New Program Proposal
Bachelor of Science in Information Technology
Coastal Carolina University

Summary

Coastal Carolina University requests approval to offer a program leading to the Bachelor of Science in Information Technology to be implemented in Fall 2014. The proposed program is to be offered through traditional and online instruction. The following chart outlines the stages for approval of the proposal; the Advisory Committee on Academic Programs (ACAP) voted to recommend approval of the proposal to the Committee on Academic Affairs and Licensing (CAAL). The full program proposal is attached.

Stages of Consideration	Date	Comments
Program Planning Summary received and posted for comment	2/1/2012	
Program Planning Summary considered by ACAP	3/22/2012	The representative from Coastal stated that this degree will increase collaboration with Horry Georgetown Technical College. He also clarified that the existing Computer Science degree is a theoretical degree and the existing Information Systems degree is a systems approach degree whereas the proposed Information Technology degree is an application-based degree. One ACAP member expressed concern about program duplication. USC's representative stated that USC has a similar program that has approximately 150 students enrolled, but USC has experienced difficulty in increasing the number of students after pursuing various initiatives for a number of years. She also commented that the faculty salaries listed for new hires might be too low. CHE staff requested that the proposal clearly discuss the distinctions between the Information Technology and Information Systems degrees. CHE staff also suggested including more explanation about the human factors aspect of the degree as well as more detail regarding the articulation between the A.A.S. degree and the proposed program.
Program Proposal Received	1/15/2014	
ACAP Consideration	2/20/2014	ACAP members expressed support for the proposed program.

Stages of Consideration	Date	Comments
Comments and suggestions from CHE staff to the institution	2/21/2014	Staff requested the proposal be revised to include the following: • more information about employment opportunities in the state; and • a corrected cost chart identifying equipment costs if hardware upgrades are needed. Staff also recommended making the section on admissions criteria more concise and omitting the appendices.
Revised Program Proposal Received	4/2/2014	

Recommendation

The staff recommends that the Committee on Academic Affairs and Licensing commend favorably to the Commission the program leading to the Bachelor of Science in Information Technology at Coastal Carolina University to be implemented in Fall 2014.

COASTAL CAROLINA UNIVERSITY
Conway, South Carolina

Proposal to
The South Carolina Commission on Higher Education

To establish a

Bachelor of Science in Information Technology

January 15, 2014

Program Contact:

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David A. DeCenzo
President

I. Classification

Program Title: Bachelor of Science in Information Technology
Academic Unit Involved: College of Science
Dept. of Computer Science & Information Systems
Designation, Type, and Level: 4-year Bachelor of Science degree in
Information Technology
Proposed Date of Implementation: Fall 2014
CIP Code: 11.0103
Site: Main Campus – Coastal Carolina University
STEM, Palmetto Fellows
and Life Scholarship Designation: Yes
Delivery Mode: Traditional and online

II. Institutional Approval

List of all internal institutional bodies of which approval was required and the dates on which each such body approved the program.

Internal Institutional Body	Date of Required Approval
Curriculum Committee, College of Natural and Applied Science	April 16, 2012
Academic Affairs Committee	April 18, 2012
Faculty Senate	May 10, 2012
Provost	May 11, 2012
President	May 11, 2012
Board of Trustees	Feb. 14, 2014

III. Purpose

Purpose of the Program
While there is still a strong existing need for graduates from traditional computer science and information systems programs, at the same time, there is also 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, and this organization recommends "increased support for college and university educational programs to align them with the needs of technology-intensive industries" [1]. Likewise, nationally, the Bureau of Labor Statistics indicates that employment in the area of information technology will grow faster than most other areas through the year 2020. Hands-on problem solving skills and broad background knowledge concerning various ways to integrate technology into new and existing systems will allow students to be ready to fill this important infrastructure area in the increasingly expanding field of Information Technology. Graduates of the proposed program will be particularly well suited for careers in some of the fastest growing occupations, as shown in the examples listed in Table 1.

[1] South Carolina Technology Alliance website. http://www.sctech.org/advocacy.php

Job Title	2010 Median Pay	Entry-Level Education	Job Outlook 2010-20	Employment Change 2010-20
Information Security Analysts, Web Developers, and Computer Network Architects	$75,660 per year $36.37 per hour	Bachelor's degree	22% (Faster than average)	65,700
Network and Computer Systems Administrators	$69,160 per year $33.25 per hour	Bachelor's degree	28% (Faster than average)	96,600
Computer System Analysts	$77,740 per year $37.38 per hour	Bachelor's degree	22% (Faster than average)	120,400
Database Administrators	$73,490 per year $35.33 per hour	Bachelor's degree	31% (Much faster than average)	33,900

Table 1. IT Job Outlook (*Data obtained from [2] Bureau of Labor Statistics Occupational Outlook Handbook 2012-13)*

As of early 2014, combined data from the CareerBuilder [3] and SC Works [4] job banks indicated that South Carolina employers had a total of 222 open, unfilled positions related to Information Technology. This number is expected to increase significantly, as the SC Department of Labor and Workforce [5] projects a 20% increase in demand for employment of Computer and Information Systems Managers by 2020, relative to 2010 employment data. In the same time period, Computer and Mathematical Occupations are expected to grow by nearly 21%, with a 21% increase in the number of Computer Specialists employed. Since these projections are based upon sector, it is likely that the actual growth in demand for skilled individuals with Information Technology experience will be higher, since some workers with formal IT education are employed out of sector in positions requiring technical computer skills.

The Association of 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. The proposed B.S. in I.T. program is designed to match these curricular recommendations from the ACM and from the accreditation board (ABET). ***Currently, there are only twenty-one ABET-accredited four-year information technology degrees in the nation, none in South Carolina.*** Coastal Carolina University would like to be among the first accredited I.T. programs in the state.

[2] Bureau of Labor Statistics Occupational Outlook Handbook 2012-13, Computer and information technology occupations. http://www.bls.gov/ooh/computer-and-information-technology/.

[3] CareerBuilder, LLC. http://www.careerbuilder.com/Jobseeker/Jobs/.

[4] SC Works online services. https://jobs.scworks.org/jobbanks/.

[5] South Carolina Department of Workforce 2010-2020 Long Term Occupational Projections. Requested directly from the agency.

Objectives of the Program
The B.S. in Information Technology degree program (1) will prepare graduates to apply technology to solve problems in business, industry, government agencies, and institutions. (2) Graduates will be prepared to design, implement, manage, and evaluate technology systems and infrastructure. (3) They will be able to integrate emerging information technologies into an organization. (4) Graduates will also be prepared to pursue graduate studies in information technology. The proposed program will include courses in web application development, systems administration, virtualization, information security, networking, project management, human-computer interaction, and systems integration. In addition to technical skills, (5) the program will emphasize development of strong communication and management skills through courses such as business communication and technical writing.

IV. Justification

Need for the Program in the State
Information Technology (IT) pervades nearly every area of modern life, from financial transactions, to smartphone applications, to national critical infrastructure. In order to support existing and future technology demands and help drive innovation, a large, educated IT workforce is needed. According to the (U.S. Department of Labor) Bureau of Labor Statistics, the IT industry is expected to grow 6.1% annually from 2010-2020, more than double the average projected growth rate for all industries. Much of this growth is driven by demand in cloud computing and information security, as well as in health care IT, mobile networking, and data management [6]. The Association for Computing Machinery, the primary resource for computer science and information systems curricula guidance, released a recommended curricula for four-year IT programs in 2008, and the Accrediting Board for Engineering Technology (ABET) began accrediting four-year IT programs in 2003.

