



Annual Program Review 2011-2012 - INSTRUCTIONAL

Division - Program

PHYSICAL SCIENCES-Geology/Oceanography

Authorization

After the document is complete, it must be reviewed and submitted to the Program Review Committee by the Division Chair.

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Overview of the Program

All degrees and certificates are considered programs. In addition, divisions may further delineate and define programs based on their assessment needs (developmental sequences, career track, etc).

Statement of Purpose – briefly describe in 1-3 sentences.

GCC's geology and oceanography courses educate general education students and earth science majors in the basics of the Earth and Physical Sciences. Topics covered expose students to issues of global importance and give students some of the tools to better understand these issues. All courses taught are transferable to four-year colleges and universities.

Please list the **most significant achievement** accomplished since your last program review.

Program review just occurred last year and there have been very few changes to report. Thankfully, all of our faculty are still teaching for us, our FTEF has not been cut (except for PACE this coming Spring—which we found out about in October of 2011), and our enrollments remain robust. Our faculty continue to be an amazing group who talk to one another, passionately share ideas about teaching, attend meetings, lead workshops, present papers and talks, and work in other fields (law, the Navy, education outreach, middle school teaching, planetary science research).

List the current major strengths of your program

1. The students in our classes
2. The faculty, both full-time and adjunct
3. Our collection of materials and classrooms that adjacent to those materials

List the current weaknesses of your program

1. Lack of full-time faculty dedicated to the program
2. Lack of a dedicated stockroom technician to help keep our materials organized, inventoried, and maintained.
3. Slow participation by faculty in the maintenance of our online lab resources for instructors

1.0. Trend Analysis

For each program within the division, use the data provided to indicate trends (e.g., steady, increasing, decreasing, etc.) for each of the following measures.

Program	Academic Year	FTEs Trend	FTEF Trend	WSCH / FTEF Trend	Full-Time % Trend	Fill Rate Trend	Success Rate Trend	Awards Trend
ASTRONOMY	2007-2008	74	4.0	586	40.0%	89.6%	60.7%	0
	2008-2009	63	3.2	630	50.0%	104.2%	64.8%	0
	2009-2010	65	3.2	651	37.5%	100.4%	64.7%	0
	2010-2011	52	3.8	439	57.9%	98.8%	63.4%	0
	% Change	-28.7%	-5.0%	-25.0%	+44.7%	+10.3%	+4.6%	--
	4-Yr. Trend	decreasing	stable	decreasing	increasing	increasing	stable	increasing
CHEMISTRY	2007-2008	472	28.2	534	49.3%	89.5%	68.9%	0
	2008-2009	477	24.9	609	57.4%	107.7%	67.6%	0
	2009-2010	531	26.1	647	51.9%	110.8%	68.5%	0
	2010-2011	453	28.0	515	49.3%	104.3%	67.2%	0
	% Change	-4.0%	-0.6%	-3.4%	-0.0%	+16.5%	-2.5%	--
	4-Yr. Trend	stable	stable	stable	stable	increasing	stable	increasing
GEOLOGY/ Oceanography	2007-2008	176	8.4	668	54.8%	85.8%	70.1%	0
	2008-2009	208	8.0	826	32.5%	102.4%	73.1%	0
	2009-2010	215	8.2	834	39.0%	103.5%	67.4%	0
	2010-2011	196	10.1	618	34.0%	110.5%	69.1%	0
	% Change	+11.4%	+20.2%	-7.4%	-37.9%	+28.9%	-1.4%	--
	4-Yr. Trend	increasing	increasing	stable	decreasing	increasing	stable	increasing
PHYSICAL SCIENCE	2007-2008	22	1.6	439	0.0%	100.0%	72.6%	0
	2008-2009	6	0.4	457	100.0%	104.2%	72.0%	0
	2009-2010	0	0.0	--	--	--	--	0
	2010-2011	0	0.0	--	--	--	--	0
	% Change	-100.0%	-100.0%	--	--	--	--	--
	4-Yr. Trend	decreasing	decreasing	increasing	increasing	increasing	increasing	increasing
PHYSICS	2007-2008	89	5.8	488	86.2%	70.7%	72.3%	0
	2008-2009	95	5.6	541	85.7%	78.4%	68.7%	2
	2009-2010	111	5.4	653	55.6%	92.2%	73.9%	0
	2010-2011	109	7.3	473	55.4%	93.1%	70.4%	1
	% Change	+22.4%	+26.4%	-3.2%	-35.7%	+31.6%	-2.6%	--
	4-Yr. Trend	increasing	increasing	stable	decreasing	increasing	stable	increasing
PHYSICAL SCIENCES DIVISION TOTAL	2007-2008	833	48.0	553	52.3%	86.2%	68.5%	0
	2008-2009	849	42.1	641	56.3%	101.3%	69.6%	2
	2009-2010	922	42.9	684	48.8%	104.3%	68.2%	0
	2010-2011	811	49.2	524	47.7%	103.7%	68.0%	1
	% Change	-2.7%	+2.6%	-5.2%	-8.7%	+20.3%	-0.8%	--
	4-Yr. Trend	stable	stable	stable	stable	increasing	stable	increasing

