Course 2063: Introductory Statistics

Fall 2009

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Office Hours: Monday and Wednesday: 11:00 – 12:30 pm, 3:30-5:30pm
Any change in office hours will be notified in class.

Course Number: MATH 2063

Course Title: Introductory Statistics

Hours Credit: 3 hours

Prerequisites: MATH 1101 or MATH 1111

Course Description: (Non-credit for mathematics major or minor) A noncalculus-based introduction to methods of descriptive statistics, probability, discrete and continuous distributions and other fundamental concepts of statistics.

Topics: Methods for describing sets of data, including descriptive statistics and histograms. Probability of discrete and continuous random variables, including the binomial and normal random variables. Sampling distributions, including the Central Limit Theorem, Hypothesis testing and Confidence intervals for one and two samples. Simple linear regression.

Text: Discovering Statistics, Daniel T. Larose, W.H. Freeman and Company. You MAY also purchase access to StatsPortal. A TI-83 calculator will be required and you should bring it to class EVERYDAY.

Learning Outcomes:

Upon successful completion of this course, the students will know how to properly collect data, how to describe and analyze that data, and make inferences about the population under study based on the sample data collected. The students will also be aware of and able to interpret the statistics with which we are bombarded on a daily basis in the print media, on radio, and on television, to help make informed decisions about their lives.
Syllabus

2.1 Graphs and Tables for Categorical Data
2.2 Graphs and Tables for Quantitative Data

3.1 Measures of Center
3.2 Measures of Variability

4.2 Introduction to Correlation
4.3 Introduction to Regression

5.1 Introducing Probability
5.2 Combining Events
5.3 Conditional Probability
5.4 Counting

6.1 Discrete Random Variables
6.2 Binomial Probability Distribution
6.3 Continuous Random Variables and the Normal Probability Distribution
6.4 Standard Normal Distribution
6.5 Applications of the Normal Distribution

7.2 Central Limit Theorem for Means

8.1 Z Interval for the Mean
8.2 t Interval for the Mean
8.3 Z Interval for a Population Proportion
8.5 Sample Size Considerations

9.1 Introduction to Hypothesis Testing
9.3 Z Test for the Population Mean $\mu$: Critical-Value Method
9.4 t Test for the Population Mean $\mu$
9.5 Z Test for the Population Proportion $p$

10.1 Inference for Mean Difference-Dependent Samples
10.2 Inference for Two Independent Means
10.3 Inferences for Two Independent Proportions
Grading:

6 Quizzes (10 points each)
4 Test (100 points each)
1 Final (100 points)

*Final Marks = 30% Quizzes + 40% Tests + 30% Final Exam*

Grading Scale:

- A = 90-100%
- B = 80% to < 90%
- C = 70% to < 80%
- D = 60% to < 70%
- F = below 60%

**Approximate dates for Quizzes and Tests:**
*(Any change in date will be announced in class and on the website.)*

Quiz 1: 26th Aug
Quiz 2: 23rd Sept
Quiz 3: 14th Oct
Quiz 4: 26th Oct
Quiz 5: 11th Nov
Quiz 6: 23rd Nov (Take Home)

Test 1: 14th Sept
Test 2: 5th Oct
Test 3: 28th Oct
Test 4: 18th Nov

**Final Exam:**
For 12:30 – 1:45 pm class – 9th Dec 2009, Wednesday 11:00am – 1:00pm
For 2:00 – 3:15pm class – 7th Dec 2009, Monday 2:00pm – 4:00pm
Class Policies:

- You get to drop your lowest test and quiz grade.
- The final exam is COMPULSORY and COMPREHENSIVE for everyone.
- If you miss less than 5 days of class, you will earn two bonus points at the end of term.
- There are NO other extra credits available for this course.
- There are NO make up tests. In case of an illness (with medical certificate) or dire emergency, the instructor must be contacted prior to the test or quiz, via phone or email. Accommodations for missed tests and quizzes will be handled depending on the severity of the situation between the student and the instructor.
- If you need to arrive late or leave early, please clear it with the instructor BEFORE the class begins.
- Cheating of any sort will not be tolerated. If you are found cheating or assisting in any form of cheating, you will be awarded a failing grade in that test or quiz.
- Turn off cell phones and other devices when you enter the classroom.
- Homework sheets will be handed out in class, if you do not get a sheet you can come and collect it from my office after class. Homework will not be graded but you are encouraged to do the homework, as this will be a great help in improving your grade.
- If using email, you must use your university email account (@westga.edu) for any communication; also check your university email account for any announcement regarding the class.
- You can come and see me during my office hours or by appointment. Please feel free to come and talk to me about any problems related to the course.