

**SJSU Annual Program Assessment Form
Academic Year 2013-2014**

Electronic copy of report is due June 1, 2014. Send to Undergraduate Studies (academicassessment@sjsu.edu), with cc: to your college's Associate Dean and college Assessment Facilitator. List of AFs is found at <http://www.sjsu.edu/ugs/faculty/programs/committee/index.html>>

Department: Environmental Studies

Program: BA/BS

College: Social Sciences

Website: <http://www.sjsu.edu/envs/>

Addresses the University Learning Goals:

<http://www.sjsu.edu/envs/docs/Environmental%20Studies%20%20Undergraduate%20Program%20Learning%20Objectives.pdf>

Program Accreditation (if any): None

Contact Person and Email: Lynne Trulio; lynne.trulio@sjsu.edu

Date of Report: June 1, 2014

Part A

1. List of Program Learning Outcomes (PLOs)

Environmental Studies Undergraduate Program PLOs:

PLO 1 - Qualitative Environmental Literacy: Students are able to write a logical analytical paper using good writing style and construction supported by appropriate research.

(ULG: Broad Integrative Knowledge, Applied Knowledge-4a, Intellectual Skills)

PLO 2 - Quantitative Environmental Literacy: Students are able to determine, apply and interpret appropriate basic statistical or other quantitative analyses to environmental data

(ULG: Intellectual Skills)

PLO 3 - Content Environmental Literacy: Students will develop proficiency in the interdisciplinary sustainability principles that are the foundation of environmental studies; they will know the key environmental challenges facing the planet, know relevant interdisciplinary information about these challenges, and be able to develop/identify feasible solutions

(ULG: Broad Integrative Knowledge & Applied Knowledge-4a)

PLO 4 - Professional Skills:

4A) Students are able to productively conduct group/team work to deliver professional quality presentations and reports (Intellectual Skills & Applied Knowledge-4c)

4B) Students demonstrate professional work skills (Intellectual Skills)

4C) Students engage in community service and democratic participation (Social and Global Responsibilities)

PLO 5 - BS Competency: Students demonstrate in-depth knowledge and skills in a science or technical field (Specialized Knowledge & Applied Knowledge)

PLO 6 - BA Competency: Students demonstrate in-depth knowledge and skills in a non-science field (Specialized Knowledge & Applied Knowledge)

At our yearly faculty retreat, we discuss PLO content, assessment criteria and the findings of the most recent Assessment Report. We determine changes to be made the program or courses to improve student learning and success in our programs. The attached PLO matrix and associated rubrics gives a full description of our PLOs and how we assess student success for each PLO.

2. Map of PLOs to University Learning Goals (ULGs)

In question 1 above, the links between the program PLOs and University Learning Goals are shown. The department chair with the help of several faculty developed this map. The entire faculty will consider these links more fully at the summer 2014 faculty retreat.

3. Alignment – Matrix of PLOs to Courses

The attached PLO matrix shows PLO-to-course alignment and how we align increasing levels of proficiency with curriculum.

4. Planning – Assessment Schedule

The attached PLO matrix gives our assessment schedule and description of our evaluation methods.

5. Student Experience

All new students entering our programs are provided a hand-out with the Department PLOs and how they link to the mission of the department and careers for students. The PLOs and their evaluation are on the department website in a clearly marked page. Student feedback has not been a part of department PLO development.

Part B

6. Graduation Rates for Total, Non URM and URM students (per program and degree)

First-time freshmen 6-year graduation rates for Environmental Studies for the Fall 2007 cohort were 100% (n=2) for URM students, 0% (n=1) for non-URM students, and 50% (n=2) for other students (See Table 1). The number of students represented here is low as Environmental Studies receives many of its students as transfers. While the 3-yr graduation rate for new undergraduate transfers was only 32.4%, we find that students take longer than 3 years to graduate. For example, the 5-year graduation rates for the Fall 2008 transfer students was 91.7% for all students (n=12), 50% for URM students (n=2), and 100% for non-URM students (n=10).

