Course Acronym:	STAT
Course Number:	0100S
Descriptive Title:	Introduction to Statistics Support
Division:	Mathematical Sciences
Department:	Mathematics
Course Disciplines:	Mathematics
Catalog Description:	This course is designed to support students concurrently enrolled in Introduction to Statistics (C1000). As needed, students review core skills and topics necessary to meet the Introduction to Statistics student learning outcomes and objectives. Students explore strategies and habits used by successful independent learners. Topics reviewed in this support course may include: concepts from arithmetic, pre-algebra, elementary and intermediate algebra, and descriptive statistics that are needed to understand the basics of college-level statistics.
Prerequisite:	
Co-requisite:	STAT C1000
Recommended Preparation:	
Enrollment Limitation:	
Hours Lecture (per week):	1
Hours Laboratory (per week):	0
Outside Study Hours:	2
Total Course Hours:	18
Course Units:	1
Grading Method:	Pass/No Pass only
Credit Status:	Credit, non degree applicable
Transfer CSU:	No
Effective Date:	
Transfer UC:	No
Effective Date:	
General Education: ECC	
Term:	
Other:	
CSU GE:	

Term:	
Other:	
IGETC:	
Term:	
Other:	
Student Learning Outcomes:	**SLO #1 Computing and Interpreting Various Measures** From data or bivariate data, compute statistics and develop displays of the data that illustrate the measures of central tendency, variation, relative position, and correlation. Interpret the displays in context. **SLO #2 Probability** Compute probability of an event by applying the basic assumption in classical probability and using addition rule and multiplication rule for contingency tables. **SLO #3 Central Limit Theorem** Use the Central Limit Theorem to compute probabilities concerning the distribution of the sample means and comparing these to the probabilities of the related random variable. **SLO #4 Confidence Intervals and Hypothesis Testing** Compute the confidence intervals and conduct hypothesis testing for a variety of parameters, and perform non-parametric hypothesis testing.
Course Objectives:	1. Solve, graph and interpret linear equations, including understanding slope and intercepts in real-life applications. 2. Evaluate expressions correctly using order of operations and evaluate formulas given values for all necessary variables. 3. Read and interpret a variety of tables, charts, and graphs including Bar Graphs, Pie Charts, Histograms, and Scatterplots. 4. Translate applied problems into mathematical statements and translate mathematical solutions into verbal conclusions. 5. Convert between fractions, decimals, and percentages and understand the relative sizes of these values.
Major Topics:	**I. LINEAR EQUATIONS (3 hours, lecture)** Concepts and skills as needed through just-in-time work to support: A. Solving Linear Equations B. Graphing Linear Equations C. Interpreting Slope and Intercepts

II. EVALUATING EXPRESSIONS (3 hours, lecture)

Concepts and skills as needed through just-in-time work to support:

A. Order of Operations

B. Evaluating Formulas

III. CALCULATOR SKILLS (2 hours, lecture)

Concepts and skills as needed through just-in-time work to support:

A. Arithmetic on the Calculator

B. Rounding

C. Lists, Graphing, and Displays

IV. TABLES, CHARTS AND GRAPHS (4 hours, lecture)

Concepts and skills as needed through just-in-time work to support:

A. Reading and Interpreting Tables, Charts, and Graphs

B. Plotting Coordinates

V. APPLICATIONS (4 hours, lecture)

Concepts and skills as needed through just-in-time work to support:

A. Translating verbal statements into numeric expressions

B. Estimating the reasonableness of results

C. Stating mathematical conclusions verbally

VI. FRACTIONS, PROPORTIONS AND PERCENTAGES (2 hours, lecture)

Concepts and skills as needed through just-in-time work to support:

A. Fractional Arithmetic and Simplifying Expressions with Fractions

B. Converting between Fractions, Decimals, and Percentages

C. Understanding Fractions as Proportions

D. Comparing values on the real line, including decimals and negatives

Total Lecture Hours:	18
Total Laboratory Hours:	0

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Primary Method of Evaluation:	2) Problem solving demonstrations (computational or non-computational)
Typical Assignment Using Primary Method of Evaluation:	Evaluate the following expression rounding your answer to two decimal places: 4/7.
Critical Thinking Assignment 1:	Suppose you are modeling the resale value, V, of a Nissan Versa based on its age in years, x. You build the following linear model, V = -1250x + 15000. (a) Write a sentence explaining what the slope of this linear model means in the context of this situation. (b) Write a sentence explaining what the V-intercept of this linear model means in the context of this situation. (c) Use this model to predict at what age a Nissan Versa will have no resale value.

Critical Thinking Assignment 2:

Suppose you are studying the students in a math class. You classify the students according to gender and age bracket and get the following data:

	18-21 years old	22-25 years old	25+ years old
Male	9	2	4
Female	7	5	6

a. How many students were in this math class?
b. What percent of the students in this math class were Female? (Round to the nearest tenth of a percent)
c. What percent of the students in this math class were 22-25 years old? (Round to the nearest tenth of a percent)
d. What percent of the Male students were 18-21 years old? (Round to the nearest tenth of a percent)
e. What percent of the 25+ year old students were Female? (Round to the nearest tenth of a percent)

Other Evaluation Methods:	Homework Problems, Objective Exam, Other Exams, Quizzes, Written Homework

Instructional Methods:	Discussion, Group Activities, Lecture
If other:	
Work Outside of Class:	Answer questions, Problem solving activity, Required reading, Skill practice, Study
If Other:	
Up-To-Date Representative Texts:	- 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
Alternative Texts:	Statistics, Informed Decisions Using Data 6th Edition, Michael Sullivan III, Pearson, 2021 Elementary Statistics, Third California Edition, Triola, Pearson, 2017.
Required Supplementary Readings:	
Other Required Materials:	
Requisite:	Corequisite
Category:	communication or computation skill
Requisite course(s): List both prerequisites and corequisites in this box.	Math 150
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	This corequisite course is necessary to satisfy AB 705. Its intent is to strengthen and supplement the essential skills needed for success in statistics. The implementation of this course will allow Math 150 classes to focus on and explore new topics in statistics to a greater extent rather than devote time in class to covering prerequisite topics in statistics. Math 150 - Identify, compare and contrast various types of data and sampling techniques Math 67 - Describing and Displaying Data A. Types of data and variables B. Gathering, organizing, and interpreting data in tables C. Creating and interpreting visual displays of data or distributions: dot plots, bar graphs, pie charts, and scatter plots D. Verbal descriptions of distributions, including notions of typical value

	E. Measures of central tendency: mean, median, mode
Requisite Skill:	
Requisite Skill and Matching Skill(s): Bold the requisite skill(s). If applicable	
Requisite course:	
Requisite and Matching skill(s):Bold the requisite skill. List the corresponding course objective under each skill(s).	
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Enrollment Limitations and Category:	
Enrollment Limitations Impact:	
Course Created by:	Benjamin Mitchell
Date:	
Original Board Approval Date:	
Last Reviewed and/or Revised by:	Benjamin Mitchell
Date:	10/16/2024
Last Board Approval Date:	03/24/2025
Effective Term:	FA 2025