

Name of Program	Division	Author(s)
Geology	STEMPS	Ruth Hanna

**INSTRUCTIONS:**

1. This Program Planning Update covers the academic years 2012-2013 and 2013-2014.
  2. The planning should be for the academic year 2015-2016.
  3. Use the Save As feature in Word to save this template with your program name, so that you do not overwrite the original template. Please use your program’s catalog rubric and this format when naming your document:  

Rubric INS PPU 15\_16  
e.g., ESL INS PPU 15\_16
  4. If the document displays in large type with only File, Tools, and View tabs at the top of the page, select **View, Edit Document**. You will then be able to type where it says “Click here to enter text” and you will be able to click on the check boxes to select them.
  5. In each section, click in the box under the instructions and fill in your information. The box will expand as you type. If a section is not pertinent to your program enter N/A in the box; do not leave it blank.
  6. When you have completed the form, run the spell-checker (**click inside the text in the first box**, then click on the Review tab and find Spell-Check in the far left corner of the ribbon).
  7. Please address your questions to your Program Review Committee representatives or the PR Chair Karin Spirn. Concerns, feedback and suggestions are welcome at any time to PRC representatives or co-chairs.
  8. Instructions for submitting your Program Planning Update will be available at the start of the fall semester.
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**I. STUDENT LEARNING OUTCOMES**

Review of academic years 2012-13 and 2013-14

**A. SLO Assessment Review**

Review your program’s SLO assessment results through spring 2014 and respond to the following questions.

1. Discuss how assessment results indicate success in student learning. Identify results that indicate a need for improvement.

As discussed in the Geology Program Review, Geology student SLO’s indicate that most students are learning the requisite materials at sufficient levels. Areas of continuing challenge for geology students are typically the quantitative areas and/or assignments, class periods or projects that require intense focus for prolonged periods of time. These challenges are typically problematic because the vast majority of students in geology courses are not science majors, let alone geology majors. As a result, the students typically find it a challenge to

invest long periods of time and focus for a general education course outside their major.

2. Discuss how distance education courses assessment results compare to face-to-face courses, if applicable? (*Respond to this question if your program has distance education courses.*)

In general, geology distance education assessment results are typically 5-8% lower in success rates than traditional face-to-face geology assessment results. The reason for this small difference appears to be that in the distance education courses, students are more likely to procrastinate, which simply means that they sometimes take the quizzes or exams without the proper preparation. Distance education students need to be more self-proactive and more self-motivated. To encourage student contact between students, discussion board forums are made available. To keep students connected with course deadlines and due dates, emails are broadcast with reminders and announcements are posted in Blackboard. The higher the frequency of emailed and posted reminders, the higher the retention rate, and the higher the success rate, in the distance education courses. Over the past several semesters, student feedback has particularly identified these reminders as one of the major reasons for their success in their online geology course.

3. Discuss how your discipline, or someone in your discipline, made changes in pedagogy as a result of SLO assessment results.

Within the Geology program instructors are approaching the quantitative and/or mathematical content by having the students utilize graphs instead of calculator crunching, and large-scale (global) perspectives to topics such as Latitude and Longitude (instead of local, small scale). To cope with student aversion to long periods of focus on scientific topics, we are currently revising the laboratory pedagogical approach so that students are continually walking around the room to move from exercise to exercise, instead of working their entire set of exercises sitting at one table. Emphasis is also being moved to group collaboration and student mentoring during lab activities, instead of each student working individually for long periods of time while sitting.

4. Give an example of a change in the number of units and/or lab hours based on assessment data, if applicable.

No such changes were made in the geology number of units per course

5. Did your program discover the need for additional resources (for AY 2015-16) based on the assessment results? YES  NO

If yes, please explain.

Yes. We discovered the change in pedagogical approach (discussed above) necessitates additional samples and specimens, additional equipment, supplies, as well as additional color maps, laminations, copy costs, etc.

## B. SLO Process

1. Describe how your program reaches consensus when writing student learning outcomes that are used in multiple sections.

My program offers only one section of each course.

