



Math 1342.037IN
Elementary Statistical Methods
Spring 2024
Online

Instructor Information: Kristi Kelley, kkelley9@com.edu , 409-933-8287

Student hours and location: MW: 9 – 10:30 AM in STEAM 325.05
TTH: 9 - 10 AM (Virtual: by appt) [Join the Virtual Office Hours](#) via Teams.
TTH: 1:30 – 2:15 PM; 4:15 - 5 PM in STEAM 325.05

Remind101: To get text reminders about assignments that are due and to be able to text me from your phone, join your class’s Remind101 by one of the methods below:

- 1) Join Remind101 by clicking the link. [Click here to join Remind101](#)
- 2) Join by texting @ **h26k4b** to the number 81010

Required Textbook/Materials: Minimally, you are required to purchase the access code for MyMathLab to access the eText for the textbook and all course assignments. A hard copy of the textbook is recommended, but not required. *The cost of the access code is included in tuition for this course. You will go to D2L to access MyMathLab.*

ISBN 10: 0-13-578018-7 **ISBN 13:** 978-0-13-578018-3 **Title:** Statistics: Informed Decisions Using Data with Integrated Review with Pearson eText **Author:** Michael Sullivan III **Edition:** 6 **Copyright:** 2021 **Publisher:** Pearson

Required Technology: A **TI-84 Plus graphing calculator is required for this course.** A TI-89 or higher or a TI-Nspire are **not permitted.** Internet capability is also required to gain access to course materials and online assignments via MyMathLab software.

Recommended Materials:

- A small 3 ring binder (to keep class notes in)
- Spiral bound notebook (to do your homework in) OR notebook paper and a bradded folder
- Pens and Pencils (You MUST complete your exam with a pencil or ERASEABLE pen)
- index cards
- highlighters

Points may be deducted for use of a non-erasable pen.

Course Description: This course includes collection, analysis, presentation, and interpretation of data and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals, and hypothesis testing.

Course requirements:

- **Homework:** Homework assignments will be given each week for every section covered in the course. Homework assignments will count as 10% of your final grade.
- **Quizzes:** Six online quizzes will be given. Cumulatively, the quizzes will count as 10% of your final grade.
 - You can retake each quiz just once to improve your score; the higher score will be the one that counts.
 - There will be slots in D2L for you two upload your quiz scratchwork. This is NOT required, but if you want me to review your quiz with you or see if you could get points back for something that MML counted wrong. For example, you put a comma in the wrong spot, typed a number in wrong, etc. Click Assignments in the left-hand toolbar of D2L and then click Quiz Scratchwork.

- **Unit Exams:** Four exams will be given, and you will be provided with a review to prepare for each exam. Each test will count as 15% of your grade.
 - There are no retakes on any of the exams, and there is only one attempt for each exam.
 - If you have problems with your computer or internet in the process of taking an exam, contact the instructor immediately.
 - You will have one day after the due date to take the exam with a 20% penalty. *There are no extensions for exams.*
 - ***There will be a paper portion of the exam.***

- **Final Exam:** The comprehensive final exam will be given at the end of the course during Week 16. The final exam will count as 15% of your grade and will replace your lowest exam grade if it is higher.
- **Discussions:** Participation in four discussion forums is required to give students opportunities to exchange and clarify ideas. Cumulatively, these will count as 5% of your grade.
 - There are 4 class discussions throughout the semester. The class discussions are located inside the week's instructions.
 - Discussion 1 - Week 2: Observational Vs. Designed Study Discussion
 - Discussion 2 - Week 6 discussion: Box Plot Discussion
 - Discussion 3 - Week 8 discussion: Probability Discussion
 - Discussion 4 - Week 11 discussion: Z -Scores
 - You must make an initial post by Friday and are required to respond to two other classmates' posts by Sunday of that week.

Paper portion of the exam:

- You will go to Assignments to print the paper portion of the exam. You can also complete the paper portion of the exam using your tablet.
- You will work out the paper portion of the exam with pencil, erasable pin, or on your tablet.
- The paper portion of the exam is due when the exam is due. You can turn it in a day late with a 5% late penalty.
- Problems need to be worked out in an organized/structured manner and show all necessary steps to justify the answer using methods taught in this course to receive full credit.
- Problems that have an answer but no work to justify the answers will not be given credit.

Determination of Course Grade/Detailed Grading Formula:

Grading Formula:

$$\text{Final Average} = .60(\text{Exam Average}) + .15(\text{Final Exam}) + .10(\text{Homework}) + .10(\text{Quizzes}) + .05(\text{Discussions})$$

Grading Scale:

The course grade will be determined using the following scale:

Grade A: Final Average [89.5, 100]

Grade B: Final Average [79.5, 89.5)

Grade C: Final Average [69.5, 79.5)

Grade D: Final Average [59.5, 69.5)

Grade F: Final Average [0, 59.5)

Late Work, Make-Up, and Extra-Credit Policy:

Due Dates – Each homework and quiz have a set due date. You can complete homework and quizzes after the due date until 11:59 PM on the day of the exam. Each homework question worked after the due date will receive a 20% late penalty. The late penalty applies only to questions worked after the due date and not the entire assignment.

Homework and quizzes will close on the day of the exam at 11:59 PM and will not be re-opened.

It is your responsibility to look at the course calendar located in the syllabus frequently, so you do not miss any due dates.

Make ups - As a general rule, there are no make-up exams. *Make-up exams will only be allowed under extenuating circumstances. If you need to miss an exam, you must petition the instructor before the due date. If you do not reach out prior to the exam, an extension will not be granted. Only extenuating circumstances of a serious nature that are documented will be considered such as a death in the family or hospitalization.* Realize not being prepared for the exam is not a legitimate reason for a make-up exam. **No one will be permitted to take more than one make-up exam. All other missed chapter tests will be assigned a zero, and the zero(s) will be used to calculate final grade in course.**

Attendance Policy: Students at COM are expected to participate every week for which they are registered. Per COM policy, students are required to log on to their course at least twice per week, but it may be necessary to log on more times each week to complete the assignments required of this course. When students are not actively participating (e.g., contributing to discussions and completing weekly online homework), the faculty member can initiate an instructor drop and, subsequently, the student will receive a **W** for the course.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means.

Table Mapping SLO's and Core Objectives

Student Learner Outcome	SLO Assessed via this Assignment	SLO Maps to Core Objective	Core Objective Assessed via this Assignment
1. Explain the use of data collection and statistics as tools to reach reasonable conclusions	Quiz 1		
2. Recognize, examine, and interpret the basic principles of describing and presenting data	Quiz 1	Empirical and Quantitative Skills (EQS)	Question on Exam 1
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics	Quiz 3	Critical Thinking Skills (CT)	Question of Exam 2
4. Explain the role of probability in statistics	Quiz 3		
5. Examine, analyze, and compare various sampling distributions for both discrete and continuous random variables.	Quiz 4		
6. Describe and compute confidence intervals	Quiz 5		
7. Solve linear regression and correlation problems	Quiz 2		
8. Perform hypothesis testing using statistical methods	Quiz 6		

Academic Dishonesty: College of the Mainland is committed to a high standard of academic integrity. All students are responsible for honesty and independent effort. Incidents of academic and scholastic dishonesty (including cheating, plagiarism, and collusion) will be dealt with in a manner that is consistent will College Policy and the Student Conduct. Any student found to have been academically dishonest on an assignment, quiz, or exam will receive a zero for that assignment, quiz, or exam, and he or she will be referred to the Office of Student Conduct for further disciplinary action. Please read the section on Standards of Student Conduct and Discipline and Penalties in the online Student Handbook.

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Mr. Leslie Richardson, Math Department Chair, at (409) 933-8329 or at lrichardson@com.edu.

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2023-2024_v2.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: College of the Mainland is committed to providing students the necessary support and tools for success in their college careers. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney at 409-933-8919 or klachney@com.edu. The Office of Services for Students with Disabilities is located in the Student Success Center.

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is February 28. ***The last date to withdraw from the 16-week session is April 22.*** The last date to withdraw for the 2nd 8-week session is May 1. The last date to withdraw for spring mini session is May 29.

FN Grading: The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the FN grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an FN grade.

