MAT 221: Elementary Probability and Statistics I
Spring 2013

Course Description: 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.

Text: *Introduction to the Practice of Statistics* by D. S. Moore, G. P. McCabe, and B.A. Craig, 7th edition. Chapters 1-6 will be covered in MAT 221.

Prerequisites: Algebra competency and an open mind.

Liberal Arts Core: This course is the first course in the Quantitative Skills sequence MAT 221-222.

Calculators: Students 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.

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

Attendance: Student attendance in lecture and recitation is expected. It is the student's responsibility to obtain missed materials in the event of an absence. Attendance is mandatory during exam times; there will be no make-up exams! A missed exam will result in a score of zero for that exam (see Grading below).

Participation: Participation in lecture is worth 5% of the final grade. The course uses TurningPoint "clickers" to track participation during lectures. There is no way to make-up missed participation points. An absence from lecture, forgotten "clicker", dead batteries, etc. will result in loss of participation points for that lecture.

Faith Tradition Observances: You must notify your instructor by the end of the second week of classes when you will be observing your religious holidays. Then, appropriate accommodation will be made according to the guideline that can be found at http://supolicies.syr.edu/emp_ben/religious_observance.htm.

Absences Due to University sanctioned events (e.g. Student athletes). If you will be absent during a scheduled exam time due to an official university event. You must notify your instructor in writing, with the official signatures, at least two weeks in advance in order to schedule a make-up exam. All make-up exams must be completed in advance of their scheduled times. No exceptions!

Grading: The final grade will be based on three Tests (20% each), a final exam (25%), homework/quizzes (10%) and Participation (5%). There will be no make-up Tests/exams. **If your final exam grade is higher than your lowest test grade, the lowest test grade will be replaced by your final exam grade**. Final grade will be given according to the following scale: A (93-100) A- (90-92) B+ (87-89) B (83-86) B- (80-82) C+ (77-79) C (73-76) C- (70-72) D (60-69) F (0-59)

Exam Format: All exams will be multiple-choice style. Please bring a #2 pencil, eraser calculator and your SU ID to each exam.

Special Note on the 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 6, 2013. There will be no exceptions, and so you should not plan to leave campus before 2:30 PM on May 6, 2013.

Homework: Homework assignments are given on the attached page. The homework/quiz policy for each section will be announced by the instructor of that section.

Course Supervisor: Please inform your instructor of any problems you have with this course. Problems not satisfactorily resolved with your instructor should be brought to the attention of the course supervisor (listed below).
Assistant Professor Aaron Skewes, LSB247,askewes@syr.edu.

Getting Help: Your instructor will hold regular office hours and will make appointments with students having class conflicts with scheduled office hours. In addition, the Mathematics Department offers regular math clinics. These will be set up by the second week of the semester and a schedule of the clinics will be posted outside the math office.

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://academicintegrity.syr.edu.

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 your instructor privately to discuss your academic needs although your instructor cannot arrange for disability-related accommodations.

Learning Goals 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.

Key to Success in MAT221 There are five things you can do to be successful in MAT221:

1) Read the corresponding book sections BEFORE lecture.
2) Attend lecture, pay attention, take notes and ask questions.
3) Do the corresponding homework problems immediately after lecture to reinforce the material.
4) Attend recitation, ask questions.
5) If you still need help, visit your TA or instructor as soon as possible to not get behind!