There is only one full time instructor, who has striven to respect the time (or lack thereof) that part-time instructors have available. Part-time instructors are given the option of entering their own SLO's into elumen, or of giving their data to the full-time instructor who then enters them for them. The full-time instructor has striven to construct SLOs that are broad-reaching enough to respect individual teaching approaches and styles.

2. Describe how your program reaches consensus when developing and evaluating assessment results for student learning outcomes that are used in multiple sections.

My program offers only one section of each course.

There is only one full time instructor (see above information). Adjunct instructors have been fully invited to create and participate in the SLO and campus elumen database collection.

3. What methods does your program use for documenting SLO related discussions? Check all that apply.

Program emails

Program meeting minutes/agendas

Blackboard/other website

Other (please describe):

There is only one full time instructor, who has striven to respect the time (or lack thereof) that part-time instructors have available. Part-time instructors are given the option of entering their own SLO's into elumen, or of giving their data to the full-time instructor who then enters

them for them. The full-time instructor has striven to construct SLOs that are broad-reaching enough to respect individual teaching approaches and styles.

## II. PROGRAM ANALYSIS

Review of academic years 2012-13 and 2013-14

Review the student data provided by the Office of Institutional Research and any additional data your program has collected. Then respond to the sections below.

### A. Data Review

If applicable, summarize any **changes** in your program's data since the Annual Program Review of 2011-12 or observed significant trends that will affect program planning or resource requests.

**NOTE:** Only include changes that affect student learning, program planning or resource requests.

For total course enrollments, headcount is slowly increasing as we add courses back into the schedule now that our state is recovering economically. We are seeing an increase in the 20-21 year old student age group, and a slight decrease in the 19 or younger group. Of interest, there is also an increase in the First Time Any College, and a decrease in the Continuing group percentage. There is also a slight increase in the 30-39 year age group. As mentioned in the Geology Program Review, there has been an increase in the Latino ethnic group percentage.

Of note, the Geology Program Fill Rate has been consistently at 100% or higher, from Fall 2009-Spring 2014.

### B. Program-Set Standard for Successful Course Completion Rates

Your program-set standard for successful course completion rates (i.e., number of grades of 'A', 'B', 'C', 'CR', and 'P' divided by total grades) is calculated by averaging successful course completion rates for your program over a five-year period and then multiplying that result by 95%.

In order to determine if you have achieved your program-set standard for successful course completion rates for a given year (e.g., 2012-13), you will need to assess if your program met or exceeded 95% of the previous 5-year average (i.e., 2007-08 through 2011-12) for your program; these calculations are done for you (*see links below*).

1. What was your program-set standard for successful course completion rates in 2012-13 and 2013-14?

	Program-Set Standard for successful course completion	Did you meet your program-set standard? (Yes or No)
2012-13	<a href="http://tinyurl.com/mmfwgfe">http://tinyurl.com/mmfwgfe</a>	
2013-14	<a href="http://tinyurl.com/q6dah55">http://tinyurl.com/q6dah55</a>	

2. If your program did not meet your program-set standard, discuss possible reasons and how this may affect program planning or resource requests.

2012 – 2013 – answer is yes  
 2013 – 2014 – answer is yes

### C. Curriculum Review

1. Review your program’s current curriculum. If applicable, describe any internal or external impacts which will affect your curriculum plans for 2015-16.

Physical Geology 1  
 Physical Geology 1 Laboratory  
 Historical Geology 3  
 Historical Geology 3 Laboratory  
 Environmental Geology 5: Natural Hazards and Disasters  
 Environmental Geology 7: Resources, Use Impact & Pollution  
 Oceanography Geology 12  
 Oceanography Geology 12 Laboratory

Phys Geol 1 & 1Lab and Ocean Geol 12 & 12Lab are offered every semester.

Historical Geology 3 and Environmental Geology 5 & 7 are offered on a rotating 2 year schedule.

Hist Geol 3 & 3Lab were offered Fall '13 – next offering Fall '15  
 Env Geol 7 was offered Spring '14 – next offering Spring 16  
 Env Geol 5 is being offered now, Fall '14 – next offering Fall '16

The only major external impacts would be state budget restrictions and/or LPC campus-wide enrollment drops.