Table 1. Graduation Rates for Total, Non URM and URM Students by Program.

Academic Programs		First-time Freshmen: 6 Year Graduation Rates		New UG Transfers: 3 Year Graduation Rates		Grads : 3 Year Graduation Rates	
		Fall 2007 Cohort		Fall 2010 Cohort		Fall 2010 Cohort	
		Entering	% Grad	Entering	% Grad	Entering	% Grad
Environmental Studies	Total	5	60.0%	34	32.4%	11	36.4%
	URM	2	100.0%	8	25.0%	2	50.0%
	Non-URM	1	0.0%	17	29.4%	6	33.3%
	Other	2	50.0%	9	44.4%	3	33.3%

7. Headcounts of program majors and new students (per program and degree)

Table 2 shows the current headcount for majors and masters students in 2013. Table 3, the number of majors and masters students from 2009 - 2013, shows the number of undergraduate majors in Environmental Studies has grown. The number of masters students has stayed relatively constant at approximately 36, due to the teaching, research and advising loads of tenured/tenure-track faculty.

Table 2. Headcount of Program Majors and New Students by Programs and Degree

Degree	Fall 2013									
	New Students				Cont. Students			Total		
	1st Fr.	UG Transf	New Creds	1st Grads	UGs	Creds	Grads	UGs	Creds	Grads
Total	19	37	0	6	201	0	30	257	0	36
BA	4	20	0	0	71	0	0	95	0	0
BS	15	17	0	0	130	0	0	162	0	0
MS	0	0	0	6	0	0	30	0	0	36

Table 3. Number of Majors from Fall 2009 to Fall 2013

	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
UG	169	185	235	217	257
MS	38	41	24	36	36
Total	207	226	259	253	293

8. SFR and average section size (per program)

In 2013-2014, the Department made a conscious effort to increase its overall SFR and data in Table 4 shows we were successful in that effort in Fall 2013. The Department expects to continue to increase SFR towards the College of Social Science average SFR of 27.3. However, the Department is now exceeding the University SFR of 24.3 for Fall 2013.

Table 4. SFR for Environmental Studies from Fall 2009-Fall 2013

SFR	Fall 2009	Fall 2010	Fall 2011	Fall 2012	Fall 2013
Lower Division	33.8	36.8	37.2	37.2	41.3
Upper Division	20.6	21.3	19.7	20.1	23.3
Graduate	12.7	12.9	9.4	9.6	10.9
Total	23.0	23.4	23.2	23.4	25.7

The average section size was for the College of Social Sciences was 29.2 and for the University was 26.8 in Fall 2013. In Environmental Studies, the average section size was 20.2 (40.5, 18.3, and 4.6 in upper, lower and graduate sections, respectively). Average section size is not representative measure of actual class sizes, as the Department has a large number of supervision and activity sections, which while counted as individual sections by Institutional Effectiveness and Analytics, are actually taught as a single course by one faculty member. SFR is a more accurate reflection of the Department's efficiency than average section size.

9. Percentage of tenured/tenure-track instructional faculty (per department)

In Fall 2013, tenured and probationary faculty were 54.5% of the instructional faculty (5.3 FTEF of 9.7 total FTEF). This percentage does not appear to differ greatly from SJSU's ratio in 2012 of 53.1%.

Part C

10. Closing the Loop/Recommended Actions

This past year we completed a 5-year program review. A key program issue identified in that review as well as in previous annual program assessments is the need to strengthen our undergraduates' quantitative skills, especially basic numeracy and statistics. Reducing our BS degrees to 120 units has made it difficult to increase students' exposure to math skills. Still, we are working on this issue using these tools:

- a) We have added a statistics lab to EnvS 110, Resource Analysis, a core course for all majors. This change is recent and we hope to see positive effects as we evaluate our students' quantitative literacy in future annual program assessments.
- b) We are increasing/strengthening the quantitative literacy element of our Area R courses. However, only minor changes can be made as these courses attract students from around campus.
- c) We are considering adding a math class to the preparation courses for the BS degrees. Of course, this can only be done if we can find a way to stay within 120-unit cap for the degrees.