While there are many information technology-related degrees offered at two-year institutions across South Carolina, there are relatively few four-year degree programs in information technology in the state. The increasing dependence upon, complexity of, and demand within the information technology sector support the need for four-year degree programs in information technology, both for students starting at four-year institutions and for students with associates degrees interested in bachelor's degree completion programs. In particular, Coastal Carolina University plans to provide a path for nearby Horry-Georgetown Technical College (HGTC) students with an A.A.S. degree in Computer Technology to complete our related B.S.I.T. degree with just an additional two years at Coastal Carolina University (CCU).

[6] Csorny, L. (April 2013). Careers in the growing field of information technology. *Employment & Unemployment 2(9). Bureau of Labor Statistics.* Retrieved September 17, 2013 from http://www.bls.gov/opub/btn/volume-2/careers-in-growing-field-of-information-technology-services.htm.

In order to help fill this demand for educated IT workers and to produce highly-employable graduates, Coastal Carolina University proposes to offer a Bachelor of Science in Information Technology starting in Fall 2014. Since 1986, Coastal Carolina University has offered a Bachelor of Science in Computer Science, and, since 2010, 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 foundation courses in computer science. Both programs emphasize software engineering and programming as fundamental areas of knowledge. Although the proposed information technology degree will include some programming, it will focus more on system administration, networking, and security aspects of the design, implementation, management, and evaluation of technology. This program is also designed to allow a student with an A.A.S. degree in Computer Technology from a school in the South Carolina Technical College System to potentially complete the Bachelor's degree at Coastal Carolina University in two years.

Coastal Carolina University currently enrolls approximately 290 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 computer science and information systems students would select the new information technology major as a better fit for their interests, skills, and career goals. An improvement in retention with the department's majors is anticipated as well, since the IT program will be a new option for students who tried computer science or information systems but didn't find either a perfect fit. Coastal Carolina University completed an initial analysis of the potential market for this proposed program in the spring of 2012. In an e-mail survey conducted among all students, 49.86% of respondents (178 of 357) indicated they would be interested in pursuing the B.S. in I.T. program. In addition to these new college freshmen and existing Coastal Carolina University students, we also hope to attract graduates from technical colleges throughout the state who have a two-year A.A.S. degree in computer technology and who will use the proposed program at Coastal Carolina for completion of a bachelor's degree. Future accreditation of the program would likely attract even more majors.

Centrality of Program to the Mission of Coastal Carolina University
This new degree proposal directly supports Coastal Carolina University's mission to offer "baccalaureate and selective master's programs of national and/or regional significance in the arts and sciences, business, humanities, education, and health and human services." It further supports the institution's mission by preparing knowledgeable, productive, and responsible graduates to contribute positively to society and to economic development, in this case through the development and management of computer information systems.

Coastal Carolina University will be seeking ABET accreditation for the proposed information technology degree. The existing degree in theoretical computer science has been accredited by ABET, Inc. since 2002. The same accrediting board will assess both the computer science and information systems degree in 2014. ABET accreditation is based on the evaluation of a program's student achievement, program improvement, faculty, curricular content, facilities, and institutional commitment.

Relationship of Program to Existing Programs at Coastal Carolina University
The proposed program will require the use of some specific courses that are currently being taught on a regular basis by the Department of Computer Science and Information Systems, the Mathematics Department, and the English Department at Coastal Carolina University. These are already required or elective 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

specific set of information technology specialization courses, some of which may also be taken as electives in the other programs. Three (3) new courses have been created specifically for this proposed degree program.

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 some knowledge of a specific application domain. The program could also be complementary to several 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 and 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.

Listing of Similar Programs Within the State
This proposed program is related in nature to programs offered by Furman University (B.S. in Information Technology), Bob Jones University (B.S. in Information Technology), Limestone College (B.S. in Computer/Information Technology Services Administration), South University (B.S. in Information Technology), and the University of South Carolina (B.S. Integrated Information Technology from the College of Hospitality, Recreation & Sport Management). Each of these schools offers a bachelor's degree in information technology, but all differ in terms of course requirements.

Relationship of Proposed Program to Existing Programs Within the State
None of the programs listed is currently accredited by ABET, and none of these programs directly serves Horry and Georgetown counties. The proposed 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 our student population in the coming years.

There are multiple accredited computer science and information systems programs throughout South Carolina and most other states as well. In the event that another program would become accredited by ABET in the field of information technology, it is not believed that multiple programs in different state economic and geographic areas constitutes unnecessary duplication.

Likewise, Horry-Georgetown Technical College is located immediately next to Coastal Carolina University. Annually, over twenty-five students graduate with an A.A.S. in Computer Technology from HGTC. Currently, there is no local program in which they can maintain residency in Horry or Georgetown County and matriculate for a baccalaureate degree in their field. The only alternative advertised by HGTC is to complete a B.S. from Western Kentucky University through distance education. It is important to provide these students an opportunity to complete a four-year degree locally. Many of these students are already employed in the area, have families in the area, and consequently cannot easily contemplate a move to another region in South Carolina or outside the state.

Similarities and Differences of Proposed Program to Other State Programs
The in-state institution offering a somewhat similar Information Technology B.S. degree that is closest geographically to Coastal Carolina University is the University of South Carolina, which is approximately 200 miles away in Columbia, South Carolina. CCU's proposed B.S. in Information Technology program will provide needed opportunities to a region of the state

where distance may pose a barrier to further training in this growing and important field. Local students from Horry and Georgetown Counties, as well as recent A.A.S. graduates from nearby Horry-Georgetown Technical College, will find it more convenient and financially viable to pursue this degree close to home and to take advantage of the seamless transition from similar programs into this new one, thereby better serving the needs of our service area and producing the technology training so crucial to our region's success and to the success of the state. The program, itself, is not unique, but the opportunities it offers are.

V. Admission Criteria

The proposed program will not have any program-specific admissions requirements beyond the University-wide general admissions requirements for freshmen or transfer students. Credits for Advanced Placement, transfer coursework, and other higher education experience will be evaluated according to existing University policies, including Memoranda of Agreement with South Carolina technical colleges. For this specific program, a Memorandum of Agreement has been executed between Coastal Carolina University and Horry-Georgetown Technical College to establish a bachelor degree completion program for students earning an A.A.S. in Computer Technology at Horry-Georgetown Technical College.

Degree Completion Program
Students transferring with an A.A.S in Computer Technology from Horry-Georgetown Technical College will follow general transfer admissions procedures. Credit will be awarded on a course-by-course basis, as per the Memorandum of Agreement between Coastal Carolina University and Horry-Georgetown Technical College. Students may transfer into the B.S. in Information Technology program regardless of whether they have completed the A.A.S degree. However, for students who have completed the A.A.S in Computer Technology degree, the Minor requirement (18 hours) will be waived, as per the Memorandum of Agreement between Coastal Carolina University and Horry-Georgetown Technical College. It would generally be in the student's best interest to complete the A.A.S. degree before entering the B.S degree program.

