



## **Program Planning Summary**


**To the South Carolina Commission on**

**Higher Education**

**Bachelor of Science  
In  
Information Technology**

**January 30, 2012**

**Approved for President DeCenzo to Sign**

  
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**Robert Sheehan, Ph. D.**  
**Provost and Senior Vice President for**  
**Academic and Student Affairs**  
**Coastal Carolina University**

  
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**Date**

## PROGRAM PLANNING SUMMARY

### PROGRAM DESIGNATION

<b>Institution:</b>	Coastal Carolina University
<b>Academic unit involved:</b>	College of Natural and Applied Science Computer Science Department
<b>Name of proposed program:</b>	Bachelor of Science in Information Technology
<b>CIP Code:</b>	11.0103
<b>Proposed date of implementation:</b>	Fall 2013
<b>New program or modification:</b>	New program
<b>Number of credit hours:</b>	120
<b>STEM designation:</b>	Yes

### JUSTIFICATION OF NEED

Coastal Carolina University proposes to offer a Bachelor of Science in Information Technology in Fall 2013. Since 1986, Coastal Carolina University has offered a Bachelor of Science in Computer Science and, since 2010, the University has offered a Bachelor of Science in Information Systems. These current programs allow students to choose courses with either a theoretical emphasis or an information systems emphasis to complement a common core of foundational courses in computer science. Both programs emphasize software engineering and programming as fundamental areas of knowledge. The proposed Information Technology degree will include some programming but will focus more on the design, implementation, management, and evaluation of technology to meet user needs. This program will be specifically designed to allow a student with an A.A.S. degree in Computer Technology to complete the Bachelor's degree at Coastal Carolina University in approximately two years.

While there is still a need for graduates in computer science and information systems, there is a critical shortage of information technology specialists who can understand, develop and maintain information infrastructure. South Carolina's Department of Commerce and the Governor's Office have created the South Carolina Technology Alliance. The Alliance's "Strategies for Developing a Knowledge-Based Economy" recommends "increased support for college and university educational programs to align them with the needs of technology-intensive industries." Nationally, the Bureau of Labor Statistics indicates that employment in the area of computer and information systems will grow faster than most other areas through the year 2016. In particular, computer system analyst jobs are expected to grow 29% (146,000 new jobs) in the decade 2006-2016. From the Bureau of Labor Statistics Occupational Outlook:

Two of the fastest growing detailed occupations are in the computer specialist occupational group. Network systems and data communications analysts are projected to be the second-fastest-growing occupation in the economy. Demand for these workers will increase as organizations continue to upgrade their information technology capacity and incorporate the newest technologies. The growing reliance on wireless networks will result in a need for more network systems and data communications analysts as well. Computer applications software engineers also are expected to grow rapidly from 2008 to 2018. Expanding Internet technologies have spurred demand for these workers, who can develop Internet, intranet, and Web applications.  
(<http://www.bls.gov/oco/oco2003.htm>)

The B.S. in Information Technology addresses these needs by preparing graduates to be computer network, systems, and database administrators, computer support specialists, and computer systems analysts, among

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 other specializations. Each of these occupations is projected to increase faster than average during the period 2008-2018, with “good” or “excellent” job prospects and preference for bachelor’s degrees in the field (<http://www.bls.gov/oco/oco1002.htm#comp>).

The Association for Computing Machinery (ACM) recognizes this natural evolution and separation of the major computing disciplines and has published a curriculum guide which emphasizes the differences between theoretical computer science, information systems, and information technology. We have designed the B.S. in I.T. program to match these curricular recommendations from the ACM and from our accreditation board (ABET). ***Currently, there are only 18 accredited 4-year Information Technology degrees in the nation, none in South Carolina.*** Coastal Carolina University would like to be the first accredited I.T. program in the state.

The B.S. in Information Technology degree program will prepare graduates to apply technology to solve problems in business, industry, government agencies, and institutions. Graduates will be prepared to design, implement, manage, and evaluate technology systems and infrastructure. They will be able to integrate emerging information technologies into an organization. Graduates will also be prepared to pursue graduate studies in information technology. The program includes courses in web application development, systems administration, information security, networking, project management, human-computer interaction, and systems integration. In addition to technical skills, the program emphasizes development of strong communication and management skills through courses such as business management, business communication, and technical writing.

