General Education Annual Course Assessment Form

Course Number/Title: Stat 95: Elementary Statistics  GE Area: B4

Results reported for AY: 2012-2013  # of sections: 14  # of instructors: 4

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Department Chair: Ronald Rogers  College: 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, by the department chair, to the Office of Undergraduate Studies, with an electronic copy to the home college by September 1 of the following academic year.

Part 1

To be completed by the course coordinator:

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

GE SLO 7: “Focus on applications of mathematical concepts in one or more areas such as statistical inference, trigonometry, calculus, and analytic geometry.”

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

Assessment was accomplished using two methods: (1) class-based; and (2) a standardized post-test exit exam given on the day of the Final Exam.

Examples of class-based assignments that instructors used included: designed a survey and generated descriptive statistics for the results (e.g., central tendency and dispersion) along with an independent-samples t test; completion of problem sets involving hand calculations of statistical procedures; performing statistical tests on a hypothesis provided by the instructor, with discussion about statistical and research hypotheses; and generating a random distribution of numbers from which they created a distribution of sample means. All of these assignments emphasize statistical inference and application of mathematical concepts.

The table below presents the results of each assessment method for SLO 7.

<table>
<thead>
<tr>
<th>Assessment Method</th>
<th>Number of Students Assessed</th>
<th>Percent who mastered SLO7 at a high level</th>
<th>Percent who mastered SLO7 at an average level</th>
<th>Percent who mastered SLO7 at a low level</th>
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</thead>
<tbody>
<tr>
<td>Class-Based</td>
<td>773</td>
<td>32.6%</td>
<td>54.5%</td>
<td>12.9%</td>
</tr>
<tr>
<td>Post-Test</td>
<td>372</td>
<td>15.3%</td>
<td>43.0%</td>
<td>41.7%</td>
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</tbody>
</table>
These assessment results indicate that most students are mastering this SLO at an average level. Additionally, students appear to do better on class-based assessments than the post-test, which could be due to the timing of the post-test administered on the same day as the final exam, or due to the wording of the post-test items. One lesson learned from this assessment, as noted by our instructors, is that students benefit from simple and concrete examples to help them relate statistical concepts to “real world” questions. This continues to be addressed by our instructors through more in-class assignments and opportunities for students to apply statistical concepts.

(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.)

The Coordinator has identified these areas for modification for the upcoming year: (a) getting feedback from instructors about the post-test to ensure that questions are representative of concepts covered in class; (b) providing feedback to instructors regarding the typical problems seen in these assessments, along with suggestions for improving student performance (e.g., more in-class activities on application of statistical concepts); and (c) encouraging instructors to provide some form of course credit for performance on the post-test to motivate students to do well.

Part 2

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

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

Sections are generally aligned with the GE criteria listed above. Drs. Woodhead and Laraway, course co-coordinators, and I continue to emphasize the importance of collecting and providing requested assessment data. This has resulted in very high compliance rates when requesting post-test data. We will continue to make efforts to increase compliance requests for the class-based assessment data.