

CENTRAL NEW MEXICO COMMUNITY COLLEGE
ASSESSMENT REPORT
Due to SAAC by October 15

PART 1: CONTACT & PROGRAM IDENTIFICATION

Report Year and Contact Information:			
<u>2014-2015</u> Academic Year	<u>Erica Voges</u> Contact Person	<u>evoges</u> Email	<u>X52680</u> Phone Number

Subject of this Assessment Report:		
Program: <u>Engineering</u> <input type="checkbox"/> Certificate <input type="checkbox"/> AA <input checked="" type="checkbox"/> AS <input type="checkbox"/> AAS	Gen Ed Area: _____ Applicable to: <input type="checkbox"/> AA/AS <input type="checkbox"/> AAS	Discipline Area: _____

PART 2: EVIDENCE OF OVERALL PROGRAM EFFECTIVENESS

Summary of Program Successes:
Too early to determine. This is our first year of assessment and we had only one section of the course to assess.

Description and Evaluation of Recent Changes Made in Support of Student Learning:
This is our first year with assessment results, so no changes were made relative to previous years.

PART 3: REPORT ON RECENT ASSESSMENT OF STUDENT LEARNING

Student Learning Outcome(s) Assessed: <small>To add rows: right-click in cell below and select "Insert," "Insert Rows Above"</small>	Classes/Cohorts Assessed:
Apply knowledge of mathematics, science, and engineering.	One section of PHYS 1810.

Measurement Tool(s) Used:	Enter X's for type of tool				Initial Achievement Target or Expectation:
	Internal	External	Direct	Indirect	
<i>To add rows: right-click in cell below and select "Insert," "Insert Rows Above"</i>					
Question on Final Exam.	x		x		The assessment was broken into two sections, math and physics. A target of an average score of 2 out of 3 points for each portion was set.

Assessment Findings:

The average total points earned was 2.1 out of 3 on the mathematical portion, and 1.8 out of 3 on the physics portion. Roughly 76% of the students demonstrated their competency in applying knowledge of mathematics by completing the mathematical portion of the problem with a score of 2 or higher. About 62% demonstrated their competency in applying their knowledge of science and engineering by completing the physics portion with a score of 2 or higher.

Analysis and Interpretation of Assessment Findings:

We split the rubric up into two parts: one part assessed their mathematical skills and one their application of physics concepts. The students could earn a 0, 1, 2, or 3 on each part. The average total points earned was 2.1 out of 3 on the mathematical portion, and 1.8 out of 3 on the physics portion. Seventy-six percent of the students hit the target of at least 2 out of 3 points on the algebra portion and 62% did so on the physics portion. Sixty-two percent hit the target of at least 2 out of 3 points on both portions.

Action Plan in Support of Student Learning:

The current curriculum appears to be doing a good job of helping students achieve this particular learning objective. No drastic changes to curriculum or pedagogy are indicated.

Recommendations, Proposals, and/or Funding Requests:

PART 4: EMBEDDED OUTCOMES

<p>Critical Thinking and Life Skills/Teamwork Development within Programs:</p> <p>a) Please describe how Critical Thinking assessment is embedded within your program assessment.</p> <p>b) Please describe how Life Skills/Teamwork assessment is embedded within your program assessment.</p>
<p>a) Critical thinking is employed when designing and conducting experiments, analyzing and interpreting data, and formulating and solving engineering problems (SLOS 2 and 4).</p>
<p>b) Two of our SLOs will be assessed in physics laboratory courses, which require teamwork. Additionally, ENGR 1010 requires a final group project.</p>

PART 5: ASSESSMENT CYCLE PLAN (Copy and paste from original plan if unchanged)

Cycle Years:	Plan Description:
2015 – 2020	The goal is to assess each of the nine Engineering outcomes over the course of the next five years. These outcomes will be assessed in engineering courses, as well as in calculus-based physics lectures and labs.

Student Learning Outcomes:	When Measured:	Where Measured:	How Measured:
1. Apply knowledge of mathematics, science, and engineering.	Fall 14 – Spring 16	PHYS 1810	Final Exam Question.
2. Design and conduct experiments, as well as to analyze and interpret data.	Fall 18 – Spring 20	PHYS 1792	To be determined
3. Function on multi-disciplinary teams.	Fall 15 – Spring 16	PHYS 1892	Observation of teams performing experiments in lab.
4. Identify, formulate, and solve engineering problems.	Fall 16 – Spring 18	ENGR 2815	Final Exam question.
5. Recognize/identify professional and ethical responsibility.	Fall 20 – Spring 22	ENGR 1010	To be determined
6. Communicate effectively.	Fall 16 – Spring 18	ENGR 1010	To be determined
7. Recognize/identify the impact of engineering solutions in a global, economic, environmental, and societal context.	Fall 18 – Spring 20	PHYS 2710	To be determined

8. Have knowledge of contemporary issues	Fall 16 – Spring 18	PHYS 2710	To be determined
9. Demonstrate basic techniques, skills, and modern engineering tools necessary for engineering practice.	Fall 20 – Spring 22	ENGR 2810	To be determined