CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS
COURSE MODIFICATION PROPOSAL
Courses must be submitted by October 15, 2010, and finalized by the end of the fall semester to make the next catalog (2011-12) production

DATE (CHANGE DATE EACH TIME REVISED): OCTOBER 1, 2010; REV 12.7.10; REV 12.21.10
PROGRAM AREA(S) : SOCIOLOGY, POLITICAL SCIENCE, PSYCHOLOGY
Directions: All of sections of this form must be completed for course modifications. Use YELLOWED areas to enter data. All documents are stand alone sources of course information.

1. **Course Information.**
[Follow accepted catalog format.] (***Add additional prefixes i f cross-listed***)

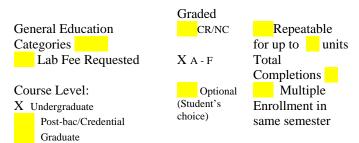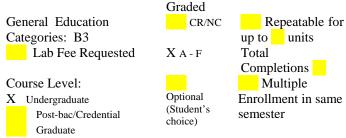| OLD	NEW
Prefix SOC/POL/PSY Course# 303 Title Statistical Applications in the Social Sciences Units (4)	Prefix SOC/POL/PSY Course# 303 Title Statistical Applications in the Social Sciences Units (4)
4 hours lecture per week	4 hours lecture per week
X Prerequisites: Math 105 or equivalent	X Prerequisites: Prerequisite: A passing score on the Entry Level Mathematics Exam (ELM) or MATH 105 or equivalent
☐ Consent of Instructor Required for Enrollment ☐ Corequisites: ☐	☐ Consent of Instructor Required for Enrollment ☐ Corequisites: ☐
Catalog Description (Do not use any symbols): Introduces quantitative methods as used in social science research and prepares students for statistical literacy. Students will be expected to demonstrate a clear understanding of statistical techniques and data analysis unique to the social sciences. Students will learn to use descriptive and inferential statistics to test hypotheses. Students will use SPSS to analyze data.	**Catalog Description** (Do not use any symbols)**:** Introduces quantitative methods as used in social & behavioral science research with the goal of statistical literacy. Statistical techniques and data analysis unique to the behavioral and social sciences. Descriptive and inferential statistics to test hypotheses. Principles of sampling design, hypothesis testing for behavioral and social science research, data collection techniques, statistical analysis and interpretation of data, as well as written reporting of results. SPSS Statistics software.

OLD

General Education Categories ☐
☐ Lab Fee Requested
Course Level:
X Undergraduate
☐ Post-bac/Credential
☐ Graduate

Graded
☐ CR/NC
X A - F
☐ Optional (Student's choice)

☐ Repeatable for up to ☐ units
Total Completions ☐
☐ Multiple Enrollment in same semester

NEW

General Education Categories: B3
☐ Lab Fee Requested
Course Level:
X Undergraduate
☐ Post-bac/Credential
☐ Graduate

Graded
☐ CR/NC
X A - F
☐ Optional (Student's choice)

☐ Repeatable for up to ☐ units
Total Completions ☐
☐ Multiple Enrollment in same semester

2. **Mode of Instruction (Hours per Unit are defaulted)**   Hegis Code(s)_____
(Provided by the Dean)

Existing

	Units	Hours Per Unit	Benchmark Enrollment	Graded
Lecture	**4**	**1**	**20**	x
Seminar	☐	**1**	☐	☐
Lab	☐	**3**	☐	☐
Activity	☐	**2**	☐	☐
Field Studies	☐		☐	☐
Indep Study	☐		☐	☐
Other blank	☐		☐	☐

Proposed

	Units	Hours Per Unit	Benchmark Enrollment	Graded	CS No. (filled out by Dean)
Lecture	**4**	**1**	**20**	x	☐
Seminar	☐	**1**	☐	☐	☐
Lab	☐	**3**	☐	☐	☐
Activity	☐	**2**	☐	☐	☐
Field Studies	☐		☐	☐	☐
Indep Study	☐		☐	☐	☐
Other blank	☐		☐	☐	☐

