GAVILAN COLLEGE
5055 Santa Teresa Blvd
Gilroy, CA 95023

Course Outline

COURSE: BUS 11 DIVISION: 50 ALSO LISTED AS: ECON 11

TERM EFFECTIVE: Summer 2025 CURRICULUM APPROVAL DATE: 05/13/2025

SHORT TITLE: BUS/ECON STATISTICS

LONG TITLE: Statistics for Business and Economics

Units	Number of Weeks	Type	Contact Hours/Week	Total Contact Hours
4	18	Lecture:	4	72
		Lab:	0	0
		Other:	0	0
		Total:	4	72

Out of Class Hrs:	144.00
Total Learning Hrs:	216.00

COURSE DESCRIPTION:

The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t- tests; statistical analysis including the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social science, psychology, life science, health science, and education. Additional and more extensive case studies from business and economics, emphasizing statistical results that provide guidance for business decisions or suggest solutions to contemporary business and economic problems; use of larger data sets analyzed with computer software programs. (C-ID: MATH 110) This course is also listed as ECON 11. PREREQUISITE: Placement as determined by the college's multiple measures assessment process or completion of a course taught at or above the level of intermediate algebra.

PREREQUISITES:

Completion of MATH 233, as UG, with a grade of C or better.
OR
(Completion of MATH 233A, as UG, with a grade of C or better.
AND Completion of MATH 233B, as UG, with a grade of C or better.)
OR
Completion of MATH 235, as UG, with a grade of C or better.
OR
Completion of MATH 240, as UG, with a grade of C or better.
OR
Completion of MATH 242, as UG, with a grade of C or better.
OR
Score of 33 on Intermediate Algebra
OR
Score of 13 on Pre-Calculus
OR
Score of 2600 on Accuplacer Math
OR
Score of 2600 on MM CCCApply Math
OR
Score of 2600 on MM Placement Tool Math

COREQUISITES:

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES

L - Standard Letter Grade
P - Pass/No Pass

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

02 - Lecture and/or discussion
05 - Hybrid
71 - Dist. Ed Internet Simultaneous
72 - Dist. Ed Internet Delayed

STUDENT LEARNING OUTCOMES:

By the end of this course, a student should:

1. Select the appropriate technique for testing a hypothesis and interpret the result.

2. Perform hypothesis tests involving samples from one and two populations.

3. Use linear regression and ANOVA analysis for estimation and inference, and interpret the associated statistics.

4. Use appropriate statistical techniques to analyze and interpret applications based on data from disciplines including business, economics, social sciences,

psychology, life science, health science, and education.

COURSE OBJECTIVES:

By the end of this course, a student should:

1. evaluate ethical issues in statistical practice.

2. identify appropriate statistical techniques and use technology-based statistical analysis to describe, interpret, and communicate results.

3. demonstrate the ability to apply statistical processes, including hypothesis tests and confidence interval estimation, to business and social science applications.

4. describe and apply probability concepts and distributions.

5. identify appropriate graphs and summary statistics for variables and relationships between them and correctly interpret information from graphs and summary

statistics.

6. assess how data were collected and recognize how data collection affects what conclusions can be drawn from the data.

COURSE CONTENT:

Curriculum Approval Date: 05/13/2025

(4 hours)

Summarizing data graphically and numerically

(8 hours)

Descriptive statistics: measures of central tendency, variation, relative position, and levels/scales of measurement

(4 hours)

Sample spaces and probability

(4 hours)

Random variables and expected value

(8 hours)

Sampling and sampling distributions, Discrete distributions, Binomial distributions

(12 hours)

Continuous distributions, Normal distributions, The Central Limit Theorem

(8 hours)

Estimation and confidence intervals

(18 hours)

Hypothesis Testing and inference, including t-tests for one and two populations, and Chi-square tests

(4 hours)

Correlation and linear regression, Analysis of variance (ANOVA)

(2 hours)

Final Exam.

METHODS OF INSTRUCTION:

Lecture, discussion, demonstration, presentation and other appropriate methods for content delivery and student participation.

OUT OF CLASS ASSIGNMENTS:

Required Outside Hours 144

Assignment Description

Problems assigned from the relevant chapter, longer projects or case studies using technology.

Exercises and applications using data from disciplines including business, social sciences, psychology, life science, health science, and education.

Statistical analysis using technology such as SPSS, EXCEL, Minitab, or graphing calculators.

METHODS OF EVALUATION:

Writing assignments

Evaluation Percent 20

Evaluation Description

15% - 35%

Written homework

Problem-solving assignments

Evaluation Percent 70

Evaluation Description

70% - 85%

Homework problems;

Quizzes;

Exams

Objective examinations

Evaluation Percent 10

Evaluation Description

10% - 30%

Multiple choice;

True/false;

Matching items;

Completion

REPRESENTATIVE TEXTBOOKS:

Statistics for Business & Economics, 15th Edition, Anderson, Sweeney, Williams, Camm, Cochran, Cengage, 2024 or a comparable textbook/material.

12+ Grade Verified by: MS Word

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

GAV B4, effective 202530

GAV Area 2 = Math Con & Q Reas, effective 202530

CSU GE:

CSU B4, effective 202530

IGETC:

IGETC 2A, effective 202530

CSU TRANSFER:

Transferable CSU, effective 202530

UC TRANSFER:

Transferable UC, effective 202530

SUPPLEMENTAL DATA:

Basic Skills: N
Classification: Y
Noncredit Category: Y
Cooperative Education:
Program Status: 1 Program Applicable
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department: MATH
CSU Crosswalk Course Number: 110
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: C
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000354179
Sports/Physical Education Course: N
Taxonomy of Program: 050100