

**MAT 222, Elementary Probability and Statistics  
Spring 2011 (MWF Section)**

**Course Description:** This is the second course in the Probability and Statistics sequence Mat 221-222 designed for most academic majors. Topics to be covered include estimation, hypothesis testing, inferences involving two populations, Chi-square tests, regression analysis, and ANOVA. More details on last page.

**Text:** Introduction to the Practice of Statistics, by David S. Moore and George P. McCabe, 6<sup>th</sup> Edition. Most of Chapters 6 through 13 will be covered.

**Prerequisites:** MAT 221

**Calculators:** You will need a calculator to do the computations that will arise throughout the course. No specific calculator is required, but the TI 83 graphics 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.

**Homework:** Homework assignments for each chapter are given on the last page of this syllabus. Homework may be collected; details will be announced in class later.

**Computer package:** There will be no computer lab session. MINITAB, a statistical package, will be introduced in class and computer problems to use MINITAB will be assigned.

**Final Project:** Data analysis projects will be assigned in the middle of the semester and will be due on the last day of class. Two to four students will be grouped and each group will have a statistical problem to solve using the methods learned in the course and MINITAB. You are supposed to design experiments, collect data, and analyze data using MINITAB and to write a report on your analysis.

**Grading:** There will be three tests and a final. The three tests will count 60% and the final will count 30% toward your grade. The remaining 10% will be based on the project, homework, quizzes, or class work at the instructor's discretion. There will be no make-up tests. If you miss a test for a valid reason, the final will count correspondingly more. 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)

**Special Note on the Final Exam:** All students must take the finale exam in the schedule time which will be a 2-hour block between 8 am and 2:30 pm on May 9 Monday. There will be no exceptions, and so you should not plan to leave campus before 2:30 pm on May 4.

**Academic Honesty:** All cases of academic dishonesty will be reported to the Office of the Dean. There is no tolerance for cheating and other immature and immoral behavior.

**Students with Disabilities:** Students who may need special consideration because of any sort of disability should make an appointment to see the instructor during office hours.

**Instructor:**

**Course Supervisor:** You should 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).

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229 Physics Building  
443-1577  
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**MAT 222 Tentative Schedules (MWF Section)**

	<b>Monday</b>		<b>Wednesday</b>		<b>Friday</b>	
<b>January</b>	17	Holiday	19	6.1	21	6.2
	24	6.3	26	6.4	28	6.4
<b>February</b>	31	7.1	2	7.1	4	7.2
	7	7.2	9	7.3	11	7.3
	14	Review	16	Test 1	18	8.1
	21	8.1	23	8.2	25	8.2
<b>March</b>	28	9.1	2	9.1	4	9.2
	7	9.2	9	9.3	11	9.3
	14	Break	16	Break	18	Break
	21	Review	23	Test 2	25	10.1
	28	10.1	30	10.2	1	10.2
<b>April</b>	4	11	6	11	8	Review
	11	Test 3	13	12.1	15	12.1
	18	12.2	20	12.2	22	Break
	25	13.1	27	13.2	29	13.2
<b>May</b>	2	<b>Review</b>				
	<b>Final exam will be on a two-hour block between 8 am and 2:30 pm on May 9 Monday.</b>					

## **Learning Goals**

Students will be expected to

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

## **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>

## **Disability**

Students who may need academic accommodations due to a disability are encouraged to discuss their needs with the instructor at the beginning of the semester. In order to obtain authorized accommodations, students should be registered with the Office of Disability Services (ODS), 804 University Avenue, Room 309, 315-443-4498 and have an updated accommodation letter for the instructor. Accommodations and related support services such as exam administration are not provided retroactively and must be requested in advance."

For more information about services and policy, see [Office of Disability Services](#)

**Syracuse University**  
**Office of Disability Services**  
**804 University Avenue Room 309**  
**Syracuse, New York 13244-2330**

**Phone: Voice: (315) 443-4498**

**TDD: (315) 443-1371**

**E-Mail: [odssched@syr.edu](mailto:odssched@syr.edu)**

## **Homework Assignments:**

### **Chapter 6**

Section 6.1: 6.10, 6.11, 6.12, 6.13, 6.17, 6.19, 6.25

Section 6.2: 6.53, 6.56, 6.57, 6.58, 6.59, 6.64, 6.65

Section 6.3: 6.95, 6.96

Section 6.4: 6.112, 6.113, 6.114.

### **Chapter 7**

Section 7.1: 7.15, 7.16, 7.17, 7.18, 7.19, 7.20, 7.21, 7.22

Section 7.2: 7.61, 7.62, 7.63, 7.64, 7.65, 7.66, 7.67, 7.68

Section 7.3: 7.98, 7.99, 7.100, 7.101, 7.102, 7.103

### **Chapter 8**

Section 8.1: 8.10, 8.11, 8.12, 8.13, 8.14, 8.15, 8.16, 8.19, 8.20

Section 8.2: 8.41, 8.42, 8.44, 8.45, 8.46, 8.49, 8.50, 8.51, 8.52, 8.53.

### **Chapter 9**

Sections 9.1-9.2: 9.7, 9.10, 9.11, 9.12, 9.17, 9.18, 9.19, 9.20, 9.21, 9.26, 9.27, 9.30, 9.31

Section 9.3: 9.40, 9.41, 9.42, 9.43 (MINITAB), 9.44, 9.45 (MINITAB)

### **Chapter 10**

Sections 10.1 – 10.2: 10.8, 10.9, 10.10 (MINITAB), 10.11, 10.12 (MINITAB), 10.13 (MINITAB), 10.14 (MINITAB), 10.15 (MINITAB), 10.18, 10.44, 10.47, 10.48, 10.49.

### **Chapter 11**

Sections 11.1-11.2: 11.7, 11.8, 11.12, 11.13, 11.14, 11.15, 11.16, 11.19, 11.22 (MINITAB), 11.23 (MINITAB), 11.29 (MINITAB), 11.30 (MINITAB), 11.32 (MINITAB), 11.33 (MINITAB).

### **Chapter 12**

Sections 12.1-12.2: 12.9, 12.10, 12.11, 12.12, 12.15, 12.16, 12.17, 12.23, 10.27, 12.38 (MINITAB), 12.39 (MINITAB), 12.51 (MINITAB), 12.52 (MINITAB)

### **Chapter 13**

Sections 13.1-13.2: 13.3, 13.4, 13.5, 13.6, 13.8, 13.13, 13.31 (MINITAB), 13.32 (MINITAB)