MAT 121 – Probability and Statistics for the Liberal Arts I
Spring 2011

Course Description: MAT 121 is the first part of a two-course sequence that teaches probability and statistics by focusing on data and reasoning. The course covers displaying data, probability models and distributions. *Prerequisites*: MAT 121 has no formal prerequisites. However, it is desirable that students have a reasonable level of competence in high school algebra. *Credit*: 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. *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, Custom Edition for Syracuse University,* and the *Minitab Manual* that goes with the 11th edition of Elementary Statistics by Mario F. Triola.

Class Time and Location: TuTh 12:30—1:50, Watson Theater in Watson Hall.

Instructor: Leonid Kovalev, lvkovale@syr.edu, 315.443.1487, GTalk *leonidvkovalev*

Office Hours: held in **Carnegie 213C**
- Monday 3–4 pm
- Tuesday 4–5 pm
- Wednesday 11-12 and 4-5 pm
- Sunday 3–4 pm
- And any time my door is open

Computer Labs: When you registered for this course you should have also registered for a recitation section that goes with it. These meet in Carnegie 100. There will be computer lab assignments to be done during these recitation times, which you must hand in to be graded. All 13 computer labs count toward your grade. Attendance at all 13 computer labs is required. Please bring your textbook, laboratory manual, and calculator to these recitations.

Homework: Suggested Homework is for your practice. It will not be handed in; it will not be graded. 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.

Online Quizzes will be done on Blackboard (blackboard.syr.edu), see the schedule on page 3. There will be no make-up quizzes, but two lowest quiz scores will be dropped. Quizzes will be similar to suggested homework. The number of attempts is not limited. Only the most recent attempt counts toward the grade.

Grading: Each exam and each lab will be graded on the scale 0-100. Your numeric grade for the term will be based on four midterm exams (15% each), final exam (20%), the quiz average (5%) and the lab average (15%).

Numeric grade x	Letter grade		Numeric grade x	Letter grade
$0 \leq x < 60$	F		$80 \leq x < 83$	B-
$60 \leq x < 70$	D		$83 \leq x < 86$	B
$70 \leq x < 73$	C-		$86 \leq x < 90$	B+
$73 \leq x < 76$	C		$90 \leq x < 93$	A-
$76 \leq x < 80$	C+		$93 \leq x \leq 100$	A

Final Exam: MAT 121 will be assigned a two-hour time slot during Period 11 for a final exam. This period is from 8:00am to 2:30pm on Monday, May 9, 2011. 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 the end of Period 11.

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

Exam Policies: 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. Student IDs may be checked during the exams.
Only two kinds of notes are allowed at exams:
- Written in the textbook
- Written on self-adhesive note paper (at most 6 by 8 inches) that is attached to a textbook page. At most 3 such notes may be attached to any one side of any one page in the book.

No loose notes are allowed, and for attachment you must use existing pages in the book. You may not insert extra pages into the book.

Make-up Exams: Make-up exams will be given only in very exceptional circumstances. In most cases instead of a make-up exam the final exam will be counted extra. In either case, the student must convince the instructor that there is a very good reason for missing the exam.

Class Schedule (subject to change as announced in class)

Date	Lecture Section(s)	Online Quiz	Notes:
Jan 18	1-1, 1-2, 1-3, 1-4		
Jan 20	1-5, 2-1, 2-2	Quiz 1	(•) The sections are from the first part of the custom-edition textbook (taken from Elementary Statistics, 11th ed., by Mario F. Triola).
Jan 25	2-3, 2-4	Quiz 2	
Jan 27	2-5	Quiz 3	
Feb 1	Review	Quiz 4	
Feb 3	Exam 1		
Feb 8	3-1, 3-2		(•) A quiz listed against Day X will be available on Blackboard **from 3:30PM on Day X-1 until 9:00AM on Day X+1.**
Feb 10	3-3	Quiz 5	
Feb 15	3-4	Quiz 6	
Feb 17	4-1, 4-2	Quiz 7	
Feb 22	4-3	Quiz 8	
Feb 24	4-4, 4-5	Quiz 9	(•) Each quiz is based on suggested homework for the sections covered in the preceding lecture.
Mar 1	4-7	Quiz 10	
Mar 3	Review	Quiz 11	
Mar 8	Exam 2		
Mar 10	5-1, 5-2		
Mar 22	5-3, 5-4	Quiz 12	
Mar 24	6-1, 6-2	Quiz 13	
Mar 29	6-3	Quiz 14	
Mar 31	6-5	Quiz 15	
Apr 5	6-4, 6-6	Quiz 16	
Apr 7	Review	Quiz 17	
Apr 12	Exam 3		
Apr 14	7-1, 7-2		
Apr 19	7-3	Quiz 18	
Apr 21	7-4, 7-5	Quiz 19	
Apr 26	Review	Quiz 20	
Apr 28	Exam 4		
May 3	Review		

Computer Labs Schedule

1. Instructor covers: Introduction to Computers; Chapter 1.
2. Instructor covers: Chapter 2.
3. Students do: Experiments 2-2, 2-10, 2-12, 2-13, 2-14, 2-18, 2-20.
4. Instructor covers: Chapter 3.
5. Students do: Experiments 3-1, 3-2, 3-3, 3-4, 3-9.
6. Instructor covers: Chapter 4.
7. Students do: Experiments 4-1, 4-2, 4-3, 4-19 (count 1s not 6s).
8. Instructor covers: Sections 5-1, 5-2, 5-4.
9. Students do: Experiments 5-1, 5-4, 5-6, 5-7, 5-8.
10. Instructor covers: Sections 6-1, 6-2, 6-3, 6-5.
11. Students do: Experiments 6-1, 6-3, 6-5.
12. Instructor covers: As much of chapter 7 as you have time for.
13. Students do: Experiments 7-1, 7-2, 7-5, 7-6, 7-13.

Labs do not meet on January 19 (Wednesday) and May 2 (Monday).

Suggested Homework Problems (from the textbook)

Section	Problems		Section	Problems
1-2	1-25 odd		4-5	1-29 odd
1-3	1-31 odd		4-7	1-35 odd
1-4	1-27 odd		5-2	1-29 odd
1-5	1-33 odd		5-3	1-43 odd
2-2	1-21 odd, 29		5-4	1-19 odd
2-3	1-13 odd		6-2	1-51 odd
2-4	1-25 odd		6-3	1-31 odd
2-5	1-9 odd		6-4	9, 13, 19
3-2	1-23 odd, 29, 31, 33		6-5	1-19 odd
3-3	1-23 odd, 29-35 odd		6-6	1-31 odd
3-4	1-29 odd		7-2	1-43 odd
4-2	1-39 odd		7-3	1-27 odd, 31-35 odd
4-3	1-39 odd		7-4	1-29 odd
4-4	1-29 odd		7-5	1-23 odd

Learning Goals: The goal of MAT 121 is to provide the student 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.
- Practical experience with statistical computer software (Minitab).

Available Assistance:

- Office hours of the primary instructor and of the teaching assistants.
- Math Clinic in the atrium of Carnegie Building, also known as Reading Room.
- Review sessions.
- Time at the end of class meetings.
- Mathematics Department maintains a list of private tutors

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 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 test.

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. For this course in particular, failure to obey the rules about what sorts of notes you are allowed to use during exams is considered to be a violation of the academic integrity policy. These rules are found on page 2 of the syllabus.