Innovative Instruction Technology Grant

Project: Electronic Portfolios to Enhance Experiential Learning and Assessment in Internship Courses

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Concept map of eportfolio support of experiential learning

- **Website** (links to career center, stemhub, etc.)
- Opportunities
- Recruitment
- Mentor
- Advising
- Evidence of learning
- Electronic portfolio
- Training, guidelines, rules
- Learning management system
- Enrollment
- Grading
- Faculty, instructor
- evaluation
- Supervision
- Assessment
- Training, maintenance, tech support

- Recruitment, professional development, creating opportunities
Input from:
- Faculty
- Industrial advisory board, employers
- Undergraduate program committee
- criteria) Program assessors (accreditation

**Bio**

Place professional photo and motto (quote) here.

- Bo
- Professional Philosophy
- Professional Goals

**Resume**

See the Career Center to complete a professional resume. Copy and paste your resume into this field.

**Internship**

Add a description with image of the company or firm hosting your internship. Provide a link to their website.

- Description
- Journal
- Summary of Activities
- Resources

Describe your responsibilities.

List and describe your projects and tasks.

Describe how your tasks and activities contributed to the company. How important was this to the company’s mission? How did this experience meet your professional goals? What are the next steps you would suggest to the company to continue with your project? How can these activities be sustained?

Start a daily or weekly journal and reflect on your work and involvement with the company or firm. Think about the following questions as you post your journal entries:
- What are you learning from your day to day experiences?
- What are you learning from the professionals on the job?
- How do you see yourself fitting in to the workplace?
- What contributions could you make?

List resources and technology you used on the job.
Experience Gained

Reflect on the following points:

1. What professional skills and abilities did you gain from this experience?

2. How did this experience give you a greater insight into the Engineering Field?

3. What skills and abilities did you observe displayed by the engineers as they went about their daily work?

4. How would you describe this experience to a friend?

5. How would you describe this experience to a future employer?

6. What new goals and career paths has this experience set for you?

7. How does your professional goals compare with the company goals?

Create a short 3 minute presentation on experience gained from internship - Try making a Prezi (http://www.prezi.com. Create an account with your Stony Brook email address for more space.)
**Assessment by:**
- Faculty coordinator
- Industrial mentor

<table>
<thead>
<tr>
<th>Evidence: projects, journal</th>
<th>Intern should excel at identifying, formulating, and solving engineering problems.</th>
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<tbody>
<tr>
<td>Excel at recognizing the necessary mathematical and critical reasoning concepts needed to solve a problem; can identify the necessary variables, standards and scientific data required when faced with a complex problem; can clearly and effectively apply this knowledge.</td>
<td>Can carry out all basic engineering problem solving methods required; can adequately find and apply general mathematical, statistical and scientific principles.</td>
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<tr>
<td>Unable to apply basic problem solving methods with any degree of independence; unable to identify mathematical or critical reasoning concepts or standards required to solve a problem.</td>
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PART I: Program Educational Objectives -- How important are they?: (answered on a 1 (not important) to 5 (very important) likert scale...)

Program Objective 1
Graduates of the Engineering Science program will be conducting careers in engineering or science-related disciplines or completing graduate studies in top ranked institutions.

Program Objective 2
Graduates of the Engineering Science program will be participating in interdisciplinary research, design, and/or policy-making teams in industrial, academic or government settings.

Program Objective 3
Graduates of the Engineering Science program will be engaging in lifelong learning (including professional society membership and support; conference attendance, presentations or organization; and knowledge transfer or community-based outreach activities in their organizations).

Program Objective 4
Graduates of the Engineering Science program will be conducting themselves in the engineering professions in a manner which holds paramount the importance of public health, safety and welfare, as well as their own ethical responsibilities.

PART II: Student Learning Objectives (what our students should know or what skills they should possess): (employers asked to rate how well intern meets this learning outcome on a 1 to 5 scale)

Student Outcome 1: Graduates of the Engineering Science program should possess an ability to apply knowledge of mathematics, science, and engineering.

Student Outcome 2: Graduates of the Engineering Science program should possess an ability to design and conduct experiments, as well as to analyze and interpret data.

Student Outcome 3: Graduates of the Engineering Science program should possess an ability to design a system, component, or process to meet desired needs.

Student Outcome 4: Graduates of the Engineering Science program should possess an ability to function on multi-disciplinary teams.

Student Outcome 5: Graduates of the Engineering Science program should possess an ability to identify, formulate, and solve engineering problems.

Student Outcome 6: Graduates of the Engineering Science program should possess an understanding of professional and ethical responsibility.

Student Outcome 7: Graduates of the Engineering Science program should possess an ability to communicate effectively.

Student Outcome 8: Graduates of the Engineering Science program should possess the broad education necessary to understand the impact of engineering solutions in a global and societal context.

Student Outcome 9: Graduates of the Engineering Science program should possess a recognition of the need for, and an ability to engage in life-long learning.

Student Outcome 10: Graduates of the Engineering Science program should possess a knowledge of contemporary issues.

Student Outcome 11: Graduates of the Engineering Science program should possess an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
Feedback to:
- Intern
- Faculty
- Industrial advisory board
- Program assessors
- Potential mentors and employers
Long Island Alternative Energy Consortium

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

Dissemination:

- Stony Brook University
- Farmingdale State College
- Suffolk County Community College
- Nassau Community College
- Maritime College
- New York Institute of Technology
- Brookhaven National Laboratory