



COURSE SYLLABUS

MATH 220 WB Elementary Statistics

Self-Paced Degree Program (Web-Based)

Online classroom located at uiulearn.uiu.edu

Instructor Information

Instructor Name: James Cliber

UIU Faculty Email: cliberj@uiu.edu

Telephone Number: 515-294-2510 CST

Office Location: Virtual

Availability

My office hours are Monday, Tuesday, Thursday, and Friday from 9:00 am to 10:00 am (Central Time). If you are unable to call during office hours you can leave a message and make an appointment. I read messages daily and will respond within 24 hours.

If you need to contact Upper Iowa University, please call the toll-free number (800) 553-4150. E-mail: selfpaced@uiu.edu

Course Description

Semester Credits: 3 semester credits

Catalog Course Description:

An introduction to the simpler problems of statistical inference; descriptive statistics, probability distributions, estimation of parameters and level of significance, regression, and correlation.

Prerequisites:

Pass (MATH 105 or above) or ((pass MATH 095 or ACT math score ≥ 19) and pass MATH 100) or ACT math score ≥ 24 or an alternative placement as approved by the math department or instructor approval.

Note: This course may not be completed for additional credit by students who have completed MATH 226.

Credit Hour Policy:

As a requirement of HLC Accreditation, all UIU courses, regardless of meeting schedule or instructional mode, follow the Federal Credit Hour Definition. As such, each credit hour earned at UIU is equivalent to a minimum of 45 hours of student engagement.

For more information on how specific instructional modes meet this requirement, please see *UIU's Policy Guidelines for Instructional Time Expectations*: [UIU Policies](#)

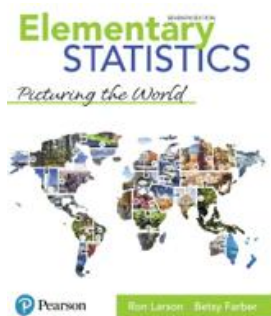
Course Materials

It is the student's responsibility to make sure she/he has access to all required course materials by the start of the session.

Required Textbook

Note: You are not required to purchase the MyStatLab access code. We will not be using the computerized homework and test with this course.

Larson, R., & Farber, B. (2019). *Elementary Statistics* (7th ed.). Boston, MA: Pearson Education. **ISBN-13: 9780134683416**



Required Resources:

The Final Exam will be proctored so access to a computer with a camera will be required. Please complete the Final Examination Request form (available in the course) to me at cliberj@uiu.edu.

Recommended Resources: A scientific calculator – TI 30XIIS is recommended and access to Excel.

Prohibited Resources and Services

The use or attempted use of **unauthorized services**, materials, information or study aids in any academic exercise unless specifically authorized by the course instructor is strictly prohibited. Any violations of this policy will be prosecuted under the fullest extent of the UIU Academic Misconduct Policy and may result in expulsion from the university.

Ordering Textbooks

Purchase your textbook through the online university bookstore, [MBS Direct](#), or by phone at (800) 325-3252.

Course Objectives

a) Descriptive statistics

- a. Collecting data: Compare and contrast qualitative and quantitative variables; nominal, ordinal, interval, and ratio level of variable measurement; random,

systematic, stratified, and cluster sampling; observational study and experimental study

- b. Organizing and presenting data: Create frequency distributions, histograms, frequency polygons, ogives, bar graphs, Pareto charts, time series graphs, pie graphs, stem and leaf plots, and boxplots
- c. Summarizing data: Calculate measures of central tendency (mean, median, mode, and midrange), measures of variation (range, variance, and standard deviation), and measures of position (z-score, percentiles, quartiles)

b) Probability

- a. Understanding probability: Calculate probabilities using sample spaces, classical probability, empirical probability, the addition rule, and the multiplication rule; understand the Law of Large Numbers
- b. Discrete probability distributions: Construct a probability distribution for a discrete random variable, understand the conditions for a binomial experiment, and calculate probabilities, means, variances, and standard deviations for the distributions
- c. Normal probability distributions: Understand normal distributions and the standard normal distribution, calculate probabilities for normally distributed variables, and apply the Central Limit Theorem to problems involving sample means

c) Inferential statistics

- a. Confidence intervals: Find confidence intervals for population proportions and means; and determine the minimum sample size for finding confidence intervals for means and proportions
- b. Hypothesis testing: Perform hypothesis testing for proportions (one sample and two sample), and means (one sample, two independent samples, and two dependent samples)
- c. Correlation and regression: Draw a scatter plot, compute the correlation coefficient, determine whether or not there is a significant linear relationship between variables, and compute the equation of the regression line.