11. Assessment Data

This year we evaluated PLO 1 - Qualitative Environmental Literacy: "Students are able to write a logical analytical paper using good writing style and construction supported by appropriate research". Specifically, students are expected to demonstrate good to excellent levels of environmental research, writing and analysis in a 15-page paper.

As our program assessment plan shows (see attached), we build students' writing skills in introductory classes (EnvS 001 and 010) and intermediate courses (EnvS 100W). We then evaluate students in EnvS 117, Human Ecology, and EnvS 198, Senior Seminar, which are research and writing focused courses taken by juniors and seniors. Students in each course are evaluated on large research paper that requires they: 1) perform independent literature review on a self-chosen topic using 10-20 relevant scholarly/technical articles with little assistance, 2) write a coherent and well-organized literature review and analysis, and 3) perform critical interdisciplinary evaluations using criteria discussed in the course to provide recommendations for sustainable solutions.

12. Analysis

Of 46 students in EnvS 117, for Spring and Fall, 13% (6 students) received a D, F or WU. The professor found that poor grades were typically not due to inadequate writing, but rather to poor citation style, not following assignment instructions, and/or not paying attention to details. In EnvS 198, only 1 of 53 students did not receive a C or better. In this capstone course, student writing was generally quite good, but students were still not clear on how to avoid plagiarism and often lost points due to their inability to clearly discuss the meaning of their statistical findings (an issue more related to quantitative skills than writing skills).

These findings indicate that student writing continues to require major attention in our courses.

The results of our efforts in the core classes, especially EnvS 100W, seem to be resulting in most students being competent writers when they graduate. However, these data show that information literacy--particularly proper citation and avoiding plagiarism--requires additional action.

13. Proposed changes and goals (if any)

The faculty will discuss these results at the annual retreat in Summer 2014. Actions likely to be taken are:

- a) ensure all faculty are holding students to the same standards for citation of material and avoiding plagiarism.
- b) require faculty in writing intensive classes use Turnitin.com, if they are not already.
- c) increase the anti-plagiarism components in EnvS 100W.

Department of Environmental Studies: Undergraduate Program Assessment Plan

This plan provides the Department plan for Assessment of our majors. It lays out the Program Learning Outcomes (PLOs) for all undergraduate students in the BS and BA degrees, our measurable goals, the competencies we expect of students, and how students are assessed.

PLOs are assessed within each 5-year program review cycle, as shown by the evaluation schedule.

At the annual department retreat, we discuss PLO content and assessment methods. We discuss the most recent program assessment and make changes to the program and curriculum, as needed, to improve student learning and success.

We have mapped the PLOs to the University Learning Goals (see the ULGs at www.sjsu.edu/senate/docs/S13-2.pdf)

- Highlighted levels of achievement are for Department use in evaluating progress toward meeting the PLO Measurable Goal

* Student performance evaluated as follows: Exceeds expectations = A or B; Meets Expectations = C; Below Expectations = <C

