Experience Report from ABET Accreditation of Our Computer Engineering Degree

**Session Goals and/or ABET Criterion (Criteria) Addressed**
This presentation will discuss our experiences in planning, preparing for and hosting a successful ABET accreditation visit for our newly developed Computer Engineering degree. We’ll discuss the assessment methods we are currently using and how they helped us plan and collect data before the visit. We’ll also discuss the assessment binders we prepared before the visit that showed how we had met our educational objectives and program outcomes. Finally, we’ll discuss our efforts during the visit to host the accreditation team.

Overall, the presentation will show how we addressed ABET Criterion 2, *Program Educational Objectives*, and ABET Criterion 3, *Program Outcomes and Assessment*. We will discuss how our assessment methods contributed greatly to the success of our ABET accreditation visit.

**Presentation Format**
The presentation will be 40 minutes of interactive lecture plus 10 minutes for questions.

**Session Summary**
This presentation will discuss our experiences in preparing for and hosting a successful ABET accreditation team visit. A lot of planning and preparation happened before the team arrived for its one-week visit. During the presentation, we’ll talk about our current assessment methods and how they can be used to show whether or not we are meeting our education objectives and program outcomes. We’ll talk about the planning we did before the visit and how our assessment methods framed our preparation efforts. We’ll also talk about how we prepared for the visit by building course notebooks, collecting samples of student work, educating the students and faculty, and collecting the materials that showed we had met our educational objectives and program outcomes. Finally, we’ll talk about all the effort that went into making the ABET accreditation team’s visit a pleasant and successful trip.

The assessment methods that are used in the engineering division of the USAF Academy contributed greatly to the success of our accreditation visit. The Department of Computer Science jointly administers the Computer Engineering (CpE) degree with the Department of Electrical Engineering. We currently use the assessment process developed by the Department of Electrical Engineering in order to assess the CpE degree program. [1] In this process, information about each course is collected and organized to show whether or not the CpE degree is meeting our established educational objectives and program outcomes. This method addresses ABET Criterion 2, *Program Educational Objectives* and ABET Criterion 3, *Program Outcomes and Assessment*. The assessment methods we use helped us plan for the visit by establishing what data we needed to collect from specific courses and how that data would show we are meeting our overall objectives.

In order to prepare for the visit, we collected a lot of material about our courses and the CpE degree. As part of our assessment method, each course director builds a course notebook including their overall assessment of the course after it is completed. We collected all the
notebooks for the courses in the CpE degree into one central location. We collected samples of student work including superior work, average work and deficient work. We also educated the students and the faculty on the assessment process and why we were going to such lengths to prepare for the visit. We also prepared one binder for each of our 12 educational objectives showing how we had met that particular objective over the past year or so.

Specifically, for in preparation for the visit, we built a binder for each of the educational objectives showing exactly which course objectives from specific courses support that educational objective. Using the information from the course notebooks, we showed all the assessments of the supporting course objectives and showed whether or not that educational objective had been met based on the success or failure of the supporting course objectives. We also built a binder for each program outcome and showed whether or not each program outcome was successful or not based on the success or failure of the supporting educational objectives.

During the team’s one-week visit, we had an initial opening reception and a meeting with the Dean of Faculty. This particular team had come to evaluate all eight of the engineering degrees offered at the Academy, so after the initial meeting they split up into sub-teams to evaluate the specific programs. Selected members of the Department of Computer Science and the Department of Electrical Engineering met with the CpE sub-team to discuss the CpE program. The team also met with random students and faculty to discuss the program. They spent a lot of time looking over the course notebooks and the binders we had prepared. At the end of the week, we had an out-briefing with the Superintendent of the Academy. All eight engineering degrees received full six-year accreditations and there was only one concern raised by the team.

Overall, it was a very successful visit and our assessment methods contributed greatly to the success of the ABET accreditation of our Computer Engineering degree.

**Key Words**
Experience Report, ABET Accreditation Visit, Assessment Methods

**Bibliography**

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