# COASTAL CAROLINA UNIVERSITY

*Office of the Provost*

October 31, 2008

Dr. Garrison Walters
Executive Director
South Carolina Commission on Higher Education
1333 Main Street, Suite 200
Columbia, SC 29201

Dear Dr. Walters:

Coastal Carolina University is submitting for your consideration the attached Program Planning Summary for a Bachelor of Science in Information Systems.

Thank you for your help in the reviewing process. I look forward to hearing from you.

Sincerely,

Robert Sheehan, Ph. D.
Provost and Senior Vice President for Academic and Student Affairs

## PROGRAM PLANNING SUMMARY

### PROGRAM DESIGNATION

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| **Institution:** | Coastal Carolina University |
| **Academic unit involved:** | College of Natural and Applied Science |
| | Computer Science Department |
| **Name of proposed program:** | Bachelor of Science in Information Systems |
| **CIP Code:** | 11.0401 |
| **Proposed date of implementation:** | Fall 2009 |
| **New program or modification:** | New program |
| **Number of credit hours:** | 120 |
| **STEM designation** | Yes |

### JUSTIFICATION OF NEED

Coastal Carolina University proposes to offer a Bachelor of Science in Information Systems in Fall 2009. Since 1986, Coastal Carolina University has offered a Bachelor of Science in Computer Science. The current program allows 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. Coastal proposes to move the information systems emphasis, with some minor changes in the curriculum, into the proposed new degree program. The current computer science degree will continue with a theoretical emphasis only.

While there is a definite need for graduates in computer science with a theoretical emphasis who can go on to advanced studies and research in the field, there is also a critical need for information systems specialists. 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. The B.S. in Information Systems addresses these needs. Separating the information systems emphasis from the computer science degree will allow employers who are looking for applications programmers, systems analysts, networking specialists, and information systems managers to more easily recognize the special skills and preparation of graduates with this degree. 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 and information systems, as well as software engineering, computer engineering, and information technology. We have designed the B.S. in I.S. program to match these curricular recommendations from the ACM and from our accreditation board (ABET).

The B.S. in Information Systems degree program will prepare graduates to use information technology to solve problems in business, industry, government agencies, and institutions. Graduates will be prepared to design, implement, manage, and evaluate information systems and to integrate emerging information technologies into an organization. Graduates will also be prepared to pursue graduate studies in information systems. The program includes courses in programming, web application architecture, system administration, database design and administration, networking, project management, systems analysis and design, software engineering, and information security. 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 the information systems degree. 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 170 majors in computer science, 80 of whom have chosen the information systems emphasis. It is anticipated that these students would select the Information Systems major. Future accreditation of the program will likely attract even more majors. Furthermore, CCU completed an initial analysis of the potential market for this proposed program in the fall of 2008. In an email survey conducted among all CCU applicants, 29% of respondents (62 of 212) indicated they would be interested in the B.S. in I.S. program.

## ASSESSMENT OF EXTENT TO WHICH THE PROPOSED PROGRAM DUPLICATES EXISTING PROGRAMS IN THE STATE
This program is similar to programs offered by the College of Charleston, the University of South Carolina (USC), and Clemson University. At the time of this application, only the USC program in information systems is accredited by ABET. Francis Marion University offers a program with some similarities but that program is more managerial and organizational and less technical than Coastal's proposed degree. The proposed degree represents only minor changes to the current "emphasis" curriculum that is being taught in the computer science major. 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 population 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 – Information Systems emphasis degree. The proposed degree in Information Systems will share 11 required courses with the current degree in Computer Science, and both degrees would offer a number of electives that could be taken by students in either program.

Furthermore, Information Systems is an applied science discipline which involves the application of information systems theory and technologies to real-world organizational problems. As such, this degree is complementary to many other degrees as a double major. Many disciplines involve the use of information systems in some way, such as software accounting systems in business, data collection and analysis software in science, and technology used to enhance learning in education. Students majoring in any business, science, or education discipline would be able to apply information systems knowledge and skills to their primary major field.

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

The proposed program may increase the use of existing South Carolina articulation agreement with Horry Georgetown Technical College and Florence-Darlington Technical College.

## TOTAL NEW COSTS ASSOCIATED WITH IMPLEMENTING THE PROPOSED PROGRAM

With the rapid growth in Information Systems, 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 Systems track. 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 Systems 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.

_Dav A. DeCenzo_

Dr. David A. DeCenzo, President
Coastal Carolina University

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