VI. Enrollment

PROJECTED TOTAL ENROLLMENT						
YEAR	FALL		SPRING		SUMMER	
	Headcount	Credit Hours	Headcount	Credit Hours	Headcount	Credit Hours
2014-2015	9	135	13	194	NA	NA
2015-2016	20	294	22	334	NA	NA
2016-2017	23	342	25	376	NA	NA
2017-2018	25	368	27	399	NA	NA
2018-2019	25	382	27	411	NA	NA

Discussion of How Estimates Were Made
Based on the existing information systems concentration enrollment trends over the past three years and the planned growth of the University as described in its Strategic Plan, we conservatively estimate a 10% increase in enrollment each year. In addition, our initial estimates for the size of the program are conservative, in order to illustrate that the program will be financially successful even with relatively low enrollment numbers. Depending on the popularity of the program, enrollment numbers could be higher, especially if a larger than expected number of transfer students from Horry Georgetown Technical College enroll in the program, or if a larger than expected number of existing computer science and information systems students change to the new major. In the latter case, the total enrollment within the department would remain constant, since the internal enrollment growth would represent changes of major of existing students, as opposed to completely new students.

Students will likely average 15 credit hours per each fall and spring semester. Summer school course offerings are typically limited to freshman-level introductory courses, although major course work will be offered in summer when justified by student demand. Present Coastal Carolina University policies require summer classes to be self-supporting, which requires a minimum enrollment of 8 to 10 students in order to run a summer class. Demand for upper-level computer science and information systems courses has historically been too weak to support these enrollment levels, largely due to limited student financial aid availability during the summer. If these conditions change, a larger number of 12-month enrollment opportunities may become available.

Projected New Students
It is expected that initial enrollments in the Information Technology degree program will be modest, as the degree program will be new and will not be up for ABET accreditation for some years after initial development. Most of the new students will enter the program from three groups: new freshmen, existing Coastal Carolina University students who change into the Information Technology major, and transfer students from Horry Georgetown Technical College.

Among students who enter Coastal Carolina University as freshmen, it is the experience of the Department of Computer Science and Information Systems that the majority of these students initially declare a major in computer science. Of these incoming students, approximately 75% change to a major outside the Department of Computer Science or leave the University entirely. Among the 25% remaining, roughly half elect to remain in the computer science degree program, while the other half switch to the information systems program. It is expected that the Information Technology degree program will allow the department to retain more of the 75% of students who elect not to continue in a software development-oriented degree. Although some students who might otherwise have remained in the computer science or information systems majors could potentially switch to Information Technology, we expect these impacts to be minimal.

Estimates for the number of incoming students from Horry Georgetown Technical College were obtained by utilizing actual transfer enrollment numbers from similar transfer arrangements in the past, as well as estimates from Horry Georgetown Technical College. These latter estimates were based upon the number of students electing to continue in the online 4-year B.S. Information Technology program offered by Western Kentucky University, with which Horry Georgetown Technical College has an existing transfer articulation agreement. Since the proposed Information Technology program at Coastal Carolina University will be offered in a

traditional format, it is likely that some Horry Georgetown Technical College students who continue to a 4-year degree will continue to enroll at Western Kentucky University for the online degree format.

ESTIMATED NEW ENROLLMENT						
YEAR	**FALL**		**SPRING**		**SUMMER**	
	Headcount	Credit Hours	Headcount	Credit Hours	Headcount	Credit Hours
2014-2015	9	135	5	75	0	0
2015-2016	9	135	5	75	0	0
2016-2017	9	135	5	75	0	0
2017-2018	9	135	5	75	0	0

VII. Curriculum

The proposed information technology curriculum shares a common core of required courses with the information systems program and also takes advantage of the more IT-related information systems electives and web application development minor courses. Majoring in IT allows students to focus on computing infrastructure, systems security, and systems analysis, as opposed to the software engineering and web application development focus of the IS program.

Furthermore, the program may be completed in four years by students starting out at CCU, or in two years by students transferring in with an A.A.S. in Computer Technology from HGTC (assuming specific advisement for this program while at HGTC in order to take the most applicable electives).

By leveraging existing courses within the information systems major, the existing web application development minor, and other existing programs, only three new courses will need to be created to support the IT program. Despite the overlap, these three new courses, along with a specific combination of courses which are only electives in other programs, will distinguish the IT curriculum from the other departmental programs.

INFORMATION TECHNOLOGY MAJOR
Degree: Bachelor of Science

Students must earn a grade of **C** or better in all Foundation and Major Requirement courses.

I. CORE CURRICULUM (34-41 Credits)... 34-41

II. FRESHMAN GRADUATION REQUIREMENT (0-3 Credits)
    Minimum grade of **C** is required.
    UNIV 110 The First-Year Experience 3
    UNIV 110 is required for all new entering freshmen and for new transfer students with fewer

than 12 transfer credit hours unless the transfer student has satisfactorily completed a college transition course.

III. FOUNDATION COURSES (25-41* Credits)*
    Choose one of the following: (3 credits) 3
       ENGL 211* Technical Writing (3)
       ENGL 102* Composition and Critical Reading (3)
    <u>Communication</u>
    Choose one from the following: (3 Credits)... 3
       ENGL 290* Introduction to Business Communication (3)
       ENGL 390 Business and Professional Communication (3)
       COMM 140* Oral Communication (3)
    Choose one of the following: **..** 3-4
       STAT 201/201L* Introductory Statistics /Laboratory (4)
       CBAD 291* Business Statistics (3)
       PSYC 225/225L* Psychological Statistics/laboratory (4)
    Choose one of the following:...3-4
       MATH 132* Business Calculus (3)
       MATH 160* Calculus (4)
    Choose one of the following:.. 3
       CSCI 101 Intro to the Internet and World Wide Web (3)
       CSCI 130 Introduction to Computer Science (3)
    CSCI 110 Enterprise Business Solutions... 3
    CSCI 120 Intro to Web Application Development... 3
    Choose one of the following:...3-4
       CSCI 135 Intro to Programming (3)
       CSCI 140 and CSCI 140L Introduction to Algorithmic Design (4)
    CSCI 170 Ethics in Computer Science 1
    CSCI 211 Computing Infrastructure-Hardware.. 3
    CSCI 225 Intro to Database Management Systems.. 3
    CSCI 203 Introduction to Web Application Development.. 3

    Problem Solving, Critical Reasoning, Professional Development.. 6
    Choose 6 hours from the following (These courses may not overlap with the minor/cognate requirements):

CSCI 300 or higher	ENVI 331/MSCI 331 and	PHIL 110
CSCI 150 and CSCI 150L	ENVI 331L/MSCI 331L	PHIL 220
CSCI 210	GEOG 200	PHIL 315
BINF 101 and BINF 101L	GEOG 204	PHIL 321
BIOL 122 and BIOL 122L	GEOG 311	PHYS 212 and PHYS 212L
CBAD 203	GEOG 400	PHYS 213 and PHYS 213L
CBAD 292	GEOL 112 and GEOL 112L	PHYS 321
CBAD 393	BSHA 455	PHYS 432
CBAD 364	HPRO 380	POLI 311
CHEM 112 and CHEM 112L	MSCI 112 and MSCI 112L	POLI 421
COMM 274	MATH 161	PSYC 303
COMM 341 or THEA 341	MATH 174	RSM 394
ECON 321	MATH 220	ROTC 201 and ROTC 201L
ENGR 101	MATH 242 and MATH 242L	STAT 318
ENVI 201 and ENVI 201L	MATH 260	THEA 255

	MATH 320 MATH 408	THEA 356

*Credits for courses taken as part of the Core Curriculum are not counted elsewhere in the major.