General Education Task

University accreditation is important as academic communities, employers, and other constituents recognize it as evidence of quality, which enhances the prestige of the institution, and consequently the value of the degree you will earn. It will be used in general education courses.

Task Statement

Apply mathematical problem solving skills to a variety of problems at the college level.

Task Assignment

Refer to page 5 of this document and the Course Schedule for due day.

Course Requirements and Grading Criteria

Course Requirements

Refer to myUIU for your official enrollment term and enrollment period.

You have six months from the date of your enrollment to complete this course. You should begin work on the course immediately upon enrollment and start submitting lessons for grading and evaluation in a timely manner. **If no course work has been submitted within the first 60 days, an administrative withdrawal will be processed.**

Technology requirement: refer to page 7 (in addition to the computer with camera requirement for the proctored final exam).

Grading Criteria

The course letter grade will be based on the following grading criteria:

Activity	Percentage
Homework	17.5%
Unit Quiz and Assessment Work	50.0%
General Education Task Assignment	2.5%
Final Exam	30.0%
Total	100.0%

Unit	Activity	Percentage
Unit 1	Assignment 1 - Homework	3.5% of your final grade
	Assignment 1 – Quiz and Assessment Work	10% of your final grade
Unit 2	Assignment 2 – Homework	3.5% of your final grade
	Assignment 2 – Quiz and Assessment Work	10% of your final grade
Unit 3	Assignment 3 – Homework	3.5% of your final grade
	Assignment 3 – Quiz and Assessment Work	10% of your final grade
Unit 4	Assignment 4 – Homework	3.5% of your final grade
	Assignment 4 – Quiz and Assessment Work	10% of your final grade
Unit 5	Assignment 5 – Homework	3.5% of your final grade
	Assignment 5 – Quiz and Assessment Work	10% of your final grade

Unit 6	Proctored Exam - Final Exam	30.0% of your final grade
	General Education Assignment	2.5% of your final grade

Assignment

The course will consist of five (5) Unit Assignments, a General Education Task Assignment and a final exam.

Unit Assignments

Each assignment will consist of homework problems and a quiz. The homework with all work shown must be submitted and graded before the quiz over the unit is available.

The homework problems were selected because of their relevance and for the fact that most of the answers for them are in the back of the book. These answers should not be used as a crutch, but as a way to determine whether or not you understand the material the textbook is covering.

I will work with you until your homework problems are completed with 100% completeness and accuracy. Please email me at cliberj@uiu.edu for help.

Check for Understanding

There is a Check for Your Understanding Quiz at the beginning of Unit 2, 3, 4 and 5. These quizzes are **not graded**. The answers will be provided immediately so you can check whether you have understood the previous unit.

General Education (Gen. Ed.) Mathematics Task Assignment

Throughout this course, you will practice applying mathematical problem solving skills to a variety of problems at the college level. You will be assigned one mathematical problem to be solved as your Gen. Ed. task assignment. Instructions for this task are posted in the uiuLearn classroom.

Final Exam

The final exam will be proctored. Please complete the Final Examination Request form (available in the course) to me at cliberj@uiu.edu to schedule for the exam.

Note: All homework and tests must use the formulas from our textbook. No credit will be provided for homework or tests submitted using formulas from outside sources.

Grading Scale

This course will use the following scale:

Letter Grade	Percent
A	93-100%

A-(minus)	90-92%
B+	87-89%
B	83-86%
B-(minus)	80-82%
C+	77-79%
C	73-76%
C-(minus)	70-72%
D+	67-69%
D	63-66%
D-(minus)	60-62%
F	0-59%

Grades and Feedback

I will post grades in the Gradebook and provide feedback in the relevant areas in uiuLearn.

Course Schedule

Week	Topics of Study	Activities	Assessments
Unit 1	Chapter 1: Introduction to Statistics Chapter 2: Sections 1, 2 and 3 Descriptive Statistics	Complete Student Introduction Read Chapter 1 and Chapter 2 Sections 1 and 2 and complete the Guided notes over each section using the textbook, PowerPoints & Video Lectures	Chapter 1 and Chapter 2: Homework 1.1, 1.2 & 1.3, 2.1, 2.2 Unit 1 Test (Chapter 1 and Chapter 2.1 and 2.2,)
Unit 2	Chapter 2: Sections 3, 4 and 5 Descriptive Statistics Chapter 3: Probability	Complete the Check for Understanding Quiz Read Chapter 2 Sections 3, 4 and 5 and Chapter 3 and complete the Guided notes over each section using the textbook, PowerPoints & Video Lectures	Chapter 2.3, 2.4, 2.5 and Chapter 3: Homework Unit 2 Test (Chapter 2.3, 2.4, 2.5 and Chapter 3)

