

Executive Summary for the BS in Computer Science Program

Turner College of Business

2013-2014

A detailed self-study of BS in Computer Science program was performed by the faculty of TSYS School of Computer Science and reviewed by an external team of evaluators. The objectives of this self-study were to assess the strengths and weaknesses of the program and to develop a plan for further improvement. In this summary all the areas assessed as above average to very strong are listed as our strengths, and areas assessed as weak or below average are listed as our weaknesses.

Major Findings of the Program's Quality and Productivity

- The program's overall quality is deemed to be **very strong**.
- Quality of faculty, service and research are **very strong**.
- Student achievement is **very strong**.
- Quality of teaching and curriculum is **above average**.
- Quality of facilities and equipment rated **satisfactory**.
- Enrollment is strong and growing.
- Faculty is highly diverse and the program offers a multicultural perspective.

List of Recommendations for Improving Program Quality

- Hire additional faculty to reduce the number of comingled graduate and undergraduate classes.
- Revisit ABET accreditation.
- Encourage interdisciplinary research between the School of Computer Science and other disciplines involving undergraduate as well as graduate level research.
- Expand outreach to the local and professional communities.
- Explore adding a professional certification requirement.
- Closely monitor curriculum to ensure it remains current and matches the needs of major employers.
- Recruit more high-achieving students. Obtain funding to offer scholarships to high achieving students.
- Improve reward system to better align faculty incentives with the mission.
- Expand internship opportunities for students and faculty.
- Improve program assessment by replacing the current Major Field Tests.
- Improve technology: new projectors for all classrooms, a faster network switch, and more wireless access points.
- Obtain additional space for Center for Academic Excellence in Information Assurance Education, GEMS Institute, Center for Enterprise Computing and other research needs.

List of Recommendations for Improving Program Productivity

- Hire additional full-time tenure-track and non-tenure-track faculty members to reduce reliance on part-time faculty members as a retention initiative.
- Offer a new orientation program for computer science majors to engage newly accepted students and assist with their transition into college.
- Continue to redesign introductory computer science courses to improve student learning and RPG rates.
- Develop a student recruitment plan. (underway)
- Hire a student support specialist to help with student advising and recruitment. [DONE]
- Increase student engagement outside of the classroom with experiential learning opportunities and expanded student organizations.
- Offer additional sections to selected core courses to maintain the current class size of 30 to maintain quality of instruction.
- Offer additional semester options (including summer) for selected core courses to help increase student progression and graduation rates.
- Increase graduate student stipends to provide additional lab support for undergraduate students.

Conclusions about the Program's Viability at CSU

The program's viability is deemed **very strong and we recommend that it be enhanced and expanded.**

Program Improvement Plan

The program will continue to educate our students who will contribute to fulfilling the huge demand of technology workforce nationwide and improving the nation's economy as a consequence. Our students will also continue to be trained to think critically and conduct research in computing and technology.

Initiatives to Be Implemented:

- Create an ABET exploration task force.
- Seek additional state funding to hire additional faculty.
- Solicit private support to create a Center for Mainframe and Enterprise Computing to meet labor force needs of major employers.
- Solicit comprehensive campaign support for addition to the Center for Commerce and Technology.
- Improve reward system to better align faculty incentives with the mission.

Summary Recommendation and Supporting Rationale

The BS in Computer Science demonstrates the high quality and level of dedication of the existing faculty members. The quality will be further improved by adding new qualified members to this team. Hiring new faculty is also very crucial for improving the program productivity. Computer science graduates are highly marketable giving the program tremendous opportunity for growth.