

MA105 Elementary Statistics
Spring 2018
Course Syllabus
Central Methodist University

Instructor: Mrs. Leverton
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(You are responsible for communication via email.)

Text: Understandable Statistics, 7th Edition, Brase, Brase, Houghton Mifflin, 2003. ISBN: 0-618-20554-3

Calculator: A graphing calculator is not required for the course but is extremely helpful. I will be using a TI-84+.

Dual Credit: The dual credit class/meeting schedule will follow the Pilot Grove High School calendar as closely as possible (available at www.pilotgrove.k12.mo.us). We will meet five days a week and will start sooner and end later than CMU and most other dual credit courses.

Mission: Central Methodist University prepares students to make a difference in the world by emphasizing academic and professional excellence, ethical leadership, and social responsibility.

Catalog description: An introduction to basic statistical procedures with application to all areas.

Prerequisite: ACT Math Sub-score at least 20 or MA101/MA102 or MA103

Course description: This course covers descriptive and inferential statistics. The descriptive portion analyzes data through graphs, measures of central tendency and spread. Other statistical practices utilize basic probability, binomial and normal distributions, estimation of population parameters, hypothesis testing, linear regression and correlation. Analytical reading and problem solving are required for success in this course.

Common Core Competencies: MA 105 meets the competency requirements for Foundations in Mathematical Literacy [1.5-6].

Academic Conduct Policy: Any student caught committing academic misconduct will earn a zero for that assignment, quiz or exam. Furthermore that student will come under the auspices of the Academic Conduct Policy of CMU. It is the student's responsibility to review and understand the CMU Academic Conduct Policy.

Grievance Policy: Central Methodist University has established a grievance policy and process designed to provide students and others with a process to resolve potential issues. This policy and process is established to provide persons with an avenue to file a written concern and to establish a process to track and implement changes as a result of said concern. For more detailed information

consult the CLAS catalog at: <http://www.centralmethodist.edu/academics/catalog/clas-catalog/policies/index.php>.

If an issue cannot be solved through consultation with the faculty or division chair, students can report an incident/issue within 30 days of the event via the online web form (<https://cm.maxient.com/reportingform.php?CentralMethodistUniv>).

Attendance: Regular attendance is necessary for this class. Late arrival or early departure from class may be counted as an absence. In the event of an absence, you are responsible for all of the material covered in class that day and any schedule changes or class announcements.

Course Outline

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| Chapter 1/2 | 1 week |
| <ul style="list-style-type: none">• Getting started with Statistics• Statistical graphics | |
| Exam 1/2 | |
| Chapter 3 | 2 weeks |
| <ul style="list-style-type: none">• Measures of Central Tendency• Measures of Variation• Percentiles | |
| Exam 3 | |
| Chapter 4 | 4 weeks |
| <ul style="list-style-type: none">• Probability• Counting Rules | |
| Exam 4 | |
| Chapter 5 | 2 weeks |
| <ul style="list-style-type: none">• Probability Distributions• Binomial Probabilities | |
| Exam 5 | |
| Chapter 6 | 3 weeks |
| <ul style="list-style-type: none">• Standard Normal Distributions• Area under normal curves• Normal approximation to the Binomial Distribution | |
| Exam 6 | |
| Chapter 7 | 1 week |
| <ul style="list-style-type: none">• Central Limit Theorem | |
| Exam 7 | |
| Chapter 8 | 2 weeks |

- Estimating μ with large and small samples
- Estimating p in the Binomial Distribution
- Choosing sample size

Exam 8

Chapter 9 3 weeks

- Hypothesis testing involving μ and p
- Hypothesis testing involving paired differences (dependent and independent samples)

Exam 9

Final Exam

Grading Policies: There will be a test following each chapter (approximately 4-5 for the semester). Quizzes will be given periodically throughout the semester as well (usually 1 per chapter). Homework will be given daily. Portions of the tests/quizzes may be redone for a higher score at the discretion of the instructor and only if all assignments were thoroughly completed and submitted on time.

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| Tests/Quizzes | 90% |
| Homework | 10% |

Penalty for late work: NO LATE WORK IS ACCEPTED.

Class policy for making up work: Please let me know as soon as possible if you are going to miss class. Your assignments for the week are still due and need to be submitted on time. If you miss a quiz or test, it needs to be completed when you return and submitted that day.

Note: Central Methodist University does not discriminate on the basis of race, color, religion, sex, national origin, age, or federally defined disability in its recruitment, admission, and retention of students.

This syllabus is subject to change, without notice, at the discretion of the instructor.

Please email me as soon as possible so that I have your email address. I will use email to update you on changes in the schedule and/or the assignments and it is useful for you to ask questions and get help outside of class.