** Typical writing assignment rubric attached

^ Quantitative assignment rubric attached

<i>Program Learning Objective (University Learning Goal)</i>	<i>Measurable Goal*</i>	<i>Student Competencies Specific to Goal</i>	<i>Tools to Assess Effectiveness</i>	<i>Courses for Evaluation</i>	<i>Evaluation Date</i>
PLO 1 - Qualitative** Environmental Literacy: Students are able to write a logical analytical paper using good writing style and construction supported by appropriate research. (Broad Integrative Knowledge & Applied Knowledge)	Introductory: Achieve basic to good level of research and writing in a 5-page paper	Assignments will require students: 1) understand and summarize material in relevant scholarly/technical articles and 2) identify basic interdisciplinary solutions	Writing assignments	Envs 001, Envs 010	
	Intermediate: Achieve basic to good level of research and writing in an 8-page paper. Goal: Achieve good to excellent level of environmental research, writing and analysis in a 15-page paper.	Assignments will require students: 1) perform a basic literature review and find 3-5 relevant scholarly/technical articles on an assigned topic and 2) analyze and evaluate 2 solutions against each other. Assignments will require students: 1) perform independent literature review on a self-chosen topic using 10-20 relevant scholarly/technical articles with little assistance and 2) perform critical interdisciplinary evaluations using criteria discussed in the course and provide recommendations for sustainable solutions.	Writing assignments	Envs 117, Envs 185, Envs 198	March 2014
PLO 2 - Quantitative^ Environmental Literacy: Students are able to determine, apply and interpret appropriate basic statistical or other quantitative analyses to environmental data (Intellectual Skills)	Introductory: Articulate and test hypotheses; read and understand graphs	Course material will require students read and understand basic statistics, such as t-tests, regression and ANOVA, or other analytical methods and complete simple analyses	Exams, Practicals	Stat 95, Envs 010	
	Intermediate: Be able to determine correct test to use for a given research design Goal: Use and interpret numerical manipulations and statistics correctly in study designed test a hypothesis or specific research question	Students will be given study designs and data and will run and interpret different analytical tests; students will interpret analyses in journal articles	Students will be able design their own study to test a hypothesis or research question, collect data, run appropriate analyses (numerical, statistical, etc.) and interpret them; they will be able to read scholarly papers and be able to understand basic analytical methods, graphs and results.	Write up of methods and research analyses; tests, practicals	Envs 198, Most Field Courses and Energy Courses

<i>Program Learning Objective (University Learning Goal)</i>	<i>Measurable Goal*</i>	<i>Student Competencies Specific to Goal</i>	<i>Tools to Assess Effectiveness</i>	<i>Courses for Evaluation</i>	<i>Evaluation Date</i>
PLO 3 - Content Environmental Literacy: Students will develop proficiency in the interdisciplinary sustainability principles that are the foundation of environmental studies; they will know the key environmental challenges facing the planet, know relevant interdisciplinary information about these challenges, and be able to develop/identify feasible solutions (Broad Integrative Knowledge & Applied Knowledge)	Introductory: Students know key sustainability terminology and principles, and important environmental challenges facing the planet. Intermediate: Students know basic natural science and social science information about important environmental challenges and are able to find and apply additional relevant information to analyze causes of environmental dilemmas. Goal: Students develop expertise in identifying complex environmental issues, find accurate natural science and social science information on all key aspects of those issues and are able to develop feasible, sustainable solutions using central principles of sustainability.	Assignments will require students: 1) know core sustainability issues, 2) know key environmental challenges, and 3) know basic science and social science information about those issues	Writing assignments and exams	Envs 001, Envs 124	
		Assignments will require students to: 1) to identify varying perspectives on key environmental issues, and 2) to find a range of information relevant to the issue, and 3) interpret that information to develop feasible solutions.	Writing assignments and exams	Envs 100W, Envs 107, Envs 110	
		Assignments will require students: 1) master sustainability terminology, 2) identify subtle/complex environmental problems; 3) provide thorough information on all sides of the issue, 4) develop a considered, logical analysis with feasible solutions, and 5) clearly convey the issue, information and solutions in both written and verbal form.	Writing assignments, research projects, and exams	Envs 117, Envs 185, Envs 198	March 2016
PLO 4 - Professional Skills: 4A) Students are able to productively conduct group/team work to deliver professional quality presentations and reports (Intellectual Skills & Applied Knowledge)	4A Goal: Be able to work productively in a group work by dividing tasks and completing work which results in a high quality presentation and/or report	Students will be given or design complex projects in which they work in a team to complete the goals of the project including literature research, information collection, analysis, report writing and presentation. Students will demonstrate basic skills in word processing, spreadsheet, and presentation software, as well as an ability to locate and interpret data from a variety of sources.	Project quality; group evaluations	Envs 152, Envs 185, Envs 198	March 2015
4B) Students demonstrate professional work skills (Intellectual Skills)	4B Goal: Demonstrate professional work skills and apply knowledge gained in the degree in a career setting	Students will find internships or other professional work opportunities that give them experience in a work environment and allow them to apply knowledge gained in their academic program.	Supervisor evaluations of work	Envs 193, Envs 194	March 2016
4C) Students engage in community service and democratic participation (Social and Global Responsibilities)	4C Goal: Build local environmental sustainability and democratic participation through community service	Students will undertake community service projects or participate in events, either on- or off-campus, that contribute to democratic institutions and promotes sustainability	Instructor evaluations of work	Envs 185, Envs 140, Envs 181, Envs 190, Envs 191, Envs 193	March 2016

