

MAT 221-100 Elementary Probability and Statistics I

Spring Semester 2015

MWF 8:25 am - 9:20 am Physics Building Stolk Auditorium

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Office Hours: MWF 1 pm - 3 pm

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

Textbooks: *Introduction to the Practice of Statistics* by D. S. Moore, G. P. McCabe, and B.A. Craig, 8th edition. Chapters 1-6 will be covered in MAT 221.

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.

Homework/Quiz: Homework assignments for practice are given on the last page of this syllabus. Homework will not be collected. You are encouraged to attempt all the problems and bring questions to the recitations. 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. There will be no make-up quizzes. The lowest two quiz scores will be dropped.

Exams: All exams (including the final exam) are closed book and closed notes. Students may use any type of calculators they wish except that they may not use 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 no make-up exams. In the case of an excused absence and otherwise at the discretion of the instructor, the final exam will be counted extra to make up for missed exams.

Exam 1 February 6 (Friday)
Exam 2 March 6 (Friday)
Exam 3 April 17 (Friday)

Final Exam: All students must take the final exam at the scheduled time which will be a 2-hour block between 8 am and 2:30 pm on Monday, May 4, 2015. There will be no exceptions, and so you should not plan to leave campus before 2:30 pm on Monday, May 4, 2015.

Grading: Your final grade will be based on three midterm exams (20% each), a cumulative final exam (25%), and weekly quizzes (15%). Final letter grades will be given according to the following scale:

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

Cell Phones: All electronic devices 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.

Students with Disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services (ODS) at

<http://disabilityservices.syr.edu>

located in Room 303 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 exam.

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”. 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. For more information and the complete policy, see <http://academicintegrity.syr.edu>. For this course in particular, the use of any notes during quizzes and exams is considered to be a violation of the academic integrity policy. A first violation will result in a zero on the quiz or exam. A second violation will result in failing the course.

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. 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.

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 regular math clinics which will be set up by the second week of the semester. A schedule of the clinics will be posted outside the math office and will be available online at math.syr.edu.

Learning Goal: Students will be expected to

1. use and understand basic mathematical notations;
2. select and apply an appropriate mathematical model for certain elementary probability problems;
3. do basic hand calculations with accuracy;
4. use appropriate hardware and software related to certain probability distributions.

Suggested Homework Problems

This schedule is only tentative. It is your responsibility to find out which topics are covered in class each week. You should work these problems as the corresponding section is covered in class.

WEEK	SECTION	PROBLEMS
Jan 12	1.1	8, 9, 11a, 14abc
	1.2	25-29, 40-42
	1.3	61, 62, 63abce, 77-79, 81, 82, 91-93
Jan 19	1.4	110, 111, 118-124, 128-131, 134-142, 144-146, 148-150
	2.1	5, 6
	2.2	18, 22, 24, 25, 28, 31
Jan 26	2.3	41, 43, 46, 50, 60
	2.4	73-75, 78bc, 84b, 85
	2.5	103-105
	2.7	138-141
	3.1	15, 16
	3.2	25-27, 33, 34
Feb 2	3.3	56, 57, 63, 72
	3.4	82, 90, 91, 92
Feb 9	4.1	2,4,6
	4.2	20, 23-25, 27-30, 32-39, 42-45
Feb 16	4.3	53, 57-61, 65, 66
Feb 23	4.4	74-82, 87, 90, 92, 93
Mar 2	4.5	102-128, 131
Mar 16	5.1	9-11, 14-20, 22, 25-29
Mar 23	5.2	47-55, 59, 61, 63, 68, 71
Mar 30	6.1	12-17, 20, 23, 24, 27-30, 33, 36
Apr 6	6.2	52-59, 70-73, 75
Apr 13	6.3	95, 98-101, 106
Apr 20-27	Review	