

Math 109 ELEMENTARY STATISTICS
Section 091 (online)
SPRING 2020

INSTRUCTOR: Dr. Kosgallana Gunawardena

OFFICE: Swart 205

PHONE: 424-1056

E-MAIL: gunaward@uwosh.edu

OFFICE HOURS: 10:20 – 11:20 pm M W F and other times by appointment.

Course Description:

Descriptive statistics, elementary probability theory, sampling distributions, basic problems of statistical inference including estimation and confidence intervals, test of hypothesis and regression.

Prerequisites: Mathematics 103 with a grade of C or better or placement

Learning Outcomes:

Upon successful completion of the course, students are expected to have the ability to:

- Describe and understand graphical displays of data.
- Describe and understand numerical summaries of data.
- Calculate probabilities using the basic rules.
- Calculate areas under the normal curve.
- Develop and explain the reasoning behind sampling distributions, including the Central Limit Theorem.
- Understand and calculate the formulas for confidence intervals.
- Understand and calculate the formulas for hypothesis tests.
- Compare and contrast various tests for means and proportions for one - and two-samples.
- Understand and calculate with technology correlations and regression equations.

Textbook, MyStatLab and Calculator:

- *Elementary Statistics using TI-83/84 Plus Calculator* fourth edition, by Mario F. Triola + *MyStatLab* Access Card (if you have used e-books then you don't have to buy the textbook)
- **MyStatLab (required):** *MyStatLab includes the textbook as an e-book.* If you purchase a used textbook, you may not get the access code. If you don't have access code, you can purchase it online from <http://pearsonmylabandmastering.com/>. To purchase online you will need the course ID **gunawardena49409**
- TI-83 or TI-84 Plus calculator is **recommended**.

MyStatLab:

You will be doing homework problems, quizzes and exams on *MyStatLab*, which is an interactive website. *MyStatLab* provides step-by-step help to solve problems. *MyStatLab* provides resources to aid the student learning with videos, multiple examples, and tutorial services.

Homework and Quizzes:

Each week you will get a new homework assignment. The homework problems can be worked on until you get them correct with no time limit. There will be a quiz at the end of each chapter. You will have **90 minutes** to complete the quiz and can be taken only once. Please pay attention to the due dates for homework assignments and quizzes.

Course Expectations:

This course will be completely on-line via Canvass and *MyStatLab*. Students will be expected to log-in to the class in Canvass at least once a week. Except in cases of emergency, or unless prior arrangements are made with the instructor, homework, quizzes and exams are due as indicated on the schedule. With prior instructor consent, or in cases of emergency, late assignments/exams or make-ups may be permitted. Please contact instructor if you have questions or problems.

Exams:

There will be 2 proctored exams given through *MyStatLab*. Proctored exams are administered by approved testing centers. You are responsible for identifying a testing center, and you must do this during the first two weeks of the semester. Use the testing center approval form provided in Canvass. A listing of testing centers used by students in the past is available in Canvass.

If you decide to take the exams at the UW Oshkosh Testing Center <http://www.uwosh.edu/testing/> then no need to complete the form. Send me an e-mail stating that you will be taking the exams at the UWO Testing Center.

You can send the completed testing center approval form by:
regular mail: Kosgallana Gunawardena, Department of Mathematics, University of Wisconsin Oshkosh, Oshkosh, WI 54901
fax: 920-424-1812
e-mail attachment: gunaward@uwosh.edu.

Exam Schedule:

Exam 1	Chapters 1 – 5	March 16 – 20, 2020
Exam 2	Chapters 6 – 10	May 11 – 15, 2020

There will be no make-up exams given except when the student has a valid reason for the absence. You will have **two hours** for each exam. Exams need to be completed by 11:59 pm on the last scheduled day for the exam.

Grading Percentage:

Homework	20%
Quiz	20%
Exam 1	30%
Exam 2	30%

Grading Scale:

PERCENTAGE	GRADE	PERCENTAGE	GRADE
90 – 100	A	72 – 74	C
87 – 89	A-	69 – 71	C-
84 – 86	B+	66 – 68	D+
81 – 83	B	63 – 65	D
78 – 80	B-	60 – 62	D-
75 – 77	C+	0 – 59	F

NOTE: Your course grade is the grade shown in Canvass and not the grade shown in MyStatLab.