3. Course Attributes:

X **General Education Categories**: All courses with GE category notations (including deletions) must be submitted to the GE website: http://summit.csuci.edu/geapproval. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

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
- X 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)

UDIGE/INTD Interdisciplinary

Meets University Writing Requirement

Meets University Language Requirement

American Institutions, Title V Section 40404:   Government   US Constitution   US History
Refer to website, Exec Order 405, for more information: http://senate.csuci.edu/comm/curriculum/resources.htm
Service Learning Course (Approval from the Center for Community Engagement must be received before you can request this course attribute).

4. Justification and Requirements for the Course. *[Make a brief statement to justify the need for the course]*

OLD

NEW
This is a required course for sociology majors, political science majors, and health science majors(*forthcoming) and will introduce students to statistical analysis. It fulfills the B3 GE requirement and the course should reflect that.

X Requirement for the Major/Minor
   Elective for the Major/Minor
   Free Elective

X Requirement for the Major/Minor
   Elective for the Major/Minor
   Free Elective

Submit Program Modification if this course changes your program.

5. Student Learning Outcomes.
(List in numerical order. You may wish to visit resource information at the following website: http://senate.csuci.edu/comm/curriculum/resources.htm)
Upon completion of the course, the student will be able to:

OLD
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

Upon completion of the course, the student will be able to:

NEW
1. Apply quantitative problem-solving skills to behavioral and social scientific questions
2. Select, apply, and interpret descriptive & inferential statistics in behavioral and social science research
3. Select, apply, and interpret hypothesis testing methods in social science research
4. Apply inductive and deductive reasoning in the behavioral and social sciences using statistical data and results

research and analysis

6. Use SPSS to conduct statistical and psychometric analysis of data
7. Be able to demonstrate quantitative literacy in reading and understanding research literature.

5. Use and explain measurement models in social research and analysis
6. Use SPSS Statistics to conduct statistical and psychometric analysis of data
7. Be able to demonstrate quantitative literacy in reading research and writing reports.

6. Course Content in Outline Form. (Be as brief as possible, but use as much space as necessary)

OLD

(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, model.
(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.

NEW

(I) Need for quantitative methods in science in general and behavioral and social sciences in particular;
(II) Inductive and deductive statistics applied to behavioral and social phenomena;
(III) Graphic and numerical description;
(IV) Frequency distributions: tables and graphs; Measures of central tendency: mean, median, mode;
(V) Measures of Variability: IQV, range, IQR, variance, 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 behavioral and 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) Probability and distributions;
(XIII) Estimation, hypothesis testing and sampling distributions;
(XIV) Mean difference tests: z-tests and t-tests;
(XV) Chi-squared and other nonparametric tests;
 (XVI) One-way ANOVA models, typical post hoc tests and planned comparisons;
(XVII) Computer analysis of social science data using SPSS Statistics;
(XVIII) Written reporting and interpretation of statistical analysis.

Does this course content overlap with a course offered in your academic program? Yes **No**
 If YES, what course(s) and provide a justification of the overlap.

Does this course content overlap a course offered in another academic area? Yes **No**
If YES, what course(s) and provide a justification of the overlap.

Overlapping courses require Chairs' signatures.

7. Cross-listed Courses (Please note each prefix in item No. 1)
   A. List cross-listed courses (Signature of Academic Chair(s) of the other academic area(s) is required).
   B. List each cross-listed prefix for the course: POLS, PSYC, SOC
   C. Program responsible for staffing: Sociology

8. References. *[Provide 3-5 references]*

   OLD

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.

NEW
Babbie, Earl, F. Halley, W. Wagner, & J. Zaino. *Adventures in Social Research*. 7th edition. 2010. Pine Forge/Sage.
Healey, Joe. *Statistics: A Tool for Social Research*. 7th edition. 2005. Wadsworth Publishing.
Kuzma, Jan, & S. Bohnenblust. Basic Statistics for the Health Sciences. 5th edition. 2004. McGraw-Hill.
Levin, J. & Fox, J.A. 2006. Elementary statistics in social research (10th ed.) Allyn & Bacon. Kendrick, J. R. 2005.
Wagner, William. *Using SPSS for Social Statistics and Research Methods*. 3rd edition. 2010. Pine Forge/Sage.

