Math 1342.153CL
Elementary Statistical Methods
Spring 2024
STEAM Building, Room 107
TTH 1:30 - 3:20 PM

Instructor Information: Theophilus, Boye, tboye@com.edu, 409-933-8758

Student hours: **MW**: 11:00-12:30am; **TTh**: 3:30 – 6:00pm;

Office location: STEAM **325-3**

Required Textbook/Materials: Minimally, you are required to purchase the access code for MyStatLab to access the eText for the textbook and all course assignments. A hard copy of the textbook is recommended, but not required.

ISBN: 9780135780183
Title: Statistics: Informed Decisions Using Data with Integrated Review, plus MyStatLab with Pearson eText
Author: Michael Sullivan
Edition: 6
Copyright: 2021
Publisher: Pearson

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 15% of your final grade.
- **Quizzes:** Six quizzes will be given. Cumulatively, the quizzes will count as 10% of your final grade.
- **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.
- **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.

  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 MyStatLab software.

Determination of Course Grade/Detailed Grading Formula:
Grading Formula:

Final Average = .60(Exam Average) +.15(Final Exam) +.15(Homework) +.10(Quizzes)

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: If you are unable to make a scheduled exam, you will be allowed to make up the exam outside of class provided you notify the instructor prior to the exam and have a legitimate reason for the absence. All makeup exams must be taken in the Testing Center by appointment. The late penalty for past due assignments is 20% of your grade. Extra credit assignments will not be available.

Attendance Policy: Attendance is required for all class meetings. 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.

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

Electronic Device Policies
You may use your laptop or tablet for taking notes during lecture; however, that privilege will be lost if I find that you are using them for non-course-related reasons (e.g., news, social media, shopping).
All other electronic devices should be **silenced and hidden**. If there is an emergency and your phone must be on/visible, please inform me of this at the beginning of class.

Classroom Conduct Policy

Arriving on time, staying the entire class period, eliminating distractions like cell phones, using appropriate language (no cursing), respecting your classmates and the instructor, and cleaning up after yourself are all expectations for students in the classroom. Please abide by these expectations so that the class setting is enjoyable for all students. Regarding cell phones, they should be turned off or set on airplane mode and in your backpack/purse (not on your desk).

It is extremely disruptive to the learning environment, so you will be asked to leave if it is a continuous problem. Infractions may result in an automatic withdrawal from the class. Cell phones cannot be used during tests or quizzes and refer to testing policies for additional information. Please notify me before class if you have an emergency that requires you to answer your phone during class. Take an emergency phone call outside of the classroom.

For their safety, unattended minors of students are not permitted on campus while students are in class. In consideration of fellow classmate, please do not bring children to class

Testing Policy

Prohibited devices include, but are not limited to:

- Cell phones; smart phones; smart watches
- Audio players/recorders, tablets, laptops, notebooks, or any other personal computing devices
- Cameras or any other photographic equipment
- Any devices, including digital watches, that can be used to record, transmit, receive, or play back audio, photographic, text, or video content

If your device makes a sound or is in your possession when the device goes off, you may be dismissed, and your score may be recorded as a zero.

If you leave the classroom at any time during an exam, the exam must be submitted for grading.

It is strongly advised that students take care of all personal business prior to entering the classroom to take an exam.

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
Student Learner Outcome	**SLO Assessed via this Assignment**	**SLO Maps to Core Objective**	**Core Objective Assessed via this Assignment**
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		

Week	Math 0306	Due Date @ 11:59PM	Math 1342	Due Date @ 11:59PM
1 Jan 16 – Jan 19	*Orientation* 1.2 Place Value, Names for Numbers & Reading Tables 1.3 Adding & Subtracting Whole Numbers and Perimeter 1.4 Rounding and Estimating 1.5 Multiplying Whole Numbers and Area 1.6 Dividing Whole Numbers 1.7 Exponents and Order of Operations 1.8 Introduction to Variables, Algebraic Expressions, and Equations ***There is a single Ch. 1 HW assignment for 1.2-1.8***	Jan 23	*Orientation* 1.1 Introduction to the Practice of Statistics 1.2 Observational Studies versus Designed Experiments 1.3 Simple Random Sampling	Jan 23
2 Jan 22 – Jan 26	2.1 Introduction to Integers 2.2 Adding Integers 2.3 Subtracting Integers 2.4 Multiplying and Dividing Integers 2.5 Order of Operations 2.6 Solving Equations: Review of the Addition and Multiplication Properties **Quiz 1: Chapter 2**	Jan 30	1.4 Other Effective Sampling Methods 1.5 Bias in Sampling 1.6 The Design of Experiments 2.1 Organizing Qualitative Data	Jan 30
3 Jan 29 – Feb 2	8.1 Pictographs, Bar Graphs, Histograms, Line Graphs, and Introduction to Statistics 8.2 Circle Graphs ***8.1 & 8.2 online HW assignments only – this material is covered in 2.1 & 2.2 in 1342*** 8.3 The Rectangular Coordinate System and Paired Data 8.4 Graphing Linear Equations in Two Variables	Feb 6	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) – SLO 1 and 2**	Feb 6
4 Feb 5 – Feb 9	8.5 Counting and Introduction to Probability ***Review for Test 1*** **Test 1: Chapters 1, 2 and 8** 3.1 Simplifying Algebraic Expressions	**Test 1: Th – 2/8**	3.1 Measure of Central Tendency 3.2 Measures of Dispersion 3.3 Measures of Central Tendency and Dispersion from Grouped Data	Feb 13

