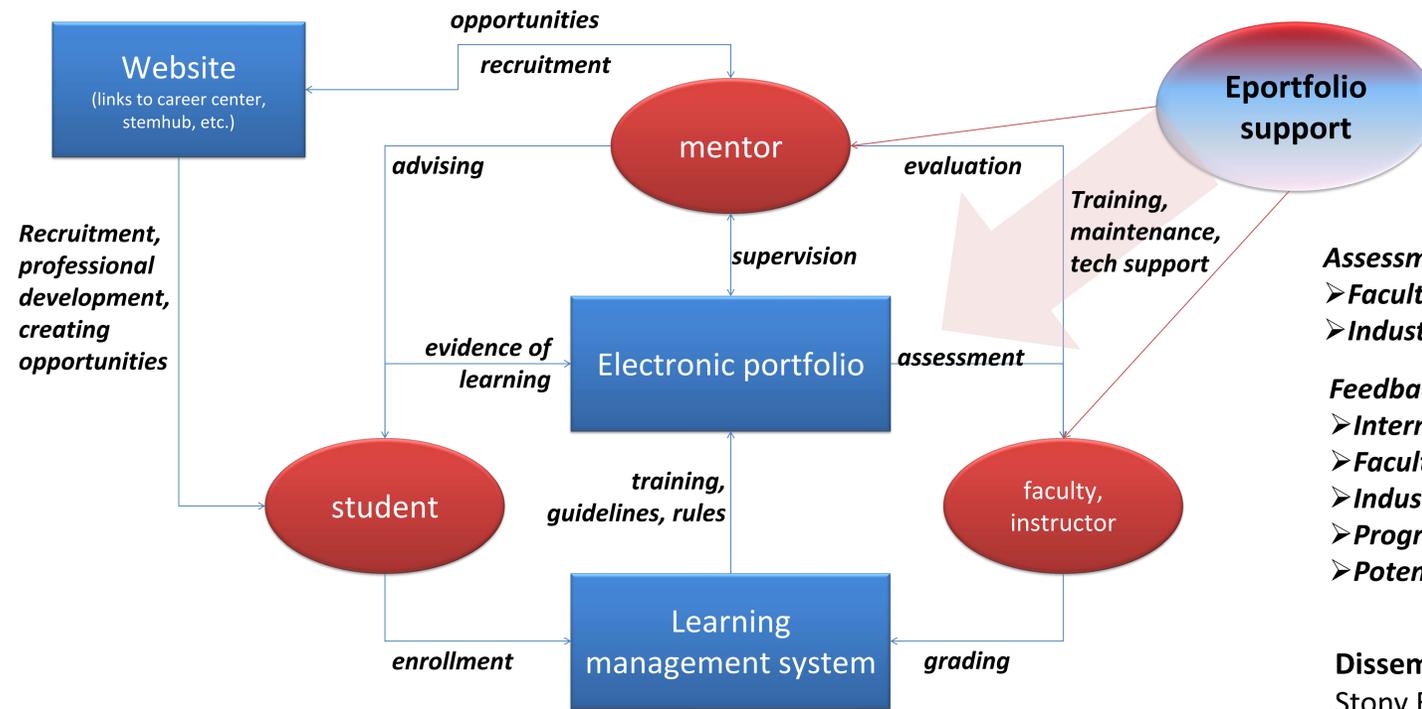


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Electronic portfolios (eportfolios) are proposed as an ideal mechanism to enhance experiential learning in undergraduate internships. Eportfolios can enhance instructors' ability to assess student learning outcomes and the ability of industrial mentors to supervise and direct interns. Further, eportfolios, through student reflection and direct assessment of activities, can help programs meet the challenges of program accreditation.

Our project consists of working with students, faculty and industry to develop an electronic portfolio template and process which benefits all stakeholders. Students will be able to collect their experiences, reflect on their learning, and relate their internship to other academic and life pursuits, showing how it has expanded and enhanced their educational experience and provided key skills valuable for life-long learning. Faculty can use the portfolios to evaluate and assess the student experience, provide feedback, and relate internship learning objectives to institutional and programmatic learning objectives. This will be especially valuable for showing how students have met learning outcomes relevant to accreditation (specifically those required by the Accreditation Board for Engineering and Technology, ABET, listed below). Industry and potential mentors will be able to use the portfolios to track and advise students, monitor progress, and identify interns who may be offered permanent positions following graduation.

Concept map of eportfolio support of experiential learning



- Assessment by:**
- Faculty coordinator
 - Industrial mentor
- Feedback to:**
- Intern
 - Faculty
 - Industrial advisory board
 - Program assessors
 - Potential mentors and employers



Dissemination: In addition to dissemination within Stony Brook University and through the SUNY Learning Commons, the eportfolio process and template will be disseminated through the Long Island Alternative Energy Consortium (LIAEC):



Long Island Alternative Energy Consortium

- Developing a multi-campus, multi-disciplinary undergraduate energy education curriculum
- Supporting workforce development in energy and green jobs through internships and life-long learning
- Creating a network to foster communication and research in advanced energy technology

ABET Criteria 3. Student Outcomes

The program must have documented student outcomes that prepare graduates to attain the program educational objectives. Student outcomes (which must be assessed periodically) are:

- an ability to apply knowledge of mathematics, science, and engineering
- an ability to design and conduct experiments, as well as to analyze and interpret data
- an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
- an ability to function on multidisciplinary teams
- an ability to identify, formulate, and solve engineering problems
- an understanding of professional and ethical responsibility
- an ability to communicate effectively
- the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
- a recognition of the need for, and an ability to engage in life-long learning
- a knowledge of contemporary issues
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Eportfolios provide evidence of learning in context



Evidence: Image, reports, comments from mentors

Evidence: Image, reports, comments from mentors

ESM 488
8 December 2011

Summer Internship at Gannett Fleming Engineers
Environmental Engineering Specialization

Summer Internship Summary

My internship this summer was at Gannett Fleming, an environmental engineering consulting firm. Over the summer I was introduced to the professional setting and was able to experience what it is like in a consulting firm. I observed the collaboration of the engineers on a variety of projects. I am fortunate that I have been invited to continue working for the firm during the upcoming year and next summer.



Joseph Nowak Engineering Internship

Home About Me Resume Internship Experience Gained

Internship

Description
Journal
Summary of Activities
Resources

Ed's Aircraft Refinishing, owned and operated by Ed Yezarski has been a fixture Brookhaven for over twenty years and has grown quite a reputation for quality and on time delivery.

Company Website

Students reflect on professional skills and engineering insight gained, and relationship of internship to career goals as well as to the mission of the company



Evidence: Activities, presentations, reflections

My Experience as an Infrastructure Engineering Intern

Felix O. Claudio
GE Transportation



Melbourne, FL
July 31, 2009