1. List in detail your Student Learning Outcomes (SLOs).

BS (Plant & Environmental Protection Sciences)
SLOs are described in detail in PEPS Assessment Plant. In the current assessment period (2005), these are assessed by (1) evaluation of student performance as a result of the introductory course to the program, PEPS 210, as evidenced by comparison of scores received on a draft Case Study (week 10) and the final Case Study (week 15); and (2) by successful student completion of the final capstone course in the program, PEPS 495, as evidenced by satisfactory completion of the required written report.

2. Where are these SLOs Published?
   a. PEPS Program Assessment Plan
   b. Department web page
   c. Course catalog

3. Explain how your SLOs map onto your curriculum.
   a. Successful completion of required course work, including introductory course PEPS 210.
   b. Successful completion of Capstone course, PEPS 495.

4. What specific methodologies were used to collect data?
The population covered in this assessment is BS students in the introductory course PEPS 210, and majors completing the capstone course PEPS 495.

   (1) Instruments and data collection for PEPS 210 are described in detail in the attached sub-report.
   (2) In 2004-2005, performance of 3 students was assessed in PEPS Capstone, PEPS 495. This represents 50% of the population of PEPS majors during this period. Each student successfully completed PEPS 495, including production of a narrative detailing impact of the PEPS curriculum on the success of their capstone exper

5. How were the assessment data/results used to inform decisions concerning the curriculum and administration of the program?
   Improved performance by students in PEPS 210 indicated success of the early portion of our program, and no changes were instituted. Results were reviewed by instructional faculty.

   Review of the narratives produced by the 3 students (representing 50% of the target population, and 100% of the solicited sample) completing PEPS Capstone (PEPS 495) by the Department Chair and the Undergraduate Advisor indicated success in matching curricular requirements to SLOs needed for successful performance. No changes were instituted at this time.

Course: PEPS 210 Environmental Resources: Issues and Options

1. List in detail your Student Learning Outcomes (SLOs).
This course attempts to increase the proficiency in writing ability and critical thinking as Undergraduate Student Learning Outcome for the PEPS undergraduate degree.

2. Where are these SLOs Published?
Provide a pamphlet on the purposes of Writing Intensive Courses at the UH to students at the beginning of the course and a review the goals of the program in class. Explain our efforts to make suggestions for improvements on their Case Study Drafts and how they need to revise their Drafts to develop better organizations, grammar, data presentation, conclusions, etc. Provide students with options for participation in Writing Workshops provided by the English Department. Explain that the Case Study assignment is a unique opportunity for each student to investigate an environmental problem of their interest and how the use of objective and critical thinking is required for understanding many of these problems and issues.

3. Explain how your SLOs map onto your curriculum.
Improvements in critical thinking, writing proficiency, and oral communication, objective approaches to problem solving, and ethical behaviors are all imbedded in our curriculum. This provides a content basis and reference for additional learning in environmental sciences.

4. What specific methodologies were used to collect data?
Each writing intensive course requires 50% of the grade to be based on writing assignments. For PEPS 210, these assignments include: Introduction of each student on the email (yr, major, environmental interest, likes, dislikes, hobbies, other science courses, etc); Information evaluation (evaluate 5 Websites using a set of questions on being current, validity, reliability, accuracy, etc); Shopping/nutritional evaluation (pretend to purchase food choices for $20 and determine the total calorie, fat and protein supplied and the number of days one could survive); legislative testimony (prepare a written testimony for submission to the committee that is hearing a particular environmental bill); Case study on an environmental issue (Outline, Critique of Outline of another students outline, Draft, Final and evaluation of case study presentation on the WebCT.)

By comparing the grades for the draft, on which the students received evaluations and suggestions for improvement, to the final case study score, we can determine if improvements occurred. In Fall of 2004, this evaluation covered 35 students and eliminates those who failed to submit either or both of the assignments. For the draft, the average score was 80.2 out of a 100 (or a low B to C+). For the final case study grade, the average score was 89.0 out of 100 (high B to A minus), a substantial increase.
This is a performance indicator that is based on scores received by students in the course designed to look for improvements.

Data collected at week 10 (Draft) and at the end of the course (Final) week 15.

Students also have two opportunities to critique to submissions of other students. They prepare critiques others students Outlines (guidelines for evaluation Outlines are provided to the class). Later students are taught methods to prepare a power point presentation of their case study and all of these presentations are posted on the class Web page. Students are then asked to critique at least 5 presentations. This provides them with an opportunity to see another persons work and often demonstrates the short-coming of their own submission. This performance indicator is based on increased awareness or an attitudinal change towards their performance. Self-criticism and improvement are sought.

Population: The students in PEPS come from NREM (5+), PEPS (1?), service students 75-80%, and students taking the course as an interesting elective (10-20%).

The students (35) in the evaluation are all the members of the class who did the assignment. Seven students were not included, as they did not submit either or both of the assignments (draft and final case study). The final case studies and web presentations are maintained on file to serve as a portfolio of student accomplishment.

5. **How were the assessment data/results used to inform decisions concerning the curriculum and administration of the program?**

The current process of requiring a Case Study Outline, followed quickly by a review and assessment of the Outline with a critique by students, submission of a Draft and then the Final Case study developed over several years. Initially we had students submit two Case Studies but they often failed to evaluate information critically or did not select a topic with more than one side to the issue. Many submitted “term papers” rather than a Case Study with “Pros” and “Cons” involved. Thus we have gradually focused more attention on subject selection and development of the Case Study. This process has improved both, although we do not have data on the small number that still failed to prepare an adequate paper. This will be part of our evaluation this semester.

6. **General Education Assessment Within the Major:**

Evaluation of student learning and oral/written products indicates that PEPS students (1) are proficient in the primary information-accessing and information-processing methods of the field, (2) are proficient in the problem-solving and oral communication methods of the field, and (3) have had training and experience in the modes of inquiry and analysis appropriate to the field.