9. Tenure Track Faculty qualified to teach this course.
  Billy Wagner

10. Requested Effective Date or First Semester offered: Fall 2011

11. New Resource Requested: Yes ☐   **No** X
   If YES, list the resources needed.

   A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)

   B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)

   C. Facility/Space/Transportation Needs:

   D. Lab Fee Requested: Yes ☐   **No** ☐   **(Refer to the Dean's Office for additional processing)**
   E. Other.

12. Indicate Changes and Justification for Each. *[Check all that apply and follow with justification. Be as brief as possible but, use as much space as necessary.]*

☐ Course title		☐ Course Content
☐ Prefix/suffix		☐ Course Learning Outcomes
☐ Course number		☐ References
☐ Units	X	GE
☐ Staffing formula and enrollment limits		☐ Other ☐
X Prerequisites/Corequisites		☐ Reactivate Course
X Catalog description		
☐ Mode of Instruction		

Justification: This course meets criteria for GE B3 and should reflect such; the pre-requisite must therefore be adjusted, as well. Catalog description and content outline have been reflected only to be more accurate and representative of the course, not to make substantive changes.

13. Will this course modification alter any degree, credential, certificate, or minor in your program? Yes ☐   **No** X
   If, YES attach a program update or program modification form for all programs affected.
   Priority deadline for New Minors and Programs: October 4, 2010 of preceding year.
   Priority deadline for Course Proposals and Modifications: October 15, 2010.
   Last day to submit forms to be considered during the current academic year: April 15th.

Billy Wagner   10/1/2010

Proposer(s) of Course Modification   Date
Type in name. Signatures will be collected after Curriculum approval.

Request for POLS -PSY-SOC 303: Statistical Applications in the Social Sciences to be added to GE Category B3: Mathematics -- Mathematics and Applications.

Committee Response:
Approved by committee on 11-03-2010

Criteria and Justifications Submitted:

- *Promote the understanding and appreciation of the methodologies of math or science as investigative tools and the limitations of mathematical or scientific endeavors*
  In this course, students learn to use statistical methods to conduct complex analysis of social and behavioral science data. Ethical considerations and other limitations are also addressed.
- *Present mathematical or scientific knowledge in a historical prespective and the influences of math and science on the development of world civilizations, both past and present*
  The importance and historical development of statistics and social/behavioral science is incorporated into the learning of this course. For instance, students are provided biographical information and reference for figures in mathematical/statistical history responsible for material about which they are learning (e.g., Ronald Fisher 1890-1962), as well as the effects of technologies and innovations on the improvements in usage of statistics in social and behavioral science.
- *Apply inductive and deductive reasoning processes and explore fallacies and misconceptions in the mathematical or scientific areas*
  This course incorporates analysis using inductive and deductive research strategies. Also, there is considerable discussion of issues of validity and reliability, which explore fallacies and misconceptions. Students will understand and practice the analysis of social science data from an uninvolved perspective, and be able to critically evaluate data as well as results/conclusions found in social science literature, as well as everyday sources.
- *Promote an understanding of mathematical ideas and problem solving skills*
  In this course, students will solve statistical problems including but not limited to: sample comparisons, population inferences, and regression analysis.

Approval Sheet

Course: 303

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

Program Chair		
	Signature	Date

Program Chair		
	Signature	Date

Program Chair		
	Signature	Date

General Education Chair		
	Signature	Date

Center for Intl Affairs Director		
	Signature	Date

Center for Integrative Studies Director		
	Signature	Date

Center for Multicultural Engagement Director		
	Signature	Date

Center for Civic Engagement and Service Learning Director		
	Signature	Date

Curriculum Chair		
	Signature	Date

Dean of Faculty		
	Signature	Date