



ELEMENTARY STATISTICS

MATH 211 – 11A

Fall 2026

Instructor:	Dr. Atul Anurag	Meeting Days:	M, W, F
Email:	aanurag@lander.edu	Meeting Time:	1:00 –1:50 p.m.
Office:	LL 315	Classroom:	LL 213
Phone:	864-388-8297	Course Platform:	Blackboard and WebAssign

Office Hours

Office hours are provided for your benefit. You are encouraged to stop by whenever you need clarification, help with course material, or guidance on preparing for assessments.

Day	Time
Monday	10:50–11:50 a.m.
Tuesday	9:50–10:50 a.m.
Wednesday	10:50–11:50 a.m.
Thursday	9:50–10:50 a.m.

By Appointment: If you are unable to attend the scheduled office hours, appointments may be arranged by email. Please include your full name, course number, and section number in your message so I can respond as quickly as possible.

Course Description and Rationale

This course introduces the fundamental ideas and methods of elementary statistics. Students will learn to collect, organize, summarize, display, and analyze data; examine relationships between variables; use probability models; and apply inferential procedures to draw conclusions about populations. Emphasis is placed on interpreting results in context and communicating statistical reasoning clearly.

The course provides opportunities for students to:

1. recognize the role of data and variability in statistical investigations;

2. select and apply appropriate graphical and numerical methods;
3. use probability and sampling distributions to model uncertainty;
4. construct and interpret confidence intervals and hypothesis tests; and
5. communicate statistical conclusions using appropriate terminology, notation, and context.

Textbook and Required Materials

Course platform: Pearson MyLab will be used for online homework, quizzes, and selected course resources. Access instructions and textbook information will be provided through Blackboard.

Required materials:

- Pearson MyLab access;
- regular access to a computer and reliable internet connection;
- a scientific or approved graphing calculator; and
- writing materials for classwork, labs, quizzes, and examinations.

Calculators with computer algebra system capabilities are not permitted on examinations unless specifically authorized. The instructor reserves the right to inspect or clear calculator memory before an examination or quiz.

Student Learning Outcomes

Upon successful completion of the course, students should be able to:

1. classify variables and explain how data are collected and organized;
2. construct and interpret appropriate graphical displays for categorical and numerical data;
3. calculate and interpret measures of center, spread, position, and unusualness;
4. describe association using scatterplots, correlation, and linear regression;
5. apply basic probability concepts and interpret probability distributions;
6. use the normal distribution and standard scores to solve applied problems;
7. explain sampling variability and apply the Central Limit Theorem;
8. construct and interpret confidence intervals for population proportions and means;
9. conduct and interpret hypothesis tests for population proportions and means; and
10. communicate statistical reasoning and conclusions clearly and accurately.

Course Topics

- data, variables, sampling, and study design;

- graphical displays and descriptive statistics;
- the empirical rule, standard scores, and boxplots;
- scatterplots, correlation, and linear regression;
- probability distributions and the normal model;
- surveys, sampling distributions, and the Central Limit Theorem;
- confidence intervals for proportions and means;
- hypothesis testing for proportions and means; and
- interpretation of statistical evidence and errors in inference.

Evaluation and Grading

		Grade	Range
Course Component	Weight	A	90–100
Three in-class examinations (15% each)	45%	B+	87–89
Comprehensive final examination	20%	B	80–86
MyLab homework and quizzes	20%	C+	77–79
Labs, classwork, and participation	15%	C	70–76
Total	100%	D+	67–69
		D	60–66
		F	Below 60

Note: The course calendar specifies three in-class examinations, a comprehensive final examination, MyLab assignments, and laboratory activities. The grading weights shown above are a proposed distribution and may be adjusted if the department provides an official grading policy.

Course Policies

Attendance and Participation

Regular attendance and active participation are essential for success. Students are expected to attend every class, arrive on time, participate appropriately, and contribute to a respectful learning environment. Every absence beyond three may result in a one-letter-grade penalty. Documented university-approved absences will be handled according to university policy. Students are responsible for material and announcements missed during an absence.

