

**DEPARTMENT OR PROGRAM: Geology, Paleontology & Oceanography**

**DIVISION: Math/Science**

1. BRIEF DESCRIPTION OF PROGRAM:  
Geology, paleontology and oceanography are all small programs, each primarily offering one lecture course (Geol 100, Paln 110 and Ocen 100) and one lab course (Geol 101, Paln 111 and Ocen 101). The majors' geology course, Geol 210, has been banked. Oceanography offers the most sections, 6-9 annually, while geology typically offers 4-5, and paleontology offers 3-4. All courses are CSU/UC transferable and fulfill GE requirements in science.  
Three faculty members, only one of which is full-time, currently cover all of the sections in all three programs. Due to course cutbacks, only one full-time faculty member is expected to cover all of the fall and spring sections in all 3 programs beginning in fall 2010. The one summer course, Ocen 100, will continue to be taught by adjunct faculty.

2. Based on the elements in your *Core Program and Student Success Indicators* (provided by PRIE for each program) and the goals stated in your most recent Program Review, please identify any key successes and challenges.

Geology LOAD, retention and success rates have consistently increased over the last 3 years. The phasing out of Geol 210, the more graphics-intensive approach of the traditional Geol 100 lecture (implemented in fall 2008) and the cancelation of the Geol 100 TV course in spring of 2009 are believed to be the primary reasons for these increases.

GEOLOGY	2006-7	2007-8	2008-9
LOAD	611	707	847
Retention %	80%	82%	84%
Success %	57%	60%	66%

Paleontology LOAD and retention rates have consistently increased, although the success rate has been continued to vary. The generally higher success rates relative to the geology and oceanography programs is probably due to the smaller class size and abundance of hands-on learning activities. Fewer students in the program would also account for the greater variation in the percentages from year to year.

PALEONTOLOGY	2006-7	2007-8	2008-9
LOAD	520	527	585
Retention %	82%	84%	87%
Success %	66%	72%	70%

Oceanography LOAD has consistently increased and retention rates have hovered around 82% for the last 3 years. Success rates have fallen sharply this last year, possibly due to an increase in full-time/adjunct FTEF ratio in oceanography.

OCEANOGRAPHY	2006-7	2007-8	2008-9
LOAD	601	708	763
Retention %	84%	80%	81%
Success %	70%	71%	61%

Information from student surveys indicates that many of the students in all 3 programs are content to earn a D since they are taking the class to fulfill a CSU general education transfer requirement. The student success data is based on earning a C or better, and therefore differs from the students' perception of success.

3. Are you on track for meeting the goals/targets that your program identified in its most recent Program Review? If not, please explain possible reasons why. If needed, update your goal/targets based on these reasons.

All of the course outlines for the geology and oceanography courses that we plan to offer during the next few years have been updated, The course outline for PALN 110 (lecture) is due to be updated.

The SLO's for all of the courses except one have been written, assessed, results analyzed, and recommendations made. The exception is PALN 111(lab/field) for which SLO's have been written, but is being taught for the first time in spring 2010.

All courses in all programs have the majority of the course materials posted on WebAccess, as requested by the administration.

Acquisition of samples of fossils and sedimentary structures has been minimal as they cannot be located for purchase.

The lab technician position is currently being filled by an adjunct faculty member who has experience teaching courses in all 3 programs.



**6. STUDENT LEARNING OUTCOMES (SLOs) AND ASSESSMENT FOCUS FOR THIS YEAR:**

- a. Academic areas: Identify at least one course SLO on which to focus. Describe the assessment strategies you will use and your method of reflection and documentation for this cycle.

SLO 2a for PALN 111 - Solve quantitative problems associated with plate tectonic rates and/or dinosaur speed. This will be assessed by grading a laboratory exercise in which the students must calculate speed based on measurements.

- b. Student services areas: TBD

**7. SUMMARY OF RESOURCES NEEDED TO REACH PROGRAM ACTION STEPS**

*(Data resources: Educational Master Plan, 2008, Institutional Priorities, 2008-2011, College Index, 2009-2010, GE-SLOs, SLOs; department records; Core Program and Student Success Indicators; previous Program Review and Planning reports)*

- a. In the matrices below, itemize the resources needed to reach program action steps and describe the expected outcomes for program improvement.\* Specifically, describe the potential outcomes of receiving these resources and the programmatic impact if the requested resources cannot be granted.

\*Note: Whenever possible, requests should stem from assessment of SLOs and the resulting program changes or plans. Ideally, SLOs are assessed, the assessments lead to planning, and the resources requested link directly to those plans.

Full-Time Faculty Positions Requested	Expected Outcomes if Granted and Expected Impact if Not Granted	If applicable, <u>briefly</u> indicate how the requested resources will link to achieving department action steps based on SLO assessment.
none	n/a	n/a

Classified Positions Requested	Expected Outcomes if Granted and Expected Impact if Not Granted	If applicable, <u>briefly</u> indicate how the requested resources will link to achieving department action steps based on SLO assessment.
none	n/a	n/a

- b. For instructional resources including equipment and materials, please list the exact items you want to acquire and the total costs, including tax, shipping, and handling. Include items used for instruction (such as computers, furniture for labs and centers) and all materials designed for use by students and instructors as a learning resource (such as lab equipment, books, CDs, technology-based materials, educational software, tests, non-printed materials). Add rows to the tables as necessary. If you have questions as to the specificity required, please consult with your division dean. Please list by priority.