1.1. Describe how these trends have affected student achievement and student learning:

The program has been fortunate to have gifted adjuncts who gladly take students on field trips and provide a rich classroom environment with fair, yet rigorous, assessments. Overall, there does not appear to have been any affect on student achievement or student learning.

1.2. Is there other relevant quantitative/qualitative information that affects the evaluation of your program?

Our faculty have had quite a few achievements. Prof. Tenenbaum, an oceanography adjunct, has won numerous awards for the website she has built and continues to maintain for JPL and she works to inspire students to become scientists by creating small, educational film clips. Prof. Telles has again applied for a Fulbright to Russia and has arranged field excursions to Santa Cruz Island several times. Prof. Baldrige led earth science educational seminars over the last summer and continues her research through LPI.

2.0. Student Learning and Curriculum

Provide the following information on each department and program within the division.

List each Department within the Division as well each degree, certificate, or other program* within the Department	Active Courses with Identified SLOs		Active Courses Assessed		Course Sections Assessed		If this area has program outcomes have they been assessed? Yes or No
	n/n	%	n/n	%	n/n	%	
GEOLOGY/OCEANOGRAPHY		100		100		?	

2.1. Please comment on the percentages above.

All of the courses taught in our program have SLO's written. All those that have been taught have had assessments made. I do not know what percentage of taught sections have been assessed.

- 2.2. a) Please provide a **link*** to all program assessment timelines here. This link could be to your division /department website, eLumen, etc.
 b) Briefly summarize any pedagogical or curricular elements of courses/programs that have been changed or will be changed as a result of developing assessment timelines and course/program alignment matrixes.
 c) Based on the program assessment timelines you have developed and the evidence you have gathered, please comment briefly on how far along your division/program is in the assessment process.

Our program is where it should be in performing SLO assessments.

<http://vision.glendale.edu/index.aspx?page=245>

- 2.3 a) Please provide a **link** to any program and/or relevant course assessment reports. Does the evidence from assessment reports show that students are achieving the desired learning outcomes?
 b) Please briefly summarize any pedagogical or curricular elements of courses and/or programs that have been changed or will be changed as a result of the assessments conducted.

Our assessments showed very high student achievement of SLO's. We expect this trend to continue.
<http://vision.glendale.edu/index.aspx?page=245>

- 2.4 Please list all courses which have been reviewed in the last academic year.
Note: Curriculum Review is required by the Chancellors Office every 6 years.

Geology 101, Geology 111, Oceanography 115, Oceanography 116, Geology 102, Geology 112

- 2.5 Please list all degree/certificate programs within the division that were reviewed in the last academic year.

N/A

- 2.6 For each program that was reviewed, please list any changes that were made.

N/A

3.0. Reflection and Action Plans

- 3.1 What recent activities, dialogues, discussions, etc. have occurred to promote student learning or improved program/division processes?

We talk with one another all the time to discuss issues related to student learning. Testing and test design is a focus of many discussions as are active learning strategies and specific classroom curricula we use and share with one another.

- 3.2 Using the weaknesses, trends and assessment outcomes listed on the previous pages as a basis for your comments, please briefly describe your plans and/or modifications for program/division improvements

Plans or Modifications	Anticipated Improvements
Maintain our course offerings Maintain dialogue among faculty regarding teaching	Growth of course offerings if FTEF is increased Better teachers, better curricula, more effective student learning of particular topics

2011 PROGRAM REVIEW**PHYSICAL SCIENCES**
*FT Geology/Ocean Instructor***I: PS.GO-1****Section 4**
IHAC RequestIf this is a repeat request, please list the Resource ID code or year requested: 2010

- 4.1**
- The Office of Instruction will provide data on instructional hires during the past five years, including the full-time percentage of each new hire.

a) Number of full-time faculty currently assigned to the Program	2
b) Number of full-time faculty assigned to the Program in 2005	3
c) Does this position cover classes currently taught by adjuncts? Yes or No	Yes
d) Does this position contribute to program expansion? Yes or No	No

4.2 CPF Index (Committees Per Full-time Faculty)

1. Total number of full-time faculty members in this department/program.	2
2. Total number of committees in which all FT faculty members in this area participate (Governance and other campus related committees & participation).	3
3. CPF INDEX (Total of # 2 divided by #1)	1.5

4.3 Status of Released Time Faculty

Faculty Name	Release Time Position	% RT	Term of Assignment
None			

.4 How does this assignment relate to the college's Mission Statement?

