

Science Department

SLO Presentation to Curriculum Committee

October 15, 2009

I. ASCC Mission Statement:

- The mission of the American Samoa Community College is to foster successful student learning by providing educational programs and high quality services that will enable students to achieve their educational goals and to contribute to the social, cultural, political, economic, technological, and environmental well-being of American Samoa.

- To fulfill this mission, the College, as an open admission's, United States accredited Land Grant institution, provides access to associate degree and certificate programs of study. These programs prepare all students including those who are educationally underserved, challenged, or non-traditional for:
 - transfer to institutions of higher learning
 - successful entry into the workforce
 - research and extension in human and natural resources
 - awareness of Samoa and the Pacific.

II. Science Mission Statement

- The mission of the Science Department is to provide educational services, research, and outreach programs in the broad areas of the basic sciences and the Associate of Arts degree in Marine Science. The department offers introductory and transferable courses in the areas of biology, chemistry, and physics to fulfill basic requirements for graduation. The department also offers a two-semester biology sequence for life sciences, nursing, pre-medicine, pre-veterinarian, allied health majors, and several science majors. The department provides a comprehensive marine science program for its students to learn, understand, and appreciate both locally and globally. The department is committed to a strong science program that deals with the latest technologies, environmental issues, and human life sustainability.

III. Institutional SLOs

- Communication Skills
- Job Skills
- Life Skills

Communication Skills

- Speaking
 - Writing
 - Reading
 - Listening
- Life Science
 - Bio: 150, 155, 180, 181, 250, 251, 255
 - MSC: 160, 170, 200, 220, 270, 280
 - AGR: 197, 250, 297
 - Physical Science
 - CHM: 150, 151
 - PHY: 151, 152
 - PHSCI: 150
 - MSC: 150, 155
 - Other
 - MSC: MOP courses

Communication Skills Example

- Rubric:
 - Research Paper
 - Presentation
 - Media (radio/forum)
- Exams, Tests & Quizzes
- Assign. & Homework
- Laboratory Reports
- Bio 150 & 180
 - Address 6 characteristics of Life
 - Research Paper
- MSC 150
 - Research Marine Species
 - Address Survival Strategies & Conservation Issues
 - Presentation

Job Skills

- Transferable
- Adaptive
- Job Specific
 - Life Science
 - Bio: 150, 155, 180, 181, 250, 251, 255
 - MSC: 160, 170, 200, 220, 270, 280
 - AGR: 197, 250, 297
 - Physical Science
 - CHM: 150, 151
 - PHY: 151, 152
 - PHSCI: 150
 - MSC: 150, 155
 - Other
 - MSC: MOP courses

Job Skills Example

- No Rubric

- Laboratory

- Assessment = grade

- Skills

- Computer, math, and reading

- Work qualities: teams

- Visiting Scientists: career choices / research

- Hands-on Activities

- MSC 270

- Perform vertical transect and quadrant ecological surveys of benthic organisms

- Enter data, Excel, graphs

- Collaborate with UH SeaGrant, NPS, and CRAG professionals

- Field work conducted in teams

Job Skills Example

- Rubric will be used, Fall 2009 - CRAG
 - Behavior, Attitude, and Participation
- Internships
 - REU, LSAMP, UMEB, CRAG
 - Submit an application
 - CRAG, additionally...
 - Interview
 - Performance reviewed end of term

Life Skills

- Personal Responsibility
- Respect & Diversity
- Problem Solving
- Using Technology
- Life Science
 - Bio: 150, 155, 180, 181, 250, 251, 255
 - MSC: 160, 170, 200, 220, 270, 280
 - AGR: 197, 250, 297
- Physical Science
 - CHM: 150, 151
 - PHY: 151, 152
 - PHSCI: 150
 - MSC: 150, 155
- Other
 - MSC: MOP courses

Life Skills Example

- Lecture & Laboratory

- Assessment

- Personal Responsibility

- Attendance

- Problem Solving

- Lab & Lecture

- Worksheets: Grades

- Using Technology

- Lab

- Worksheets: Grades

- Chem 150

- Attendance, on-time completion of assign.

