I. SUMMARY OF ASSESSMENT

A. Program Learning Outcomes (PLO)

<table>
<thead>
<tr>
<th>PLOs: Students graduating with a Health Sciences Bachelor’s Degree from California State University, East Bay will be able to:</th>
<th>ILO Alignment</th>
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<tbody>
<tr>
<td>1 Integrate and synthesize knowledge from general education courses and courses in the biological, physical, social and health sciences.</td>
<td>1, 6</td>
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<tr>
<td>2 Communicate effectively to solve problems in health sciences</td>
<td>2</td>
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<tr>
<td>3 Work effectively in teams, partnerships and larger groups toward accomplishing goals in health care.</td>
<td>4</td>
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<tr>
<td>4 Apply ethics and professional standards to interactions with colleagues, supervisors and staff, diverse and multicultural clients, and with the general public.</td>
<td>3, 5</td>
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<tr>
<td>5 Evaluate scientific and policy research to solve problems in the health sciences.</td>
<td>1, 6</td>
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B. Program Learning Outcome(s) Assessed

Two PLOs were assessed in 2017:

- Communicate effectively to solve problems in health sciences (PLO 2)
- Evaluate scientific and policy research to solve problems in the health sciences (PLO 5)

PLO 2 (herein “Written Communication”) was assessed for the first time, whereas PLO 5 (herein “Critical Thinking”) was reassessed because of suboptimal results found in 2015. Health Sciences had implemented changes in 2016 to address these issues. The reassessment was conducted in 2017 to allow at least one year of implementation of the changes to determine if improvements were observed for this specific objective. These changes are summarized in a recent publication by Professors Ganesh and Smith.¹

C. Summary of Assessment Process

PLO2: Communicate effectively to solve problems in health sciences (Written Communication)

**Instrument(s):** CSUEB Communication ILO Rubric

**Sampling Procedure:** Random sample of 50 papers

**Sample Characteristics:** Students who completed HSC 4500

**Data Collection:** Final Reports submitted by students in Spring Quarter of 2016

**Data Analysis:** Basic frequencies of scores assigned by two reviewers per paper across major domains of scoring rubric (100 total reviews by 12 reviewers)

PLO5: Evaluate scientific and policy research to solve problems in the health sciences (Critical Assessment: Re-assessment)

**Instrument(s):** HSC Critical Thinking Rubric

**Sampling Procedure:** Random sample of 55 papers

**Sample Characteristics:** Students who completed HSC 3550

**Data Collection:** Final papers submitted by students in Spring Quarter of 2016

**Data Analysis:** Basic frequencies of scores assigned by two reviewers per paper across major domains of scoring rubric (110 total reviews by 12 reviewers)

D. Summary of Assessment Results

PLO2: Communicate effectively to solve problems in health sciences (Written Communication)

**Main Findings**

The overall average performance of students reviewed was a 17.38 out of a 24-point total (72.4%). Among the six domains assessed, there was considerable quality exhibited (>3 on 4-point scale) in two domains (audience awareness, presentation of supporting ideas), and above-satisfactory performance (2.95) among an other two others (organization/cohesion/clarity, statement of purpose/thesis). The two poorest average scores were found for language usage/structure and mechanics.

**Recommendations for Program Improvement**

In general, students exhibited strengths in understanding audience in order to deliver tailored written communication; this is a key competency of the HSC Program. In addition, having a thesis statement and supporting assertions with evidence in a clear and organized fashion were demonstrated by students in sufficient measure. Not surprisingly, students had trouble with technical aspects of writing, which is a concern among most college students irrespective of major and institution. Upon transformation of the HSC curriculum during semester conversion, the Program will emphasize training and practice of writing across multiple classes; any course section with less than 35 students will have an intensive writing exercise in which attributes of effective written communication, particularly mechanics and usage of language, will be highlighted and incorporated into a major deliverable.
Next Step(s) for Closing the Loop
Given the paramount importance of written communication for health professionals, it is important that this objective be continually assessed in reasonable intervals. Specifically, it is recommended that another evaluation occur after implementation of at least two years of the transformed curriculum, using artifacts from key courses reflecting distinct junctures in the HSC major (including concentrations).

PLO5: Evaluate scientific and policy research to solve problems in the health sciences

Main Findings
Students demonstrated satisfactory performance in critical thinking with an average overall score of 15.85 on a 24-point scale (66%), with values for each specific 4-point domain ranging between 2.39 (acknowledging alternate viewpoints) and 2.83 (explanation of issues).

Recommendations for Program Improvement
It merits noting that the standardization of courses, including mandatory training for instructors as well as uniform syllabi, activities, deliverables, and assessments, did result in positive changes in critical thinking abilities of students. To illustrate, the overall score increased by 8.64% from the prior assessment, with all individual criterion exhibiting positive changes ranging from 1.67% (ability to evaluate evidence) to 25.12% (conclusions and implications). It is clear that, during the short time frame in which courses were redesigned, implemented, and refined, the effects of these changes were all positive.

Next Step(s) for Closing the Loop
Given the importance of critical thinking in the health professions, the transformed HSC curriculum has employed an innovative pedagogical approach involving coursework scaffolded in a problem-based learning environment. This strategy prioritizes critical thinking insofar as it stresses the development of solutions to real-world problems, as identified by health professionals who practice in the relevant fields of HSC. Because of the considerable time required to fully implement the transformed curriculum, it is recommended that critical thinking be assessed only after students have been able to be exposed to the HSC major under semesters in its entirety, which may take at least four years.

E. Assessment Plans for Next Year
Health Sciences will be assessing team work in AY 17 – 18.