

Program Educational Objectives Review Report

Rich Christie, ABET Coordinator

September 20, 2013

Program Educational Objectives were reviewed in Academic Year 2012-2013, specifically in Spring quarter 2013, as required by the Continuous Improvement Program.

A Constituency Advisory Group (CAG) was nominated by the ABET Coordinator and approved by the Department Chair. The group consisted of:

The Citizens of the State of Washington

*Represented by companies that employ our graduates, currently
Booga Gilbertson, Puget Sound Energy*

Ted Kummert, Madrona Venture Capital, formerly with Microsoft

Paul Carlson, Carlson Group

Students and Alumni

Booga Gilbertson

Ted Kummert

Paul Carlson

HKN and IEEE Student Section Chairs

Faculty of Top-Ranked Graduate Schools

Prof. Gregory Kovacs, Stanford

Faculty of UWEE Department

Prof. Vikram Jandhyala, Chair

Assoc. Prof. Rich Christie, ABET Coordinator

The industry members were named by Rico Malvar, Chair of the Department Industrial Advisory Board (IAB), from board members. Professor Kovacs was identified by Bruce Darling, the Associate Chair for Education.

In early April the CAG was sent the following email (this specific email was sent to the three IAB members).

Dear Booga, Ted and Paul,

Rico Malvar has given me your names as members of a subcommittee of the University of Washington EE Advisory Board to assist the department with accreditation. As part of our accreditation process, we periodically need to have the program educational objectives for our undergraduate program reviewed by our constituents (stakeholders), and you are representative of several constituents.

This should not be a long task!

The constituents you represent are the industries that hire our graduates, our alumni and the citizenry of Washington State. Our program educational objectives are also being reviewed by our undergraduate students and faculty. Any revision will be approved by the faculty as a whole.

To review the program educational objectives, please read them (they are at the end of this email, below my signature) and answer the two questions at the end. Please send your input directly to me. It would be ideal if this could be complete by the end of April.

Thank you for doing this review, and thank you for your service on the EE Advisory Board.

Regards,

Rich Christie

Associate Professor of Electrical Engineering

ABET Coordinator

UW EE Undergraduate Program Education Objectives:

“The objective of the Department of Electrical Engineering at the University of Washington is to produce alumni who contribute to our society and to the economic base of our region and beyond to the best of their abilities. We recognize that our students have very diverse interests and talents, and although the majority may find employment in one of the many specialties or interdisciplinary activities in industry or academe to which electrical engineers traditionally gravitate, we also expect some of our alumni to build careers in business, law, health care, government or other professions. Regardless of the intended career, our educational objective is to see them succeed, to use the analytical discipline and problem-solving skills of their undergraduate education in creative endeavors as professionals and to avail themselves of opportunities to learn new skills and advance their careers through continuing education.”

The questions below refer to "constituencies." The Department of Electrical Engineering, in its role as a provider of a highly technical undergraduate education, sees the citizens of the State of Washington as one of its primary constituencies. The part of this broad constituency that best understands our role and benefits most directly from our efforts, and therefore has been chosen to represent the community at large, is

the group of companies that employ our graduates. Our constituencies also include our students, our alumni, faculty at top-ranked graduate schools to which our graduates go for advanced degrees and faculty of our own department.

1. In your opinion, how well do these objectives meet the needs of the EE constituencies you represent: 0-10, where 0 is not at all, 5 is pretty much, and 10 is perfectly.

2. How could the program educational objectives be changed to better meet the needs of the EE constituencies you represent? (Essay answer)

Replies were received only from Ms. Gilbertson and Prof. Kovacs. Ms. Gilbertson said:

1. In your opinion, how well do these objectives meet the needs of the EE constituencies you represent: 0-10, where 0 is not at all, 5 is pretty much, and 10 is perfectly.

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2. How could the program educational objectives be changed to better meet the needs of the EE constituencies you represent?

The objectives address the fundamentals that industry would expect. A suggested improvement would be to broaden the objectives to include elements of collaboration and communication. Something like “provide a foundation of collaboration and communication which establishes a solid base for a career of broad endeavors that contribute to many facets of societal, economic, and technological innovation, development, and stewardship.”

Please let me know if you need more.

Regards,

Booga Gilbertson

Professor Kovacs said:

1. In your opinion, how well do these objectives meet the needs of the EE constituencies you represent: 0-10, where 0 is not at all, 5 is pretty much, and 10 is perfectly

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2. How could the program educational objectives be changed to better meet the needs of the EE constituencies you represent? (Essay answer)

Overall, I cannot point to much that could be changed. In Stanford's EE graduate program, we have happily accepted UW graduates for many years. Those I have personally encountered have been extremely talented intellectually and socially, the latter being something not to be taken for granted. Key traits among these UW graduates has been a solid fundamental education with sharp analytical skills for tackling new intellectual areas. Deep thinking generalists pretty much sums it up for me, and that is wonderful preparation for graduate education, particularly in the interdisciplinary areas many of us explore. It is this sort of graduate – equipped to cope with an evolving discipline and rapid pace of change – who seems best suited to creative endeavors in the many areas EE's engage.

I evaluate Ms. Gilbertson's essay reply as related more to student outcomes and less to Program Educational Objectives.

In view of the high ratings received and assuming that the absence of other replies indicates there are no strong opinions among the other members of the Constituency Advisory Group I recommended no changes be made to the Program Educational Objectives and the Department Chair concurred.

When the next review is performed in 2015-2016 I recommend that it be an item on the Industrial Advisory Board agenda. Unfortunately the IAB meeting this year occurred before the review process was initiated.