Resources Requested	Expected Outcomes if Granted and Expected Impact if Not Granted	If applicable, <u>briefly</u> indicate how the requested resources will link to achieving department action steps based on SLO assessment.
<p><b>GPO Shared Items:</b> fossils, sedimentary structures and marine samples (see list below)  <b>Number:</b> (see list below)  <b>Vendor:</b> These are not items that can be ordered from the usual vendors (Ward's, Cenco, etc.) and will require much research and possibly travel to obtain usable specimens.  <b>Unit price:</b> generally between \$20-\$200  <b>Total Cost:</b> unknown, but chances of finding all of these items in the numbers needed is extremely low, so half of the maximum budget would probably suffice for a year  <b>Status*:</b> New &amp; Upgrade.</p>	<p><b>Expected Outcomes if Granted</b>  more engaged, motivated students; concepts reinforced; better student participation in smaller groups; more opportunities to develop teamwork and problem-solving skills  <b>Expected Impact if Not Granted</b>  continuation of status quo; students have few hands-on learning experiences, especially in the large lectures; students working in groups that are too large don't fully participate</p>	<p>Input text here.</p>

\*Status = New, Upgrade, Replacement, Maintenance or Repair.

Geology, Oceanography, Paleontology

vendor	item name	estimated unit price	# needed	estimated maximum extended price	
unidentified					
	fossil trackways	65 -200	2	\$ 200.00	
	fossil megalodon shark tooth (partial)	50 -100	1	\$ 300.00	
	cross-bedded sandstone	20 - 80	4	\$ 320.00	
	graded bedding	20 - 80	4	\$ 320.00	
	phosphate nodules	20 - 80	11	\$ 880.00	
				2020.00	subtotal
				166.65	tax
				303.00	shipping
				2489.65	total

8. PROGRAM REVIEW PARTICIPANTS AND SIGNATURES

Date of this *Annual Update for Program Review and Planning* evaluation:

Please list the department's *Annual Update for Program Review and Planning* report team as appropriate:

Primary program contact person: Linda Hand

Phone and email address: 650 574-6633

Full-time faculty: Linda Hand

Part-time faculty: Robin Marymont, John Galloway

Administrators: Math/Science Division Dean Charlene Frontiera

Classified staff:

Students:

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Primary Program Contact Person's Signature Date

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Full-time Faculty's Signature Date

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Part-time Faculty's Signature Date  
(as appropriate)

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Administrator's Signature Date  
(as appropriate)

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Dean's Signature Date

**Annual Program Review  
RESOURCES FOR SUPPORTING DOCUMENTATION**

This section contains a listing of sources for data and key documents referred to in this *Annual Update* along with other resources. Contact information for relevant people is also included.

**Academic Senate**

<http://www.collegeofsanmateo.edu/academicsenate/>

Contact: [csmacademicsenate@smccd.edu](mailto:csmacademicsenate@smccd.edu)

Diana Bennett, President, [bennettd@smccd.edu](mailto:bennettd@smccd.edu), (650) 358-6769

**College Catalogs and College Class Schedules are archived online:**

<http://collegeofsanmateo.edu/schedule/archive.asp>

**Course Outlines are found at:**

<http://collegeofsanmateo.edu/articulation/outlines.asp>

**Committee on Instruction**

<http://www.smccd.net/accounts/csmcoi>

Contact: Laura Demsetz, Chair, [demsetz@smccd.edu](mailto:demsetz@smccd.edu), (650) 574-6617.

**Program Review Resources** (includes forms, data, and completed program reviews for both instructional and student services program review)

*Core Program and Student Success Indicators (see links for "Quantitative Data for Instructional Programs")*

*Distance Education Program Review Data*

*Glossary of Terms for Program Review*

*Listing of Programs Receiving Program Review Data from PRIE*

*Rotation Schedule for Instructional Program Review, 2008-2014*

[http://collegeofsanmateo.edu/prie/program\\_review/program\\_review.php](http://collegeofsanmateo.edu/prie/program_review/program_review.php)

**Office of Planning, Research, and Institutional Effectiveness (PRIE)**

<http://collegeofsanmateo.edu/prie/>

Contact: John Sewart, Dean, [sewart@smccd.edu](mailto:sewart@smccd.edu), (650) 574-6196

Contact: Milla McConnell-Tuite, Coordinator, [mccconnell@smccd.edu](mailto:mccconnell@smccd.edu), (650) 574-6699

**At PRIE Website:**

*College Index, 2009-2010,*

[http://collegeofsanmateo.edu/prie/institutional\\_documents.php](http://collegeofsanmateo.edu/prie/institutional_documents.php)

*Comprehensive Listing of Indicators and Measures, 2009-2010*

[http://collegeofsanmateo.edu/prie/institutional\\_documents.php](http://collegeofsanmateo.edu/prie/institutional_documents.php)

*Division/Department Workplans, Spring 2009 (only)*

[http://collegeofsanmateo.edu/prie/institutional\\_documents.php](http://collegeofsanmateo.edu/prie/institutional_documents.php)

*Educational Master Plan, 2008, <http://collegeofsanmateo.edu/prie/emp.php>*

*Institutional Priorities, 2008-2011*

[http://collegeofsanmateo.edu/prie/institutional\\_documents.php](http://collegeofsanmateo.edu/prie/institutional_documents.php)

**Student Learning Outcomes (SLOs) website:**

<http://www.collegeofsanmateo.edu/sloac/>

Contact: Frederick Gaines, Interim SLO Coordinator, [gainesf@smccd.edu](mailto:gainesf@smccd.edu),

(650)574-6183