<i>Program Learning Objective (University Learning Goal)</i>	<i>Measurable Goal*</i>	<i>Student Competencies Specific to Goal</i>	<i>Tools to Assess Effectiveness</i>	<i>Courses for Evaluation</i>	<i>Evaluation Date</i>
PLO 5 - BS Competency: Students demonstrate in-depth knowledge and skills in a science or technical field (Specialized Knowledge & Applied Knowledge)	Students will complete an Environmental Studies Concentration or minor in a science or technical field	Students will successfully complete the course of study in the chosen minor or concentration	Completion of minor or concentration	All courses in the minor or concentration	March 2013
PLO 6 - BA Competency: Students demonstrate in-depth knowledge and skills in a non-science field (Specialized Knowledge & Applied Knowledge)	Students will complete the Teacher Preparation BA, an Environmental Studies minor or minor in a non-science field	Students will successfully complete the course of study in the chosen Envs or non-Envs minor	Completion of minor	All courses in the minor	March 2013

Updated: 05/04/2014

Department of Environmental Studies: Writing Assignment Rubric

Standards

A - Demonstrates excellent organization and grammar; all content requirements are included; argument is clear and coherent; shows clear grasp of principles; citation appropriate and form correct; Turnitin.com showed no plagiarism; and bibliography included.

A- to B+ - Demonstrates very good organization and grammar; nearly all content requirements included; clear argument; good grasp of principles; citation nearly completely correct, with perhaps some minor problems; Turnitin.com showed no plagiarism; and bibliography included.

B - Demonstrates good organization and grammar, with perhaps some minor problems; nearly all content requirements included; clear argument; good grasp of some principles; citation nearly completely correct, with perhaps some minor problems; Turnitin.com showed no plagiarism; and bibliography included.

C - Demonstrates adequate organization and grammar, with perhaps some minor to major problems; some content requirements missing; argument not completely clear; grasps some principles; citation nearly completely correct, with perhaps some minor problems; Turnitin.com showed no plagiarism; and/or bibliography included but may have form and completeness problems.

D - Demonstrates poor organization and grammar; some content requirements missing; argument not clear; grasps some but not all principles; citation not adequate or correct; Turnitin.com showed no plagiarism; and/or bibliography form is poor.

F - Grammar not acceptable; citations missing or incorrect; not submitted to Turnitin.com or plagiarism check was positive; and/or paper was late.

Department of Environmental Studies: Quantitative Skills Rubric

Standards

A - Able to identify correct analytical method; able to run the method using appropriate software or formulas; able to interpret the test results; able to apply the results correctly to an environmental question

B - Able to identify correct analytical method or able to run the method using appropriate software/formulas; able to interpret the test results or able to apply the results correctly to an environmental question

C - Able to identify key statistical tests, but not typically when they would be used; able to do simple interpretation of test results; typically not able to apply the results correctly to an environmental question

D - Has some knowledge of basic statistical tests and how statistical and other analyses are applied to environmental data, but cannot determine or undertake tests on environmental data.

F - Has little or no knowledge of basic statistical tests or how statistical and other analyses are applied to environmental data.