

Weber State University  
Annual Assessment of Evidence of Learning

Cover Page

Department/Program: Engineering Technology/Electronics Engineering Technology  
Academic Year of Report: 2015/16  
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**A. Brief Introductory Statement:**

Please review the Introductory Statement and contact information for your department displayed on the assessment site: <http://www.weber.edu/portfolio/departments.html> - if this information is current, please place an 'X' below. No further information is needed. We will indicate "Last Reviewed: [current date]" on the page.

**Information is current; no changes required.**

**Information is not current; updates below.**

Update:

**B. Mission Statement**

Please review the Mission Statement for your department displayed on the assessment site:

<http://www.weber.edu/portfolio/departments.html> - if it is current, please indicate as much; we will mark the web page as “Last Reviewed [current date]”. No further information is needed.

If the information is not current, please provide an update:

**Information is current; no changes required.**

**Information is not current; updates below.**

### **C. Student Learning Outcomes**

Please review the Student Learning Outcomes for your department displayed on the assessment site:

<http://www.weber.edu/portfolio/departments.html> - if they are current, please indicate as much; we will mark the web page as “Last Reviewed [current date]”. No further information is needed.

If they are not current, please provide an update:

**Information is current; no changes required.**

**Information is not current; updates below.**

**D. Curriculum**

Please review the Curriculum Grid for your department displayed on the assessment site: <http://www.weber.edu/portfolio/departments.html> - if it is current, please indicate as much; we will mark the web page as “Last Reviewed: [current data]”. No further information is needed.

If the curriculum grid is not current, please provide an update:

**Information is current; no changes required.**

**Information is not current; updates below**

Curriculum Map

Core Courses in Department/Program	Department/Program Learning Outcomes							
	Learning Outcome 1	Learning Outcome 2	Learning Outcome 3	Learning Outcome 4	Etc...			

*Note<sup>a</sup>*: Define words, letters or symbols used and their interpretation; i.e. 1= introduced, 2 = emphasized, 3 = mastered or I = Introduced, E = Emphasized, U = Utilized, A = Assessed Comprehensively; these are examples, departmental choice of letters/numbers may differ

*Note<sup>b</sup>*: Rows and columns should be transposed as required to meet the needs of each individual department

Additional Information (if needed)

## **E. Assessment Plan**

Please review the Assessment Plan for your department displayed on the assessment site:

<http://www.weber.edu/portfolio/departments.html> - if the plan current, please indicate as much; we will mark the web page as “Last Reviewed [current date]”. No further information is needed.

The site should contain an up-to-date assessment plan with planning going out a minimum of three years beyond the current year. Please review the plan displayed for your department at the above site. The plan should include a list of courses from which data will be gathered and the schedule, as well as an overview of the assessment strategy the department is using (for example, portfolios, or a combination of Chi assessment data and student survey information, or industry certification exams, etc.).

*Please be sure to include your planned assessment of any general education courses taught within your department.* This information will be used to update the General Education Improvement and Assessment Committee’s planning documentation.

Assessment plan: No Changes

**F. Report of assessment results for the most previous academic year:**

There are a variety of ways in which departments can choose to show evidence of learning. This is one example. The critical pieces to include are 1) what learning outcome is being assessed, 2) what method of measurement was used, 3) what the threshold for 'acceptable performance' is for that measurement, 4) what the actual results of the assessment were, 5) how those findings are interpreted, and 6) what is the course of action to be taken based upon the interpretation.

Evidence of Learning: Outcomes within the Major

Evidence of Learning					
ABET Learning Outcomes a-k	Method of Measurement	Threshold for Evidence of Learning	Findings Linked to Outcomes	Interpretation of Findings	Action Plan/Use of Results
a. Select and apply the knowledge, techniques, skills, and modern tools of the discipline	Measure 1. Course Exams	Measure 1: 70% of students will score above 75% on both exams	Measure 1. 70% of students scored above 75% (S15)	Measure 1. Satisfactory	N/A
	Measure 2. Program Exam	Measure 2: 70% of students will score above 65%	Measure 1. 50% of students scored above 65%	Measure 2. Skills weakness in area of AC circuit analysis	1140 will be split into two courses – 1140 and 2010
b. Select and apply a knowledge of mathematics, science, engineering, and technology to develop practical solutions for engineering technology problems	Measure 1. Program Exam	Measure 1: 70% of students will score above 75%	Measure 1. 25% of students scored above 75% (S15)	Measure 1. Req'd tech courses lacking at the Junior-level	Move upper level electives immediately following completion of sophomore technical courses

	Measure 2. Exam (mid-term)	Measure 2. 70% of students will score above 80%	Measure 2. 85% of students scored above 80%	Measure 2. Satisfactory	N/A
c. Conduct, analyze and interpret experiments and apply experimental results to improve processes	Measure 1. Laboratory Exercises	Measure 1: 70% of students will score above 75%	Measure 1. 67% of students scored above 75%	Measure 1. Satisfactory (given small number of students)	N/A
d. Design systems, components, or processes, as related to electrical and electronic systems.	Measure 1. Laboratory Reports	Measure 1: 75% of students will score above 75%	Measure 1. In EET 3060, 88% students scored above 75% and in EET 4020, 82% students scored above 75%	Measure 1. Satisfactory	N/A
e. Function effectively as a member or leader on a technical team	Measure 1. Course Project Rubric and team evaluations	Measure 1: 75% of students will score above 75%	Measure 1. In EET 2130, Team Score Ave=91.8 & 100% students scored above 75% and in EET 4020, 91% students scored above 75%	Measure 1. Satisfactory	N/A
f. Identify, analyze, and solve broadly-defined problems through analysis and experimentation leading to modification of systems, components and processes	Measure 1: Exams and lab reports	Measure 1: 75% of students will score above 75%	Measure 1. In EET 4090, 88% students scored above 75%	Measure 1. Satisfactory	N/A

