College of the Mainland.

Math 1342.037IN
Elementary Statistical Methods
Fall 2024
Online

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

Student hours and location: M,W: 9 – 10:45 AM and 2 – 2:30 PM in STEAM 325.05
T,Th: 9 – 9:30 AM and 1:30 – 2:30 PM in STEAM 325.05
F: By appointment only

You can come to student hours in person or meet virtually via Teams.
Office location: STEAM 325.05

Join the Virtual Office Hours

Send me an E-mail if you'd like to meet virtually during office hours.

Pulse App: Download the Brightspace D2L Pulse App to get the announcements on your phone that I post to D2L. I will send reminders about assignments among other things through this app.

Outlook App: Download the outlook app on your phone to be able to check and send emails from your smartphone.

Calculate84: Download Calculate84 on your iPhone and download Calc84 on your android.
to have an TI 84 calculator app on your phone. I do recommend buying one if you can, but if you cannot, this will work for your homework.

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 5% penalty. *There are no extensions for exams.*
- **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.

Determination of Course Grade/Detailed Grading Formula:
Grading Formula:
    Final Average = .60(Exam Average) +.15(Final Exam) + .10(Homework) +.10(Quizzes) + .05(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 10% 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_2024-2025_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, Student Accessibility Services Coordinator
Phone: 409-933-8919
Email: AccessibilityServices@com.edu
Location: COM Doyle Family Administration Building, 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 October 2. The last date to withdraw from the 16-week session is November15. The last date to withdraw for the 2nd 8-week session is November 26.***

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.

Nondiscrimination Statement:
The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of College District policy.

Important Dates:

Census Day: 10/21   **2nd 8 weeks W Day:** 11/26
Last Day of Class: 12/4   **Grades Due:** 12/6

Course outline:

Week	Dates	Math 1342.037 Online	Due Dates by 11:59pm
1	October 14 – 20	1.1 Introduction to the Practice of Statistics 1.2 Observational Studies vs. Designed Experiments 1.3 Simple Random Sampling 1.4 Other Effective Sampling Methods 1.5 Bias in Sampling 1.6 The Design of Experiments 2.1 Organizing Qualitative Data 2.2 Organizing Quantitative Data: The Popular Displays	Su:10/20/24
2	October 21 – 27	2.4 Graphical Misrepresentations of Data 3.1 Measures of Central Tendency 3.2 Measures of Dispersion 3.3 Measures of Central Tendency and Dispersion from Grouped Data	Su:10/27/24
3	October 28 – November 3	3.4 Measures of Dispersion and Outliers 3.5 The Five-Number Summary Boxplots Review for Exam 1 **Exam 1 (Ch. 1 – 3)**	Su:11/3/24
4	November 4 – 10	4.1/4.2 Scatter Diagrams, Correlation, and the Coefficient of Determination Least Squares Regression 5.1 Probability Rules 5.2 The Addition Rule and Complements 5.3 Independence and the Multiplication Rule 5.4 Conditional Probability and the General Multiplication Rule	Su:11/10/24
5	November 11 – 17	5.5 Counting Principles 6.1 Discrete Random Variables 6.2 The Binomial Probability Distribution Review for Exam 2 **Exam 2 (Ch. 4 – 6)**	Su:11/17/24
6	November 18 – 24	7.1 Properties of Normal Distribution 7.2 Applications of Normal Distribution 8.1 Distribution of Sample Mean 8.2 Distribution of Sample Proportion Review for Exam 3 **Exam 3 (Ch. 7 – 8)**	Su:11/24/24
7	November 25 – December 1	9.1 Estimating a Population Proportion 9.2 Estimating a Population Mean 10.1 The Language of Hypothesis Testing 10.2 Hypothesis Tests for a Population Proportion 10.2 Hypothesis Tests for a Population Mean	Su:12/1/24
8	December 2 – 4	**Exam 4 (Ch. 9 and 10)** *Review for Final Exam in class on 12/3/24 – T* *Final Exam due Wednesday December 4, 2024*	M:12/2/24 W:12/4/24