- Measuring, chem rxn, quantitative & qualitative analysis

- Computer software, triple beam balances, YSI 6600 Sonde (water quality testing)

IV. Program SLOs (pg 99)

Upon completion of science requirements, students will be able to:

- i) comprehend, interpret and evaluate information;
- ii) demonstrate the ability of conceptual, analytical and critical modes of thinking for problem solving in the work place;
- iii) analyze patterns and functional relationships to solve problems and determine cause;
- iv) understand the applications of technological systems; and
- v) recognize relevance of career choices to life long learning.

1. Defining Expected SLOs

- Has the Science Dept defined expected Student Learning Outcomes?
 - Yes.
 - These are the 5 mentioned in # IV above.
 - Each of the courses offered have their LOs which are then aligned to the Program SLOs' and to the Institutional SLOs', and these are provided in the individual course syllabus handed out to the students.

2. Assessing SLOs

- Has the Science Dept. assess SLOs’?
 - Yes.
 - SLO assessment for Communication Skills have been done using the various methods available:
 - rubrics - Individual or Group presentations, Research presentations
 - exams/tests, quizzes
 - laboratory experiments
 - submitted reports
 - community interaction, etc...

3. Analyzing Results of Assessments

- Has the Science Dept. analyze the results of assessment?
 - Yes.
 - The results of assessment helped the department in deciding to implement a few changes in course credits and pre-requisites as presented before this committee in summer 2008.
 - The department is now collecting more data for analysis based on these new changes.

4. Defining Assessment of Expected SLOs

- Has the Science Dept. defined Assessment of Expected SLOs?
 - Yes.
 - All courses taught include the variety of assessment methods in the syllabus.
 - Communication Skills have been included in all the courses offered to date, and to some extent Job Skills and Life skills, and the latter two to be completed by 2010 if not earlier.

5. Planning & Implementing Changes

- Address 4 Courses, not taught
- Restructure Pre-requisites; Articulation
- Develop & Produce *local* Lab Manuals
- Resources
 - Improvements in facilities, progressing slowly
 - Students have microscopes & outlets
 - Still need for
 - Modernized Laboratory & Marine Science wet-lab, Xerox machine, computers & printers

Science Dept. Summary

- 30 Courses
 - 87% Offered at least once per year
 - 13% (or 4) courses are not taught
 - Working towards solution with Dean of Academic Affairs
- 1 degree program offered: AA in MS
 - Liberal Arts Majors may divert into science
 - Other Majors include: Agriculture, Nursing, Natural Resources, etc.
- Summer Research Programs (since 2007)
 - 15 students applied; 13 accepted
 - 2 students, 2007; 6 students, 2008; 5 students, 2009
 - 2009 group will present end of this month
- Tutorial Program (2006)
- LSAMP (2007) – Tutorial program + REU participation
- CRAG (2008, 2009) -> Local Internship Program
- MOP -> Certificate of Proficiency, articulation with UH system
- Grants: ATE continuation 2009-2012, LSAMP, local (CRAG)

Assessment Methods

	Courses	Tests/Exams	Quizzes	Homework	Rubrics	Portfolio	Special Projects	Others (Specify)
1	AST 150							
2	BIO 150	√	√	√	√			
3	BIO 155	√	√	√	√	√	√	(LAB MANUALS)
4	BIO 180	√	√	√	√	√	√	(LAB MANUALS)
5	BIO 181	√	√	√	√	√	√	(LAB MANUALS)
6	BIO 250	√	√	√	√			
7	BIO 251	√	√	√	√			
8	BIO 255	√	√	√	√		√	
9	CHM 150	√	√	√	√	√	√	
10	CHM 151	√	√	√	√	√	√	
11	CHM 152							
12	MET 150							
13	PHSCI 150	√	√	√	√	√	√	(LAB MANUALS)
14	PHY 151	√	√	√	√	√	√	
15	PHY 152	√	√	√	√	√	√	
16	MSC 100	√		√				Proposal
17	MSC 150	√	√	√	√			
18	MSC 155	√	√	√	√			
19	MSC 160	√	√	√	√		√	
20	MSC 200	√	√	√	√			
21	MSC 201			√	√		√	
22	MSC 202			√	√		√	
23	MSC 270	√	√	√	√			
24	MSC 280			√	√		√	

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Science Department

Courses & SLOs

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- PHSCI: 150
- MSC: 150, 155

■ Other

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■ All courses have SLOs

■ Except those in orange

■ Agriculture

- LandGrant responsible

■ MSC previous instructors

- Taught before 2008