IV. MAJOR REQUIREMENTS (24 Credits)

    CSCI 335 Software Project Management.. 3
    CSCI 370 Networking 3
    CSCI 385 Intro to Computer Security... 3
    CSCI 415 System Administration... 3
    CSCI 416 Linux System Administration 3
    CSCI 427 System Integration... 3
    CSCI 444 Human Computer Interaction... 3
    CSCI Elective 300 level or higher 3

V. Minor (Web Application Development minor or Computer Science minor may not be used to satisfy this requirement) (18-24 Credits)

Students who transfer with an approved A.A.S in Computer Technology from a South Carolina Technical College may waive the minor requirement.

V. ELECTIVES (0-6 Credits) 0-6

TOTAL CREDITS REQUIRED 120

New Courses
The following courses will be offered for the first time as requirements for the information technology major:

CSCI 211: Computer Infrastructure
This course covers core computer hardware, including the relationships between components of a computer system. Software components are also introduced, including the fundamentals of the computer operating system and an introduction to virtualization systems.

CSCI 427: System Integration
Introduction to, and practice of, designing and integrating large-scale information processing systems, with a focus on selecting and implementing hardware and software systems to develop an appropriate IT solution. Topics include systems provisioning, software integration, hardware management, availability, scalability, and disaster recovery capability. Students will design an integrated information system to implement a solution to a case study problem.

CSCI 444: Human Computer Interaction
A large percentage of the world's software is devoted to the interface between computers and their users, and usability is one of the key factors deciding whether a software project succeeds or fails. This course explores the requirements analysis, design and evaluation of the User Interface in the context of Software Engineering Processes. Specific methods and design problems will be illustrated with real-world examples in information technology, the Internet, communications, mobility, multimedia, and speech technologies.

The addition of these courses allows the program to meet curriculum requirements for future accreditation of the information technology degree.

VIII. Assessment

By offering a B.S. in Information Technology, Coastal Carolina University will continue to serve the community by providing a high-quality educational experience for students and by producing graduates who can contribute to society and economic development through successful design, development, and/or management of the technologies that support computer information systems.

Program Objectives/Student Learning Goals

Computer science/computer information systems/information technology graduates should:

I. Contribute to society and/or economic development through the application of strong core competencies in the field

II. Advance in their careers and/or education by applying their:
      a. communication and collaboration skills
      b. problem solving abilities
      c. appreciation of and commitment to professional ethics
      d. knowledge of computer science/information systems

III. Successfully adapt to technological, societal, and environmental change by building upon strong foundational competencies and continuing lifelong learning in computer science/information systems/information technology or related areas.

Each Program Objective is assessed using both direct and indirect methods, with at least one direct method of assessment per objective. A triangulation strategy of data collection is used to validate the assessment data for each SLO assessed. Triangulation requires us to collect data from multiple sources using both direct and indirect methods. Direct assessment methods generally evaluate the skills of students by testing factual knowledge (e.g.: test questions). Indirect methods generally evaluate the interpretation of learning achieved (e.g. survey questions). We achieve triangulation by targeting three main data sources (each with numerous individual data points): Course data reported via Faculty Course Assessment Reports (FCARs), knowledge-based questions of the Senior Exit Exam, and survey-based questions of the Senior Exit Exam.

Student Learning Outcomes (as required by ABET)

Computer Science, Information Systems, and Information Technology
    a) An ability to apply fundamental principles of computing and mathematics.
    b) An ability to analyze a problem, and identify and define the requirements appropriate to its solution.
    c) An ability to design, implement, and evaluate a solution to meet specific requirements subject to a set of constraints.
    d) An ability to function effectively on multidisciplinary teams to accomplish a common goal.
    e) An understanding of professional and ethical responsibilities.
    f) An ability to communicate effectively, both verbally and in writing.
    g) An ability to analyze the local and global impact of computing on individuals, organizations, and society.
    h) Recognition of the need for and an ability to engage in life-long learning.
    i) An ability to use current techniques, skills and tools necessary for computing practice.

Information Technology
  j) An ability to use and apply current technical concepts and practices in the core information technologies.
  k) An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation and administration of computer-based systems.
  l) An ability to effectively integrate IT-based solutions into the user environment.
  m) An understanding of best practices and standards and their application.
  n) An ability to assist in the creation of an effective project plan.

The Student Learning Outcomes can be mapped to the Program Objectives but are individually assessed as they relate to current students, as required by ABET. These outcomes are evaluated twice within each evaluation cycle, using the same process employed to evaluate the Program Objectives. After gathering assessment results in the first year of the cycle, they are evaluated during the second year, which may result in curricular changes. This assessment is repeated a second time within each cycle, so that prior changes can be evaluated and any additional modifications can be recommended. In addition to a department-level evaluation, Student Learning Outcomes are also evaluated at the course level. Evaluation methods at the course level include individual embedded exam questions, assignments, and course surveys. Department-level evaluation methods include exit exams and surveys. Because we have a set assessment schedule (meaning we know which SLOs are to be measured each year), we have opportunities to make modifications in our program after our analysis and evaluation, yet before the next data collection cycle.

IX. Faculty

List Staff by Rank (e.g. Professor #1, Professor #2, Associate Professor #1, etc.)	Highest Degree Earned	Field of Study	Teaching in Field (Yes/No)
Associate Professor #1	Ph.D.	Computer Engineering	Yes
Assistant Professor #1	Ph.D.	Computer Engineering	Yes
Assistant Professor #2	Ph.D.	Computer Information Systems	Yes
Assistant Professor #3	Ph.D.	Computer Information Systems	Yes
Assistant Professor #4	Ph.D.	Computer Science	Yes
Assistant Professor #5	Ph.D.	Computer Science	Yes
Assistant Professor #6	Ph.D.	Computer Science	Yes
Assistant Professor #7	M.S.	Computer Science	Yes
Lecturer #1	M.S.	Computer Science	Yes
Lecturer #2	M.S.	Computer Science	Yes
Lecturer #3	M.Ed.	Educational Technology	Yes

Necessary Qualifications of New Faculty
Since ABET does not require a specific terminal degree in information technology for accreditation, new hires could be credentialed in computer science, information systems, information technology, or a closely related area. In addition to teaching information technology

courses, any new faculty member would be able to teach courses in the computer science or information systems degree programs as well.

Explanation of Proposed Changes in Assignment
Current computer science and information systems faculty will staff the proposed new program. Because most of the courses in the proposed program are currently offered as a concentration within the existing computer science and information systems degrees, there will be minimal changes of assignment for existing faculty. As enrollments increase in all three degree programs offered by the department, it may be necessary to increase the number of full-time faculty to maintain the student-to-faculty ratio. Any future hires will be triggered by student demand and justified by increased tuition revenues.

