

2014-2015 CSCI EETF Assessment Year End Report, 2015

Program Name(s)	EETF Faculty Rep	Department Chair
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A. Program Student Learning Outcomes

The Student Learning Outcomes are in line with those of ABET (Accreditation Board for Engineering and Technology, Inc.). Students graduating with a B.S. in Computer Engineering from Cal State East Bay will demonstrate the following learning outcomes:

- a. An ability to apply knowledge of mathematics, science and engineering
- b. An ability to design and conduct experiments, as well as to analyze and interpret data
- c. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- d. An ability to function on multidisciplinary teams
- e. An ability to identify, formulate, and solve engineering problems
- f. An understanding of professional and ethical responsibility
- g. An ability to communicate effectively (3g1 orally, 3g2 written)
- h. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- i. A recognition of the need for, and an ability to engage in life-long learning
- j. A knowledge of contemporary issues
- k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice

B. Program Student Learning Outcome(s) Assessed

SLO b - Ability to design and conduct experiments, as well as to analyze and interpret data.
SLO g - Ability to communicate effectively.

C. Summary of Assessment Process

The ability to design and conduct experiments, as well as to analyze and interpret data was assessed via student performance on labs, quality case researches, ISO 9000 factory tour, exercises, and examinations in Industrial Engineering 4300 Quality Engineering offered in Spring 2015.

The ability to communicate effectively was assessed by applying an assessment rubric to student teams' final presentations in Engr 4620 Senior Design II. The assessment tool has a separate rubric for oral communication and for graphical communication.

D. Summary of Assessment Results

Outcome (b): Ability to design and conduct experiments, as well as to analyze and interpret data.

Indicator: Course labs included conducting quality measurements using manual tools, digital tools and computer controlled CMM, as well as tour ISO 9000 certified factory. The quality case researches, exercises, and examine included researches of the unprecedented 2015 auto airbag recalls, quality case analysis and data interpretations for identifying quality root-causes and selecting quality corrective actions. Students scored an average of 89% on the research cases and exercises, with an overall range on individual assignments from 60% to 100%.

Outcome (g): An ability to communicate effectively, orally and written. Ability to design and conduct experiments, as well as to analyze and interpret data.

Indicator:

Student teams worked for two quarters with a sponsor organization culminating in an oral presentation to sponsors from the organization, faculty, students, alumni and community members. These presentations were assessed according to the following rubrics:

Oral Communication	Little of the oral presentation was clear, and it was generally confusing.	Some of the oral presentation was clear, but there were significant lapses.	Most of the oral presentation was clear and added significant content.	All of the oral presentation was clear and added significant content.
	1 2	3 4	5 6	7 8
Graphical Communication	Many slides, charts, and graphs were not legible or were misleading.	Some slides, charts, and graphs were clear but did not add significant content.	All slides, charts, and graphs were clear but did not add significant content.	All slides, charts, and graphs were clear and added significant content.
	1 2	3 4	5 6	7 8

The 29 students, each assigned to one of 8 teams, had average scores of 82.8% and 85.9% in oral and graphical communication respectively, with the scores from the above rubric converted to a percentage.

E. Suggestions and Recommendations for the CSCI EETF in the Future

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