1. What courses/certificates/programs have you assessed this past year?

Chemistry 51 and 102 and Physics 7 (Fall 2011)
Geography 2 (Spring 2011)

2. Summarize the analysis of your assessment results for courses in your area.

- **Astronomy 1** (Fall 2009)
  One SLO was assessed on identifying and evaluating the causes and possible solutions to the problems of environmental concern. Assessment through imbedding of question on final exam was done. Results indicated that although most students have a general understanding of the concepts, many do not possess a deep knowledge of the causes and possible solutions to these problems.

- **Astronomy 5** (Fall 2009)
  One SLO was assessed on analyzing and obtaining data from astronomical chars and images. Assessment through evaluation of lab reports and questions on quizzes and final exam was done. Results indicated that most students achieved a good understanding of the concept as evidenced by their response to the imbedded exam questions.

- **Physics 6** (Spring 2010)
  One SLO was assessed on solving problems dealing with motion, energy, heat and waves. Assessment through embedded question on final exam was done. Results indicated that while the majority of students assessed understood the concept of distance flowed, the more subtle concept of cross-sectional area through which heat flows was not grasped by more than half of the students.

- **Geography 7** (Fall 2010)
  One SLO was assessed on use of maps to locate and identify physical and cultural features on regional and world maps. Assessment through exam questions on map of Southwest Asia was done for a class of 32 students. Results indicate that students possess adequate skills to locate and identify physical and cultural features of a map of Southwest Asia.

- **Geography 2** (Spring 2011)
  One SLO has been assessed, but report has not been finalized by instructor.
3. **How have the results of your assessments been shared and discussed among the members of your program? (Provide dates and minutes of meetings or transcript of online discussion)**

Discussions of SLO’s in each discipline have been conducted through informal meetings and email communications between instructors in the discipline. In addition, all faculty present at the Fall 2011 Flex day participated in discussions of SLO assessment for the current year. No minutes of these meetings are available.

4. **How have the results of your assessments been shared and discussed with members of your advisory committee (if vocational program)?**

N/A

5. **Based on the discussion and analysis of your assessment results, what changes have you made or plan to make (provide dates, description of changes, and person responsible).**

Analysis of assessed SLO’s have resulted in changes in instructional techniques such as use of Student Response Systems (clickers) in presentations, emphasis of difficult concepts in lecture, etc. In addition, providing student support systems such as tutoring and use of social media to develop a learning community have been instituted in several classes in the department.

6. **What is your assessment plan for the program and courses for the upcoming program review period? Provide dates, SLO(s) to be measured, means of assessment, and person to be responsible.**

- **Chemistry 65** (Spring 2011) Mike Fenton and adjunct faculty  
  Students will be given questions embedded in exams to assess their ability to apply mathematics to solve quantitative chemical problems.

- **Chemistry 101** (Spring 2011) Mike Fenton and adjunct faculty  
  Students will be given questions embedded in exams to assess their ability to solve quantitative chemistry problems through integration of multiple ideas and demonstrate reasoning clearly and completely.

- **Chemistry 52** (Fall 2012) Mike Fenton and Said Pazirandeh  
  Student lab reports and laboratory notebooks will be reviewed to assess student’s abilities to extract appropriate information, analyze, and synthesize experimental results to reach correct conclusions.
• **Geography 1** (Spring 2011)  Said Pazirandeh and adjunct faculty
Students will be assessed on their knowledge of the interrelationships among the earth system’s major spheres; the atmosphere, lithosphere, hydrosphere, and the biosphere.

• **Geography 15** (Spring 2011)  Said Pazirandeh and adjunct faculty
Students will be assessed on their ability to classify climate regions using climate data, learn to interpret weather maps and also learn the fundamentals of weather forecasting.

• **Geography 14** (Not currently offered)

• **Geology 1** (Fall 2012)  Said Pazirandeh and adjunct faculty
Department chair will work with adjunct faculty to develop and assess SLO’s for this course.

• **Oceanography 1** (Fall 2012)  Said Pazirandeh and adjunct faculty
Department chair will work with adjunct faculty to develop and assess SLO’s for this course.

• **Physical Science 1** (Spring 2011)  Richard Rains and adjunct faculty
Department vice chair will work with adjunct faculty to develop and assess SLO’s for this course.

• **Physical Science 14** (Spring 2011)  Richard Rains and adjunct faculty
Department vice chair will work with adjunct faculty to develop and assess SLO’s for this course.

**Written responses to these questions are due by December 2, 2011. These answers will be important evidence for accreditation.**