Institutional Plan for Faculty Development
The University promotes professional development and growth through an ongoing process involving all faculty, and this will apply to the new B.S. in Information Technology. The Office of the Provost and Senior Vice-President for Academic Affairs oversees travel, reassigned time, small grants, and community service opportunities. Grants made available through the Office of the Provost include the following: Professional Activities Travel Mini-Grants, Academic Enhancement Grants, Assessment Mini-Grants, and Proposal Writing Grants. Support for faculty travel for presentation at professional conferences is available from the College of Science. Scholarly activities are also supported by the Office of the Vice-President for Research, providing pre-award and post-award support services for faculty seeking external funding.

Institution's Definition of Full-time Equivalents
Every 21 credit hours taught during the academic year is equivalent to one Full-Time Equivalent (FTE).

Unit Administration, Faculty, and Support Table

UNIT ADMINISTRATION/FACULTY/STAFF SUPPORT						
Year	New		Existing		Total	
	Headcount	FTE	Headcount	FTE	Headcount	FTE
Administration						
2014-2015	0	0.00	1	0.33	1	0.33
2015-2016	0	0.00	1	0.33	1	0.33
2016-2017	0	0.00	1	0.33	1	0.33
2017-2018	0	0.00	1	0.33	1	0.33
2018-2019	0	0.00	1	0.33	1	0.33

UNIT ADMINISTRATION/FACULTY/STAFF SUPPORT						
Year	**New**		**Existing**		**Total**	
	Headcount	FTE	Headcount	FTE	Headcount	FTE
Faculty						
2014-2015	0	0.00	11	2.24	11	2.24
2015-2016	0	0.00	11	2.24	11	2.24
2016-2017	0	0.00	11	2.24	11	2.24
2017-2018	0	0.00	11	2.24	11	2.24
2018-2019	0	0.00	11	2.24	11	2.24
Staff						
2014-2015	0	0.00	1	0.33	1	0.33
2015-2016	0	0.00	1	0.33	1	0.33
2016-2017	0	0.00	1	0.33	1	0.33
2017-2018	0	0.00	1	0.33	1	0.33
2018-2019	0	0.00	1	0.33	1	0.33

X. Physical Plant

Explanation of the Proposed Program's Effect on the Physical Plant's Ability to Support the New Program

At present, the Department of Computer Science and Information Systems is located in the Coastal Science Center, a 68,202 square foot classroom and laboratory facility. Within this building, the department has 6,513 square feet of office, laboratory, and student study space. Also, this building provides 13,303 square feet of shared teaching space among thirteen classrooms.

The department has three computer labs available for student use: a computer-based teaching lab, in which introductory programming courses are offered; a student research and study lab; and a student study lounge with additional computers. Students have access to additional study space in the area adjacent to faculty offices, encouraging faculty-student interaction. Since the IT program will leverage existing resources with the addition of only a few extra courses, current department facilities will be adequate to support the proposed program for the first five years.

Discussion of Additional Physical Plant Requirements
The proposed B.S. in Information Technology program requires no additional physical plant requirements. Any changes will be dictated by growth in enrollment.

XI. Equipment

The Department of Computer Science and Information Systems has three teaching and study labs equipped with computer workstations that provide both Linux and Windows operating environments. These machines have been recently upgraded with new hardware as part of a normal refreshment cycle and will be capable of supporting the new Information Technology program for the first several years.

In addition to lab computers, the department also possesses specialty equipment that will directly support the IT program. For example, the department has a collection of network switches and devices that already support the existing networking class. Human interface devices, such as Leap Motion controllers and Xbox Kinect units already used in software engineering, could be leveraged to support the human-computer interaction class scheduled to run in Fall 2014. Server resources are available to host student websites and programming projects, and former lab machines are retained in storage to decompose into parts for the computing hardware and infrastructure course, which is also scheduled for Fall 2014.

For general-purpose computing needs, students in the department are required to own personal laptop computers. Customized software environments suitable for system administration exercises can be deployed on top of these laptops using freely available virtualization software. As a result, the department is able to leverage students' own devices in order to ensure access to the technologies required in the classroom.

Since the department is in a strong position with existing technology supplies, no new major equipment items will be needed for at least the first five years of the program.

XII. Library

Effect of the Proposed Program on the Library's Ability to Support the Program
A quantitative comparison of Kimbel Library's holdings was conducted using *Bowker's Book Analysis System*. This collection tool compares current library holdings against a core list of monographs recommended for academic libraries by subject bibliographers. Comparison with such a list controls for age of collection held by peer libraries and offers a standard by which any library's holdings may be measured. The library's collection also includes media formats. Media materials may be an important part of the library's holdings for information technology, and while not considered "core" titles, must be included in a quantitative assessment of titles that support the program. Likewise, Kimbel Library's journal holdings were examined in *Ulrich's Serials Analysis System*, which compares our total periodical holdings with a recommended core list of periodicals for academic libraries. Online access to periodicals is provided via aggregator databases, publisher packages, open access titles, and direct online subscriptions. Kimbel Library provides access to 1,091 print and online-accessible periodicals relevant to the proposed major (using the Ulrich's subject *Computers*). 37.9% of these represent core titles in the relevant subject areas.

The Library likely cannot be expected to reach a sufficient percentage of core titles within just the first five years of the program, but it can make judicious use of electronic resources and

state-wide systems to supplement what it needs. The following quantitative summary lists the specific estimates of need.

Quantitative Analysis of Library Holdings
- Thirty-seven subject areas and corresponding Library of Congress (LC) call number ranges were identified for the B. S. – Information Technology program. Of the 4,148 total titles owned, 948 (22.9%) are print, 3,197 (77%) are e-books, and 3 (0.1%) are media items. The e-book collection is *strong* in the areas of general science, computer science and mathematics (Q/QA) with 2,042 titles (63.9%) followed by technology (T/TA/TK/TR) with 994 (31.3%).

- Using *Bowker's Book Analysis System* as a reference point, Kimbel Library owns 73 (4.5%) of recommended core titles for the subject areas identified.

- Kimbel Library owns over 4,100 titles to support information technology studies; of these, only 4.5% overall are considered "core" titles for an academic collection. Ten percent (10%) is used as a practical benchmark for meeting core collection holdings to support a program. Actual cost of core titles not held among the subject areas that would be considered more constituent to the program is at least $34,000. The Library realizes that these acquisition projections are based on an ideal collection of core titles; the numbers reported above are to be considered benchmarks to guide acquisition activities. Given the proposed program of study's computer utilization and the transitional nature of computer applications and technologies, should the emphasis be to move away from print monographs, electronic book options can be explored. The faculty may wish to adjust these figures based on curricular needs.

- Kimbel Library anticipates an allocation of $34,000 (based on the actual cost of core titles not owned), or $6,800 per year for five years for monographic acquisitions. Realistically, the Library cannot also be expected to reach the desired number of titles within the first five years of the program. At the end of the first five years of the program, the Library should review its holdings to ascertain the need for further funding in support of this major. In the meantime, students enrolled in the program can utilize external resources through South Carolina's shared resource program, PASCAL Delivers, or through interlibrary loan, both of which have provided excellent service and dependable resource acquisition for our students and faculty members.