Course Content:**Chapter 1: Introduction to Statistics**

- 1-1: Review and Preview
- 1-2: Statistical and Critical Thinking
- 1-3: Types of Data
- 1-4: Collecting Sample Data
- 1-5: Introduction to the TI-83/84 Plus Calculator

Chapter 2: Summarizing and Graphing Data

- 2-1: Review and Preview
- 2-2: Frequency Distributions
- 2-3: Histograms
- 2-4: Graphs That Enlighten and Graphs That Deceive

Chapter 3: Statistics for Describing, Exploring, and Comparing Data

- 3-1: Review and Preview
- 3-2: Measures of Center
- 3-3: Measures of Variation
- 3-4: Measures of Relative Standing and Boxplots

Chapter 4: Probability

- 4-1: Review and Preview
- 4-2: Basic Concepts of Probability
- 4-3: Addition Rule

Chapter 5: Discrete Probability Distributions

- 5-1: Review and Preview
- 5-2: Probability Distributions
- 5-3: Binomial Probability Distributions

Chapter 6: Normal Probability Distributions

- 6-1: Review and Preview
- 6-2: The Standard Normal Distribution
- 6-3: Applications of Normal Distributions
- 6-4: Sampling Distributions and Estimators
- 6-5: The Central Limit Theorem

Chapter 7: Estimates and Sample Sizes

- 7-1: Review and Preview
- 7-2: Estimating a Population Proportion
- 7-3: Estimating a Population Mean

Chapter 8: Hypothesis Testing

- 8-1: Review and Preview
- 8-2: Basics of Hypothesis Testing
- 8-3: Testing a Claim about a Proportion
- 8-4: Testing a Claim about a Mean

Chapter 9: Inferences from Two Samples

- 9-1: Review and Preview
- 9-2: Two Proportions
- 9-3: Two Means: Independent samples

Chapter 10: Correlation and Regression

- 10-1: Review and Preview
- 10-2: Correlation
- 10-3: Regression

Academic Integrity Policy:

Integrity is one of the Core Values of UW Oshkosh. All students share with the faculty the responsibility for academic honesty and integrity. The University expects its students to do their own academic work. In addition, it expects active participation and equitable contributions of students involved in group assignments. The following acts of academic dishonesty are not acceptable:

- Cheating: using or attempting to use unauthorized materials, information, or study aids in any academic exercise (e.g. an exam).
- Facilitating Academic Dishonesty: helping or attempting to help another to commit academic dishonesty (e.g. allowing another to copy from your test or use your work).
- Plagiarism: representing the words or ideas of another as one's own in any academic exercise (e.g. failing to cite references appropriately or taking verbatim from another source), whether it is done with the intention of being dishonest or not.
- Fabrication: unauthorized falsification or invention of any information or citation in an academic exercise (e.g. a paper reference).

Cheating on an exam, plagiarizing or any other form of academic dishonesty will be dealt with in accordance with the current UWO Student Discipline Code. The instructor reserves the right to assign a grade of **F** for the course should circumstances warrant.

Accessibility Resources

The University of Wisconsin Oshkosh supports the right of all enrolled students to a full and equal educational opportunity. It is the University's policy to provide reasonable accommodations to students who have documented disabilities that may affect their ability to participate in course activities or to meet course requirements.

Students are expected to inform Instructors of the need for accommodations as soon as possible by presenting an Accommodation Plan from either the Accessibility Center, Project Success, or both. Reasonable accommodations for students with disabilities is a shared Instructor and student responsibility.

The Accessibility Center is part of the Dean of Students Office and is located in 125 Dempsey Hall. For more information, email accessibilitycenter@uwosh.edu, call 920-424-3100, or visit the [Accessibility Center Website](#).

Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990:
<https://uwosh.edu/financialaid/consumer-information/>.