g. Communicate effectively in written, oral, and graphical forms	Measure 1. Senior Project rubric, Graphics, log books, manual, and demonstrations, (presentations)	Measure 1. 80% of students will score above 75%	Measure 1. In EET 4020, 74% students scored above 75% (S15)	Measure 1. Logbook showed weaknesses	Increase emphasis on maintaining technical logbook
h. Develop an understanding of the need for and to engage in self-directed continuing professional development	Measure 1. Senior Project evaluations Subject Knowledge	Measure 1. 80% of students will score above 75%	Measure 1. 79% students scored above 75%	Measure 1. Satisfactory	N/A
i. Develop an understanding of and a commitment to address professional and ethical responsibilities including a respect for diversity	Measure 1. Project management exams and assignments	Measure 1. 80% of students will score above 90%	<b>EET 3090:</b>		
j. Develop a knowledge of the impact of engineering technology solutions in a societal and global context	1. Projects	Measure: 70% of students will score above 80%	<b>EET 4090:</b> (PRO) <sub>AVE</sub> =86.7) 5/6=83% scored above 80% (F14)	Satisfactory	N/A
k. Have a commitment to quality, timeliness and continuous improvement.	1. Coop Work Experience employer surveys and student surveys	Measure: 80% of students will score above 75%	<b>EET 4890:</b>		

b. Evidence of Learning: High Impact or Service Learning

If you provide students with high impact or service learning opportunities briefly describe those opportunities and explain how you assess their impact on student learning. This [excerpt](#) from George D. Kuh provides a brief overview of high-impact practices.

Not applicable.

## G. Summary of Artifact Collection Procedure

Artifact	When/How Collected?	Where Stored?
(i.e. Final Project Rubric) <b>Senior project rubric: teamwork, organization, degree of completion, subject knowledge(technical merit, graphics, logbook, manual, appearance, preparedness, delivery, demonstration.)</b>	(i.e. end of semester) <b>Presentation at the end of semesters for two semesters.</b>	(i.e. electronic copies) <b>Electronic copies.</b>
(i.e. Chi Tester Outcome Report) <b>Program exam for student learning outcomes tested on ChiTester.</b>	(i.e. 2-3 times per semester) <b>Sophomore and senior students need to take the test.</b>	(i.e. electronic format, chi tester warehouse) <b>ChiTester warehouse and printouts.</b>

Summary Information (as needed)

## Appendix A

Most departments or programs receive a number of recommendations from their Five-Year Program Review processes. This page provides a means of updating progress towards the recommendations the department/program is acting upon.

Date of Program Review: Fall 2014	Recommendation	Progress Description
Recommendation 1	The doubt amongst the faculty about the program direction including the interaction with the Electronics Engineering program, and issues with facilities and funding needs to be resolved.	The college is in the midst of doing a strategic plan that will include the programs in the Engineering Technology Department. Such a plan could help to resolve some of these issues.
Recommendation 2	Many of the learning outcomes do not have defined measures and metrics. Additionally, many of the outcomes do not have a course or series of courses where the concepts are introduced.	As can be seen from the assessment table above, this issue has been addressed. The program is continuing its assessment efforts.
Recommendation 3	EET faculty have enormously high teaching loads. It was not clear to us that there is appropriate compensation for the significant amount of overload carried. This seems to be amplified by the cross-over between the EE and EET programs. There are severe concerns about having time to accomplish the additional academic requirements for tenure and promotion in light of the heavy teaching loads without "moonlighting".	There are plans to hire an additional faculty member who would start in the Fall of 2016. In addition, there are plans to hire a faculty member in MET who could also teach courses in the EET area.

Additional narrative:

## Appendix B

Please provide the following information about the full-time and adjunct faculty contracted by your department during the last academic year (summer through spring). Gathering this information each year will help with the headcount reporting that must be done for the final Five Year Program Review document that is shared with the State Board of Regents.

<b>Faculty</b>	
Headcount	
With Doctoral Degrees (Including MFA and other terminal degrees, as specified by the institution)	
Full-time Tenured	
Full-time Non-Tenured (includes tenure-track)	2
Part-time	
With Master's Degrees	
Full-time Tenured	1
Full-time Non-Tenured	
Part-time	
With Bachelor's Degrees	
Full-time Tenured	
Full-time Non-tenured	
Part-time	2-3
Other	
Full-time Tenured	
Full-time Non-tenured	
Part-time	
<b>Total Headcount Faculty</b>	
Full-time Tenured	1
Full-time Non-tenured	2
Part-time	2-3

**Please respond to the following questions.**

- 1) Based on your program's assessment findings, what subsequent action will your program take?

A new faculty member is being hired in the manufacturing engineering technology program who will be teaching some of the courses in the electrical engineering technology program. This person will help alleviate some of the current overload experienced by the EET faculty.

- 2) Are there assessment strategies within your department or program that you feel are particularly effective and/or innovative? If so, what are those strategies and what do you learn about your students by using them?

An EET Program exam was created for student assessment. Questions were developed by the faculty in the general areas of circuit analysis, digital systems, and fundamental electronics. Fifty questions were formatted to create an on-line exam using Weber State University's Chi-Tester program.

Sophomore and senior-level students will be required to take the exam at the on-campus testing center.

This EET Program exam was created as an assessment tool to track and evaluate student attainment of Student Learning Outcomes and continuous improvements.