- Journal subscriptions are an ongoing cost. The average cost of information technology-related journals in 2011 is $1,593, with an average annual increase of 7%. The Library's budget would need to be increased to cover the continuation of any new journal titles added. Selection of journal titles should closely conform to titles indexed in sources available to CCU students.

Qualitative Analysis of Library Holdings
In the LC Classification areas reviewed, Kimbel library holds 4,148 titles in all supporting areas. Of the 4,148 titles analyzed, 563 (13.6%) were published prior to 2000, oldest dated 1925. Average publication year of the collection is 2004 (or average age eight years); median publication year is 2007 (or median age 5 years); most frequent publication year is 2009. Electronic books make up 77% (3,197) of the analyzed total.

Circulation statistics available since 1997 (the year Kimbel Library implemented its automated library system) show that of 1,020 *physical* items (electronic books are not included in

circulation statistics), 621 were checked out 1,748 times, or on average two times each. More precisely, 399 physical items (dating from 1925 through 2011) had no circulation incidents, and 249 had two or more circulation incidents, up to 10 or more incidents for 10 titles. These "Top 10" titles have circulation counts ranging from 10 to 19 uses; all books are in the QA call number range (mathematics and computing machinery.) DVDs had only one or two circulation incidents. There is no correlation between publication date and item circulation.

In-house use (tracked from 1999) for the same 1,020 physical items show that 624 (61%) of these have no record of internal use, while 396 items were used in-house at least once, up to more than 10 uses for two titles. These two high internal use titles, dated 1986 and 2004, demonstrate that there is no correlation between in-house use and publication date. Internal use of DVDs is zero, since security cases for these items require that they be checked out (circulated) in order to be used.

XIII. Accreditation, Approval, Licensure or Certification

Discussion of the Impact on Program Accreditation
Coastal Carolina University will seek accreditation for the degree in information technology within four years of program initiation. The degree in theoretical computer science has been accredited by the Accreditation Board for Engineering and Technology (ABET) since 2002, and they will assess the information systems degree in 2014. The same accrediting board will later assess the information technology degree. ABET accreditation is based on the evaluation of a program's student achievement, program improvement, faculty, curricular content, facilities, and institutional commitment.

ABET Curriculum Requirements for Information Technology [7]
Students must have course work or an equivalent educational experience that includes:

a. Coverage of the fundamentals of

  1. the core information technologies of human computer interaction, information management, programming, networking, web systems and technologies. [IT]
  2. information assurance and security. [IT]
  3. system administration and maintenance. [IT]
  4. system integration and architecture. [IT]

b. Advanced course work that builds on the fundamental course work to provide depth. [IT]

XIV. Articulation

The Bachelor of Science in Information Technology is designed to allow students with an A.A.S. degree in Computer Technology from Horry Georgetown Technical College to earn a Bachelor's degree in two years beyond the Associate's degree. A Memorandum of Understanding between HGTC and CCU, which ensures that HGTC credits transfer favorably, is attached. A mapping of HGTC courses into the proposed IT program is included in the MOU document.

[7] Criteria for Accrediting Computing Programs, 2013-2014. ABET Website.
http://www.abet.org/DisplayTemplates/DocsHandbook.aspx?id=3148

XV. Estimated Costs and Sources of Financing

ESTIMATED COSTS BY YEAR						
CATEGORY	**1ST**	**2ND**	**3RD**	**4TH**	**5TH**	**TOTALS**
Program Administration[1]	$26,219	$26,743	$27,278	$27,824	$28,380	$136,445
Faculty Salaries[2]	$122,024	$124,465	$126,954	$129,493	$132,083	$635,020
Graduate Assistants	0	0	0	0	0	0
Clerical/Support Personnel[3]	$12,076	$12,318	$12,564	$12,815	$13,071	$62,844
Supplies and Materials	$1,000	$1,000	$1,000	$1,000	$1,000	$5,000
Library Resources	$6,775	$6,775	$6,775	$6,775	$6,775	$33,874
Equipment	0	0	0	0	0	0
Facilities	0	0	0	0	0	0
Other	0	0	0	0	0	0
Totals	$168,094	$171,301	$174,571	$177,907	$181,310	$873,183
SOURCES OF FINANCING BY YEAR						
CATEGORY	**1ST**	**2ND**	**3RD**	**4TH**	**5TH**	**TOTALS**
Tuition Funding (all students)	$197,856	$380,190	$437,773	$471,015	$490,921	$1,977,755
Program-Specific Fees						0
State Funding						0
Reallocation of Existing Funds						0
Federal Funding						0
Other Funding (Endowment, Auxiliary etc.)						0
TOTALS	$197,856	$380,190	$437,773	$471,015	$490,921	$1,977,755

Statement About Assumptions for Cost Table
The following items have dictated estimates about funding:
    (1) Program administration is based upon .30 of Director's salary plus 28% fringe for year one. Years 2-5 are based on a 2% increase.
    (2) 28% Fringe Benefits are included with faculty salaries. Years 2-5 are based on a 2% increase.
    (3) Clerical/Support salary includes 28% fringe for year one. Years 2-5 are based on a 2% increase.

Statement About Unique Costs or Other Special State Appropriations
Tuition fees are estimated to cover the cost of this new program. The proposed B.S. in Information Technology program has no unique costs or other special state appropriations associated with it. No funding will be requested from the state.

Information Regarding Estimated Program Costs
Program costs are covered by students' tuition payments. Estimates indicate a potential for sustained growth over the first five years of the program.

COASTAL CAROLINA
U N I V E R S I T Y

Office of Risk Management

MEMORANDUM

To: Susan Talbot, Provost Office

Subject: Contract (s) to include

RE: #487   HGTC MOA ITS

Date: December 16, 2013

Enclosed you will find two copies of the original Contract (s) for the above referenced. Please have the authorized representative complete the execution of the Contract (s) and return the original (s) to Rose Marie Johnson, Office of Risk Management, Singleton 106. Should you have any question, please do not hesitate to call Rose Marie at 349-6448.

Enc: Contract

Memorandum of Agreement – Transfer Partnership
Associate of Applied Science in Computer Technology
to
Bachelor of Science in Information Technology

This Memorandum of Agreement establishes a partnership between Horry-Georgetown Technical College and Coastal Carolina University for the implementation of a completion program (2+2) for the Bachelor of Science degree in Information Technology awarded by Coastal Carolina University. This partnership is designed to increase the higher education opportunities for the graduates of Horry-Georgetown Technical College's Associate in Applied Science degree program in Computer Technology (Transfer Path).

Coastal Carolina University and Horry-Georgetown Technical College agree to provide the opportunity for a seamless transition for Computer Technology graduates of Horry-Georgetown Technical College to the Bachelor of Science in Information Technology at Coastal Carolina University. Horry-Georgetown Technical College is a multi-campus, publicly supported comprehensive community/technical college, part of the South Carolina Technical College System, and is authorized to award associate degrees, diplomas and certificates. Coastal Carolina University is a public, mid-sized, comprehensive liberal arts-oriented institution offering bachelor's and Master's degrees, and a doctoral level degree in Marine Science. Both institutions are accredited by the Southern Association of Colleges and Schools, Commission on Colleges.

Horry-Georgetown Technical College agrees to:
- Provide coursework for the completion of the Associate in Applied Science degree (75 credit hours) in Computer Technology, with student advisement for transfer coursework.
- Assist with the marketing and recruiting of associate degree graduates.

