General Education Annual Course Assessment Form

Course Number/Title: Soci. 15: Statistical Applications in the Social Sciences

GE Area: B4

Results reported for AY: 15-16

# of sections: 2

# of instructors assessed: 1

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Department Chair Dr. Carlos Garcia

College of Social Sciences

Instructions: Each year, the department will prepare a brief (two page maximum) report that documents the assessment of the course during the year. This report will be electronically submitted to <curriculum@sjsu.edu>, by the department chair, to the Office of Undergraduate Studies, with an electronic copy to the home college by October 1 of the following academic year.

Part 1

(1) What GELO(s) were assessed for the course during the AY?

For annual year 2015-2016, GELO 1 (Mathematical concepts courses should prepare the student to use mathematical methods to solve quantitative problems, including those presented in verbal form) was assessed. Using a pre-test/post-test design, I administered a multiple-choice questionnaire with 10 questions. In order to answer questions correctly on this pre-/post-test students were required to have an understanding of core concepts from the term including being able to calculate percentages, understand the difference between the three measures of central tendency: median, mean and mode, match types of graphs with variable level: nominal, ordinal, interval-ratio. This assessment relates to the GELO by allowing students to demonstrate they can use mathematical methods to solve quantitative problems.

(2) What were the results of the assessment of this course? What were the lessons learned from the assessment?

Pre-test/Post-test result

- Student scores went up an average of 2.65 points from the pre-test to the post-test.
- 47% (23/49) mastered these at high level mastery: 8/10 or better
- 41% (20/49) performed at a moderate level mastery on these GELOs: 6 or 7/10
- 12% (6/49) failed to master these GELOs

These scores increased considerably this year. This is good news, however, I have several concerns about the current method of assessment. First, I do not like the format of the assessment. Students undergo three exams and up to 10 pop-quizzes in this class. Further, the post-test is positioned at the very end of the semester where students are particularly stressed about finals and have undergone a whole semester of testing. I want to embed the problems into student exams or home works in order to alleviate unnecessary testing.
Second, these students are aware that the pre-test/post-test assessment does not count towards their grade. I feel this may decrease their performance. If problems were embedded in exams or homework students would have that increased incentive of earning a good grade to incentivize them. I know that this course is very difficult for some students and will work to improve these scores in the future. In the past, I worked to connect the Learning Objectives to the course material more fully, however, the scores remained consistent—it is nice to see the boost.

(3) What modifications to the course, or its assessment activities or schedule, are planned for the upcoming year? (If no modifications are planned, the course coordinator should indicate this.)

I intend to continue to modify and amend my teaching materials and presentations. I used less powerpoint this past year and also posted the powerpoints online. This gave students access to the lecture material before, during and after class. I also included more time for students to work on problems in class. As last year, I plan to micro-manage each class day so that I can focus on how well students are grasping the concepts throughout each lecture period and to review concepts that seem difficult for students in the moment. Further, I would like to embed the assessment in either an exam or homework.

Part 2

To be completed by the department chair (with input from course coordinator as appropriate):

(3) Are all sections of the course still aligned with the area Goals, Student Learning Objectives (GELOs), Content, Support, and Assessment? If they are not, what actions are planned?

Yes

(4) If this course is in a GE Area with a stated enrollment limit (Areas A1, A2, A3, C2, D1, R, S, V, & Z), please indicate how oral presentations will be evaluated with larger sections (Area A1), or how practice and revisions in writing will be addressed with larger sections, particularly how students are receiving thorough feedback on the writing which accounts for the minimum word count in this GE category (Areas A2, A3, C2, D1, R, S, V, & Z) and, for the writing intensive courses (A2, A3, and Z), documentation that the students are meeting the GE GELOs for writing.

Not applicable
SOCI 15 is consistent with General Education guidelines in its assignments, assessments, and overall course format. This course introduces students to the logic and use of statistical techniques in social science research and provides them with the tools to conduct this research themselves. The course begins by covering how to describe data through the use of descriptive statistics. The course then moves to a focus on techniques for comparing groups, using inferential statistics. Topics covered include: Introduction to statistical applications, statistical description and inference including central tendencies, measures of variation, the normal distribution, probability, estimation, hypothesis testing, measures of association, correlation, and linear regression. This course is three units and is specifically designed to equip students with the subject matter content knowledge needed to continue on an academic trajectory in quantitative methods, including preparing students for the SOCI 104: Quantitative Research Methods sequence as well as fulfill general education requirements. In addition, graduate students may take this course to prepare them to take the MA required course SOCI 204: Quantitative Data Analysis. To these ends, students are engaged in a variety of activities designed to promote active learning and support the lecture format. The environment in the classroom is particularly conducive to student-centered learning for a quantitative course. Students are introduced to content knowledge and instructional strategies that they will be able to incorporate beyond this classroom. Quizzes are given throughout the semester to motivate students to keep up-to-date on the readings. Assignments and exams allow ample opportunities to practice statistical applications. Instructor feedback affords students the chance to improve their abilities in statistical problem solving. Instructors present and model primary problem solving for students prior to asking students to demonstrate these skills.

In addition, general education requirements for Area B4 advise that courses should “prepare the student to arrive at conclusions based on numerical and graphical data” as well as “prepare the student to demonstrate the ability to use mathematics to solve real life problems.” In SOCI 15, students create their own graphs to organize data and are assessed on their ability to read, interpret and critique graphical displays of statistical data. In addition, the instructors use the data available in the classroom and on campus to present statistical concepts. As an example, students are shown the distribution of the class exam scores and are given the class average. They then use these tools, along with own exam score and the Z-score equation to solve how many standard deviations their own score is above or below the mean. Examples in class are consistently based on real world scenarios. Students are assessed not only on their mathematical skills and content knowledge, but also on their writing skills.
future plans for the course include making explicit connections between the GE SLOs and the assignments/assessments on the course syllabus and in the assignment prompts to ensure students and instructors have a more comprehensive understanding of the larger context and purpose of the SLOs. Another goal is to ensure that all instructors are assessing the relevant SLOs.