Program Review
Executive Summary

Information Technology

Majors Reviewed:

- Information Technology: Software Development and Information Management (BSI), B.S.

May 2016
The Software Development and Information Management (BSI) bachelor-degree major is a relatively new major at Pennsylvania College of Technology. The major grew out of the former Web and Applications Development (BWD) major, which began in 2003. Specifically, BSI was crafted in 2012 to address programming and information management in IT. While BSI is a programming degree, it does focus on database development, which is an industry need. According to the Bureau of Labor Statistics, the percentage increase in database-related needs for the period 2012-2022 will be about 15%, while the increase in software development will be 22%.

The purpose of the BSI degree is to prepare students for a variety of careers. In particular, these careers include software development and information management and databases. The BSI program addresses the implementation of the software development process from problem definition to final product, the design and maintenance of e-commerce and websites, and the development and implementation of database applications with Web front-ends on various platforms and servers.

Following the College’s mission, the BSI program provides a hands-on experience in a field that is widely sought after. The program is challenging, as not everyone is able to be a software developer. For those who choose the major, rewards and employment opportunities are abundant. Students develop a strong set of skills that allow them to be hired as software developers, database developers or administrators, or system administrators. As stated earlier, the BSI major is new, with the first official graduating class in May 2016, although a few students graduated early over the past three semesters. Graduates have enjoyed exciting career opportunities and have formed a network that has resulted in former classmates becoming colleagues working together again on the job.

The findings and recommendations resulting from the program review are provided below.

Findings

- BSI has 16 separate program outcomes meant to meet the needs of the College as well as future ABET accreditation requirements. This large number of outcomes cannot be adequately assessed in a regular manner.
- Student placement is currently at 100%; however, prior to May 2016, only four transfer students have completed the program.
- Enrollment has grown steadily since the program’s start in 2012.
- Students tend to have difficulties with problem solving and programming at program entry.

Recommendations

- Reframe program objectives to be fewer in number, allowing for deeper assessments.
- Update course outcomes to eliminate redundancies and to make evaluation more useful.
- Pursue ABET/CSAB accreditation.
- Explore creation of a minor in software development and information management.
- Investigate altering math requirements to bolster students’ problem-solving abilities.