Coastal Carolina University agrees to:
- Give admissions preference to HGTC Computer Technology graduates.
- Accept a maximum of 76 credit hours of articulated Horry-Georgetown Technical College coursework towards the Coastal Carolina University Bachelor of Science in Information Technology (60 credits of A.A.S. in Computer Technology required coursework).
- Facilitate advising of Horry-Georgetown Technical College students for a seamless transfer of courses to Coastal Carolina University. Coastal Carolina University will provide staff for collaboration in order to advise Horry-Georgetown Technical College students who wish to transfer to Coastal Carolina University.

Horry-Georgetown Technical College and Coastal Carolina University both agree:
- Certain core curriculum requirements for CCU may be completed at either institution with a maximum of 76 credit hours accepted in transfer.
- Collaborate, as feasible and in accordance with each institution's policies, for joint utilization and/or scheduling of facilities, faculty and support services.
- Review this Memorandum annually and amend, in writing, as mutually agreed upon and with approval of authorized officials. At minimum, the Memorandum will be renewed every three years, if mutually acceptable.
- Monitor and adapt, as needed, to ensure successful implementation to meet the needs of Horry-Georgetown Technical College transfers. The institutions will continue to coordinate for the purpose of curriculum alignment.
- Communicate any proposed curriculum or admissions revisions prior to implementation.

In order to receive transfer credit, students must do the following:
1. Complete the Associate in Applied Science Degree in Computer Technology that includes specific courses identified by this agreement.
2. Earn no less than the grade of C in any course.
3. Meet with a Coastal Carolina University advisor before enrolling in Coastal Carolina University coursework. This is recommended prior to graduation from Horry-Georgetown Technical College or as soon as possible following associate degree completion.
4. Meet admission criteria for Bachelor of Science in Information Technology at Coastal Carolina University by fulfilling the requirements specified in the catalog which is current at the time of application to the program.

Attachments: Advisement Plan for Students

AFFIRMED BY:

Coastal Carolina University
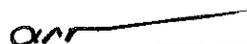
Michael Roberts   11/17/13
Michael Roberts   Date
Dean
College of Science

Ralph Byington   12/12/13
Ralph Byington   Date
Interim Provost

David A. DeCenzo   12/13/13
David A. DeCenzo   Date
President
Coastal Carolina University

Horry-Georgetown Technical College
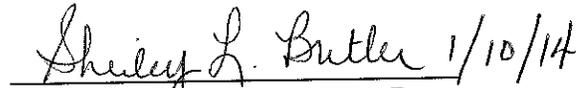
Shirley L. Butler   1/10/14
Shirley Butler   Date
Assistant Vice President – Dean of
    Academic Affairs

Marilyn Fore   1/10/14
Marilyn Fore   Date
Senior Vice-President
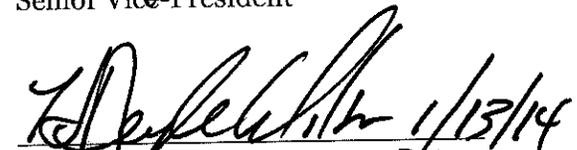
H. Neyle Wilson   1/13/14
H. Neyle Wilson   Date
President
Horry-Georgetown Technical College

Attachment: Advisement Plan for Students

HGTC (Advisement Sheet for Transfer to B.S. in I.T. at CCU) [Programming Track]
Degree: Associate in Applied Science
Major: Computer Technology
Emphasis: Programming
Credit Requirements: 75 semester credit hours

A.A.S in Computer Technology	Transfers as
First Semester (Fall) CPT 168 CPT 170 CPT 209 MAT 101, SUB MAT 110 (College Algebra) PHI 103, SUB PHI 110	CSCI 130 Intro to CS (Foundation) CSCI 110 Business Apps (Foundation) CSCI 211 Computer Infrastructure (Foundation) MATH 130 College Algebra PHIL 102 Intro to Ethics (Core) Total transferred hours: 15
Second Semester (Spring) CPT 176 CPT 187 CPT 270 IST 166 MAT 122 (SUB MAT 120)	CSCI 1xx (Cognate) CSCI 140 Intro Algorithm Design (Foundation) CSCI 106 Advanced Comp Apps (Cognate) CSCI 1xx (Cognate) STAT 201 Statistics (Foundation) Total transferred hours: 15
Third Semester (Summer) CPT 186 CPT 260 ENG 155 or SPC 205 IST 226 PSY 103, SUB PSY 201	CSCI 1xx (Cognate) CSCI 2xx (Cognate) ENGL 290 Business Communication or COMM 140 Oral Communication (Core, Foundation) CSCI 2xx (Foundation) PSYC 101 General Psych (Core) Total transferred hours: 15
Fourth Semester (Fall) CPT 162 CPT 163 CPT 242 IST 271 Elective (CPT 213)	CSCI 120 Web Page Design(Foundation) CSCI 1xx (Cognate) CSCI 225 Intro DB and SQL (Foundation) CSCI 2xx (Cognate) CSCI 208 Visual Basic Programming (Cognate) Total transferred hours: 15
Fifth Semester (Spring) ENG 160 or ENG 102 CPT 262 CPT 264 Major Elective (IST 236) Major Elective (IST 271)	ENGL 211 Technical Writing or ENGL 102 Composition and Critical Reading(Core, Foundation) CSCI 203 Intro Web App Dev. (Foundation) CSCI 2xx (Cognate) CSCI 2xx (Cognate) CSCI 2xx (Cognate) Total transferred hours: 15
	Total Transferred Credits: 75

	Total Remaining for degree requirements (59-64) Core:28-29 Foundation: 7-11 Major: 24 Minor/Cognate: 0
CCU Semester 1 (Fall)	CSCI 370 Networking CSCI 385 Information Security Core (World Cultures 1) Prob Solv. Crit Reas. Prof Dev. Elective 1 Core (Effective Communication*) *ENGL 101 or ENGL 102 or 211 or 290, depending on which ENGL courses student transfers from HGTC) Total: 15
CCU Semester 2 (Spring)	CSCI 335 Software Project Management CSCI 3xx+ Core (World Cultures 2) Core (Humanistic Concepts) Prob Solv. Crit Reas. Prof Dev. Elective 2 CSCI 170 Ethics in Computer Science Total: 16
CCU Semester 3 (Fall)	CSCI 415 System Administration CSCI 444 Human Computer Interaction Core (Creative Expression) Math 160 Calculus or Math 132 Business Calc Core (Government) Total: 15-16
CCU Semester 4 (Spring)	CSCI 416 Linux System Administration CSCI 427 System Integration Core (Global Studies) Core (Scientific Concepts) STAT 201/L or CBAD 291 or PSYC 225/L* *If not transferred from HGTC Total: 13-17

HGTC (Advisement Sheet for Transfer to B.S. in I.T. at CCU) [Networking Track]

Degree: Associate in Applied Science
Major: Computer Technology
Emphasis: Networking
Credit Requirements: 75 semester credit hours

