NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
H. Martin Lancaster, President

February 7, 2008

RESPONSE DEADLINE: February 28, 2008

MEMORANDUM

TO: Chief Academic Officers

FROM: Delores A. Parker, Vice President
Academic and Student Services

SUBJECT: Requested Revision in Curriculum Standard
Computer Information Technology (A25260)

The System Office has received a request to add the "CCT" (Cyber Crime Technology) prefix to the Computer Information Technology (A25260) curriculum standard. The "CCT" prefix is currently listed on the following curriculum standards:

Cyber Crime Technology (A55210)
Criminal Justice Technology (A55180)
Criminal Justice Technology/Latent Evidence (A5518A)
Criminal Justice Technology/Financial Crime/Computer Fraud (A5518B)
Information Systems Security (A25270)
Information Systems Security/Operating Systems (A2527A)
Information Systems Security/Security Hardware (A2527B)

Attached is a form requesting your approval or disapproval of the proposed prefix addition. We are primarily interested in gathering your input on whether or not you believe the possible addition of Cyber Crime Technology courses is appropriate for students enrolled in the Computer Information Technology program or whether these courses should be restricted to programs in the areas of Cyber Crime, Criminal Justice or Information Systems Security.

Please complete and return the form to Hilmi Lahoud by February 28, 2008. You may fax your response to (919) 807-7164. Once the responses have been received at the System Office, the request will be presented to the State Board of Community Colleges for action.

Thank you for your prompt attention to this matter. If you have questions, please contact Hilmi Lahoud at (919) 807-7116 or lahoudh@nccommunitycolleges.edu.

DAP/HL
Attachments
c: Presidents
Judith Mann
Jennifer Frazelle
Hilmi Lahoud
Tracy McPherson
CC08- 035
E-Mail

MAILING ADDRESS: 5016 MAIL SERVICE CENTER ~ RALEIGH, NC 27699-5016
Street Address: 200 West Jones Street ~ Raleigh, NC 27603-1379 ~ 919-807-7100 ~ Fax 919-807-7164

College Recommendation

Curriculum Standard Revision Request
Computer Information Technology (A25260)

Request: Add the "CCT" (Cyber Crime Technology) prefix to the Computer Information Technology (A25260) curriculum standard. This would enable colleges to utilize up to nine semester hours of "CCT" courses in the Computer Information Technology program.

Rationale of Requesting College*:* Courses included under the "CCT" prefix include the study and /or use of digital equipment, such as, computers, digital cameras, cell phones, etc. These courses involve training in the preservation, detection and recovery of management information systems relating to violations of corporate policy. The "CCT" prefix course would be useful for students enrolled in the Computer Information Technology program.

_____ We have reviewed the request and **recommend** the addition of the "CCT" prefix to the Computer Information Technology standard.

_____ We have reviewed the request and **do not recommend** the addition of the CCT prefix to the Computer Information Technology standard for the following reason(s):

_____ Inappropriate for students outside of Cyber Crime, Information Systems Security or Criminal Justice program areas

_____ Other: _____

_____ We have reviewed the request and recommend the addition of the "CCT" prefix to the Computer Information Technology standard to allow utilization of some CCT courses *provided* that the following CCT courses are restricted to the programs that currently contain the CCT prefix and will not be available for Computer Information Technology or other programs. (see attached course descriptions)

___ CCT 110	___ CCT 112	___ CCT 121
___ CCT 220	___ CCT 231	___ CCT 240
___ CCT 241	___ CCT 250	___ CCT 251
___ CCT 285	___ CCT 289	

_____ We do not offer the Computer Information Technology program or any of the programs that currently contain the CCT prefix. Therefore, we wish to decline from making a recommendation.

College: _____

Signature of President: _____ **Date:** _____

Please return this form by **February 28, 2008** to:

Hilmi Lahoud, Program Coordinator
Program Services
NC Community College System
5016 Mail Service Center
Raleigh, NC 27699-5016
Fax Number: (919) 807-7164

CCT - Cyber Crime Technology Courses

		Class	*Lab*	*Credit*
CCT 110	**Intro to Cyber Crime**	3	0	3

Prerequisites: None
Corequisites: None

This course introduces and explains the various types of offenses that qualify as cyber crime activity. Emphasis is placed on identifying cyber crime activity and the response to these problems from both the private and public domains. Upon completion, students should be able to accurately describe and define cyber crime activities and select an appropriate response to deal with the problem.

