

Syllabus

PRINCIPLES OF STATISTICS

MAT 167
Spring 2011

Instructor: John DeLucia

Office Hours: By Appointment

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Prerequisite: Acceptable placement score or MAT 137.

Required Text: Elementary Statistics, 11th ed., by Mario F. Triola
Publisher: Addison Wesley.

Supplementary Materials: Graphing Calculator (TI-83, 84, or 89 recommended)

Course Description: This course introduces the basic concepts of statistics as they apply primarily to business, the technologies, and the social sciences. The topics include: methods of summarizing data, measures of central tendency and dispersion, correlation and linear regression, basic probability, binomial and normal distributions, hypothesis testing for one or two populations, confidence intervals, and distributions.

Grading Policy: Your grade will be determined in the following manner:

1. *Tests.* There will be four tests given throughout the semester. The tests will be worth 85% of the final grade. Makeup tests will be available if prior arrangements are made with the instructor.
2. *Homework.* Homework will be assigned throughout the semester and I will collect and grade these assignments occasionally. The homework will be worth 15% of the final grade.

Grade	A 93 – 100	B+ 87 – 89	C+ 77 - 79	D+ 67 – 69	F 59 or below
Equivalents:	A- 90 – 92	B 83 – 86	C 73 – 76	D 63 – 66	
		B- 80 – 82	C- 70 – 72	D- 60 – 62	

Attendance: Regular class attendance is expected and attendance is mandatory for all tests.

Support Services: The tutoring center offers free services to all TRCC students. Additionally, the textbook has a web site and supplemental materials.

Disabilities Statement: If you are a student with a disability and believe that you will need accommodations for this class, it is your responsibility to contact the Disabilities Counseling Services at 383-3240. To avoid any delay in the receipt of accommodations, you should contact the counselor as soon as possible. Please note that I cannot provide any accommodations based upon your disability until I have received notification from the disabilities counselor.

Academic Integrity: You are expected to do your own work on exams, tests, and quizzes. You may receive help and work collaboratively on homework provided you understand the work you submit. I will enforce college policies on academic dishonesty.

Class Cancellation: Refer to the college catalog and/or website for notification of full college cancellations or delays due to weather or for any other reason. In the event that this class is canceled for a reason other than a full college closing, notification will be made via Blackboard announcement.

Learning Outcomes: After successful completion of this course, the student will be able to:

1. Construct and interpret histograms, stem leaf plots, and frequency tables for sets of data.
2. Find mean, median, mode, range, standard deviation, deciles, and quartiles.
3. Calculate linear correlation coefficient; find equation of regression line and use equation to predict values.
4. Apply the basic rules of addition, multiplication, and counting. Find conditional probability.
5. Construct contingency tables and use to find probabilities.
6. Determine if data satisfies a probability distribution.
7. Know when to use the binomial distribution, standard normal distribution, or a normal distribution as an approximation to a binomial distribution.
8. Know when to apply the Central Limit Theorem.
9. Determine confidence intervals for means and proportions and find sample sizes necessary for statistical analysis.

Tentative Course Outline:

<u>Date</u>	<u>Sections Covered</u>
1/20	1.1 – 1.5
1/27	2.1 – 2.5
2/03	<i>No Classes – College Professional Day</i>
2/10	3.1 – 3.4
2/17	Review, <i>Test # 1</i>
2/24	4.1 – 4.4
3/03	4.5, 4.7
3/10	5.1 – 5.4
3/17	<i>No Classes – Spring Break</i>
3/24	Review, <i>Test # 2</i>
3/31	6.1 – 6.3
4/07	6.5 – 6.6
4/14	7.1 – 7.4
4/21	Review, <i>Test #3</i>
4/28	8.1 – 8.5
5/05	10.1 – 10.3
5/12	Review, <i>Test #4</i>

Homework: This is a guide only. Assignments may vary.

Chapter 1:

- 1.2 p.9 # 5 – 12 all
- 1.3 p.16 # 5 – 20 all
- 1.4 p.23 # 5 – 8 all, 21, 23, 29
- Cumulative Review Exercises p. 40 # 3 – 8 all

Chapter 2:

- 2.2 p.53 # 5, 7, 13 – 16 all, 18, 19, 21
- 2.3 p.58 # 5 – 8 all, 10, 11, 13
- 2.4 p.68 # 6, 27
- 2.5 p.73 # 6, 10
- Review Exercises p.76 # 1, 2, 7, 8

Chapter 3:

- 3.2 p.94 # 5, 9, 11, 15, 16, 17, 21, 24, 29, 31, 33, 34
- 3.3 p.110 # 5, 9, 11, 15, 16, 17, 29, 31, 33, 36
- 3.4 p.127 # 5, 7, 9, 10, 13 – 19 odd, 20, 21, 23, 25, 26, 27, 29
- Review Exercises p. 130 # 1 – 6 all, 10

Chapter 4:

- 4.2 p.148 # 7 – 11 odd, 12 – 15 all, 21, 25, 31, 33, 34, 37, 38
- 4.3 p.157 # 7, 9, 11, 15, 16, 21 – 37 odd
- 4.4 p.168 # 5 – 15 odd, 16, 21, 22, 23, 27, 29
- 4.5 p.175 # 5 – 13 odd, 18, 19 – 22 all, 23 – 27 odd, 28, 34
- 4.7 p.189 # 5 – 19 odd, 25, 27, 33
- Review Exercises p.195 # 1 – 10 all

Chapter 5:

- 5.2 p.214 # 1, 5 – 11 odd, 15 – 21 odd, 25 – 29 odd
- 5.3 p.225 # 5 – 13 odd, 17 – 21 odd, 29 – 33 odd, 41, 42
- 5.4 p.232 # 5 – 11 odd, 17, 19
- Review Exercises p.241 # 4, 5

Chapter 6:

- 6.2 p.261 # 9 – 51 odd
- 6.3 p.272 # 5 – 21 odd, 25, 27
- 6.5 p.296 # 5, 7, 9, 10, 11, 19
- 6.6 p.306 # 5 – 15 odd, 23, 25, 27
- Review Exercises p.319 # 1 – 4, 7, 9

Chapter 7:

- 7.2 p.340 # 5 – 27 odd, 37, 39, 41
- 7.3 p.352 # 5 – 27 odd, 33
- 7.4 p.365 # 5 – 13 odd, 19, 21, 27
- Review Exercises p.382 # 1, 4, 5, 9

Chapter 8:

8.2 # 9 – 24

8.4 # 5, 7, 8, 9, 11, 13, 15, 19 (no p values)

8.5 # 5 – 8, 13, 15, 17, 19, 25, 27 (no p values)

Review Exercises p.452 # 1, 2, 3, 5

Chapter 9:

9.3 # 9, 11, 13, 15

9.4 # 5, 11, 13

Chapter 10:

10.2 # 5, 7, 9, 13, 15, 17, 19, 21, 23

10.3 # 5, 7, 9, 13, 15, 17, 19, 21, 23