

STAT C1000E - Introduction to Statistics (Embedded Support)

1. Who should enroll?

- This course is for students who need statistics and have previously struggled with math courses and algebra.
- This course could be the last math class many students need for their major to graduate and/or transfer.

2. Course Description and Topics Covered

- 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. (Formerly MATH 103S). UC CREDIT LIMITATION: Credit for BTEC 180, BUS 204, PSYC 104, PSYC 104H, SOC 125, STAT C1000, STAT C1000E, or STAT C1000H.
- The course includes just-in-time support for all topics listed including applications of technology for statistical analysis, including the interpretation of the relevance of statistical findings.

3. What to expect?

- **Time:** The most common term lengths are listed below; others would be proportionate. Outside of class time is studying, completing homework, reviewing, etc.

Term Length (weeks)	In-class (hours per week)	Out-of-class (hours per week)	Total weekly time (all types)	Total Term hours (typical)
17	6	9	15	255
8	12.8	19.1	31.9	255
6	17	25.5	42.5	255

- **Technology:** Many teachers choose modern statistical technologies such as SALT, ArtOfStat Web Applets (FREE), or RStudio Cloud (FREE), Python on Google Colab (FREE), etc. Others may require a cost for the software and/or e-book.

4. What prior knowledge do students need to know to be successful?

- Operations on Numbers
 - i. Perform signed number arithmetic
 - ii. Calculate powers of a number (using technology)
 - iii. Calculate the square root of a number (using technology)
 - iv. Understand order of operations in expressions and formulas
 1. Parentheses/ Brackets, Exponents, Multiplication/Division, Addition/Subtraction
- Equations and Inequalities

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- i. Evaluate algebraic expressions
- ii. Solve a linear equation in one variable
- iii. Plot an ordered pair (x, y) in a rectangular coordinate system