Homework, Quizzes, and MyLab

Homework and quizzes will normally be assigned through MyLab. Due dates will be announced in MyLab and/or Blackboard. Students should begin assignments early and should not wait until the final hours before a deadline. Extensions will be granted only in exceptional circumstances and should be requested before the deadline whenever possible.

Laboratory Activities

Laboratory activities are designed to strengthen conceptual understanding and provide practice interpreting statistical output. Students are expected to complete each lab carefully and submit the required work by the announced deadline. Collaboration may be permitted during data collection or discussion, but each student must submit original work unless group submission is explicitly authorized.

Examinations

There will be three in-class examinations and a comprehensive final examination. Tentative exam dates will be announced in the course schedule and confirmed in class. Make-up examinations will be permitted only for documented, legitimate circumstances and at the instructor’s discretion.

Email Communication

Course announcements may be sent through Blackboard or Lander email. Students are expected to check both regularly. When emailing the instructor, include your full name, course number, section, and a clear description of your question.

Electronic Devices

Electronic devices may be used only when they support the instructional activity taking place. Phones should be silenced and put away during class. Students who must take an urgent call or message should quietly step outside.

Artificial Intelligence

Generative artificial intelligence tools may not be used to complete work submitted for a grade unless the instructor gives explicit written permission for a particular assignment. Unauthorized AI-generated or AI-assisted work may receive a grade of zero and may be referred as a possible academic-integrity violation.

Important Fall 2026 Dates

Academic Dates		Holidays and Breaks	
August 17	Classes Begin	September 7	Labor Day; University Closed
August 21	Drop/Add Ends	October 8–9	Fall Break
December 4	Last Day to Withdraw	November 3	Election Day; University Closed
December 7	Reading Day	November 25–27	Thanksgiving Break
December 8–14	Final Examinations		

The final-examination date and time for this section will be announced after confirmation of the official university examination schedule.

Tentative Course Schedule

The schedule below is tentative and may be adjusted to support student learning, accommodate university closures, or respond to the pace of the class. Changes will be announced in class and through Blackboard.

Date	Class	Topics and Assessments
August		
Aug. 17	1	Course Introduction; Syllabus; Section 1.1: What Are Data?
Aug. 19	2	Sections 1.2, 1.4, 1.5: Classifying and Storing Data; Organizing Categorical Data; Collecting Data to Understand Causality
Aug. 21	3	MyLab Introduction; Chapter 1 Homework and Quiz; Section 2.1: Visualizing Variation in Numerical Data; Section 2.2: Summarizing Numerical Distributions