Week	Topics of Study	Activities	Assessments
Unit 3	Chapter 4: Discrete Probability Distributions Chapter 5: Normal Probability Distributions	Complete the Check for Understanding Quiz Read Chapter 4 and Chapter 5 and complete the Guided notes over each section using the textbook, PowerPoints & Video Lectures	Chapter 4: Homework 4.1, 4.2 Chapter 5: Homework 5.1, 5.2, 5.3, 5.4 Unit 3 Test (Chapter 4 and Chapter 5)
Unit 4	Chapter 6: Confidence Intervals Chapter 7: Hypothesis Testing with One Sample	Complete the Check for Understanding Quiz Read Chapter 6 and Chapter 7 and complete the Guided notes over each section using the textbook, PowerPoints & Video Lectures	Chapter 6: Homework 6.1, 6.2, and 6.3 Chapter 7: Homework 7.1, 7.2, 7.3, and 7.4 Unit 4 Test (Chapter 6 and Chapter 7)
Unit 5	Chapter 8: Hypothesis Testing with Two Samples Chapter 9: Correlation & Regression	Complete the Check for Understanding Quiz Read Chapter 8 and Chapter 9 and complete the Guided notes over each section using the textbook, PowerPoints & Video Lectures	Chapter 8: Homework 8.1, 8.2, 8.3 & 8.4 Chapter 9: Homework 9.1 & 9.2 Unit 5 Test (Chapters 8 and 9)
Unit 6	General Education Task Final Exam	General Education Task Assignment Send a request for final exam to cliberj@uiu.edu	General Education Task Assignment Final Exam

Course Expectations

Email

Upper Iowa University employees and students are issued an UIU email account (doej@uiu.edu). University email communications will only be sent to UIU email address. Faculty and staff are not obligated to respond to students using non-UIU email accounts.

Technology Requirements

Access to a reliable up-to-date computer, updated virus protection, and an Internet connection to access course materials and complete course activities.

Note: You are responsible for ensuring that you have a reliable up-to-date computer, updated virus protection, and Internet connection to access the course materials and

complete course activities. You need to make alternate arrangements in case of unexpected computer and Internet problems. Upper Iowa University Page 3 of 8 Backup: Remember to regularly back up course files to avoid data loss in the event of hardware failure or user error.

Professional Writing and Speaking Guidelines

Communications in class and online should follow the Student Conduct and Discipline, Respect for the University Environment, and Code of Student Responsibility in the [Student Handbook](#) (pg. 20 and 21). Respect the opinions of others using appropriate language and communications.

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University Policies

Withdrawal (W)

For Self-Paced Degree Program enrollments: if a student wishes to withdraw prior to the last day of the enrollment period, complete a withdrawal form found on myUIU or contact an academic advisor for assistance. A student-initiated withdrawal can occur at any time within the six-month enrollment period and a grade of W is applied.

REFUND POLICY

Upon receiving a written or phone request for withdrawal, using the date of the request, a refund of tuition is made according to the guidelines listed below.

- | | |
|--|------|
| • On or before the first day of the enrollment period * | 100% |
| • After the first lesson through 10% of the enrollment period | 90% |
| • After the first 10% through the first 25% of the enrollment period | 50% |
| • After the first 25% of the enrollment period | 0% |

*An enrollment period is defined as a number of units to be submitted during a six-month period of time. The refund/repayments shall be calculated using the percentages noted above. The percentages are determined by the number of units/exams completed as compared to the total number of units/exams required for the course.

Students who withdraw from a course prior to submitting the first unit or who are administratively withdrawn for nonsubmission of units will be charged an administrative fee.

Administrative Withdrawal (AW)

Self-Paced Degree Program Administrative Withdrawal A grade of AW (administrative withdrawal) is recorded for any course from which a student is administratively withdrawn. At least one complete assignment/unit must be received and verified by the instructor within the first 60 days of the enrollment period or the student will be administratively withdrawn from the course. Students who are administratively withdrawn for non-submission of assignments, will be charged an administrative fee of \$99. Non-Attendance (NA): Never attended grades are not applicable to the Self-Paced Degree Program.

