

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

DATE DECEMBER 7, 2005
 PROGRAM AREA SOCIOLOGY/PSYCHOLOGY/POLITICAL SCIENCE

1. Catalog Description of the Course. *[Follow accepted catalog format.]*

Prefix SOC Course# 303 Title STATISTICAL APPLICATIONS IN THE SOCIAL SCIENCES Units (3)
 4 hours lecture/lab per week

- Prerequisites Math 105 or equivalent
 Corequisites

Description

SOC 303: This course introduces students to quantitative methods as used in social science research and prepares them for statistical literacy. Students will learn to use descriptive and inferential statistics to test hypotheses. Basic topics covered in the class include graphical representations, central tendency and variability, chi-squared and other nonparametric techniques, correlation and regression, and mean difference tests as applied to research methods and data commonly used in the social sciences. Measurement and psychometric issues unique to social science data will be covered. Students will use SPSS to analyze data. Same as PSY 303/POLS 303

PSY 303: This course introduces students to quantitative methods as used in social science research and prepares them for statistical literacy. Students will learn to use descriptive and inferential statistics to test hypotheses. Basic topics covered in the class include graphical representations, central tendency and variability, chi-squared and other nonparametric techniques, correlation and regression, and mean difference tests as applied to research methods and data commonly used in the social sciences. Measurement and psychometric issues unique to social science data will be covered. Students will use SPSS to analyze data. Same as PSY 303/POLS 303

POLS 303: This course introduces students to quantitative methods as used in social science research and prepares them for statistical literacy. Students will learn to use descriptive and inferential statistics to test hypotheses. Basic topics covered in the class include graphical representations, central tendency and variability, chi-squared and other nonparametric techniques, correlation and regression, and mean difference tests as applied to research methods and data commonly used in the social sciences. Measurement and psychometric issues unique to social science data will be covered. Students will use SPSS to analyze data. Same as PSY 303/POLS 303.

- Gen Ed CR/NC Repeatable for up to _____ units
 Categories
 Lab Fee Required A - Z Total Completions Allowed _____

2. Mode of Instruction.

	Units	Hours per Unit	Benchmark Enrollment	Graded Component	CS # (filled in by Dean)
Lecture	<u>2</u>	<u>1</u>	<u>20</u>	<input checked="" type="checkbox"/>	_____
Seminar	_____	_____	_____	<input type="checkbox"/>	_____
Laboratory	<u>1</u>	<u>2</u>	<u>20</u>	<input checked="" type="checkbox"/>	_____
Activity	_____	_____	_____	<input type="checkbox"/>	_____

3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) *[Use as much space as necessary]*

This is a required course for Sociology, Psychology and Political Science majors. It introduces students to the type of analysis used by social scientists working with empirical data, and it is a prerequisite for the research methods class, where students develop their own quantitative research project. Using standard quantitative and statistical problem solving approaches required of social scientists, students make the connection between using quantitative tools to test social scientific theories based on empirical data. Upon completion of the course, students should be able to:

1. apply quantitative problem-solving skills to social scientific questions;
2. select, apply and interpret descriptive statistics in social science research;
3. select, apply and interpret hypothesis testing methods in social science research;
4. demonstrate inductive and deductive reasoning in the social sciences using statistical data and results;

5. use and explain measurement models in social research and analysis;
6. use SPSS to conduct statistical and psychometric analysis of data; and
7. be able to demonstrate quantitative literacy in reading and understanding research literature.

4. **Is this a General Education Course** YES NO
If Yes, indicate GE category and attach GE Criteria Form:

- A (English Language, Communication, Critical Thinking)**
- A-1 Oral Communication
 - A-2 English Writing
 - A-3 Critical Thinking
- B (Mathematics, Sciences & Technology)**
- B-1 Physical Sciences
 - B-2 Life Sciences – Biology
 - B-3 Mathematics – Mathematics and Applications
 - B-4 Computers and Information Technology
- C (Fine Arts, Literature, Languages & Cultures)**
- C-1 Art
 - C-2 Literature Courses
 - C-3a Language
 - C-3b Multicultural
- D (Social Perspectives)**
- E (Human Psychological and Physiological Perspectives)**
- UD Interdisciplinary**

5. **Course Content in Outline Form.** *[Be as brief as possible, but use as much space as necessary]*

- (I) Need for quantitative methods in science in general and social science in particular.
- (II) Inductive and deductive statistics applied to social phenomena.
- (III) Graphic and numerical description.
- (IV) Frequency distributions: tables and graphs. Measures of central tendency: Mean, median, mode.
- (V) Measures of Variability: range, variation, standard deviation.
- (VI) Normal curve, z-scores and other standardized scores.
- (VII) Correlation and other measures of association.
- (VIII) Regression.
- (IX) Sampling and sampling methods used in social research.
- (X) Measurement and psychometric data concerns: reliability and validity.
- (XI) Inferential statistics--Type I and Type II errors, power, sample size and effect sizes.
- (XII) Hypothesis testing and sampling distributions;
- (XIII) Mean difference tests: z-tests and t-tests;
- (XIV) Chi-squared and other nonparametric tests;
- (XV) One-way ANOVA models, typical post hoc tests and planned comparisons;
- (XVI) Computer analysis of social science data using SPSS.

Does this course overlap a course offered in your academic program? YES NO
 If YES, what course(s) and provide a justification of the overlap?

Does this course overlap a course offered in another academic area? YES NO
 If YES, what course(s) and provide a justification of the overlap? Math 201.

Signature of Academic Chair of the other academic area is required on the consultation sheet below.

6. **Cross-listed Courses (Please fill out separate form for each PREFIX)**

List Cross-listed Courses

PSYCH 303: POLS 303

Signature of Academic Chair(s) of the other academic area(s) is required on the consultation sheet below

Department responsible for staffing: Sociology, Psychology, Political Science

7. References. [Provide 3 - 5 references on which this course is based and/or support it.]

George, D. & Mallery, P. 2002. SPSS for Windows step by step: a simple guide and reference (4th ed.) New York: Allyn & Bacon.
Levin, J. & Fox, J.A. 2006. Elementary statistics in social research (10th ed.) New York: Allyn & Bacon.
Kendrick, J. R. 2005. Social Statistics. (2nd ed.) Pearson.
Sprinthall, R.C. 2003. Basic statistical analysis. (6th ed.) Boston: Allyn & Bacon
Walsh, A. & Ollenburger, J.C. 2001. Essential statistics for the social and behavioral sciences: conceptual approach. New Jersey: Prentice-Hall.

8. List Faculty Qualified to Teach This Course.

Sociology, Psychology, Political Science faculty

9. Frequency.

a. Projected semesters to be offered: Fall Spring Summer

10. New Resources Required. YES NO

If YES, list the resources needed and obtain signatures from the appropriate programs/units on the consultation sheet below.

a. Computer (data processing), audio visual, broadcasting needs, other equipment)
Eventually, a computer lab for social science students with 20-25 stations.

b. Library needs

c. Facility/space needs

11. Will this new course alter any degree, credential, certificate, or minor in your program? YES NO

If, YES attach a program modification form for all programs affected.

Beth Hartung, Harley Baker, and Scott Frisch
Proposer of Course

9/26/2005
Date

Approvals

Program Chair

Date

Overlap Chair

Date

Curriculum Committee Chair

Date

Dean

Date