General Education Annual Course Assessment Form

Course Number/Title: ME 195a/b

GE Area: approved for S and V when combined with Engr 195a/b

Results reported for AY: 14-15

# of sections: 4

# of instructors: 6

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Department Chair: Tai-Ran Hsu

College: Engineering

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 SLO(s) were assessed for the course during the AY? Area S SLO 2, Area V SLO 1 (all SLO’s were evaluated in Engr 195a/b)

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

Mechanical Engineering was approved by BOGS for a different set of writing assignments in their senior project courses than all other engineering departments. Learning activities and assignments in ME 195a and b have been used to show students how the important issues raised through the S and V learning objectives introduced in Engr 195a/b relate to the everyday work they will be doing as engineers. To help students see this connection, the assignments all directly related to students’ senior design projects. Each semester included one individual writing assignment and as a one team. The minimum number of words written for these assignments combined was 1500 individual plus 1500 as a team (These are in addition to words written in Engr 195a/b).

Students also attended three related seminars to help provide the context for these assignments: Impact of Technology on Society, On Global Economy and Social Impacts, and Energy, Environment and Global Impacts.

Data for the four assignments are shown in Table 1. The percent of students who had an acceptable discussion of the relevant learning outcome is given for each assignment, and the average score for some are also provided.

For some class sections, students were allowed to revise and resubmit their individual writing assignment for ME 195a based on instructor feedback, resulting in strong scores.

Table 1: Summary of Results of GE Writing Assignments in ME 195a and b

<table>
<thead>
<tr>
<th>Section number</th>
<th>Individual Writing Assignment, ME 195a (SLO 2, area S)</th>
<th>Final Report Section, ME 195a (SLO 2, area S)</th>
<th>Individual Writing Assignment, ME 195b (SLO 1, area V)</th>
<th>Final Report Section, ME 195b, (SLO 1, area V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Average: 88% % acceptable: 100%</td>
<td>Percent Acceptable: 100%</td>
<td>Percent Acceptable: 100%</td>
<td>Percent acceptable: 100%</td>
</tr>
<tr>
<td>2</td>
<td>Average: 91% % acceptable: 100%</td>
<td>Percent Acceptable: 100%</td>
<td>Average: 79% % acceptable: 88%</td>
<td>Percent Acceptable: 88%</td>
</tr>
<tr>
<td>3</td>
<td>Average*: 83% % acceptable*: 100%</td>
<td>Percent Acceptable*: 100%</td>
<td>Average*: 74% % acceptable*: 50%</td>
<td>Percent Acceptable: 87%</td>
</tr>
<tr>
<td>4</td>
<td>Average: 81% % acceptable: 96%</td>
<td>Percent Acceptable: 100%</td>
<td>Average: 87% % acceptable: 91%</td>
<td>Percent Acceptable: 87%</td>
</tr>
</tbody>
</table>

*Data based on scores of 6 students out of 43. Data for remaining 37 students unavailable.
Data show good achievement of SLO 2 for S and SLO 1 for V in ME 195a/b. In general, students do a thorough job thinking through safety and environmental implications of their projects as well as social and cultural implications of their projects here within the United States. However, they have a harder time discussing global implications. While the data for SLO 1 for V show that a strong majority of students had acceptable discussions of these elements, for many students that achievement was barely acceptable, with discussions that did not show as thorough an understanding of different cultures outside the US as we might hope.

(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.)

1. The prompts for the writing assignment relating to global effects of their senior design projects will be made more general. The current prompts make it difficult for students working on certain projects to present a thorough discussion. A minimum number of references will also be required to give students the background to provide a more thorough discussion.

2. If students write papers that present only a surface-level understanding of global effects (ME 195b individual writing assignment), their instructors will provide feedback to help them think through these issues and then allow them to revise and resubmit their individual assignments.

3. Some of the data from Section 3 was missing. We will ensure that we have data for 100% of students in the future.

Part 2

(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?

Yes

(5) 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 SLOs for writing.

All sections except one were within enrollment limits of 40 students. The remaining section had 43, but it had two instructors and was within 10% of the enrollment limit. All sections in the current academic year (2015-16) are within the enrollment limit. These small section sizes give instructors the time to provide feedback to students. In addition to providing feedback on writing assignments (using detailed rubrics as well as written comments), all instructors schedule regular meetings with student teams of 3-6 students.