Early Alert Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress:

If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

Course outline:

Math 1342.037 Online – Spring 2024		
Week		Due Date (by 11:59PM)
1 Jan. 16 - 21	<i>MyMathLab Orientation</i> <i>Scavenger Hunt/Course Expectations</i> <i>Flipgrid Introduction Assignment</i> 1.1 Introduction to the Practice of Statistics 1.2 Observational Studies versus Designed Experiments 1.3 Simple Random Sampling	Jan 21 st
2 Jan. 22-28	1.4 Other Effective Sampling Methods 1.5 Bias in Sampling 1.6 The Design of Experiments 2.1 Organizing Qualitative Data <u>Discussion 1: Observational vs. designed experiment Discussion (D2L) -Original post due Friday 1/26 and two responses due Sunday 1/28</u>	Jan 28 th
3 Jan. 29- Feb 4	2.2 Organizing Quantitative Data: The Popular Displays 2.3 Additional Displays of Quantitative Data 2.4 Graphical Misrepresentations of Data Quiz 1 (1.1-1.6, 2.1-2.4)	Feb 4 th
4 Feb. 5-11	3.1 Measure of Central Tendency 3.2 Measures of Dispersion 3.3 Measures of Central Tendency and Dispersion from Grouped Data	Feb 11 th
5 Feb. 12-18	3.4 Measures of Dispersion and Outliers 3.5 The Five-Number Summary Boxplots <i>Review for Exam 1</i>	3.4 & 3.5 - Feb 18 Rev: Feb 20 th
6 Feb. 19-25	Exam 1 (1.1-1.6, 2.1-2.4, 3.1-3.5) – W – 2/21 4.1/4.2 Scatter Diagrams, Correlation, Coefficient of Determination, & Least Squares Regression Quiz 2 (4.1-4.2) <u>Discussion 2: Box plot discussion (D2L) - Original post due by Fri 2/23 and two follow up posts due by Sun. 2/25</u>	Feb 25
7 Feb. 26- Mar. 3	5.1 Probability Rules 5.2 The Addition Rule and Complements 5.3 Independence and the Multiplication Rule	Mar 3 rd
8 Mar. 4-10	5.4 Conditional Probability and the General Multiplication Rule 5.5 Counting Techniques Quiz 3 (5.1-5.5) <u>Discussion 3: Probability (D2L) - Original post due by Fri 3/8 and two follow up posts due by Sun. 3/10</u>	5.4,5.5 - Mar 10 th
Mar. 11-17	Spring Break	
9 Mar. 18-24	6.1 Discrete Random Variables 6.2 The Binomial Probability Distribution <i>Review for Exam 2</i>	6.1, 6.2 – Mar 24 th Rev – Mar 26 th
10 Mar.25-31 *Mar 29 – Good Friday	Exam 2 (4.1, 4.2, 5.1-5.5, 6.1, 6.2) – W – 3/27 7.1 Properties of Normal Distribution 7.2 Applications of Normal Distribution Quiz 4 (6.1, 6.2, 7.1, 7.2)	Mar 31 st

11 Apr. 1-7	8.1 Distribution of the Sample Mean 8.2 Distribution of the Sample Proportion Discussion 4: Z-scores (D2L) - <i>Original post due by Fri 4/5 and two follow up posts due by Sun. 4/7</i>	Apr 7 th
12 Apr. 8-14	9.1 Estimating a Population Proportion 9.2 Estimating a Population Mean Quiz 5 (9.1, 9.2) <i>Review for Exam 3</i>	9.1, 9.2, Quiz 5 – Apr 14 th Rev – Apr 16 th
13 Apr. 15-21	Exam 3 (7.1, 7.2, 8.1, 8.2, 9.1, 9.2) – W – 4/17 10.1 The Language of Hypothesis Testing 10.2 Hypothesis Tests for a Population Proportion	Apr 21 st
14 Apr. 22-28	10.3 Hypothesis Tests for a Population Mean 11.1 Inference about Two Population Proportions	Apr 28 th
15 Apr 29 – May5	11.2 Inference about Two Means: Dependent Samples 11.3 Inference about Two Means: Independent Samples – Exam 4 Bonus Opportunity Quiz 6 (10.1-10.3, 11.1-11.3) <i>Review for Exam 4</i> Exam 4 (10.1-10.3, 11.1-11.3) – F – 5/3	11.2, Quiz 6, Rev – May 1 st Rev – May 2 nd
16 May 6-9	Final Exam Review Final Exam – W – 5/8	Rev – May 7 th

****W-day: 4/22/24****

****Calendar is subject to change****