MAT 221 Tentative Schedule

	Tuesday		**Thursday**	
January	15	Introduction/1.1	17	1.1/1.2
	22	1.2/1.3	24	1.3
	29	2.1/2.2	31	2.3
February	5	2.3/2.4	7	2.5-2.6
	12	Test 1 Review	14	Test 1
	19	3.1/3.2	21	3.3/3.4
	26	4.1/4.2	28	4.2
March	5	4.3/4.4	7	4.4
	12	Spring Break	14	Spring Break
	19	4.5	21	Flex Day*
	26	Test 2 Review	28	Test 2
April	2	5.1	4	5.2
	9	6.1	11	6.2
	16	6.3	18	Test 3 Review
	23	Test 3	25	Course Review
	30	Course Review		
*Flex Day – An opening in the schedule used to catch-up if behind. **There is class on the Flex day** and participation will be awarded!				
Final Exam (Monday, May 6, between 8:00 AM and 2:30 PM)				

Important dates:

First day of classes – Monday, January 14
Add deadline – Tuesday, January 26
Financial drop deadline (With refund) – Monday, February 24
Academic drop deadline – Tuesday, March 19
Martin Luther King Day - Monday, January 21
Spring Break - Monday, March 11 through Friday, March 15
Last day of classes – Tuesday, April 30

MAT 221 Suggested Homework Problems

Note that exercises are consecutively numbered in each chapter. These are assigned along with sections of the book. You should work these problems as the corresponding section is covered in class. The problems marked with * are recommended to be done with software or TI 84 (TI 83).

Section Problems

1.1: 1.14, 1.21, 1.24, 1.27, 1.30, 1.31, 1.32, 1.33, 1.34, 1.35, 1.36*, 1.38*, 1.42*, 1.46*
1.2: 1.62*, 1.63*, 1.67, 1.68, 1.74*1.75, 1.77, 1.81*, 1.93, 1.96*, 1.97, 1.98
1.3: 1.109. 1.110, 1.112, 1,116, 1.118, 1.119, 1.120, 1,122, 1.125*, 1.126, 1.128, 1.132-1.141, 1.145, 1.151, 1.152*

2.1: 2.13, 2.15, 2.18, 2.25, 2.29, 2.31, 2.33, 2.34*
2.2: 2.42, 2.43*, 2.47, 2.49, 2.50, 2.53, 2.60
2.3: 2.66*, 2.68*, 2.71*, 2.72*, 2.77, 2.78, 2.79, 2.84, 2.87, 2.91*
2.4: 2.94, 2.95, 2.100, 2.101, 2.102, 2.107, 2.109
2.5: 2.121, 2.123, 2.124, 2.125, 2.126, 2.127
2.6: 2.134, 2.136, 2.139, 2.141, 2.144

********** Test I **********

3.1: 3.17, 3.18, 3.23, 3.30, 3.31, 3.32, 3.36, 3.45, 3.46
3.2: 3.52, 3.53, 3.59, 3.63, 3.66, 3.68, 3.70
3.3: 3.82, 3.83, 3.85, 3.88, 3.89, 3.93*, 3.94*
3.4: 3.102, 3.108, 3.111, 3.114

4.1: 4.2, 4.8
4.2: 4.19, 4.23, 4.25, 4.28, 4.31, 4.33, 4.34, 4.35, 4.42-4.45
4.3: 4.49, 4.50, 4.51, 4.53, 4.54, 4.55, 4.56, 4.57, 4.63
4.4: 4.72, 4.73, 4.76, 4.82, 4.83, 4.87, 4.88, 4.91, 4.93
4.5: 4.102, 4.107, 4.108, 4.109, 4.110, 4.111, 4.115, 4.117, 4.124, 4.125, 4.129, 4.130, 4.131

********** Test 2 **********

5.1: 5.7, 5.8, 5.12, 5.14, 5.16, 5.18, 5.21, 5.22, 5.23, 5.25, 5.26
5.2: 5.41, 5.42, 5.43, 5.45, 5.47, 5.49, 5.54, 5.56, 5.57, 5.62, 5.67

6.1: 6.10, 6.11, 6.13, 6.14, 6.15, 6.25, 6.26, 6.28, 6.31, 6.34
6.2: 6.50, 6.51, 6.52, 6.54, 6.56, 6.57, 6.58, 6.59, 6.68, 6.70, 6.71, 6.73
6.3: 6.89, 6.92, 6.93, 6.94, 6.95, 6.100

********** Test 3 **********

********** Final **********