#### D. Human Resources

1. Have there been changes in the number of full-time or part-time faculty associated with your program since the Annual Program Review of 2011-12? If yes, briefly describe the changes.

No changes

2. Have there been changes in the number of full-time or part-time classified staff associated with your program since the Annual Program Review of 2011-12? If yes, briefly describe the changes.

No changes

3. If applicable, describe how the changes indicated in 1 and 2 have impacted student learning?

[Click here to enter text.](#)

#### E. Other information pertinent to the program

The current lab technician at 30 hours/week is critical to the on-going maintenance and continued development of the course materials and supplies, which consist of hundreds of thousands of samples and student materials. The extremely valuable experiential learning laboratories result in continual degradation of the student samples, specimens and materials, which in turn requires constant (daily and weekly) upkeep, maintenance and re-supply. The current lab tech position does not provide coverage for the evening lab sections. In the future, a request for evening lab tech coverage will be required.

### III. PLANNING

#### A. Planning Update

Summarize your program's plans, initiatives, and objectives accomplished since the Annual Program Review of AY 2011-12 (include accomplishments for the academic years 2012-13 and 2013-14).

Program plans accomplished were: AS-T degree finished, with all geology major courses receiving C-ID approval. Program SLO's constructed and entered into elumen. SLOs completed and entered into elumen for all courses. Implementation of revised pedagogical approach for laboratory exercises beginning to be started with regards to active learning environment that emphasizes student collaboration.

### B. Program Planning for AY 2015-16

As appropriate for your program, please address each of the following areas. For each area, describe your program's plans, initiatives, and objectives for the academic year 2015-16. Focus on how planning will impact student learning or the student experience at Las Positas College.

1. SLO assessments. NOTE: 100% of courses in your disciplines should be assessed a minimum of once every two years. As a guideline, each program should be assessing 25% of its courses every semester.
  - a. How does your program plan to use assessment results for the continuous improvement of student learning? Examples might include (Your responses may vary.):
    - changing number of units/lab hours
    - changing pedagogy/curriculum
    - changing assessments

Changing pedagogy/curriculum: Within the Geology program instructors are approaching the quantitative and/or mathematical content by having the students utilize graphs instead of calculator crunching, and large-scale (global) perspectives to topics such as Latitude and Longitude (instead of local, small scale). To cope with student aversion to long periods of focus on scientific topics, we are currently revising the laboratory pedagogical approach so that students are continually walking around the room to move from exercise to exercise, instead of working their entire set of exercises sitting at one table. Emphasis is also being moved to group collaboration and student mentoring during lab activities, instead of each student working individually for long periods of time while sitting.

- b. Have your assessment results shown a need for new SLOs? YES  NO
- If yes, in the table below, state the number of courses in your program and estimate the percentage of courses for which your program will write new SLOs.

Number of Courses	Estimated Percentage for which new SLOs will be written
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Click here to enter text.	Geology 5 – which is a new course, will have a new SLO written and assessment results entered
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c. What percentage of courses will your program assess in the next academic year (2015-16)?

100% is our goal

d. In order to budget to pay part-time faculty to work on SLOs during the academic year 2015-16, estimate the number of part-time faculty in your program and the percentage of them who are likely to participate in the SLO process in 2015-16.

Estimated Number of Part-time faculty	Estimated Percentage who will participate in the SLO process
2-3	2-3

4. Curriculum

a. Considering the criteria of relevance, appropriateness, achievement of course objectives, currency, and future needs and plans, will your program be making any changes to **existing** curriculum to address any of these criteria? If yes, please describe the changes and your program’s reasons for the changes. Please provide any data which supports your program’s reasons for the changes to your curriculum. Include a discussion of how the changes will improve student learning.

No. The Geology Program just finished adding the new, relevant, appropriate courses of Environmental Geology 5 & 7, and these have completed the curriculum process and are being offered last Spring and this Fall.