This new degree proposal directly supports Coastal Carolina University’s mission to offer baccalaureate programs of national and regional significance in science and business. It further supports the institution’s mission by preparing knowledgeable, productive, and responsible graduates to contribute positively to society and economic development through the development and management of computer information systems.

Coastal Carolina University will be seeking accreditation for the degree in information systems. The degree in theoretical computer science has been accredited by the Accreditation Board for Engineering and Technology (ABET) since 2002. The same accrediting board will assess both the computer science and information systems degree in 2013. ABET accreditation is based on the evaluation of a program's student achievement, program improvement, faculty, curricular content, facilities, and institutional commitment.

#### **ANTICIPATED PROGRAM DEMAND AND PRODUCTIVITY**

Coastal Carolina University currently enrolls approximately 230 majors in computer science and information systems, with approximately fifty percent of the majors in each discipline. It is anticipated that some of the existing information systems students would select the Information Technology major. Future accreditation of the program will likely attract even more majors. We will also attract graduates from technical colleges throughout the state who have a two-year Associate of Applied Science degree in Information Technology who will use the proposed program at Coastal Carolina for completion of a bachelor’s degree.

#### **ASSESSMENT OF EXTENT TO WHICH THE PROPOSED PROGRAM DUPLICATES EXISTING PROGRAMS IN THE STATE**

This program is related to programs offered by Furman University, Bob Jones University, Limestone College, and South University. Each of these schools offers a Bachelor’s degree in Information Technology, but all are very different in terms of specific course requirements. None of these programs is accredited by ABET. This program does not constitute unnecessary duplication of programs in the state. It will service the eastern portion of the state, one of the fastest growing regions in the southeast, and provide opportunities for the planned growth in student populations in coming years.

#### **RELATIONSHIP OF THE PROPOSED PROGRAM TO EXISTING PROGRAMS AT THE PROPOSING INSTITUTION**

The proposed program will require courses that are currently being taught on a regular basis by the Mathematics Department and by faculty from the College of Business Administration. These courses are already required courses for the Computer Science and Information Systems degree programs. The proposed degree in Information Technology will share a core of required courses with the current degrees in Computer Science and Information Systems, along with a set of information technology specialization courses, some of which may be taken as electives in the other programs.


Furthermore, Information Technology is an applied science discipline which involves the application of technology to real-world organizational problems. As such, this degree will require a cognate or minor to provide knowledge of an application domain. Additionally, this program is complementary to many other degrees as a double major. Many disciplines involve the use of information technology in some way, such as mobile devices and networks in health care systems, or technology used to enhance learning in education. Students majoring in any health care, business, science, or education discipline would be able to apply information technology knowledge and skills to their primary major field. Information technology is a virtual requirement to support all disciplines with computer networks, computer systems, data storage and analysis of technology needs.

**RELATIONSHIP OF THE PROPOSED PROGRAM TO OTHER INSTITUTIONS VIA INTER-INSTITUTIONAL COOPERATION**

The proposed program will hope to increase the use of the existing South Carolina articulation agreement with Horry Georgetown Technical College and Florence-Darlington Technical College (as well as other two-year institutions) by offering a needed two-year bachelor's degree completion program for these students.

**TOTAL NEW COSTS ASSOCIATED WITH IMPLEMENTING THE PROPOSED PROGRAM**

With the rapid growth in Information Technology, we anticipate the need for additional courses that are geared specifically to this discipline, and not directly to Computer Science. For that reason, we will be looking to add tenure-track faculty who can be dedicated to the Information Technology program. One new full-time faculty hire would be needed in each of the second and third years of the program. Each new hire will cost an estimated \$70,000-\$75,000 annually. The annual allotments for library monograph purchases for the department will be sufficient for expansion. The total estimated costs for the B.S. in Information Technology is \$0 in year one, \$70,000-75,000 in year two and \$70,000-75,000 in year three. Costs for this new program will be covered by tuition generated by the program. No additional funds for this program are expected to be requested from the state.

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Dr. David A. DeCenzo  
President  
Coastal Carolina University