



Background

- This CCN Course Template was developed by mathematics discipline faculty representatives from the California Community Colleges, California State University and University of California segments during June and July 2024 using the C-ID MATH 110 descriptor as a starting point.
- Development of the CCN Course Template was facilitated by ASCCC with advisory input from segment articulation officers and transfer experts.
- Approved and Submitted to the Chancellor’s Office: August 15, 2024
- Template was modified by CCN in late September. Content was not altered.

Phase I CCN TEMPLATE

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| Subject: Statistics | Subject Code: STAT |
| Proposed Course Number (Identical): C1000E | |
| Proposed Course Specialty Identifier (if applicable): | |
| Course Title (Identical): Introduction to Statistics | |
| Catalog/Course Description (Identical): Part 1: (Identical and Required): This course is an introduction to statistical thinking and processes, including methods and concepts for discovery and decision-making using data. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-squared, and t-tests; and application of technology for statistical analysis including the | |



interpretation of the relevance of the statistical findings. Students apply methods and processes to applications using data from a broad range of disciplines. This course has embedded support.

Part 2: *(Optional Expanded Description, Local College Discretion):*

This will be submitted to the Chancellor’s Office Curriculum Inventory with further instructions to come.

Cal-GETC

- Yes
- No

Cal-GETC Area

Area 2 Recommended

Major Preparation:

- Yes
- No

List Possible Relevant Majors

- This is not a binding requirement; this is a placeholder for Phase II and may include TMC/ADT in the future.

UCTCA:

- Yes
- No

Minimum Unit Threshold | Semester 3.0

Unit amounts must adhere to the established threshold minimum.

Units for this course may be any combination of lecture/lab to meet student needs.

Any Rationale or Comment:

Prerequisites (Identical): 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.

Co-Requisites (Identical):



Other Limitations on Enrollment (Determined locally):

Advisories/Recommended Preparation (Determined locally):

Course Content:

Part 1: Required Topics (Identical):

1. Introduction to statistical thinking and processes
2. Technology-based statistical analysis
3. Applications using data from four or more of the following disciplines: administration of justice, business, economics, education, health science, information technology, life science, physical science, political science, psychology, and social science
4. Units (subjects/cases) and variables in a data set, including multivariable data sets
5. Categorical and quantitative variables
6. Sampling methods, concerns, and limitations, including bias and random variability
7. Observational studies and experiments
8. Data summaries, visualizations, and descriptive statistics
9. Probability concepts
10. Probability distributions (e.g., binomial, normal)
11. Sampling distributions and the Central Limit Theorem
12. Estimation and confidence intervals
13. Hypothesis testing, including t-tests for one and two populations, Chi-squared test(s), and ANOVA; and interpretations of results
14. Regression, including correlation and linear regression equations

Part 2: *Optional Expanded or Additional Topics (optional):*

This will be submitted to the Chancellor's Office Curriculum Inventory with further instructions to come.

Laboratory Activities: (if applicable)



Course Objectives (Identical and Required):

Part 1: Objectives/Outcomes (Identical and Required):

At the conclusion of this course, the student should be able to (Identical and Required):

1. Assess how data were collected and recognize how data collection affects what conclusions can be drawn from the data.
2. Identify appropriate graphs and summary statistics for variables and relationships between them and correctly interpret information from graphs and summary statistics.
3. Describe and apply probability concepts and distributions.
4. Demonstrate an understanding of, and ability to use, basic ideas of statistical processes, including hypothesis tests and confidence interval estimation.
5. Identify appropriate statistical techniques and use technology-based statistical analysis to describe, interpret, and communicate results.
6. Evaluate ethical issues in statistical practice.

Part 2: *Optional objectives/outcomes:*

This will be submitted to the Chancellor's Office Curriculum Inventory with further instructions to come.

Part 2: *After this course, the student should be able to* (Optional):

This will be submitted to the Chancellor's Office Curriculum Inventory with further instructions to come.

Methods of Evaluation:

Part 1: Examples of potential methods of evaluation used to observe or measure students' achievement of course outcomes and objectives could include but are not limited to quizzes, exams, laboratory work, field journals, projects, research demonstrations, etc. Methods of evaluation are at the discretion of local faculty.

Part 2: *List Methods of Evaluation* (Optional):

This will be submitted to the Chancellor's Office Curriculum Inventory with further instructions to come.



Representative Texts, Manuals, and/or OER that is equivalent, Other Support Materials:

Part 1:

- Introduction to Modern Statistics 2e, Çetinkaya-Runde, M., Hardin, J., OpenIntro, 2024 (\$0-25): <https://www.openintro.org/book/ims/>
- Statistics: Learning From Data 3e, Peck, R., Case, C., Cengage, 2024 (\$57-250): <https://www.cengage.com/c/new-edition/9780357758298/>
- Introductory Statistics: Exploring the World Through Data 4e, Gould, R., Wong, R., Ryan, C., Pearson, 2025 (\$65-80): <https://www.pearson.com/en-us/subject-catalog/p/introductory-statistics/P200000011641/9780138242145>
- Introductory Statistics 2e, Illowsky, B., Dean, S., OpenStax, 2023 (\$0): <https://openstax.org/details/books/introductory-statistics-2e>
- Introductory Statistics: Analyzing Data with Purpose, The Dana Center Mathematics Pathways, Charles A. Dana Center, University of Texas at Austin, 2021 (\$0): <https://www.utdanacenter.org/products/introductory-statistics>

Part 2: *List Sample Textbooks, Manuals, or Other Support Materials (optional):*

This will be submitted to the Chancellor’s Office Curriculum Inventory with further instructions to come.

Date Approved: August 15, 2024, following ASCCC facilitation of template development process, including engagement of faculty discipline representatives from California Community Colleges, CSU, UC and independent colleges and universities and advisory input from segment articulation officers and transfer experts.