

MA105 Elementary Statistics
Spring 2021
1:06-1:56 Monday-Friday
Course Syllabus
Central Methodist University

Instructor: Mrs. Leverton

Email: mleverton@pilotgrove.k12.mo.us

(You are responsible for communication via email.)

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 with many built-in homework/study days and may 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

REQUIRED Text: *Understandable Statistics* (12th ed) by Brase & Brase. Houghton Mifflin Publisher. ISBN-10: 1337119911 ISBN-13: 978-1337119917

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>

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

Chapter 2 1 week

- Frequency Tables
- Histograms

Chapter 3 2 weeks

- Measures of Central Tendency
- Measures of Variation
- Percentiles

Exam 3

Chapter 4 3 weeks

- Probability
- Counting Rules

Exam 4

Chapter 5 2 weeks

- Probability Distributions
- Binomial Probabilities
- Geometric Distribution
- Poisson Distribution

Exam 5

Chapter 6 2 weeks

- Standard Normal Distributions
- Area under normal curves
- Normal approximation to the Binomial Distribution
- Central Limit Theorem

Exam 6

Chapter 7 2 weeks

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

Exam 7

Chapter 8 2 weeks

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

Exam 8

Chapter 10 2 weeks

- Chi-Square Distribution
- F Distribution

Exam 9

Final Exam

Grading Policies: There will be a test following each chapter (approximately 8 for the semester). Quizzes will be given periodically throughout the semester as well. Homework will be given daily and will be graded for completion and accuracy.

Tests 53%

Quizzes 10%

Projects 1-4 3% EACH

Homework 25%

Notes: Notes will be collected on the day of each exam (they will be returned to you). Points will be given based on their completion and accuracy. Neatness will count (legibility, labeling, enough information to follow, etc.). Partially completed portions will earn no points.

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/state defined handicap ("disability"). This includes but is not limited to recruitment and admission of students, educational programs, services, activities, financial aid, and scholarship programs. The University complies with all federal and state non-discrimination requirements.

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.