Week	Math 0306	Due Date @ 11:59PM	Math 1342	Due Date @ 11:59PM
5 Feb 12 – Feb 16	3.2 Solving Equations: Review of the Addition and Multiplication Properties 3.3 Solving Linear Equations in One Variable 3.4 Linear Equations in One Variable and Problem Solving **Quiz 2: Chapter 3** 4.1 Introduction to Fractions and Mixed Numbers 4.2 Factors and Simplest Form 4.3 Multiplying and Dividing Fractions	Feb 20	3.3 Measures of Central Tendency and Dispersion from Grouped Data 3.4 Measures of Dispersion and Outliers 3.5 The Five-Number Summary Boxplots ***Review for Exam 1***	Feb 20
6 Feb 19 – Feb 23	4.4 Adding and Subtracting Like Fractions, Least Common Denominator, and Equivalent Fractions 4.5 Adding and Subtracting Unlike Fractions 4.7 Operations on Mixed Numbers 4.8 Solving Equations with Fractions ***Review for Test 2***	Feb 27	**Exam 1 (Ch 1, 2, 3)** 4.1/4.2 Scatter Diagrams, Correlation, Coefficient of Determination, & Least Squares Regression **Quiz 2 (4.1-4.2) – SLO 7**	Feb 27
7 Feb 26 – Mar 1	**Test 2: Chapters 3 and 4** 5.1 Introduction to Decimals 5.2 Adding and Subtracting Decimals 5.3 Multiplying Decimals and Circumference of a Circle 5.4 Dividing Decimals	**Test 2: T: 2/29** **Mar 5**	5.1 Probability Rules 5.2 The Addition Rule and Complements- 5.3 Independence and the Multiplication Rule	Mar 5
8 Mar 4 – Mar 8 **Spring Break: 3/11-3/17**	5.5 Fractions, Decimals, and Order of Operations 5.6 Solving Equations Containing Decimals 5.7 Decimal Applications: Mean, Median, and Mode ***5.7 Online HW assignment only – Covered this topic in 3.1 in 1342*** **Quiz 3: Chapter 5** 6.1 Ratios and Rates 6.2 Proportions	Mar 19	5.4 Conditional Probability and the General Multiplication Rule 5.5 Counting Techniques **Quiz 3 (5.1-5.5) – SLO 3 and 4** 6.1 Discrete Random Variables	Mar 19
9 Mar 18 – Mar 22	6.3 Proportions and Problem Solving ***Review for Test 3*** **Test 3: Chapters 5 and 6 – Th – 3/21**	Mar 26	6.1 Discrete Random Variables 6.2 The Binomial Probability Distribution ***Review for Exam 2*** 7.1 Properties of Normal Distribution ***7.1 is on Exam 3***	Mar 26

Week	Math 0306	Due Date @ 11:59PM	Math 1342	Due Date @ 11:59PM
10 Mar 25 – Mar 29	7.1 Percents, Decimals, and Fractions 7.2 Solving Percent Problems with Equations 7.3 Solving Percent Problems with Proportions 7.4 Applications of Percent	April 2	**Exam 2 (Ch 4, 5 & 6)** 7.1 Properties of Normal Distribution 7.2 Applications of Normal Distribution **Quiz 4 (6.1, 6.2, 7.1, 7.2) – SLO 5**	**April 2**
11 April 1 – April 5	7.5 Percent and Problem Solving: Sales Tax, Commission, and Discount 7.6 Percent and Problem Solving: Interest **Quiz 4: Chapter 7** 9.2 Perimeter-Th 9.3 Area, Volume	April 9	8.1 Distribution of the Sample Mean 8.2 Distribution of the Sample Proportion	April 9
12 April 8 – April 12	9.4 Linear Measurement (US & Metric units of length) 9.5 Weight and Mass (US & Metric units of weight and mass) 9.6 Capacity (US & Metric units of volume) 9.7 Temperature and Conversions Between the U.S. and Metric Systems	April 16	9.1 Estimating a Population Proportion 9.2 Estimating a Population Mean **Quiz 5 (9.1, 9.2) – SLO 6** *Review for Exam 3*	April 16
13 April 15 – April 19	*Review for Test 4*		**Exam 3 (Ch 7 & 8)** 10.1 The Language of Hypothesis Testing-T	April 23
14 April 22 – April 26	**Test 4: Chapters 7 and 9** *Review for Final Exam*	April 25	10.2 Hypothesis Tests for a Population Proportion 10.3 Hypothesis Tests for a Population Mean 11.1 Inference about Two Population Proportions 11.2 Inference about Two Means: Dependent Samples	April 30
15 April 29 – May 3	**Final Exam**		11.3 Inference about Two Means: Independent Samples-T (if time permits) **Quiz 6 (10.1-10.3, 11.1-11.3) – SLO 8** *Review for Exam 4* **Exam 4 (9 & 10)** *Final Exam Review-*	May 5
16 May 6 – May 10			**Final Exam**	**May 8**

*W-Day is April 22
**Class ends on May 8
***Calendar is subject to change

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.