

Program Review Executive Summary

Information Technology Sciences

Majors Reviewed:

- *Gaming and Simulation (BGS), B.S.*

April 2016



The Gaming & Simulation (BGS) bachelor-degree major is a relatively new major at Pennsylvania College of Technology. BGS fits well with the College's mission by providing a commitment to hands-on, experiential learning within an integrative and responsive educational program.

There is substantial evidence that the information technology industry is growing and actively seeking employees with gaming and simulation programming skillsets. The program's graduates have been effective in obtaining employment in the information technology field, although only two are directly working or attending graduate school within the gaming and simulation domain. The program review process has identified a number of contributing factors for this and more importantly, recommendations to improve the BGS program.

Findings

- According to the Bureau of Labor Statistics, the gaming/simulation field is expected to have an increase in employment of 33% for the period 2014-2024. During that period, about 200,000 new jobs will need to be filled in an industry that already has roughly 1.2 million positions.
- The expansion of software and application development is expected to be the main driver of the gaming and simulation job growth in the next decade.
- The outcomes assessments process was incomplete, making it difficult to evaluate course sequencing for appropriate skill introduction and ongoing reinforcement. Informal analysis suggests that students do not have the necessary problem-solving and algorithm-development skills needed for the junior- and senior-level courses in BGS.
- The program graduates prefer the stable and reliable jobs in software development as their careers, and prefer to freelance as independent game developers during their spare time.
- The name of degree appears to cause some confusion for potential employers and students.
- Many of the students are not actively job hunting, either prior to or after graduation.

Recommendations

- Provide greater emphasis on simulation earlier in the degree sequence.
- Develop a comprehensive outcomes assessment model, per the Quality Through Assessment Committee's recommendations.
- Include more problem solving and algorithm development skills development during core courses.
- Increase focus on marketing the degree, specifically, stressing that video games are a subset of simulation.
- Incorporate more job hunting processes into the program and foster an understanding of the need for continued professional development.

Regardless of the challenges, the BGS degree remains a viable degree for Penn College's portfolio. With diligence in recruiting and modification within the curriculum, it is believed that the BGS program can continue to be a major contributor to the vision and mission of Penn College. Gaming and simulation skills are more desirable today than they have ever been, and they are projected to increase in demand. Nearly all business and service industries, large and small, can utilize the skillsets a student receives in this program.