exam, are closed book and closed notes. Students may use any type of calculators they wish except calculators capable of wireless communication. Cell phones or any other devices capable of wireless communication are not allowed. Student ID's will be checked at the exams.

There will be two midterm examinations on the last lecture day of the following weeks:

- Exam 1: Last lecture day of the week of October 1, 2018
- Exam 2: Last lecture day of the week of November 5, 2018

Final Exam: The final exam will be comprehensive. All students must take the final exam at the scheduled time which will be a 2-hour block between 8 a.m. and 2:30 p.m. on Wednesday, December 12th. There will be no exceptions, and so **you should not make plans to leave campus before 2:30 p.m. on Wed, December 12th**.

Quiz: Starting from the second week of classes, there will be a quiz in recitation similar to the homework problems. The specific sections covered by each quiz will be announced in lecture. The lowest two quiz scores will be dropped.

Missed Quizzes or Exams: There will be no make-up quizzes or exams for any reason. A missed quiz or exam will count as a zero unless it is due to a documented religious observance, University-sponsored event, or documented emergency. For religious observances and for University-sponsored events, this documentation must be submitted in advance. For emergencies, you must present documentation from a physician or from the Dean's Office as soon as possible. In such cases, a missed quiz will not be counted toward the final grade and a missed exam score will be replaced by the score on the corresponding portion of the material on the final exam.

Homework: Homework will be done online using WeBWorK, an open-source homework system for math and sciences courses. The number of attempts on each problem is unlimited. Problems can be done in any order, and you do not have to do them all at once. Two lowest WeBWorK scores will be dropped.

WeBWorK access information: If you enrolled in this class before Aug 27th, 2018, you can set up your WeBWorK account as soon as the semester begins. Otherwise, you have to wait until after the Add deadline (Sep 4th, 2018) to do so.

1. Go to either
   https://webwork.syr.edu/webwork2/MAT_221_Fall_2018_Au/ (MWF lectures - sections 300 and 400) or
   https://webwork.syr.edu/webwork2/MAT_221_Fall_2018_John/ (TTh lectures - sections 100 and 200)
2. Your Username is your NetID (For example, your username would be "jqpublic" if your email is jqpublic@syr.edu.)
3. Your Password is initially set to be your 9-digit SUID. You should change it after logging in for the 1st time.

Additional HW problems may be assigned occasionally by the lecture instructor. The instructor will clarify whether or not those problems will be collected. See also the additional practice problems listed at the end of this syllabus.

Grading: Your final grade will be based on two midterm exams (25% each), a cumulative final exam (30%), weekly quizzes (8%), HW (8%), and lecture attendance (4%). Final letter grades will be based on the following scale:

Raw Grade	Letter Grade		Raw Grade	Letter Grade		Raw Grade	Letter Grade
$93 \leq x \leq 100$	A		$90 \leq x < 93$	A -			
$87 \leq x < 90$	B +		$83 \leq x < 87$	B		$80 \leq x < 83$	B -
$77 \leq x < 80$	C +		$73 \leq x < 77$	C		$70 \leq x < 73$	C -
$60 \leq x < 70$	D		$0 \leq x < 60$	F			

Cell Phones: All electronic devises other than calculators should be turned off and put away during class. Calculators on cell phones are not to be used on tests or quizzes.

Available Student Assistance: Your recitation instructor will hold regular office hours and will make appointments with students having class conflicts with their scheduled office hours. Your lecture instructor will also have office hours. In addition, the Mathematics Department offers help in the Math Clinic. The hours and location are posted on http://math.syr.edu/undergrad/math-help.html (Fall hours to be posted by the 3rd week of classes).

In addition, Center for Learning and Student Success (CLASS) offers free group tutoring sessions for MAT 221. Visit http://class.syr.edu/ to learn more and register for a session.

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.

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: https://policies.syr.edu/policies/university-governance-ethics-integrity-and-legal-compliance/religious-observances-policy/ .

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, the academic integrity aspects relate to lecture attendance (recorded via Turning Point clickers), quizzes, and exams. Regarding the usage of clickers in lecture, a student may only use their own clicker; using someone else's clicker in their absence will be considered an academic integrity violation. Regarding the quizzes/exams, students are not allowed to use ANY electronic device except for their calculator during the quiz/exam until the quiz/exam is handed in. Accessing material beyond standard calculator functionalities and any statistical table provided during the quiz/exam will be a violation of academic integrity.

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/

Tentative Course Schedule: This schedule is only tentative. It is your responsibility to find out which topics are covered in class each week.

Week	Chapter		Week	Chapter
Week of Aug-27	Chapter 1		Week of Oct-22	Chapter 3/Chapter 5
Week of Sep-03	Chapter 1		Week of Oct-29	Chapter 5
Week of Sep-10	Chapter 4		Week of Nov-05	Chapter 5/Review/Exam 2
Week of Sep-17	Chapter 4		Week of Nov-12	Chapter 6
Week of Sep-24	Chapter 4		Week of Nov-19	Thanksgiving Break
Week of Oct-01	Chapter 4/Review/Exam 1		Week of Nov-26	Chapter 6
Week of Oct-08	Chapter 2		Week of Dec-03	Chapter 6/Review
Week of Oct-15	Chapter 2/Chapter 3		Week of Dec-10	Wed Dec.12: Final Exam

Suggested Practice Problems: Since WeBWorK does not provide enough problems for you to learn the concepts covered in this class, you should work these textbook problems as the corresponding section is covered in lecture. Exams and quizzes are based on these textbook problems as well as the WeBWorK problems.

SECTION	PROBLEMS		SECTION	PROBLEMS
1.1	7(a-d), 8(a-d), 9, 11(a), 14(a-c)		**2.5**	101-103, 105-107
1.2	25(a, b), 27(a, c), 28, 29, 34, 35, 39(a-c), 40		**2.7**	135-141, 143
1.3	65, 66, 67(a-c), 68, 69, 70(a-c), 75-80, 87, 88(a-c)		**3.1**	14, 15, 16
1.4	102, 103, 110, 111(a), 112-115, 118-121, 124-135, 138a, 139a		**3.2**	24, 25, 27, 31, 34
4.2	18, 21-23, 25-35, 38-41		**3.3**	50, 54, 55, 58, 63, 70
4.3	45, 48, 49, 53-59, 61, 62		**5.1**	7-9, 12
4.4	68, 70-78, 83, 86		**5.2**	25, 26, 28-34, 37-39
4.5	96-120, 123		**5.3**	57-65, 69, 71, 73, 78
2.1	5, 6		**6.1**	12-17, 19, 20, 23-25, 27-29, 33, 36
2.2	16, 17, 24, 32, 34b		**6.2**	52-59, 72-75
2.3	41, 46, 60		**6.3**	95, 98-101, 106
2.4	73(a, b), 75c, 76, 77, 87			