Statistics (MATH 1342)

LAMAR INSTITUTE OF TECHNOLOGY

CREDIT
3 Semester Credit Hours (3 hours lecture, 0 hours lab)

MODE OF INSTRUCTION
Online

PREREQUISITE/CO-REQUISITE:
TSI Complete for Math

COURSE DESCRIPTION
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

COURSE OBJECTIVES
Upon completion of this course, the student will be able to

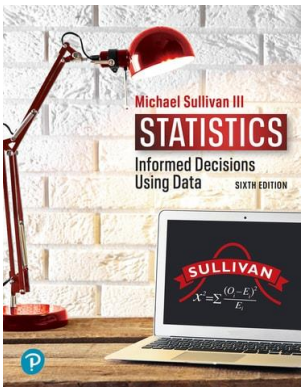
1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine, and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze, and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.

INSTRUCTOR CONTACT INFORMATION

Instructor:	Chris Sams
Email:	casams@lit.edu
Office Phone:	409-247-5186
Office Location:	TC Rm. 240
Office Hours:	M: 9:30am-12:10pm; 1:40pm-2:30pm W: 11:00am-12:10pm; 1:40pm-2:30pm TR: 8:00am-9:20am; 1:50pm-2:30pm F: 9:30am-12:00pm

Approved: Initials/date

REQUIRED TEXTBOOK AND MATERIALS



MyLab Statistics with Pearson eText (18 Weeks) for Statistics: Informed Decisions Using Data
ISBN-13: 9780135780121

MyLab Statistics with Pearson eText (24 Months) for Statistics: Informed Decisions Using Data with Integrated Review
ISBN-13: 9780136662105

1. Paper, pencils, and a calculator, access to computer with internet access.

ATTENDANCE POLICY

Attendance is required, online students should login and work on assignments 2-3 times per week, minimum.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE CALENDAR

Week Of:	*Sec*	*Topic*	*Homework due:*
8/25		Self introduction (Blackboard)	
8/25	1.1	Getting Started	9/28
8/25	1.2	Data Classification	9/28
9/1	1.3	The Process of a Statistical Study	9/28
9/1	2.1	Frequency Distributions	9/28
9/8	2.2	Graphical Displays of Data	9/28
9/8	2.3	Analyzing Graphs	9/28
9/8	3.1	Measures of Center	9/28
9/15	3.2	Measures of Dispersion	9/28
9/15	3.4	Measures of Position	9/28
9/15	3.5	The Five Number Summary	9/28
9/22		**EXAM I Ch.1-3**	9/28
9/22	4.1	Scatter Diagrams and Correlation	11/2
9/29	4.2	Least Squares Regression	11/2
9/29	5.1	Probability Rules	11/2
10/6	5.2	Addition Rule and Complements	11/2
10/6	5.3	Independence and Multiplication Rule	11/2
10/6	6.1	Discrete Randon Variables	11/2
10/13	6.2	Binomial Probability Distribution	11/2
10/13	6.3	Poisson Probability Distribution	11/2
10/13	6.4	Hypergeometric Probability Distribution	11/2
10/20	7.1	Properties of the Normal Distribution	11/2
10/20	7.2	Applications of the Normal Distribution	11/2
10/27		**Test II Ch.4-7**	**11/2**
10/27		**Core Assessment Due**	**11/2**
10/27	8.1	Distribution of the Sample Mean	11/30
11/3	8.2	Distribution of the Sample Proportion	11/30
11/3	9.1	Estimating a Population Proportion	11/30
11/3	9.2	Estimating a Population Mean	11/30
11/10	9.3	Estimating a Population Standard Deviation	11/30
11/10	10.1	Language of Hypothesis Testing	11/30
11/10	10.2	Hypothesis Testing for Population Proportions	11/30
11/17	10.3	Hypothesis Testing for Population Means	11/30
11/17	10.4	Hypothesis Testing for Population Standard Deviation	11/30
11/24		**Test III Ch.8-10**	**11/30**
11/26-28		**Thanksgiving Break**	
12/1	11.1	Inference about Two Population Proportions	12/7
12/1	11.2	Inference about Two Means: Dependent Samples	12/7

12/1	11.3	Inference about Two Means: Independent Samples	12/7
12/1	11.4	Inference about Two Population Standard Deviations	12/7
12/1	12.1	Goodness-of-Fit Test	12/7
12/1	13.1	Comparing Three or more Means (One Way ANOVA) **(If time allows)**	12/7
12/1		**Final Exam**	**12/7**

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- Test 60%
- Assignments 20%
- Core Assessment 20%

GRADE SCALE

- 90-100 A
- 80-89 B
- 70-79 C
- 60-69 D
- 0-59 F

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

STUDENT CODE OF CONDUCT STATEMENT
It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

ARTIFICIAL INTELLIGENCE STATEMENT
Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI/ChatGPT in their courses

STARFISH
LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

Course Expectations

Instructor Expectations from Students:

- Weekly email communication regarding assignment and upcoming test due dates
- Response to email/remind text within 24 (same day if received before 5pm M-Th or before noon Friday)
- Flexible office hours/ virtual help when needed.
- Weekly grade updates
- Extra credit opportunities

Professor Expectations of Students:

- **Join remind for text communication. (Directions found on Blackboard)**
- **Seek help from instructor early and often, do not wait until the last minute!**
- **Plan ahead; if you will miss an exam, make prior arrangements to take it early or schedule a make-up date at instructors' convenience**
- **When sending emails identify yourself with class and section**
- **Participate in class lecture/discussion boards.**

Assignments:

All homework assignments will be completed in MyMathLab. A link to MyMathLab, along with instructions on how to register, can be found in Blackboard under "Course Information."

Homework assignments are 20% of your final course grade. Assignments due dates are located in MyMathLab. Each assignment must be completed before the deadline. Late assignments will be accepted with 20% penalty.

YOU CAN SCORE 100% ON EVERY MYMATHLAB ASSIGNMENT as long as you complete it before the due date. You have an unlimited amount of attempts for each problem. After answering a problem incorrectly three times, you will receive a new, but similar problem for which you can receive full credit. YOU CAN DO THIS UNTIL YOU SCORE 100%, as long as the assignment is not past due. After the due date, you will only be able to improve your score to 80%. Your score will be available to view in MyMathLab.

Tests:

Tests including Final exam will make up 60% of your final course grade. Each test will be given in class or given online and proctored through Respondus Lockdown Browser. Make-up exams will only be given in extreme circumstances. If for some reason you are unable to take a test, your comprehensive final will replace your lowest test score.(Final exam will not replace multiple exams, only one.)

Test scores will be located in Blackboard.

Core Assessment:

The Core Assessment constitutes 20% of your final course grade. It is required. The due date will be found in your syllabus course calendar.