Environmental Science Program Review
2013-2014

Section I – Accomplishments and Status of 2012 Program Review Report

A. Last Year's Initiatives

ESRM1301 - ESRM AA degree
Didn't ask for General Budget Funding. Discussion within the department ensued and we met with the Articulation Officer. Still much more to do. Will carry forward as initiative ESRM 1402

ESRM 1302 – SCI 105 Workroom
This space originally (8+ years ago) identified for a GIS workroom, has been given to Engineering.

ESRM 1303 - Reinstate Courses (1/semester)
Appears that current scheduling of the AG courses that have been converted to ESRM is adequate. We will need to continue to monitor this as schedules are developed, semester by semester. These considerations are rolled into a new initiative, ESRM 1404, that combines our various course development/offering ideas.

ESRM 1304 - Full slate of core ESRM courses
ESRM 2 had already been offered consistently with a section each semester. Now it appears BIOL is supporting having ESRM 1 offered each semester (alternating between a BIOL part-time instructor and a GEOG Full-time instructor). Students seeking to transfer to UCSB in ES and working on our PA in Environmental Studies would also benefit from ESRM 3 offered both semesters, but right now neither POLY SCI nor the Geosciences want to give up another class to make way for this section in the fall (it is taught in the Spring). There is also an issue of staffing (we might need to bring in a new part-time instructor). These considerations are rolled into a new initiative, ESRM 1404, that combines our various course development/offering ideas.

ESRM 1305 - ESRM tools/tech course
We are trending towards having this be the lab section paired with the new ESRM 10, but that is under discussion. This is carried forward as initiative ESRM 1405.

B. Updates/accomplishments pertaining to any of the Student Success or Operating Goals from last year's report.
We continue to look forward to the development of a degree in this area. We will try to make that happen this Spring semester.

Section II - Description
A. Description of Program/Department
Environmental Science is a multidisciplinary field integrating topics from the geosciences, physical sciences, biological sciences, and public policy (including economic, legal, and social aspects) as they pertain to understanding working of the earth's ecosystems and the interplay of humans within those systems.

Degrees/Certificates

Program's courses are designed to articulate to UC and CSU for transfer students.

B. **Program/Department Significant Events (Strengths and Successes), and Accomplishments**
Solid enrollment and successful migration of key AG classes with overlapping content.

C. **2013-2014 Estimated Costs/Gainful Employment – for Certificates of Achievement ONLY**

	Cost		**Cost**		**Cost**		**Cost**
Enrollment Fees		Enrollment Fees					
Books/ Supplies		Books/ Supplies					
Total		Total		Total		Total	

D. **Criteria Used for Admission**
None

E. **College Vision**
Ventura College will be a model community college known for enhancing the lives and economic futures of its students and the community.

F. **College Mission**
At Ventura College, we transform students' lives, develop human potential, create an informed citizenry, and serve as the educational and cultural heart of our community. Placing students at the center of the educational experience, we serve a highly diverse student body by providing quality instruction and student support, focusing on associate degree and certificate completion, transfer, workforce preparation, and basic skills. We are committed to the sustainable continuous improvement of our college and its services.

G. **College Core Commitments**
Ventura College is dedicated to following a set of enduring Core Commitments that shall guide it through changing times and give rise to its Vision, Mission and Goals.

- Student Success
- Respect
- Integrity
- Quality
- Collegiality
- Access

- Innovation
- Diversity
- Service
- Collaboration
- Sustainability
- Continuous Improvement

H. **Organizational Structure**
President: Greg Gillespie
Executive Vice President:
Dean: Dan Kumpf

Department Chair: Steve Palladino
Faculty/Staff:

Name	**Steve Palladino** (Lead ESRM professor)
Classification	Professor
Year Hired	January, 1999
Years of Work-Related Experience	11 years of prior education-related experience
Degrees/Credentials	B.A. Environmental Studies/Geography, M.A. Geography, Cal Single Subject Teaching Credential

Name	**Bill Budke**
Classification	Associate Professor
Year Hired	Fall 2004
Years of Work-Related Experience	15 years in Environmental Compliance and Remediation
Degrees/Credentials	A.A., B.A., M.S.

Section IIIa – Data and Analysis

A. **SLO Data**
   Provide highlights of what you learned last year in your assessments and discussions. Most of the findings indicated an attempt was need to develop new instruments to check for students understanding, but the assessments used showed the students meeting the set goals.

   Provide highlights of some of the changes made as a result of the assessments and discussions. This semester we will be retesting to see if we can get more clear data.

   How did the changes affect student learning – or how do you anticipate that they will? As the instructors get a better bead on what the students comprehend, we can make adjustments to our teaching patterns and/or content.

   Based on what you learned, what initiatives requiring resources could you develop (or have you developed) to improve student learning? Explain briefly. Initiatives need to be entered in more detail in Section V. While the results don't indicate this directly, there is a sense that this area could use more support and development (courses offered more frequently, aligned better, and perhaps developed). A key initiative is to separate the Geosciences Department from the PHYS/ASTR/ENGR area so the correct amount of release time can be realized. This will free up the ½-time chair to have time for degree development and course creation/revision.