Date	Class	Topics and Assessments
Aug. 24	4	Sections 2.3–2.5: Visualizing and Summarizing Categorical Data; Interpreting Graphs
Aug. 26	5	Lab 1: Graphs; MyLab Chapter 2 Homework and Quiz
Aug. 28	6	Section 3.1: Summaries for Symmetric Distributions
Aug. 31	7	Sections 3.2–3.3: Empirical Rule, z -Scores, and Skewed Distributions
September		
Sept. 2	8	Sections 3.4–3.5: Comparing Measures of Center; Boxplots; Lab 2: Distributions
Sept. 4	9	Additional Examples and Applications from Chapter 3
Sept. 7	–	Labor Day — No Classes
Sept. 9	10	Exam 1 Review
Sept. 11	11	Exam 1
Sept. 14	12	Sections 4.1–4.2: Scatterplots and Correlation
Sept. 16	13	Sections 4.3–4.4: Linear Regression; Evaluating the Linear Model; Lab 3
Sept. 18	14	MyLab Chapter 4 Homework and Quiz; Additional Regression Examples
Sept. 21	15	Sections 6.1–6.2: Probability Distributions; The Normal Model
Sept. 23	16	Section 6.2 continued; Lab 4: Normal Distribution
Sept. 25	17	Additional Normal Distribution Applications and Review
Sept. 28	18	Worked Examples; Probability and Normal Model Applications
Sept. 30	19	Chapter 6 Review and Practice Problems
October		
Oct. 2	–	Fall Break — No Classes
Oct. 5	20	Sections 7.1–7.3: Surveys; Quality of Surveys; Central Limit Theorem for Sample Proportions
Oct. 7	21	Section 7.3 continued; Lab 5: Central Limit Theorem for Proportions
Oct. 9	22	MyLab Chapter 7 (Part I) Homework and Quiz
Oct. 12	23	Exam 2 Review
Oct. 14	24	Exam 2
Oct. 16	25	Section 7.4: Confidence Intervals for Proportions; Sections 8.1–8.2: Introduction to Hypothesis Testing; Lab 6
Oct. 19	26	Section 8.2 continued; Section 8.3: Hypothesis Tests in Detail; Lab 7
Oct. 21	27	MyLab Section 7.4/Chapter 8 Homework and Quiz; Sections 9.1–9.2: Sample Means; Central Limit Theorem for Means; Lab 8
Oct. 23	28	Additional Central Limit Theorem Examples
Oct. 26	29	Section 9.3: Confidence Intervals for Means; Lab 9
Oct. 28	30	MyLab Chapter 9 Homework and Quiz
Oct. 30	31	Section 9.4: Hypothesis Testing for Means
November		
Nov. 2	32	Lab 10: Hypothesis Testing for Means
Nov. 4	33	Lab 11: Comprehensive Hypothesis Testing (Means and Proportions)
Nov. 6	34	Additional Hypothesis Testing Applications and Worked Examples
Nov. 9	35	Exam 3 Review
Nov. 11	36	Exam 3
Nov. 13	37	Comprehensive Final Review I
Nov. 16	38	Comprehensive Final Review II
Nov. 18	39	Cumulative Practice Problems and Data Analysis Activities
Nov. 20	40	Applied Statistics Workshop and Student Questions

Date	Class	Topics and Assessments
Nov. 23	41	Comprehensive Review Workshop
Nov. 25	–	Thanksgiving Break — No Classes
Nov. 27	–	Thanksgiving Break — No Classes
Nov. 30	42	Comprehensive Final Review and Practice Exam
December		
Dec. 2	43	Final Examination Review and Course Wrap-Up
Dec. 4	44	Optional Review Session; Student Questions; Practice Problems
Dec. 7	45	Final Preparations and Comprehensive Review
Dec. 8–14	–	Comprehensive Final Examination at the university-scheduled time

Note: MyLab homework assignments, quizzes, laboratory activities, and examination dates are tentative and may be adjusted. Additional meetings during the Fall semester are intended for guided examples, statistical applications, laboratory activities, and comprehensive review while preserving the topic sequence from the original course schedule.

Academic Integrity

Students are expected to comply with the Lander University Academic Honor Code. Academic dishonesty includes, but is not limited to, unauthorized collaboration, use of unapproved resources during quizzes or examinations, submitting another person's work as one's own, altering graded work, and providing or receiving unauthorized assistance. Suspected violations will be reported and handled according to university procedures.

Classroom Responsibilities

Students are expected to:

- read and follow the syllabus and all course procedures;
- check Lander email and Blackboard regularly;
- arrive prepared and participate respectfully;
- ask for clarification when expectations or assignments are unclear;
- avoid disruptive behavior and inappropriate use of electronic devices; and
- give, use, and receive only assistance that has been explicitly authorized.

University Policies and Student Support

Accessibility and Accommodations

Students who need accommodations should contact the appropriate Lander University office and provide the required documentation. Approved accommodations will be implemented in accordance with university procedures.

Inclement Weather and University Closures

Students should monitor official Lander University communications during severe weather or other emergencies. When the university remains open, students should use reasonable judgment regarding safe travel and are responsible for material missed during an absence.

Changes to the Syllabus

The instructor reserves the right to make reasonable changes to the syllabus, grading procedures, or course schedule. Any changes will be communicated in class and through Blackboard.