Incomplete/Extension

Students who are enrolled in self-paced courses will be allowed to request one four-month extension and receive an 'I' (incomplete grade) at the end of their original six-month enrollment period if:

- A minimum of one assignment has been received for grading per guidelines **AND**
- All course units and exams are not completed and submitted **OR**
- A course withdrawal has not been initiated

Incomplete grade details:

- When the extension is granted and an incomplete grade is issued, the student will receive a four-month enrollment period to complete the course.
- Students do not have the option to withdraw from a course after the initial six-month enrollment period.
- An 'I' grade posted to the student's official record will be replaced with a final letter grade; however, the incomplete will remain on the official transcript as a notation.
- Note: Students are not reported as enrolled during the incomplete/extension period and are not eligible for student loan deferment.
- The fee for a self-paced extension is \$99 per course. To request an extension, the "Self-Paced Course Extension Request" form must be completed and returned to the Self-Paced department. The form can be found at <https://my.uiu.edu/ics> (*Login to your account>>Go to Academics Tab>>Select Student Forms*). The request for an extension and payment must be submitted no earlier than one month before the end of the course and no later than a week before the end of the course. Please see the Academic Catalog for more information regarding the Incomplete/Extension guidelines. **If you do not request and pay for an**

extension, a final grade will be issued for the course based on coursework received by the original course end date.

- If you do not wish to use the extension option and will not be able to finish your Self-Paced class by the original six-month end date, you can submit a course withdrawal form before the course end date if you wish to withdraw from the course. The amount of the course refund is determined by the number of lessons submitted as compared to the total due.

Academic Accommodations

It is the policy of Upper Iowa University to ensure equal access to educational and co-curricular activities to students with disabilities as mandated by the Americans with Disabilities Act Amendments Act (ADAAA) and Section 504 of the Rehabilitation Act of 1973. A student seeking accommodations should contact the Director of Disability Services (DDS) as early in the session as possible. In order to receive accommodations, students must disclose their disability to the DDS by completing a *Voluntary Disclosure Form*, as well as providing appropriate documentation. The *Voluntary Disclosure Form* is available in the DDS office or online at [Disability Services](#). Students will be given a *Request for Accommodations Contract* during their initial appointment with the DDS.

This appointment will be in person for Fayette campus students and over the phone for center, online, and self-paced students. It is the student's responsibility to provide the instructors with a copy of the *Request for Accommodations Contract* (for Center or online students, these contracts are emailed out to instructors by the DDS for the student). Additionally, students should work cooperatively with their instructors throughout the session to make sure that appropriate accommodations are being made. You can contact the DDS at (563) 425-5949, disabilityservices@uiu.edu, or stop by the office in the Student Center, Office of Student Life, Room 229.

Academic Misconduct Policy

Cheating, academic dishonesty, and plagiarism constitute a violation of the offender's own integrity, as well as the integrity of the entire University; they will not be tolerated. Violators will receive sanctions based on the level of academic misconduct.

Cheating includes, but is not limited to:

- The use of unauthorized books notes or other sources in the giving or securing of help in an examination or other course assignments.
- The copying of other students' work or allowing others to copy your work. The submission of work that is not your own or allowing others to submit your work as theirs.
- The submission of the same work for two or more classes without the approval of instructors involved.

Academic dishonesty includes, but is not limited to:

- Sharing academic materials knowing they will be used inappropriately.
- Accessing another person's work without permission.
- Providing false or incomplete information on an academic document.
- Changing student records without approval.
- Obtaining and using texts or other materials intended for instructor use only.

Plagiarism includes, but is not limited to:

- The presentation of another's published or unpublished work as one's own.
- Taking words or ideas of another and either copying them or paraphrasing them without proper citation of the source.
- Using charts, graphs, statistics or tables without proper citation.

Levels of Academic Misconduct and Sanctions

The faculty member teaching the course has the primary responsibility for resolving allegations of academic dishonesty, though egregious violations will be resolved by the School administration, the Academic Misconduct Board, or some combination thereof. The final decision on the level of a violation rests with the Academic Misconduct Board. Options for resolving an alleged case of academic dishonesty range from dismissing the allegation with no negative sanction to being expelled from the university ([Academic Misconduct Policy: Table 1](#)). A negative sanction is defined as an action taken by the faculty member that affects the student's grade for the assignment or his or her cumulative grade for the course. Anytime academic misconduct is detected, the procedures outlined in [Academic Misconduct Policy: Table 1](#) should be followed. The incident will be maintained in a searchable database maintained by the Office of Academic Affairs.

Copyright Statement

In recognition of the Copyright Law of the United States (Title 17, United States Code), Upper Iowa University reminds both faculty members and learners that a willful infringement of the law may result in disciplinary action. The University library has available materials discussing the "fair use" concept, along with criteria and guidelines for reproduction and use of copyrighted materials.

This syllabus is subject to change.

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