   What are the most significant initiatives not requiring resources you could (or have developed) to improve student learning?   Explain briefly. Initiative(s) need to be entered in more detail in Section V. We are proposing an initiative to create a capstone lab course that would engage

students with the tools used in environmental sampling, mapping, monitoring and remediation. This may engage students more and bring up their motivation to understand.

==Comment on the status of your SLO rotational plan, mapping, and other TracDat work.== The SLO rotational plan has been developed and implemented as of Fall 2012. All SLOs but one (a joint POLS/ESRM course) have been mapped to ISLOs and will be linked to the assessments. TracDat is up to date, with the one exception of rubrics. Rubrics will be developed and inputted into TracDat in the Spring 2014 semester.

B. Performance Data

1. Retention – Program and Course
Our retention has been quite high (90%), but dipped last year to 85% which is right on the campus average. The drop can be found primarily in one course that had a retention rate of only 81% last year. That course has been very up and down. There was one semester a few years ago where one section had difficulties with rentiontion and success. Students approached the chair and dean about this. It seemed to be better the next couple years, but that may still be bringing the numbers down a bit.

2. Success – Program and Course
Like retention, the three year average is good (at college average), but there was a dip this last year. A couple sections had a very low success rate. Students, instead of dropping, evidently either stuck with it despite poor grades or perhaps didn't do well on final assessments or assignments. There isn't a clear pattern though for any of these low performing classes. In different semesters with the same instructor the success rate can be much higher. We do need to have a discussion about this rollercoaster-like dynamic we are seeing with these courses.

3. Program Completion – for "Programs" with Degrees/Certificates Only
N/A

C. Operating Data

1. Demographics - Program and Course
Skews a bit more white (and American Indian, but probably not statistically significant) than Hispanic. There are more males than females, which happens in the sciences, though many of the females seem very engaged and likely to continue in this discipline.

2. Budget
Outside of Faculty Salary, there are no budget lines items funded for this discipline. They must be subsumed under Geography representing the Geosciences (making it even more imperative that Geography and/or the Geosciences Department in general receive some level of budget. See initiative GEOG1401). In fact in the future it may be necessary to either ask for a separate budget for ESRM or to have additional funds put in a general Geosciences Department budget (which right now is $0!) Also, I see that past spreadsheets for Agriculture and Natural Resources have been included with the one for ESRM. This makes sense.

X Program members have reviewed the budget data.
☐ No comments or requests to make about the budget

3. **Productivity – Program and Course**
   WSCH comes in just a bit above the 525 ratio both for the 3 year average and for 2013 with ESRM 2 being the most solidly enrolled. All the classes are reasonably close, but some of the non-core classes are a bit lighter. Part of this is due to the lower seat count in the room they are taught in, but they still have "respectable" numbers and don't pull the discipline average down below the 525 goal.

D. **Resources**

1. **Faculty**
   This is hard to measure as courses have been coming over from Agriculture and also the assignment of the courses as extra hourly vs. regular contract hours causes the FT/PT numbers to jump around. All three of the Geosciences Faculty members have backgrounds in Environmental Sciences (academic and/or professional), so we have adequate support at this time. Since these faculty are divided among disciplines, there may be a little bit less attention paid to the discipline than if there was one dedicated faculty member like at Moorpark, but with the addition of a Geologist to the Geosciences Staff (See initiative GEOL1401), the energies of some of the other Geosciences faculty can be directed a bit more to ESRM.

2. **Classified Staff**
   None, outside of the shared time of the Geosciences Dept./Physics Dept. Lab Tech. There may be a future need here, but none identified at this point.

3. **Inventory**
   We are in the process of identifying equipment from Ag and STEM grants that would be appropriate to support ESRM instruction. This is a task led by Bill Budke*. No equipment is being requested at this time.*

4. **Facilities or other Resource Requests**
   While we don't have any facility requests, we continue to assess what resources from AG that we will continue to use since some of the courses in this area were AG courses.

5. **Combined Initiatives**
   N/A

E. **Other Program/Department Data**
   N/A

Section IIIb – Other Program Goals and Initiatives

A. **Other Program Goals**
   None at this time.

Section IV – Program Vitality (Academic Senate Approved Self-Evaluation)

On the self-assessment we got an 18, but would have been higher had we not had a one semester downturn in retention and especially success. Some classes, due to time offered or particular instructor will experience a number of students not performing well and the numbers can drop considerably. We think this is a bit anomalous, but to get to the level of "vital" might take the degree and course additions listed in the initiatives below. Also having more time for the department chair could lead to more support for this program.

Section V - Initiatives

    A. **Initiative: Unique Department**

        Initiative ID: ESRM1401

        For the last 16 years the Geosciences (Geography, Geology, GIS, and now ESRM) and ASTR/ENGR/PHYS have functioned as separate departments, despite being official one combined department. This has reduced the compensation due the two department chairs. We seek to see this remedied by a separation of the two groupings into separate departments. Same as GEOL 1402 and GEOG 1402. See GEOL 1402 for cost.