Additionally, the Geology Program has completed the AS-T degree process, and the Geology AS-T has been approved, and all required Geology AS-T degree courses have received final C-ID approval.

b. Will new curriculum be submitted to the Curriculum Committee for the academic year 2015-2016? If yes, please describe briefly what new curriculum is planned and the rationale for the new curriculum. Please provide any data which supports your reasons for the new curriculum. Include a discussion of how the changes will improve student learning.



No, not at this time. In the future, it might be appropriate to create a Geology AA degree for non-science majors who take a concentration of LPC lower division geology courses; however, the current state process for AA degree establishment is in limbo.

5. General Program Planning

Use this area to describe any program plans, initiative, or objectives your program wishes to accomplish in 2015-16 and their impact on student learning or the student experience. Focus on what the plans are and how they are to be accomplished (not resources needed).

As mentioned and discussed above: within the Geology program instructors are approaching the quantitative and/or mathematical content by having the students utilize graphs instead of calculator crunching, and large-scale (global) perspectives to topics such as Latitude and Longitude (instead of local, small scale). To cope with student aversion to long periods of focus on scientific topics, we are currently revising the laboratory pedagogical approach so that students are continually walking around the room to move from exercise to exercise, instead of working their entire set of exercises sitting at one table. Emphasis is also being moved to group collaboration and student mentoring during lab activities, instead of each student working individually for long periods of time while sitting.

**IV. Resource Requests for AY2015-16**

Complete all areas that apply to your program's resource needs for 2015-16 (**not all areas apply to all programs**).

For each request, in the rationale section:

- Describe how meeting this request will improve student learning or the student experience.
- Provide any data or evidence which supports this request.

**A. Enrollment Management**

1. Request: New FTEF. Indicate amount being requested.

Click here to enter text.

2. Rationale for request(s).

Click here to enter text.

### C. Human Resources

1. Request: New or replacement faculty position(s).

Click here to enter text.

2. Rationale for faculty position request(s).

Click here to enter text.

3. Request: Classified staff position(s) (for example, new or replacement classified staff position(s) or increasing classified hours/position level).

Click here to enter text.

4. Rationale for classified staff position request(s).

Click here to enter text.

### D. Financial

1. Request: Maintenance of, or increase in, existing program budget (e.g., for supplies, etc.).

Yes, we are requesting an increase in the existing program budget.

2. Rationale for financial request(s).

The program budget was around \$3800/year before the state financial crisis a few years ago. Over the financial crisis years, the budget was reduced to down to less than a \$1000 and then back up, perhaps around \$2000 for last year, however, we do not actually have the specific numbers to present here. Over the 'cutback years' we incrementally used up stock supplies, which now need to be replaced. Additionally, new pedagogical approaches that are being implemented (discussed previously in this document) necessitate additional materials, supplies and equipment.

**E. Technology (software only – discuss hardware in section E)**

1. Request: Upgrade existing software or purchase new software.

The second floor, shared science laptops will be due to be replaced, possibly with tablets.

2. Rationale for technology request(s).

The current shared science laptops are nearing the end of their life cycles. Batteries and power supplies are beginning to fail.

**F. Facilities, Equipment (include technology hardware), and Supplies**

1. Request: Renovation or upgrade of existing facilities or new facilities.

- 1) The AV equipment in RM 2420 is at the end of its life cycle and needs to be replaced as soon as possible.
- 2) A second lecture hall needs to be created on campus with the same AV equipment as in 2420 so that that 'all the multiple computer multiple projector' types of presentations can have a backup location if one location goes down.

2. Rationale for facilities request(s).

1. The AV equipment in RM 2420 is at the end of its life cycle and needs to be replaced as soon as possible.
2. A second lecture hall needs to be created on campus with the same AV equipment as in 2420 so that that 'all the multiple computer multiple projector' types of presentations can have a backup location if one location goes down.

3. Request: Upgrading of existing equipment or purchase of new equipment.

Click here to enter text.

4. Rationale for equipment request(s).

Click here to enter text.

5. Request: New supplies

Click here to enter text.

6. Rationale for supplies request(s).

Click here to enter text.