The geology & oceanography program provides general education physical science courses with accompanying labs that satisfy transfer and AA/AS requirements for students. The courses are also foundation courses for potential earth and environmental science majors. In general, some of the goals of these courses are to teach students how science addresses questions of universal origin (in comparison to religion, for example) and to teach students about the scale of the processes that work to shape the Earth's surface and their impact in everyday life. As such these courses serve to "... foster the development of critical thinking and lifelong learning" and to "... provide students with the opportunity and support to gain the knowledge and skills necessary to meet their educational, career, and personal goals."

4.5 How does this position relate to the objectives and functions of the college?

- | | |
|--|------------------------------|
| a) Associate Degree | d) Basic Skills development |
| b) Transfer to a four-year institution | e) Noncredit Adult Education |
| c) Career and Technical Education | f) Personal enrichment |

Associate Degree, Transfer to a four year institution, Career and Technical Education, and Personal enrichment

- 4.6** Describe how this position enhances student success. Ex: enhances instructional skills, meets community or industry needs. Contributes to state of the art technical education, etc. What

The geology & oceanography department typically serves more students in terms of census enrollments than any other department in the Physical Sciences Division. During the 2009-2010 academic year, for example, census enrollment in the four different courses offered by the geology & oceanography department was 1,872 students, comprising almost 2% of college-wide enrollments. Little has changed for 2010-2011. The 2 full-time faculty in charge of this program comprise about 1% of the full-time credit faculty (if there are currently 190 full-time faculty). The full-time faculty percentage for the department stands at 34%, the lowest in the Physical Sciences Division.

Currently, the program has enjoyed the benefits of a talented group of adjunct faculty that take students on field trips, use innovative teaching methods, are contributing to an online lab manual, are participating in SLO assessment, and are working in research in geology. This has not always been the case. Some of the adjunct faculty are seeking full-time jobs elsewhere, so the program may have to find new adjunct faculty soon.

Despite the "introductory" nature of the geology and oceanography courses taught, these are the last physical science courses most of our general education science students will ever take. As such, the program strives to offer these courses in the most attractive, innovative ways while maintaining academic rigor with the hope that students will be inspired to take a greater interest in the sciences in general. At minimum, the program seeks for students to achieve basic science literacy with regard to the oceans and the Earth

Some students taking these courses are motivated by more than the desire to fulfill a general education requirement. Students majoring in environmental science, geology, ocean science, physics, engineering, and astrophysics take these courses as do returning students and general education students who have questions about Earth's ancient history or earthquakes or who wish to learn more about the oceans and their role in climate.

Full-time faculty in geology and oceanography spend the extra time required on field trips and instructional innovation. Student learning increases dramatically when students are exposed to real materials in real settings on field trips and many of those students become inspired to pursue more study in the sciences.

- 4.7** Are there anticipated negative impacts for not hiring this position? If so describe.

The high quality of the adjunct faculty in geology and oceanography is helping to maintain high standards and student success rates on par with those college-wide. Loss of any of those adjunct faculty without their replacement by a full-time faculty person could bode ill for the program and for student success. Currently, Prof. Pal is teaching a 100% load in the program and Prof. Leland has returned to a 100% load. The current year, 2011-2012, full-time faculty percentage has therefore increased about 50%. However, the department will still be below the number of full-time faculty it had in 2005 when it had 3 full-time faculty.

- 4.8** Are there any other special concerns not previously identified? If so, please explain.

The geology and oceanography program has not been able to keep a third full-time faculty member since the position was created in Fall 2005. The first person hired into the position in

Fall 2005 was Prof. Jenny Hall, who left after one year to move to Oregon. Her replacement, Prof. Catherine Powers, stayed for 25 years and proved to be an excellent teacher and an excellent colleague. Prof. Powers, however, also chose to move away, in this case with her husband and children when her husband got a job in Colorado. Both of these people were of excellent quality but family circumstances caused them to move. The program could really benefit by having another full-time faculty person who could stay and help develop new curricula as well as lead field-based classes.

APPROVALS

AGENCY	DECISION						
The Program Review Committee has reviewed the data, outcomes and plans in the report and finds this request to be: NA	Well supported						
	Adequately supported						
	Not supported						
	Reason:	Sect.1: Data		Sect.2: SLOs		Sect.3: Plans	Other:
Standing Committee Review of Resource Request Committee: Academic Affairs						Prioritization Score	