        Link to Data: Budget and Divisional records will show that the Geosciences Department doesn't receive the separate distinction as a department, but is unnecessarily linked to PHYS/ASTR/ENGR.

        Expected Benefits: It is very difficult without release time for the full year to complete all departmental chair tasks. Those tasks which currently either end up late, are not completed, or are not taken up will be more likely to be successfully carried out. This will benefit various aspects of the program.

        Goal: To have a separate department

        Performance Indicator: N/A

        Timeline: 2014-2015 **Funding Resource Category:** Staffing Funds **Ranking:** H

    B. **Initiative: ESRM AA Degree Development**

        Initiative ID: ESRM1402

        ESRM instructors need to investigate setting up an AA degree, including how to integrate the new ESRM courses that have come over from Agriculture. We also need to update the Environmental Studies Proficiency Award and maybe establish a Environmental Science Proficiency Award. Having another full time faculty member in our department (Geology) would help provide some general departmental support, freeing up Bill Budke and Steve Palladino to spend time on these task (Bill teaches around 60% of our current ESRM courses and Steve teaches 25%).

        Link to Data: Course catalog shows that we don't have a degree, yet all of our classes get good enrollment. This is a practical and attractive major.

        Expected Benefits: The degree will enable students to transfer to Environmental Science programs at feeder schools such CSUCI and UCSB, but also elsewhere. It will also provide a level of depth that could help students with just the AA get a job in the environmental field.

        Goal: To submit the degree next fall (2014) and see it in place by fall 2015.

        Performance Indicator: Having an increasing number of majors as the first few years of the degree kick in.

        Timeline: 2014-2015 **Funding Resource Category:** No new resources needed **Ranking:** M

C. **Initiative: Castors for extra chairs in SCI 106**
Initiative ID: ESRM1403
For larger capacity classes being taught in SCI 106, like ESRM 2 (currently over-enrolled at 45), there is a need to double up at each desk. The current cushioned, office-style chairs on rollers, are slowly failing. We have been replacing them with the extra plastic chairs left over from our chair order for SCI 113 and SCI 119 a couple years ago. The replacement chairs have glides, but it would be better if they had castors.
Link to Data: N/A
Expected Benefits: Broken or less functional chairs distract students (and could be a safety issue)
Goal: Have students in solid chairs with castors may make it easier to focus in class.
Performance Indicator: N/A
Timeline: 2014-2015 **Funding Resource Category:** Facilities Funds **Ranking:** L

D. **Initiative: More ESRM Offerings**
Initiative ID: ESRM1404
While progress was made for last year's initiative to have all three of our core classes (ESRM 1, 2, 3) offered every semester, ESRM 3/POLS 12 still needs this level of support (needs to be offered in fall). In the future we may explore offering multiple sections of ESRM 1 and 2 each semester (perhaps ESRM 1 in fall and ESRM 2 in spring).
Link to Data:
Expected Benefits: Students wouldn't be inhibited in getting the transfer courses they need and they would find it more easy to get a schedule including ESRM courses.
Goal: To eventually offer all three core courses every semester (and perhaps some more than once each semester!)
Performance Indicator: Solid enrollment in any new sections.
Timeline: 2015-2016 **Funding Resource Category:** Hourly Instruction Funds
Ranking: L

E. **Initiative: New ESRM Lab Course**
Initiative ID: ESRM1405
A capstone environmental technologies/tools/techniques course would be a good addition to our program. We'd like to create this as part of the future AA degree. This may be a required lab section for the new ESRM 10.
Link to Data: Some of the classes in the discipline seem to spike up and down in success. This may a course students will look forward to and stay more focused in the other ESRM classes. Future data gathering will be a better way to assess the success of this new course.
Expected Benefits: This is keyed to our efforts to utilized environmental sampling tools acquired in STEM and other grants that will help students grasp concepts and be exposed to tools of the discipline.
Goal: To have many students who take our other ESRM courses see this as the pinnacle course that will put the various concepts learned in the other classes into practice.
Performance Indicator: Solid enrollment and a high success rate. **Timeline:** 2014-2015
Funding Resource Category: No new resources needed **Ranking:** L

Section VI – Process Assessment

Instructions: Please answer the following questions:

A. How have the changes in the program review process this year worked for your area?

B.   How would you improve the program review process based on this experience?

C. Appeals

After the program review process is complete, your program has the right to appeal the ranking of initiatives (i.e. initiatives that should have been ranked high but were not, initiatives that were ranked high but should not have been), the division's decision to support/not support program discontinuance, or the process (either within the department/program or the division) itself.

If you choose to appeal, please complete the Appeals form (Appendix E) that explains and supports your position. Forms are located at the Program Review VC website.

The appeal will be handled at the next higher level of the program review process.

VII – Submission Verification

Instructions: Please complete the following section:

Program/Department:
Preparer:
Dates met (include email discussions):
List of Faculty who participated in the program Review Process:

Χ **Preparer Verification:** I verify that this program document was completed in accordance with the program review process.

☐ **Dean Verification:** I verify that I have reviewed this program review document and find it complete. Dean may also provide comments (optional):