

Fall 2012
MCCC – MAT 131 IC
Introduction to Statistics I
Tuesday – Thursday 9:35 – 11:00 AM
Room: PH 117

Instructor: Paul Winterbottom
Voicemail: 215-641-6396
E-mail: pwinterb@mc3.edu
Office: PH 16

Office Monday - Wednesday 12:15 – 1:15
Hours: Tuesday - Thursday 2:30 – 3:00

LAL: Tuesday - Thursday 1:30 – 2:30

TEXTBOOK: *Elementary Statistics*, Mario F. Triola, Pearson/Addison Wesley, 3rd ed. Custom, 2011.

A TI-84+ graphing calculator is needed for this course. If a student has a TI-83+, they do not need to buy a TI-84+

Chapters 1-10 are covered.

1. Introduction to Statistics
 - A. Background
 - B. Descriptive Statistics
 - C. Summarizing Data
 - D. Charts and Graphs
 - E. Types of Averages – Measures of Central Tendency
 - F. Dispersion Statistics
2. Probability and Probability Distributions
 - A. Addition and Multiplication Rules
 - B. Complementary Events
 - C. Random Variables
 - D. Mean, Variance, and Standard Deviation
 - E. Binomial Distribution
 - F. Distribution Shapes
3. Testing Hypotheses
 - A. Estimation of Means and Proportions
 - B. Sample Sizes
 - C. Tests Comparing Two Parameters
4. Correlation and Regression
5. Chi-Square
 - A. Goodness of Fit
 - B. Contingency Tables
6. ANOVA

GRADING

There will be 4 exams each worth 100 points. Homework assignments, class attendance and class participation is worth 100 points. There will be 6 quizzes (the top 5 will be counted) which will be worth a total of 50 points. The final exam is worth 100 points. There is a grand total of 650 points for the course. If a student misses a test, the final exam will count 200 points and the highest grade a student can receive in this case is a "C." If test #2 or #3 is missed, a special final exam will be given.

Evaluation Of Grade:

92-100 = A	82-87 = B	70-77 = C
90-91 = A-	80-81 = B-	60-69 = D
88-89 = B+	78-79 = C+	Below 60 = F

POLICIES

- No assignments will be accepted after the due date.
- There are no make-up exams or quizzes!
- There is no extra credit!
- I will sign a withdrawal slip up until the last class.
- Students are expected to attend every class!

CATALOGUE DESCRIPTION

A basic course designed for students in all fields. Topics include organization of data, measures of central tendency, measures of variation, statistical inference and correlation. This is a self-contained course, or with MAT 132, it is a course with greater depth and applications. A graphing calculator is required for class, homework, and testing. Classroom instruction and programs will be presented using a TI-84+.

PREREQUISITES

Math placement test recommendation of "ABV 100" (above MAT 100) or MAT 100, with minimum grade of "C."

LEARNING OBJECTIVES

Upon completion of the course, students should be able to:

1. understand descriptive statistics by being able to find by hand and using the TI-84+ calculator, mean, median, mode, midrange, range, variance and standard deviation for a given set of data;
2. make frequency tables, histograms, frequency polygons, ogives, pie charts, stem and leaf plots and box plots;
3. solve probability problems using the addition and multiplication rules and complementary events;
4. understand probability distribution, random variables, mean, variance, and expectation for the binomial and normal distributions;
5. understand the normal distribution as an approximation to the binomial distribution and the Central Limit Theorem;
6. estimates, samples sizes for means and sample sizes for proportions;
7. Test hypotheses: test a claim about a mean, understand p-values, a t test, and tests of proportions;
8. make inferences from two samples using means and proportions;
9. understand correlation and regression;
10. understand multinomial experiments and contingency tables;
11. use the TI-84+ graphics calculator to do many of the statistical tests described above.

CLASSROOM POLICY

1. Casual talking during class is not permitted, as it is a sign of disrespect toward the professor and other students. Students who engage in conversations will receive only one warning. If talking persists, the students' grades will be lowered by ONE GRADE LEVEL and he/she will be referred to the Dean's office for further disciplinary action.

2. If you are late to class, you must take a seat at the back of the room. Do not come to the front of the room once the lecture has started.
3. All cell phones must be turned off in the classroom.
4. **Missing the Final Exam will result in an automatic grade of "F" for the course.**
5. All quizzes are at the end of class.
6. If a student fails the final exam (below 60%) the highest grade the student can receive is a "C" for the course.
7. Cheating is an automatic XF for the course.

MAT 131 – STATISTICS I – FALL 2012
TENTATIVE SCHEDULE

Monday,	Chapters 1 and 2
Tuesday,	Chapter 3
Wednesday,	NO CLASS - HOLIDAY
Thursday,	Chapter 4, Quiz #1
Monday,	Chapter 4
Tuesday,	Chapter 4, Quiz #2
Wednesday,	Chapter 5, Quiz #3
Thursday,	Test #1, Chapter 1-4
Monday,	Chapter 5
Tuesday,	Chapter 6
Wednesday,	Chapter 6
Thursday,	Chapter 7, Quiz #4
Monday,	Test #2, Chapters 5 and 6
Tuesday,	Chapter 7
Wednesday,	Chapter 8
Thursday,	Chapter 8
Monday,	Chapter 8
Tuesday,	Chapter 9
Wednesday,	Chapter 9, Quiz #5
Thursday,	Test #3, Chapter 7 and 8
Monday,	Chapter 10
Tuesday,	Chapter 11
Wednesday,	Chapter 11, ANOVA supplement
Thursday,	Review, Quiz #6
Monday,	Test #4 due and Final Exams