DAVIS UNIVERSITY

COURSE SYLLABUS
MTH335: STATISTICAL METHODS
SUMMER QUARTER 2026

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COURSE SYLLABUS FOR: MTH335 STATISTICAL METHODS

CREDIT HOURS: 5 CREDITS

INSTRUCTOR:

INSTRUCTOR EMAIL:

INSTRUCTOR OFFICE HOURS:

COURSE DESCRIPTION: Topics include basic concepts of probability, normal and binomial distributions, hypothesis testing, confidence intervals, Correlation and Regression, and chi-square distribution.

PREREQUISITES: Elementary Calculus

TEXT: Peck, Olsen and Devore, Introduction to Statistics and Data Analysis, 3rd edition, Brooks/Cole.

LATE WORK POLICY: All students are expected to submit homework assignments electronically on the date specified on the syllabus No late homework will be accepted and the student will receive a "0" (zero) for the homework assignment. Should the student refuse to complete the assigned work for the class, it could result in the student failing the class.   All work assigned is expected to be completed on the date assigned. The instructor reserves the right to alter the schedule as necessary.   Please be sure to check your email/Moodle for any changes to the schedule.

PLAGIARISM AND COPYRIGHT INFRINGEMENT POLICY: Work that is found to be plagiarized receives a grade of zero and often causes a student to fail a class. Documentation of plagiarism is added to the student's academic file as a violation of accepted student conduct and is subject to disciplinary action. Plagiarism is the use of another person's exact words, or their ideas written in the student's words without giving the original author credit.

Plagiarism can result from any of the following:

- Quote material directly without using quotation marks.
- Paraphrase the original so that many of the phrases are the same as the original. A good rule is no more than 3 or 4 words in a row should be the same as the original.
- Copy the original sentence pattern, substitution synonyms for key words.
- Neglect to indicate the source of the original material.

ASSESSMENTS:

Content	
Homework	20%
Quizzes	20%
Exams	60%
Total	100%

Midterm is worth 25% of the final course grade, the homework is worth 20%, Quizzes are worth 20%, and the final exam is worth 35%. There are 2 quizzes; the Friday of the 2nd week and the Friday of the 4th week. The midterm is the end of the 3rd week, and the final exam is the Friday of the last week.

COURSE GRADE:

A+ = 97%–100%	C+ = 77%–79%
A = 93%-96%	C = 73%–76%
A− = 90%–92%	C− = 70%–72%
B+ = 87%–89%	D+ = 67%–69%
B = 83%–86%	D = 63%–66%
B− = 80%–82%	D− = 60%–62%
	F = Below 60%

TENTATIVE CLASS SCHEDULE:

(Subject to change)

Week	Content Covered	Assignments & Assessment Due
Week 1:	**Describing data and basic probabilities** ● Discrete and Continuous variables, bivariate data ● Describing data with graph and numerical measures ● Basic probability	
Week 2:	**Expectation, probability distributions** ● Discrete/absolutely continuous expectations, conditional expectation ● Variance, covariance, correlation, generating functions ● Bayes' rule ● Binomial, Poisson, Hypergeometric probability distribution ● Normal distribution	Quiz 1 on Friday
Week 3:	**More on normal distribution, Sampling distributions and limit theorems** ● Distribution approximation ● Sampling distributions ● The law of large numbers, the central limit theory	Midterm on Friday
Week 4:	**Large-sample estimation, test of hypotheses** ● Point, interval and difference estimations ● Likelihood function, maximum likelihood estimation, ● Testing hypotheses and P-values ● Sample-size calculations ● Prior and posterior distributions, inferences based on the posterior	Quiz 2 on Friday

Week 5:	**Statistical inferences from small samples** ● Student's t distribution ● Small sample inferences ● Comparing population means	Final Exam on Friday