CCT 112	**Ethics & High Technology**	3	0	3

Prerequisites: None
Corequisites: None

This course covers ethical considerations and accepted standard practices applicable to technological investigations and computer privacy issues relative to the cyber crime investigator. Topics include illegal and unethical investigative activities, end-justifying-the-means issues, and privacy issues of massive personal database information gathered by governmental sources. Upon completion, students should be able to examine their own value system and apply ethical considerations in identifiable cyber crime investigations.

CCT 121	**Computer Crime Invest**	3	2	4

Prerequisites: None
Corequisites: None

This course introduces the fundamental principles of computer crime investigation processes. Topics include crime scene/incident processing, information gathering techniques, data retrieval, collection and preservation of evidence, preparation of reports and court presentations. Upon completion, students should be able to identify cyber crime activity and demonstrate proper investigative techniques to process the scene and assist in case prosecution.

CCT 220	**Forensic Accounting**	3	3	4

Prerequisites: None
Corequisites: None

This course introduces the basic principles and procedures of investigative accounting and analysis of financial evidence. Emphasis is placed on collecting data and evidence, evaluation of internal control systems, accounting systems, concealed income analysis and fraud detection. Upon completion, students should be able to apply generally accepted accounting standards and procedures for conducting a criminal investigation audit for financial information.

		Class	*Lab*	*Credit*
CCT 231	**Technology Crimes & Law**	3	0	3

Prerequisites: None
Corequisites: None

This course covers the applicable technological laws dealing with the regulation of cyber security and criminal activity. Topics include an examination of state, federal and international laws regarding cyber crime with an emphasis on both general and North Carolina statutes. Upon completion, students should be able to identify the elements of cyber crime activity and discuss the trends of evolving laws.

CCT 240 **Data Recovery Techniques** 2 3 3
Prerequisites: None
Corequisites: None

This course introduces the unique skills and methodologies necessary to assist in the investigation and prosecution of cyber crimes. Topics include hardware and software issues, recovering erased files, overcoming encryption, advanced imaging, transient data, Internet issues and testimony considerations. Upon completion, students should be able to recover digital evidence, extract information for criminal investigation and legally seize criminal evidence.

CCT 241 **Advanced Data Recovery** 2 3 3
Prerequisites: CCT 240
Corequisites: None

This course further explores the methodologies necessary to assist in the investigation and analysis of cyber crimes. Topics include commercial and open-source software tools for working with evidence acquisition, data recovery, and encryption. Upon completion, students should be able to perform the data recovery and analysis for a complete criminal or corporate investigation.

CCT 250 **Netwk Vulnerabilities I** 2 2 3
Prerequisites: NET 110
Corequisites: None

This course introduces students to penetration testing, network vulnerabilities, and hacking. Topics include an overview of traditional network security, system hardening, and known weaknesses. Upon completion, students should be able to evaluate weaknesses of traditional and wireless networks for the purpose of incident response, reconstruction, and forensic investigation.

Class Lab Credit

CCT 251 **Netwk Vulnerabilities II** 2 2 3
Prerequisites: CCT 250
Corequisites: None

This course advances students' knowledge of penetration testing, network vulnerabilities, and hacking. Topics include analyzing advanced techniques for circumventing network security hardware and software. Upon completion, students should be able to assemble test kits for multiple operating systems, scan and footprint networks, and perform advanced forensic investigation.

CCT 285 **Trends in Cyber Crime** 2 2 3
Prerequisites: CCT 110
Corequisites: None

This course covers and explores advances and developments in cyber crime technologies. Emphasis is placed on computer forensics tools, information protection and security, threat response, and professional development. Upon completion, students should be able to articulate understanding of the current state of the industry as well as emerging technologies for cyber crime technology.

CCT 289 **Capstone Project** 1 6 3
Prerequisites: CCT 231 or CCT 220
Corequisites: None

This course provides experience in cyber crime investigations or technology security audits in either the public or private domain. Emphasis is placed on student involvement with businesses or agencies dealing with technology security issues or computer crime activities. Upon completion, students should be able to successfully analyze, retrieve erased evidence and testify in mock proceedings against these criminal entrepreneurs.

