A. ACTIONS TAKEN TO IMPROVE STUDENT LEARNING

What actions did you take in 2012-2013, based on previous assessment findings, to improve student learning in your program? (Refer back to plans indicated in “Response to Assessment Findings” in 2011-2012 Assessment Report.)

The 2011-2012 Assessment Report discussed the need to better inform students of the advantages of continued professional involvement and development. A significant improvement in this area was the formation of the EHS Advisory Committee, which comprises members of the Kitty Hawk Section of the American Society of Safety Engineers (ASSE). The ASSE group is composed of Dayton-area safety professionals, many of whom are graduates of WSU’s EHS Program. The organization sponsors and mentors the Wright State Student Section of the Kitty Hawk Chapter of the ASSE, which is composed exclusively of students in the EHS Program. Professionals in the Kitty Hawk Chapter have been very generous with the time, attention, and encouragement they have given to EHS students and their further input as an advisory panel is expected to be especially beneficial to the EHS Program and to student learning.

B. STUDENT LEARNING OUTCOMES ASSESSED AND EXAMINED

Which Program Level Student Learning Outcomes did you assess and examine during 2012-2013? List the Program Level Student Learning Outcomes using the format of “Graduates will be able to _______________________."

(Please note that due to specialized accreditation requirements, accredited programs may be required to assess and report on all program level student learning outcomes every year; accredited programs should report in a manner that will align with their accreditation. Programs not carrying specialized accreditation may assess all of their learning outcomes every year but may choose to report on 2-3 per year, looking at several years of data.)

Graduates of the EHS Program will be able to demonstrate proficiencies in the learning outcomes associated with the EHS Program’s accreditation with the National Environmental Health Science and Protection Accreditation Council (EHAC). Broadly stated, these objectives include the ability to communicate effectively, demonstrate mathematical, statistical, and scientific literacy, work with other people, apply technical knowledge, understand the basic principles of environmental health, and meet admission prerequisites of graduate programs.

C. METHODS FOR COLLECTING DATA

Which students were included in the assessment? (For example, all seniors completing Course X in Spring 2013, all graduating seniors, etc.)

Students included in the assessment were: (1) enrolled in EES 3660 (EHS Internship); (2) EES 4700 (Environmental Intern and Career Analysis); (3) graduating seniors; and (4) recent graduates taking the Ohio Registered Sanitarian exam.

Other program alumni were not surveyed this year to determine their satisfaction with the program. However, this measure is used every six years during the reaccreditation process with EHAC. During this process, alumni are asked to provide comments about their academic preparation and its relevance to their career employment.
D. ASSESSMENT MEASURES

- What key assessments/assignments/student work did you examine to directly assess the Program Level Student Learning Outcomes listed above?

- What, if any, indirect assessments (e.g. exit survey, alumni survey, focus groups, etc.) did you use to indirectly assess the Program Level Student Learning Outcomes listed above?

Several key assessments were examined to assess student learning:

Program seniors completed a comprehensive examination on topics covered by EHS Program courses. The examination was given in EES 4700, which is considered to be the “capstone” course for EHS students. The exam is not a graduation requirement but it provides a general evaluation of the EHS curriculum and student learning near the point of graduation. Students enrolled in EES 4700 were also assigned individual and group presentations that included both oral and written components. These assignments allowed for assessment of student learning and communication skills.

Students performing the EHS Internship (EES 3660) were required to: (1) complete time sheets detailing their work activities; (2) complete early and final drafts of a written report of their internship experience; and (3) obtain from their field supervisor a final evaluation of the student’s internship performance. These documents provided significant insight into EHS students’ abilities to apply technical knowledge, communicate effectively, and work closely with practitioners in business, industry, and government.

Program accreditation under EHAC qualifies EHS students to take the State of Ohio Sanitarian Registration Exam, which eligible candidates may retake if unsuccessful on the first try. EHS student pass rates on the sanitary exam were determined to the best extent possible.

Supervisors of program alumni were not surveyed this year to determine their satisfaction with alumni education and training. However, this measure is used every six years during the EHAC reaccreditation process.

Also, several indirect assessments were used to evaluate student learning. These include obtaining input from EES students during advising meetings, reviewing student records in the course of advising students and updating student files, evaluating student participation in research, obtaining general input from the department’s faculty and adjunct instructors, and reviewing the successes of program alumni.

E. SIGNIFICANT FINDINGS

What did you find from your assessments? What did your data reveal about how well students are achieving the Program Level Student Learning Outcomes that you listed above?

The findings show that using the measures identified, we have met the program objectives and outcomes:

- Students possess a broad knowledge of the environmental sciences with the necessary skills in mathematics, statistics, chemistry and biology for supporting and integrating into environmental applications.

- Students are capable of competently solving on-the-job problems relating to environmental issues.

- Students have effective communication skills, both oral and written, for technical, administrative and public arenas.

- Students have the ability to be flexible and adaptable to the many changing environmental sub-disciplines they will encounter and perform in a competent manner in each.

More specifically:

Internship supervisor comments indicate that EHS students have the scientific knowledge, communication skills, and other competencies that prepare them well for their internship duties.

Students during the recent past have achieved similar scores on the EHS comprehensive exam, indicating the program continues to be effective.

EHS graduates taking the Ohio Registered Sanitarian exam during recent years have achieved a 100% pass rate, with all passing on their first attempt. In contrast, the statewide pass rate during recent years has generally been below 50%. Thus, the performance of WSU EHS graduates continues to be impressive.
Program alumni have a high rate of entry into graduate programs and professional employment.

F. DISCUSSION OF RESULTS
How were results shared? With whom were they discussed?

Overall student performance in the EHS Program was discussed with EES Departmental faculty and staff during regular departmental meetings. Further, informal meetings were held with part-time faculty to obtain their input about the EHS curriculum and student learning. (These discussions are especially helpful because the program’s instructors have been valuable links to internship and career employment for EHS students, graduating seniors, and program alumni.) Finally, updates about the EHS Program and student performance were provided in the yearly report to EHAC, which is required for the EHS Program’s accreditation.

G. ACTIONS PLANNED TO IMPROVE STUDENT LEARNING
Based on what you learned from your assessment of the Program Level Student Learning Outcomes, what actions do the faculty in your program plan to take to improve student learning in your program/area? Describe the steps faculty have taken/will take to use information from the assessments for improvement of student performance and the program. List additional faculty meetings or discussions and planned or actual changes to curriculum, teaching methods, approaches, or services that are in response to the assessment findings.

As stated above, previous assessments identified the need for the EHS Program to better inform students of the advantages of continued professional involvement and development. The need to emphasize these advantages has – and continues to be – conveyed to all EHS faculty with a request that they share that information with their students. It is anticipated that input from the EHS Program’s Advisory Committee will broaden internship opportunities, help maintain an appropriate curriculum, and promote other supportive measures.

Also, previous discussions with program students revealed a significant interest among students in obtaining certifications that will enhance their credentials for career employment. As a result, an expanded version of one EHS Program course (EES 4660 – OSHA Compliance) was offered during Fall Semester, 2013 as EES 4010 – OSHA Standards for Industry. Students meeting the requirements of the course were eligible to receive the Occupational Safety and Health Administration’s 30-hour Voluntary Compliance Card. The EES Department is considering permanently expanding EES 4660 from one credit hour to two hours to enhance student awareness of OSHA Standards and increase students’ qualifications for career employment.

H. SUPPORTING DOCUMENTS (recommended)
Please attach minutes of program faculty meeting where discussion of results and action planning occurred and any other relevant documents.