



Academic Program Assessment Report for AY 2017-2018

Program: BS in Engineering

(Due: June 1, 2018)

Date report completed: 4 June 2018

Completed by: Jane M Fraser

Assessment contributors (other faculty involved): Ansaf, Bedoya, DePalma, Jaksic, Yuan

Please describe the 2017-2018 assessment activities and follow-up for your program below. Please complete this form for each undergraduate major, minor, certificate, and graduate program (e.g., B.A., B.S., M.S.) in your department. Please copy any addenda (e.g., rubrics) and paste them in this document, save and submit it to both the Dean of your college/school and to the Assistant Provost as an email attachment before June 1, 2018. You'll also find this form on the assessment website at <https://www.csupueblo.edu/assessment-and-student-learning/resources.html>. Thank you.

I. Assessment of Student Learning Outcomes (SLOs) in this cycle. Including processes, results, and recommendations for improved student learning. Use Column H to describe improvements planned for 2018-2019 based on the assessment process.

A. Which of the program SLOs were assessed during this cycle? Please include the outcome(s) verbatim from the assessment plan.	B. When was this SLO <u>last</u> assessed? (semester and year)	C. What method was used for assessing the SLO? Please include a copy of any rubrics used in the assessment process.	D. Who was assessed? Please fully describe the student group(s) and the number of students or artifacts involved.	E. What is the expected achievement level and how many or what proportion of students should be at that level?	F. What were the results of the assessment? Include the proportion of students meeting proficiency.	G. What were the department's conclusions about student performance?	H. What changes/improvements to the <u>program</u> are planned based on this assessment?
(d) an ability to function on multi-disciplinary teams,	Fall 2014	Assessments wer done in several classes. See attachment.	All students in the specified classes. See attachment.	Various. See attachment.	The goal was met in each class. See attachment.	See attachment.	None. See discussion in attachment.

Comments on part I:

II. Closing the Loop. Describe at least one data-informed change to your curriculum during the 2017-2018 cycle. These are those that were based on, or implemented to address, the results of assessment from previous cycles.

A. What SLO(s) did you address? Please include the outcome(s) verbatim from the assessment plan.	B. When was this SLO last assessed to generate the data which informed the change? Please indicate the semester and year.	C. What were the recommendations for change from the previous assessment?	D. How were the recommendations for change acted upon?	E. What were the results of the changes? If the changes were not effective, what are the next steps or the new recommendations?

Comments on part II:

During our regular review by ABET in 2017-2018, the visiting team identified that we were not being consistent in waiving or in documenting waiver of prerequisites and similarly for substitutions. In response to that problem, we improved our process for documenting waivers of prerequisites, we examined (but rejected) the possibility of changing some semesters of offering in order to reduce the need for waivers, and we reviewed the necessity of all co- and prerequisites. As a result of that review, in 2017-2018 we submitted changes to the prerequisites for EN 211, EN 324, EN 363, and EN 460 (the first two are required courses in the BSIE; all four are required courses in the BSE).

Our evaluation processes result regularly in data-informed changes in courses, but not in frequent changes in our programs. ABET requires continuous improvement as stated in Criterion 4: "Continuous Improvement The program must regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The results of these evaluations must be systematically utilized as input for the continuous improvement of the program. Other available information may also be used to assist in the continuous improvement of the program." ABET does not require changes to the curriculum each year and our review did not indicate the need for any changes beyond the changes in prerequisites discussed above.

Attachment:

(d) an ability to function on multi-disciplinary teams

Course	Semester	Goal met?	Notes	IE, E, or both?	
EN 107	Fa16	Yes	Assignment: group project - create assembly working drawing. Performance standard: 85% of students score at least 90% or better and class average of 90%. Result: 85.71% students scored 90%, and the class average was 91.19.	Both	Ansaf
EN 215	Fa15	Yes	Assignment: describe lessons learned from teamwork. Performance standard: score 80% or better. Result: the goal was met.	IE	Fraser
EN 215	Fa16	Yes	Assignment: understand system design where inter-disciplinarily skill is needed. Performance standard: score 80% or higher. Result: 83% of the students earned 80% or higher.	IE	Wollega
EN 430	Sp16	Yes	Assignment: group project - apply project planning tools. Performance standard: 80% of the students score at least 80% or better. Result: both mechatronics and industrial engineering students earned 80% or higher.	Both	Wollega

EN 430	Sp17	Yes	Assignment: group project - apply project planning tools. Performance standard: 80% of the students score at least 80% or better. Result: both mechatronics and industrial engineering students earned 80% or higher.	Both	Wollega
-----------	------	-----	---	------	---------

From 1 December 2017 department meeting minutes:

Ebisa presented a summary of assessments; the goal was met in all classes and for both BSE and BSIE students. We discussed the difficulty in getting our students experience on "multi-disciplinary teams." Teams in EN 430 do have BSE and BSIE members. We think the new ABET outcomes remove this difficulty. We also discussed the need for engineering graduates to be able to work on multi-level teams, that is, teams with technicians as well as engineers. The evidence supports that our graduates achieve this outcome and we recommended no changes to the programs.

