

Statistics (MATH 1342)



**LAMAR INSTITUTE
OF TECHNOLOGY**

CREDIT

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

MODE OF INSTRUCTION

Face to face

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

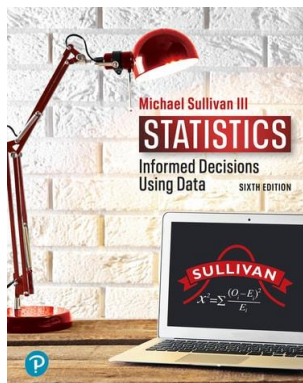
Email: casams@lit.edu

Office Phone: 409-247-5186

Office Location: TC Rm. 240

Office Hours: M: 9:30am-10:30am
MW 1:45pm-2:30pm
TR: 8:30am-9:20am; 12:20pm-2:30pm
F: 9:30am-11:00am

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

Materials

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

<i>Week Of:</i>	<i>Sec</i>	<i>Topic</i>	<i>Homework due:</i>
1/21		Self introduction (Blackboard)	
	1.1	Getting Started	2/21
	1.2	Data Classification	2/21
1/27	1.3	The Process of a Statistical Study	2/21
	2.1	Frequency Distributions	2/21
2/3	2.2	Graphical Displays of Data	2/21
	2.3	Analyzing Graphs	2/21
	3.1	Measures of Center	2/21
2/10	3.2	Measures of Dispersion	2/21
	3.4	Measures of Position	2/21
	3.5	The Five Number Summary	2/21
2/17		EXAM I Ch.1-3	2/21
	4.1	Scatter Diagrams and Correlation	4/11
2/24	4.2	Least Squares Regression	4/11
3/3	5.1	Probability Rules	4/11
3/17	5.2	Addition Rule and Complements	4/11
	5.3	Independence and Multiplication Rule	4/11
	6.1	Discrete Random Variables	4/11
3/24	6.2	Binomial Probability Distribution	4/11
	6.3	Poisson Probability Distribution	4/11
	6.4	Hypergeometric Probability Distribution	4/11
3/31	7.1	Properties of the Normal Distribution	4/11
	7.2	Applications of the Normal Distribution	4/11
4/7		Test II Ch.4-7	4/11
		Core Assessment Due	4/11
	8.1	Distribution of the Sample Mean	5/2
4/14	8.2	Distribution of the Sample Proportion	5/2
	9.1	Estimating a Population Proportion	5/2

	9.2	Estimating a Population Mean	5/2
4/21	9.3	Estimating a Population Standard Deviation	5/2
	10.1	Language of Hypothesis Testing	5/2
	10.2	Hypothesis Testing for Population Proportions	5/2
4/28	10.3	Hypothesis Testing for Population Means	5/2
	10.4	Hypothesis Testing for Population Standard Deviation	5/2
		Test III Ch.8-10	5/2
5/5	11.1	Inference about Two Population Proportions	5/9
	11.2	Inference about Two Means: Dependent Samples	5/9
	11.3	Inference about Two Means: Independent Samples	5/9
	11.4	Inference about Two Population Standard Deviations	5/9
	12.1	Goodness-of-Fit Test	5/9
	13.1	Comparing Three or more Means (One Way ANOVA) (If time allows)	5/9
5/9		Final Exam	5/9

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 \(lit.edu\)](https://www.lit.edu/special-populations).

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

Mr. Sams Additional Information

My Teaching Philosophy

I believe that all students can learn. If you've never been good at math that does not mean you never will be good at math. With proper guidance and practice you can learn anything. The way you practice sports or practice learning a musical instrument is the same practice we must adopt to learn mathematics. No one learned to ride a bike by listening to lectures, you had to practice and endure falls and crashes. I'm here to help you and hopefully explain topics and concepts in such a way that it's easy to digest. However, you must practice if you want to learn.

What To Expect from Instructor Sams:

- Response to email within 24 (except Friday after noon and weekends) / Remind text response same day (**Remind preferred**) Please add name course and section to email and text so that I can identify you
- Flexible office hours/ virtual help when needed. (Schedule an appointment with me if my offered hours do not work for you)
- Grade updates within a week of syllabus due date (Please wait until a week of submission/syllabus due date before inquiring about a grade)
- Extra credit opportunities

Student Behavior Expectations:

- Join remind for text communication. (Directions found on Blackboard start here)
- 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/discussions.
- Keep in mind that each student comes from a different cultural background and brings a different set of beliefs and values. As a result, students may disagree on various topics during discussion. Disagreements can lead to critical thinking and deeper understanding, therefore be respectful of other class members and different opinions. Disrespect for others will not be tolerated.
- You are adults, you will be treated as such. If you need to excuse yourself from class for work call, personal family call, or restroom etc. Please do so quietly with minimal disruptions. Please know that you are responsible for any information that you miss during your absence.