

UHCL Assessment Plan
FY07 (or academic year 2006-07)

School of Science and Computer Engineering

This assessment plan was chosen as example plan because it contained specific use of results to improve student learning. In some cases, wording were modified slightly for illustration purposes

Environmental Science - BS

Learning Outcomes Assessment

Learning Outcomes	ULO ¹	Assessment Methods	Criteria for Success	Assessment Results	Use of Results
ENSC undergraduate students will be able to effectively communicate through both formal written papers and oral presentations	b, c, d	ENSC faculty committee will meet annually to review undergraduate students' written and oral work performed in relevant courses including Independent Study, Co-Op, or Internship (ENSC 4739, ENSC 4915)	On presentations and written work in Independent Study, Co-Op, or Internship (ENSC 4739, ENSC 4915), 80% of undergraduate students meets or exceeds expectations ratings that represent "solid" or "significant achievement" in accomplishing course goals and objectives.	Most ENSC undergraduate students pursued Independent Study through sub-plan specific projects under INDH 4739, INDH 4839, BIOL 4839, or CHEM 4839 rather than ENSC 4739 and ENSC 4915. Available data suggested that even though most undergraduate students met or exceeded the specified minimal expectations, technical writing is a needed area for further improvement to meet today's challenging work environment.	(1) Revise the assessment methods by the inclusion of sub-plan specific independent study. (2) Revise FY08 CPS by requiring technical writing course (WRIT 3135) taken at the upper level to enhance students' writing skills.

Learning Outcomes Assessment

Learning Outcomes	ULO ¹	Assessment Methods	Criteria for Success	Assessment Results	Use of Results
ENSC undergraduate students will be able to demonstrate knowledge and understanding of global environmental processes and issues	a, f, g	Instructors will evaluate undergraduate students' performance in mid-term exams and final exams in ENSC core courses (BIOL 3333, GEOL 3333, CHEM 3333)	On global issues section of a post-test in environmental science core courses (BIOL 3333, GEOL 3333, CHEM 3333), 80% of students receives ratings that represent "average" or "satisfactory achievement" in accomplishing course goals and objectives.	The percentage of students received the specified rating were: 85%-100% (CHEM 3333); 78 -83% (BIOL 3333); 100% (GEOL 3333, Spring 2007); 100% (INDH 3333, Spring 2007). Students in environmental science major will be better performed in these core courses if equivalent courses are offered separately to non-science major students.	(1) Starting Spring 2008, a new course ENSC 3033 will be added to divert non-science major students from taking BIOL 3333, CHEM 3333, and GEOL 3333 so that major students can spend more time in these courses to learn global environmental issues. (2) A new course INDH 3333 was developed to expand the knowledge base in global environmental issues. This course was added to the assessment in FY 07 and will be added accordingly in FY08.
ENSC undergraduate students will be able to acquire the fundamental knowledge of the environmental science field	a, g, h	Instructors will conduct a pre-test and a post-test for each ENSC core course (BIOL 3333, GEOL 3333, CHEM 3333)	80% of student completing the pre-test in environmental science core courses (BIOL 3333, CHEM 3333, GEOL 3333) will improve on the post-test.	The percentages for the improved students are: 90-100% (CHEM 3333); 82-100% (BIOL 3333); 69% (GEOL 3333, Spring 2007), 100% (INDH, 3333, Spring 2007). It was also noted that these listed core courses should be taught by full-time faculty members to maintain continuity of the course contents and quality.	Continue to monitor student performance in CHEM 3333, BIOL 3333, GEOL 3333, and INDH 3333. In FY 07, the core course GEOL 3333 was taught by an adjunct faculty. This core course will be offered by a full-time faculty in the future.

Learning Outcomes Assessment

Learning Outcomes	ULO ¹	Assessment Methods	Criteria for Success	Assessment Results	Use of Results
ENSC undergraduate students will be able to acquire specialized knowledge of the environmental science field subplan	c, f, g	ENSC faculty committee will meet annually to review undergraduate students' performance in required courses in each sub-plan: (1) Environmental Biology, (2) Environmental Chemistry, (3) Environmental Geology, and (4) Industrial Hygiene and Safety	80% of students completing the required courses in their subplans meets or exceeds performance ratings that represent "average" or "satisfactory" achievement in accomplishing the goals and objectives of courses required by each subplan	The specified % criteria were exceeded based on the graduating seniors. It was suggested by Accreditation Board for Engineering and Technology (ABET) that two separate accreditations are better served for industrial hygiene major and safety major rather than the currently combined "Industrial Hygiene and Safety" (INDH) major.	Safety sub-plan was separated from the currently combined INDH and was added as the 5th sub-plan under the environmental science program. This change will enhance the learning opportunities for specialized knowledge needed for students currently under the industrial hygiene and safety sub-plan.

¹University Learning Outcomes (ULO)

In developing student learning outcomes, select from the list below the university level learning outcome(s) that match most closely to the learning outcomes.

- a. Critical Thinking - The mastery of higher order thinking skills including quantitative and qualifying analysis, synthesis, and evaluation of information, argumentation, problem solving, and creativity.
- b. Communication - Effective written and oral expression including the use of such media as audio, video, text, and graphics.
- c. Information Technology - The application of information technology to search for, access, retrieve, organize, interpret, and transfer information.
- d. Interpersonal Competence - The capacity to understand many points of view and to work responsibly with others in a variety of settings.
- e. Ethical Citizenship - The ability to make ethical decisions in person and professional societal contexts
- f. Global Perspective - The capability to demonstrate awareness of local and global diversity, within the students chosen discipline, the international economy, and the interrelated worldwide environment.
- g. Self-directed Learning - The ability to identify, assess, revise, and monitor learning to achieve personal and professional goals.
- h. Other: Professional accreditation standards