PROPOSED

CURRICULUM STANDARD

Effective Term
Spring 2006
*[2006*01]*

Curriculum Program Title: Computer Information Technology Code: **A25260**

Concentration: **(not applicable)**

Curriculum Description

The Computer Information Technology curriculum is designed to prepare graduates for employment with organizations that use computers to process, manage, and communicate information. This is a flexible curriculum that can be customized to meet community information systems needs.

Course work will develop a student's ability to communicate complex technical issues related to computer hardware, software, and networks in a manner that computer users can understand. Classes cover computer operations and terminology, operating systems, database, networking, security, and technical support.

Graduates should qualify for employment in entry-level positions with businesses, educational systems, and governmental agencies which rely on computer systems to manage information. Graduates should be prepared to sit for industry-recognized certification exams.

*Curriculum Requirements**

I. **General Education.** Degree programs must contain a minimum of 15 semester hours including at least one course from each of the following areas: humanities/fine arts, social/behavioral sciences, and natural sciences/mathematics. Degree programs must contain a minimum of 6 semester hours of communications. Diploma programs must contain a minimum of 6 semester hours of general education; 3 semester hours must be in communications. General education is optional in certificate programs.

II. **Major Hours**. AAS, diploma, and certificate programs must include courses which offer specific job knowledge and skills. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit. *(See second page for additional information.)*

III. **Other Required Hours.** A college may include courses to meet graduation or local employer requirements in a certificate, diploma, or associate in applied science program. These curriculum courses shall be selected from the Combined Course Library and must be approved by the System Office prior to implementation. Restricted, unique, or free elective courses may not be included as other required hours.

	AAS	**Diploma**	**Certificate**
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
Total Semester Hours Credit in Program	**64-76**	**36-48**	**12-18**

PROPOSED

Major Hours

A. Core. The subject/course core is comprised of subject areas and/or specific courses which are required for each curriculum program. A diploma program offered under an approved AAS program standard or a certificate which is the highest credential level awarded under an approved AAS program standard must include a minimum of 12 semester hours credit derived from the subject/course core of the AAS program.

B. Concentration *(if applicable).* A concentration of study must include a minimum of 12 semester hours credit from required subjects and/or courses. The majority of the course credit hours are unique to the concentration. The required subjects and/or courses that make up the concentration of study are in addition to the required subject/course core.

C. Other Major Hours. Other major hours must be selected from prefixes listed on the curriculum standard. A maximum of 9 semester hours of credit may be selected from any prefix listed, with the exception of prefixes listed in the core or concentration. Work experience, including cooperative education, practicums, and internships, may be included in associate in applied science degrees up to a maximum of 8 semester hours of credit; in diploma programs up to a maximum of 4 semester hours of credit; and in certificate programs up to a maximum of 2 semester hours of credit.

Computer Information Technology A25260

	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. CORE *A diploma offered under this AAS degree requires a minimum of 12 SHC extracted from the required subject/course core of the AAS degree.*	**35-36 SHC**	**12 SHC**	

Required Courses:

CIS	115	Intro to Programming and Logic	3 SHC
CTS	120	Hardware/Software Support	3 SHC
CTS	285	Systems Analysis & Design	3 SHC
CTS	289	Systems Support Project	3 SHC
DBA	110	Database Concepts	3 SHC
NOS	110	Operating System Concepts	3 SHC
NOS	130	Windows Single User	3 SHC
NOS	230	Windows Admin I	3 SHC
SEC	110	Security Concepts	3 SHC

Required Subject Areas:

Basic Computer Skills. Select one:

CIS	110	Introduction to Computers	3 SHC
CIS	111	Basic PC Literacy	2 SHC

Business. Select one:

BUS	110	Introduction to Business	3 SHC
CTS	115	Info Sys Business Concepts	3 SHC

Networking. Select one:

NET	110	Networking Concepts	3 SHC
NET	125	Networking Basics	3 SHC

B. CONCENTRATION *(not applicable)*			
C. OTHER MAJOR HOURS *To be selected from the following prefixes:* ACC, BUS, CCT, CET, CIS, COE, CSC, CTS, DBA, DES, DME, ECO, ELN, GIS, GRD, HPC, MIT, NET, NOS, OMT, OST, SEC, SGD, and WEB *Foreign language courses (including ASL) that are not designated as approved other major hours may be included in all programs up to a maximum of 3 semester hours of credit.*			