

Syllabus for UW XMA117

Elementary Statistics

NOTE: This syllabus document contains the basic information of this course. The most current syllabus is available in the full course.

Course Description

An introduction to Statistics including the collection and analysis of data, descriptive statistics, both graphical and numerical, elementary probability, general and sampling distributions, and the fundamentals of statistical inference, including confidence intervals and hypothesis testing, simple regression, correlation, Chi-square goodness of fit and one-way ANOVA.

Prerequisite(s)

Grade of C or better in MA093 or MA108, or placement into MA116

Course Outcomes

Upon completing this course, you will be able to do the following:

- Develop and interpret descriptive statistical methods.
- Use basic concepts of probability to calculate and explain outcomes associated with random experiments.
- Explain and calculate probabilities from binomial and normal distributions.
- Explain the reasoning behind sampling distribution including the Central Limit Theorem.
- Use and apply inferential statistics including one-sample (both small and large) confidence intervals and hypothesis testing for population mean and population proportion.
- Use and apply inferential statistics for two-sample hypothesis testing of the population means.
- Perform linear regression analysis and interpret the results.
- Use and interpret one-way ANOVA.
- Use the Chi-square goodness of fit to test if a sample of data came from a population with a specific distribution.

Course Requirements/Components

You will be graded on your completion of online assignments, group projects, discussions, individual short papers, one final group project, and three exams.

Grading

The following grading scale will be used to evaluate all course requirements and to determine your final grade: (examples below)

Grade	Percentage Range
A	93% - 100%
A-	90% - 92%
B+	87% - 89%
B	83% - 86%
B-	80% - 82%
C+	77% - 79%
C	73% - 76%
C-	70% - 72%
D+	67% - 69%
D	60% - 66%
F	59% and under

Assignment (Example Table: Delete Before Saving)	Percent
Exam 1	20%
Exam 2	20%
Group projects, discussions, and short papers	20%
Final Exam	20%
Total Points	100%