HGTC	Transfers to CCU as
First Semester (Fall) CPT 168 CPT 170 CPT 209 MAT 101, SUB MAT 110 (College Algebra) PHI 103, SUB PHI 110	CSCI 130 Intro to CS (Foundation) CSCI 110 Business Applications (Foundation) CSCI 211 Computer Infrastructure (Foundation) MATH 130 College Algebra PHIL 102 Intro to Ethics (Core) Total transferred hours: 15
Second Semester (Spring) CPT 176 CPT 187 CPT 270 IST 166 MAT 122, SUB MAT 120	CSCI 1xx (Cognate) CSCI 140 Intro Algorithm Design (Foundation) CSCI 106 Advanced Comp. Apps (Cognate) CSCI 1xx (Cognate) STAT 201 Statistics Total transferred hours: 15
Third Semester (Summer) CPT 260 ENG 155 or SPC 205 IST 161 IST 162 PSY 103, SUB PSY 201	CSCI 2xx (Cognate) ENGL 290 Business Communication or COMM 140 Oral Communication (Core, Foundation) CSCI 1xx (Cognate) CSCI 1xx (Cognate) PSYC 101 General Psych (Core) Total transferred hours: 15
Fourth Semester (Fall) ENG 160 or ENGL 102 CPT 242 IST 165 IST 291 Elective (CPT 213)	ENGL 211 Technical Writing or ENGL 102 Composition and Critical Reading (Core, Foundation) CSCI 225 Intro to DB and SQL (Foundation) CSCI 1xx (Cognate) CSCI 2xx (Cognate) CSCI 208 Visual Basic Programming (Cognate) Total transferred hours: 15
Fifth Semester (Spring) CPT 264 IST 209 IST 261 Major Elective, (IST 292) Major Elective, (IST 290)	CSCI 2xx (Cognate) CSCI 2xx (Cognate) CSCI 2xx (Cognate) CSCI 2xx (Cognate) CSCI 2xx (Cognate) Total transferred hours: 15
	Total Transferred Credits: 75 (Math 130 is general elective)

	Total Remaining for degree requirements (68-70) Core:28-29 Foundation: 16-17 Major: 24 Cognate: 0
CCU Semester 1 (Fall)	CSCI 120 Web Page Design CSCI 203 Intro Web App Development Core (World Cultures 1) Prob Solv. Crit Reas. Prof Dev. Elective 1 Core (Effective Communication*) CSCI 170 Ethics in Computer Science *ENGL 101 or ENGL 102 or 211 or 290, depending on which ENGL courses student transfers from HGTC) Total: 16
CCU Semester 2 (Spring)	CSCI 335 Software Project Management CSCI 3xx+ Core (World Cultures 2) Core (Humanistic Concepts) Prob Solv. Crit Reas. Prof Dev. Elective 2 Core (Government) Total: 18
CCU Semester (Summer)	STAT 201/L or CBAD 291 or PSYC 225/L* *If not taken at HGTC
CCU Semester 3 (Fall)	CSCI 415 Systems Administration CSCI 444 Human Computer Interaction CSCI 370 Networking CSCI 385 Information Security Math 160 Calculus or Math 132 Business Calc Total: 15-16
CCU Semester 4 (Spring)	CSCI 416 Linux System Administration CSCI 427 System Integration Core (Global Studies) Core (Creative Expression) Core (Scientific Concepts) Total: 16

Based on Proposed Fall 2014 IT curriculum:
INFORMATION TECHNOLOGY MAJOR
Degree: Bachelor of Science

Students must earn a grade of **C** or better in all Foundation and Major Requirement courses.

I. CORE CURRICULUM (34-41 Credits).. 34-41

II. FRESHMAN GRADUATION REQUIREMENT (0-3 Credits)
    Minimum grade of **C** is required.
    UNIV 110 The First-Year Experience 3
    UNIV 110 is required for all new entering freshmen and for new transfer students with fewer than 12 transfer credit hours unless the transfer student has satisfactorily completed a college transition course.

III. FOUNDATION COURSES (25-41* Credits)*
    Choose one of the following: (3 credits) 3
        ENGL 211*: Technical Writing (3)
        ENGL 102*: Composition and Critical Reading (3)
<u>Communication</u>
Choose one from the following: (3 Credits)... 3
        ENGL 290*: Introduction to Business Communication (3)
        ENGL 390: Business and Professional Communication (3)
        COMM 140*: Oral Communication (3)
Choose one of the following: 3-4
        STAT 201/201L*: Introductory Statistics /Laboratory (4)
        CBAD 291*: Business Statistics (3)
        PSYC 225/225L*: Psychological Statistics/laboratory (4)
Choose one of the following:.. 3-4
        MATH 132*: Business Calculus (3)
        MATH 160*: Calculus (4)
Choose one of the following:.. 3
        CSCI 101: Intro to the Internet and World Wide Web (3)
        CSCI 130: Introduction to Computer Science (3)
CSCI 110: Enterprise Business Solutions... 3
CSCI 120: Intro to Web Application Development.. 3
Choose one of the following:.. 3-4
        CSCI 135: Intro to Programming (3)
        CSCI 140 and CSCI 140L: Introduction to Algorithmic Design (4)
CSCI 170: Ethics in Computer Science 1
CSCI 211: Computing Infrastructure-Hardware.. 3
CSCI 225: Intro to Database Management Systems.. 3
CSCI 203: Introduction to Web Application Development..................................... 3
Problem Solving, Critical Reasoning, Professional Development........................ 6

    Choose 6 hours from the following (These courses may not overlap with the minor/cognate requirements):

CSCI 300 or higher	ENVI 331/MSCI 331 and	PHIL 110
CSCI 150 and CSCI 150L	ENVI 331L/MSCI 331/L	PHIL 220
CSCI 210	GEOG 200	PHIL 315
BINF 101 and BINF 101L	GEOG 204	PHIL 321
BIOL 122 and BIOL 122L	GEOG 311	PHYS 212 and PHYS 212L
CBAD 203	GEOG 400	PHYS 213 and PHYS 213L
CBAD 292	GEOL 112 and GEOL 112L	PHYS 321

CBAD 393 CBAD 364 CHEM 112 and CHEM 112/L COMM 274 COMM 341 or THEA 341 ECON 321 ENGR 101 ENVI 201 and ENVI 201L	BSHA 455 HPRO 380 MSCI 112 and MSCI 112L MATH 161 MATH 174 MATH 220 MATH 242/L MATH 260 MATH 320 MATH 408	PHYS 432 POLI 311 POLI 421 PSYC 303 RSM 394 ROTC 201 and ROTC 201L STAT 318 THEA 255 THEA 356

*Credits for courses taken as part of the Core Curriculum are not counted elsewhere in the major.

IV. MAJOR REQUIREMENTS (24 Credits)
CSCI 335: Software Project Management... 3
CSCI 370: Networking 3
CSCI 385: Intro to Computer Security 3
CSCI 415: System Administration 3
CSCI 416: Linux System Administration 3
CSCI 427: System Integration.. 3
CSCI 444: Human Computer Interaction... 3
CSCI Elective 300 level or higher 3

V. Minor (Web Application Development minor or Computer Science minor may not be used to satisfy this requirement) (18-24 Credits)

Students who transfer with an approved A.A.S in Computer Technology from a South Carolina Technical College may waive this requirement.

V. ELECTIVES (0-6 Credits) 0-6

TOTAL CREDITS REQUIRED 120