

Statistics: Math 170

Materials

- 9780134870113, Essentials of Statistics (MyStatisticsLab Stand Alone), 6e, Triola, pearson
- 9780134685779, Essentials of Statistics, 6e, Triola, pearson, paper
- Calculator: A TI-30XIIS or TI-30 Multiview
- Text – All text options can be found here:
<http://www.mypearsonstore.com/bookstore/essentials-of-statistics-9780134685779>

NOTE: If you buy a physical copy of the book, it must be a NEW copy with an unused access code that you can enter into MyStatLab. The exception to this would be if you purchase direct access to the course and then pick up a cheap copy of the book just to have the physical text. I apologize for the inconvenience of not being able to buy a used text with access.

Catalog Description

MTH 170 STATISTICS (4)

This is an introductory course in descriptive and inferential statistics, approached through intuition, algebra, and problem solving. Understanding of central concepts and methods is stressed. Practical applications in the fields of social and physical sciences are studied.

Realworld problems are solved through use of statistical computer packages such as SPSS, SAS, or MINITAB. Prerequisites: MTH 105 and computer literacy.

Each semester

Student Learning Outcomes - Quantitative Literacy

Students will be assessed on objectives 4.1a and 4.1c during this general education requirement. These outcomes will be reported to the University as indicated in the Undergraduate Catalog.

Objective 4.1

Students will gain quantitative literacy by solving quantitative problems based on plausible numerical data and communicating effective arguments in a variety of formats.

Performance indicators.

Students will:

4.1a Explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words)

4.1b Convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words).

4.1c Use calculations successfully to solve a problem.

4.1d Express quantitative evidence in support of an argument.

Course Overview

This is an introductory course in descriptive and inferential statistics, which we approach through intuition, algebra, and problem solving. Understanding of central concepts and methods is stressed. There will be computations – you may use a TI-30 calculator and/or StatCrunch to do computations. Prerequisites to this class are Mathematics 105 and computer literacy.

Course Goals

- Organization and presentation of quantitative data.
- Be able to organize and present quantitative data in numerical and visual formats.
- Understanding and using probability and probability distributions
- Understand and apply basic probability rules
- Understand and apply sampling distributions
- Sampling and statistical inference
- Be able to compute confidence intervals using sample data
- Be able to state appropriate hypotheses and test these hypotheses using sample data.
- Be able to perform the following tests: goodness of fit, regression and ANOVA

Student Email

Every student is issued a McKendree email account, which is one of the major means of communication from departments such as the Office of Academic Records, Student Affairs and the Business Office.

ALL STUDENTS ARE RESPONSIBLE FOR CHECKING THEIR MCKENDREE EMAIL ACCOUNTS REGULARLY AND ARE ACCOUNTABLE FOR INFORMATION DISSEMINATED TO THEIR EMAIL ACCOUNTS.

Failure to read university communications sent to McKendree email accounts does not absolve students from knowing and complying with the content of these communications.

How to succeed in this course:

- Log on to www.mystatlab.com and set up your account.
- Start with the orientation assignment under **HOMEWORK** on the left hand side.
- Identify how to access: the text, your homework, and your tests.
- Use the Interactive Chapter Contents:
- Each chapter overview will summarize the assignments
- Each section overview will list objectives and assignments
- Read each assigned section
- Complete the homework assignments for that chapter
- Use StatCrunch to do computations or use a calculator
- Contact your instructor as needed
- Complete your assigned homework, quizzes and tests

- Use the “Study Plan” options for extra practice if you need it

All assignments are due by 11:59 PM Eastern Time on their listed due date. **PLEASE NOTE THAT ALL TIMES LISTED ON MYSTATLAB ARE IN EASTERN TIME.** This means that assignments will show as being set to close at 11:59 PM, but you will lose access to them at 10:59 PM if you are in Central Time. Plan accordingly!

Grades and Assignments

The following is a complete list of the assignments in this course. This list may be altered at the instructor’s discretion, but changes are unlikely.

- Twenty on-line homework assignments
- Three tests
- One comprehensive final (includes questions from all sections)
- One rubric assessment assignment
- Four extra-credit quizzes (Optional, but highly recommended)
- Re-grade requests must be submitted in writing within one week of the return date.
- Grades are visible in mystatlab.com

Point Breakdown

Required Assignments

20 homeworks x 10 pts. = 200 pts.

3 tests x 40 pts. = 120 pts.

1 final x 80 pts. = 80 pts.

1 rubric assessment x 20 pts.

Class total = 420 pts.

Extra Credit

(4 mini-quizzes x 8 pts. = 32 pts.)

(1 class assessment x 5 pts. = 5 pts.)

Note that extra credit points are not part of the main body of points in the class, so it is possible to get 100% in the class without doing any extra credit. There is no extra credit in this class other than what is built in from the beginning.

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Make Ups

- If you miss an assignment due to an official McKendree function (sporting event or other activity), you must provide me with written notice via email. This notice must be provided within a satisfactory period of time. Satisfactory is defined as a minimum of **ONE WEEK** before the event.

- If you experience a short term illness and cannot complete a test or quiz, contact me immediately. If I have not heard from you within 12 hours after the end of the test or quiz, you will be assigned a **ZERO** for the test.
- Emergencies will be handled on a case by case basis.

Grade Scale

Your final grade will be determined by the percentage of possible points obtained. The letter grade will be determined by the following scale:

Percentage	Grade
100 – 93	A
92 -90	A-
89 - 87	B+
86 – 83	B
82 – 80	B-
79 – 77	C+
76 – 73	C
72 – 70	C-
69 – 60	D
59 – 0	F

Schedule of Topics

Subject to change at instructor's discretion/if needed

Module 1: Descriptive Statistics

- Week 1
Start Sections 1.1-1.4, 2.1-2.4, 3.1-3.4

1/22/18 – Last day to withdraw without receiving a “W”

- Week 2 –
Homeworks for chapters 1, 2, and 3 (includes “Welcome to Statistics” assignment); Mini-quiz 1

Module 2: Probability and Distributions

- Week 3 – **TEST 1**
Start Sections 4.1-4.2, 5.1-5.2, 6.1-6.5
- Week 4 –
Homeworks for chapters 4, 5, and 6; Mini-quiz 2

Module 3: Confidence Intervals and Hypothesis Tests

- Week 5 – **TEST 2**
Start Sections 7.1-7.2, 8.1-8.4
- Week 6 –
Homeworks for chapters 7 and 8, Mini-quiz 3

2/21/18 – Last day to withdraw from class

Module 4: ANOVA, Goodness of Fit, and Regression

- Week 7 – **TEST 3**
Start Sections 10.1-10.3, 11.1-11.4
- Week 8 –
Homeworks for chapters 10 and 11, Mini-quiz 4, rubric assignment
TEST 4/FINAL

Final grades posted to WebAdvisor

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Please make a note of the following university-wide policies!

Academic Honesty:

Any student detected of cheating or engaging in plagiarism on any exam or paper, or participating in any other form of academic dishonesty, will receive the appropriate sanctions which can include a failing grade ("F") for the individual assessment or the course. Please visit with me regarding any questions. In cases of serious violations, additional sanctions (such as academic probation or suspension) are possible.

ADA Policy:

A student requiring assistance with the technical portions of the course should contact the Instructor or the Academic Support Center (MASC). Services for students with disabilities are provided through the McKendree Academic Support Center in order to help the student integrate in the entire college experience. MASC provides coordination and implementation of special accommodations for students with documented disabilities.