

November 17, 2017

Present: Mr. Chad Easterling (Dynerics), Mr. Russ Johnson (SAIC), Mr. Eric Day (student), Mr. Luke Henry (student), Mr. Matthew Marrasso (student), Dr. Adam Lewis, Dr. Brady Rimes, Prof. Dave Fitzsimmons, Prof. Katia Mayfield.

We started the meeting with new introductions as we had new student representatives join us for the meeting. We also made comment on a new board member and a student who was not able to join us. Joe Green from Davidson Technologies has joined our board, and Pedro Reyes has also joined as a student representative.

The main focus of this meeting was to have an unofficial discussion to go over our assessment results for the year and also to discuss some of the feedback that we received from the ABET evaluators that came to campus.

We reviewed the terminology that ABET uses within their evaluations (concern, weakness, deficiency). We went over the following changes that have occurred from our first ABET evaluation:

1. Our program educational objectives were first marked as a deficiency and then re-categorized as a weakness. Based on the changes that the department has put in place, during this interim visit we were considered compliant to ABET requirements.
2. Our student outcomes were first marked as a deficiency and then re-categorized as a weakness. During the interim visit they were re-categorized as a concern. This is in regards to the way that we display and correlate student outcomes to program objectives. The issue is the confusion that it can cause. After speaking with the Program Advisory Board about our Student Outcomes and how we currently list them, we have decided to update our outcomes to be listed as the following:
  - (a) An ability to apply knowledge of computing and (CS 318, CS 309, Exit Exam)
  - (b) An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution (CS 372, CS 452)
  - (c) An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs (CS 318, CS 309, CS 452)
  - (d) An ability to function effectively on teams to accomplish a common goal (CS 452, **is there another class where they do group work?**)
  - (e) An understanding of professional, ethical, legal, security and social issues and responsibilities (CS 310)
  - (f) An ability to communicate effectively with a range of audiences (CS 452, **is there another CS class where they do presentations?**)
  - (g) An ability to analyze the local and global impact of computing on individuals, organizations, and society (CS 451)
  - (h) Recognition of the need for and an ability to engage in continuing professional development (CS 310, CS 451)
  - (i) An ability to use current techniques, skills, and tools necessary for computing practice. (CS 452)

The above are student outcomes that we will use for both Computer Science and Information Technology programs. The class listings with each of the outcomes above are associated to the Computer Science degree since this is the degree currently under review by ABET, however there is a set of classes associated specifically for the IT degree.

One comment from the Board in which will require us to modify the outcome is that of outcome “F”. The outcome does not clarify if it is written or oral communication and the Board members strongly agree that this should be two outcomes, one that corresponds to each of the types of communication. Also, with outcome “h” the Board strongly agrees that the department needs to be sure that students are aware of different conferences and training that are available to them.

As we spoke about the changes to student outcomes, we went over the 2016-2017 assessment report, and the areas where the student collected data is showing that the outcomes are not being fully met. This discussion was later continued when we re-visited the Exit Exam that the department holds which is where much of the assessment that is not being fully met is where the data is being collected.

3. We went over the requirement of continuous improvement, which was initially ranked as a deficiency and then re-categorized as a weakness. During this interim visit the requirement was labeled as a concern. Professor Mayfield met with the two evaluators one on one to discuss changes that needed to occur. One suggestion that was made is to create an “assessment manual” that goes over the full process and all procedures in conducting assessment. Another is to be sure that the documented process is in reference to the data that is being collected and not so heavily based on opinions or input without representation that the data was reviewed that brought on those opinions and inputs.
4. At the initial visit the curriculum was categorized as a deficiency. The department made the decision to split programs and offer a BS in Computer Science and a BS in Information Technology. By having the approvals in place to make this change we were re-categorized as our curriculum being a weakness and during our last visit we were found to be compliant.
5. Since our department is small, and we only have four faculty members it was a concern of ABET’s if we would be able to sustain the program. Between the first visit and the interim visit we did hire a fifth faculty member however he resigned over the summer before our interim visit. Even though our students have all good things to say about the small department the interim evaluators did re-categorize our faculty s a weakness. The department is still seeking a fifth faculty member to join us.
6. One of the main things that we have to solve for ABET is associated to their policies and procedures. Currently, the concentration in Information Security is NOT ABET accredited. The lawyers representing ABET feel that there can be a misunderstanding as to how we market the degree where people may assume that the concentration and the major are both accredited when they are not. The department is working with the administration to come up with a solution to this problem. Originally this was a concern but during the interim visit it did become a deficiency.

Continuing the discussion of the department assessment we went into details about the exit exam where a lot of our data is gathered. Even after the department has made changes to try and assist students in better preparing for the digital logic and discrete mathematics portions of the exam, these still continue to be the areas where the data shows that students struggle the most. Part of the goal of the exit exam is to see that students are gaining and retaining the knowledge that they will need to succeed in their careers. With these two areas of struggle, the department posed the question of “how important are these two knowledge areas when it comes to your employees?” To our surprise, both areas were ranked at the bottom. We learned from our board members that there are other areas that are of additional importance to our industry partners, those being operating

systems, inner communications, and algorithms. It was discussed that the department should consider tailoring the exams to the degrees that the students are pursuing. We also revisited a previous discussion that the Board does not agree that students should have multiple choice questions within their exam.

Some of the changes that are being considered are as follow:

1. Structure the exam where each section has multiple essay, short answer, or application based questions where the student can choose a number to answer. Example, provide 7 questions allow them to choose 5 to answer.
2. Do not grade the exam as all sections of the exam being evenly weighed. According to our industry partners, software engineering and programming should be the most important, following by data structures, and lastly digital logic and discrete math (if we keep the subjects for testing).
3. Should consider students who are going for the Computer Science degree should have a section that focuses on Operating Systems, and one that focuses on Algorithms. For students going for the IT degree they should focus additional programming languages, databases, and human computer interaction. While students in Networking should have a focus on Digital Logic, Operating Systems, and a section based on more advanced networking concepts.

We summed up the meeting by going over some of the curriculum changes that we are proposing for the 2018-2019 academic catalog which include:

1. No longer requiring students to take Microcomputer Applications
2. Specifying a list of electives that students can take instead of having “free for all”
3. Adding an Enterprise Applications Development course
4. Changing our database course to a four credit hour class instead of 3
5. Changing some of the numbering for the networking classes so that they will use the prefix ITE instead of CN.

We took a quick look at the Program Advisory Board website which is still under construction and at the moment there were no immediate suggestions for any changes.

Lastly, we discussed the capstone projects from the Fall 2017 semester and those that were coming up in Spring 2018.

We set a tentative Spring meeting for February, however the main focus for this meeting is to officially discuss the results of the ABET visit even though we have been able to summarize the results from unofficial conversations. However, as of January 16<sup>th</sup> the department has not received the official response document, and therefore we may need to schedule our next meeting in March.