

Seattle Pacific University Engineering Program Mission
Adopted Fall 2009

Preparing engineers within a supportive Christian community to develop appropriate and sustainable engineering solutions by skillfully serving, effectively leading and thoughtfully engaging the world with their lives.

Seattle Pacific University Electrical Engineering Program
Educational Objectives
February 2010

From ABET: II.D.1.a. Program Educational Objectives – Program educational objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.

1. Alumni will purposefully demonstrate Christian ideals throughout their professional life.

Evidence of this includes, but is not limited to:

- i) Ethical behavior and practice
- ii) Examples of serving others and/or personal sacrifice for others
- iii) Active participation in a religious community
- iv) Active participation in a charitable organization
- v) Personal practice of prayer, Bible study and/or other Christian activities
- vi) Examples of decisions and goals that are consistent with personal values and priorities

2. Alumni will demonstrate abilities in the core competencies of engineering and be progressing toward excellence in their field.

Evidence of this includes, but is not limited to:

- i) Exercising project management skills while completing one or more complex engineering projects
- ii) Recognition for engineering performance
- iii) Professional licensure
- iv) Development of a recognized area of professional expertise

3. Alumni will communicate effectively.

Evidence of this includes, but is not limited to:

- i) Interacting with others professionally and respectfully
- ii) Asking appropriate questions, listening, and providing coherent contributions to discussions
- iii) Authoring well-written documents
- iv) Authoring and delivering quality mixed-media presentations

4. Alumni will engage in lifelong learning.

Evidence of this includes, but is not limited to:

- i) Training or self-study to learn new skills
- ii) Participation in professional societies, workshops and conferences
- iii) Study toward advanced degrees or certifications
- iv) Membership in professional organizations
- v) Reflection on and learning from past experiences

5. Alumni will demonstrate servant leadership skills.

Evidence of this includes, but is not limited to:

- i) Appropriately contributing to the success of a team as a team member or leader
- ii) Taking personal initiative to discover and meet observed needs
- iii) Mentoring of newer employees or members of organizations
- iv) Successfully fulfilling leadership responsibilities in a variety of roles

6. Alumni will appropriately apply knowledge of contemporary issues to understand and be sensitive to the ethical and sustainable development, use and impact of engineering solutions in a global, societal and community context.

Evidence of this includes, but is not limited to:

- i) Regular reading, viewing, and listening to various news media
- ii) Articulation of an awareness of specific issues related to the appropriate and sustainable use of technology in society
- iii) Participation in an evaluative process about the appropriateness and sustainability of a particular engineering solution
- iv) Work on projects directly related to improving environmental, societal, or local community conditions

7. Alumni will succeed in a variety of postgraduate experiences.

Evidence of this includes, but is not limited to:

- i) Articulation of a professional growth plan consistent with individual gifts and talents
- ii) Employment or job growth consistent with the individual's professional growth plan
- iii) Admission to and academic success in graduate school
- iv) Volunteer work with a charitable organization

Electrical Engineering Program Outcomes

February 2010

From ABET: II.D.1.b. Program Outcomes – Program outcomes are narrower statements that describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge, and behaviors that students acquire in their matriculation through the program.

1. *Engineering skills*
Graduates are able to apply the necessary skills and theory in math, physics and engineering to develop engineering solutions.
2. *Experiments and tests*
Graduates are able to design and conduct experiments and tests and analyze data to compare and confirm engineering solutions.
3. *Formulate Solutions*
Graduates are able to identify needs and formulate engineering solutions.
4. *Skills and tools*
Graduates are capable in using modern software and hardware engineering tools and are able to effectively program computers.
5. *Project management*
Graduates are able to manage projects within multiple constraints and to meet multiple goals.
6. *Learning from experiences*
Graduates are able to analyze and derive useful conclusions from the successes and failures of design experiences.
7. *Serve teams*
Graduates are able to effectively serve in diverse teams as leaders and workers.
8. *Responsible*
Graduates are reliable, responsible and ethical in meeting their commitments.
9. *Appropriate/Sustainable*
Graduates are able to analyze the appropriateness and sustainability of their engineering decisions in the social and physical environment.
10. *Lifelong learning*
Graduates are able to locate and apply current information on the state-of-the-art in engineering disciplines.
11. *Current events*
Graduates are able to analyze and apply information on current events obtained from a wide variety of sources and experiences.
12. *Communication*
Graduates are able to effectively communicate with others on technical subjects using a variety of techniques.
13. *Christian perspective*
Graduates are able to articulate Christian perspectives on personal, societal, technical, and theological issues.