Sciences and Engineering SLO Summary: Report 2010-11

The completed Assessment Worksheets are available in our Department archives.

Biology 112: This course has 6 SLOs. The students successfully met all but one of them. "80% of students will be able to relate important processes to plant form and function." Only 33% of students met this SLO. Due to its dry nature, plant structures may not be the best topic for the last section of the class. Try to move this back to middle.
Assessed Spring 2011

Biology 251: This course has 10 SLOs. The student successfully met the content SLOs, but "Identify microscopic and gross anatomical structures in laboratory setting" had slightly lower success that the target- 65% rather than 70% of students met this SLO. More lab experiences will be offered in the future. Student success could also be improved by increasing lab opportunities- more models and better slides.
Assessed Spring 2011

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Chemistry 101: This course has 8 SLOs. All were met by the students.
Assessed Spring2011

Chemistry 113: This course has 8 SLOs. The students met all but one of them- Demonstrate an understanding of and calculate the driving force behind electrochemical reactions. This is a complex topic. More time will be spent balancing the electrochemical equations in future years. This is an improvement over Spring of 2010 (50%).
Assessed Spring 2011

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PHSC 101: This course has 5 SLOs. Students successfully met all but one of them, and that one nearly- the target was 75%; successful students were 73%. We hope the change in prereq for this class will increase student success for this SLO and the others.
Assessed Spring 2011

PHSC 102: This course has 6 SLOs. Students successfully met all but two of them, and those nearly- the target was 75%; successful students were 73% for both. We hope the change in prereq for this class will increase student success for this SLO and the others.
Assessed Spring 2011

PHSC 111: This course has 5 SLOs. All were met by the students.
Assessed Spring2011

PHSC 102: This course has 6 SLOs. Students successfully met all but one of them, and it nearly- the target was 75%; successful students were 73% - mostly due to mathematical and set up errors. We hope the change in prereq for this class will increase student success for this SLO and the others.
Assessed Spring 2011

PHSC 125: This course has 8 SLOs. All were met and well exceeded by the students.
Assessed Spring2011

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PHYS 111: This course has 5 SLOs. The students successfully met all but one of them "Understand and solve equations involving gravitation, fluid statics and dynamics, oscillation and simple harmonic motion." It is assumed that the inabilities observed are due to the fact that appropriate level experiments in most of these areas are difficult to design and execute The use of on-line educational videos of these concepts may improve the students abilities to apply the requisite physics theory to problems in these areas.
Assessed Spring 2011, though the instructor was able to look back on exams for this course over 3 years.

PHYS 211: This course has 5 SLOs. The students successfully met all targets.
Assessed Spring 2011.

Program Outcome Assessment Report

Basic Information:

Program: CC General Sciences

College: Cerro Coso College

Assessment Term: Fall, 2006

Status: Launched

Co-contributors:

Learning Outcome:

Target of Performance: 80% of students will be able to

Learning Outcome: Demonstrate mastery of the Scientific Method, including the experimental and empirical methodologies characteristic of science and the modern methods and tools used in scientific inquiry.

Assessment Tool/Scoring Method: an exam

Assessment Plan:

Changes Made Since Last Assessment: N/A - First Assessment

Assessment Plan: For the past 2 semesters (Fall 2006 and Spring 2007), students in the Chemistry C101 class were given a series of questions on exams throughout the semester that assessed the students' understanding of the Scientific Method, including the definition of Scientific Theory. In Spring 2009, questions specifically geared towards the Scientific Method were included in an exam in Biology C142

Assessment Results:

Results: The 20 students completing Chemistry C101 in the Fall of 2006 received an average of 81% on the questions. The 29 students completing Chemistry C101 in the spring of 2007 received an average of 80% on the questions. Data will be continued to be collected. The assessment of this SLO/PLO be incorporated into the non-majors biology courses in the fall of 2008, and all 100 level Science Courses by fall of 2010. For BIOL: 80% of the students at the KRV site, 81 % of the Students at the ONL campus and 100 % of the students at the IWV received a 70% or higher on these questions.

Analysis and Plan for Improvement and Reassessment: Incorporate into more 100 Level BIOL courses. Obtain more full-time Science Faculty and an Institutional Researcher.

Participants:

Attachments:

Program Outcome Assessment Report

Basic Information:

Program: CC General Sciences

College: Cerro Coso College

Assessment Term: Fall, 2006

Status: Launched

Co-contributors:

Learning Outcome:

Target of Performance: 80% of students will be able to

Learning Outcome: Perform hands-on laboratory and/or field experiments of all science classes safely.

Assessment Tool/Scoring Method: Other(Measured by direct observation during laboratory work using a rubric based upon guidelines published)

Assessment Plan:

Changes Made Since Last Assessment: N/A - First Assessment

Assessment Plan: In Physics C211, C113 and in Chemistry C113, C221 and C223. Students performing an especially challenging experiment were observed.

Assessment Results:

Results: All students were prepared and engaged in the experiment. About 10% of the students excelled in preparation and execution of the challenging experiments. No injuries occured.

Analysis and Plan for Improvement and Reassessment: Obtain resources for equipment and facilities upgrades for all the Science Courses. Continue to be strong advocates for hands-on labs. Continue to follow guidelines from Professional Societies.

Participants:

Attachments:

Program Outcome Assessment Report

Basic Information:

Program: CC General Sciences

College: Cerro Coso College

Assessment Term: Fall, 2006

Status: Launched

Co-contributors:

Learning Outcome:

Target of Performance: 70% of students will

Learning Outcome: Demonstrate proficient preparation for upper division science courses at the appropriate transfer institution in the chosen emphasis: biology, chemistry, or physical science.

Assessment Tool/Scoring Method: Other(Exam and follow-up survey)

Assessment Plan:

Changes Made Since Last Assessment: N/A - First Assessment

Assessment Plan: For the past 2 years, the American Chemical Society Standardized Organic Exam was given to all the students in the Chem C223 the Capstone Class for Chemistry. Students who transferred to 4-year university were also informally surveyed.

Assessment Results:

Results: All 7 students in the General Science Program took the ACS exam and the 73rd percentile or higher, with 1 student scoring in the 85th percentile and 1 student obtaining a perfect score. Students who were informally surveyed mentioned that they thought their preparation was excellent.

Analysis and Plan for Improvement and Reassessment: Incorporate the standardized exams into other disciplines such as Biology and Physics. Continue with Survey. Obtain more full-time Science Faculty and an Institutional Researcher.

Participants:

Attachments: