NORTH CAROLINA COMMUNITY COLLEGE SYSTEM
Dr. R. Scott Ralls, President

March 30, 2012

To: Presidents
Chief Academic Officers

From: Sharon E. Morrissey, Ed. D.
Senior Vice President and Chief Academic Officer

Subject: Curriculum Review Committee Course Approvals

The Curriculum Review Committee (CRC) has the responsibility for maintaining the curriculum courses in the Combined Course Library (CCL). The approved course requests from the Spring 2012 meeting are attached for your information. A few of the course revisions may involve the removal of required prerequisites or corequisites. Please note that colleges may add local prerequisites and/or corequisites if they determine a need exists.

The CRC approved requests to revise the **course description, prerequisite(s), corequisite(s), and/or class/lab hours** of core courses found on the curriculum standards listed below. Please note that the only change indicated on the printed standard will be the inclusion of the statement *CRC Revised-Electronic Only 2/29/12,* since only the electronic version of the standard template will be revised. The revised standards are attached for your convenience.

Curriculum Title	Curriculum Code
Computer Information Technology	A25260
Computer Programming	A25130
Computer Technology Integration	A25500
Database Management	A25150
Dietetic Technician	A45310
Healthcare Business Informatics	A25510
Information Systems Security	A25270
Information Systems Security/Security Hardware	A2527B
Networking Technology	A25340
Surveying Technology	A40380
Web Technologies	A25290

CC12-009
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Please be aware that you must implement the attached revised courses and standards no later than one year after the effective term. You must update your college's electronic program of study and receive approval from the System Office prior to implementation of the revised courses and program.

The following newly approved course will be sent to the TAC and the ITAC for consideration of college transfer designation:

PED 229   Disc Golf-Advanced

In additional course action, the Chair of the Curriculum Review Committee authorized the removal of the DMA prerequisites for *MAT 175 Precalculus*. Please note that a new version of MAT 175 was not created. The technical correction was made to the original version of the course.

If you need assistance or clarification, please contact Ms. Jennifer Frazelle, Program Director, at frazellej@nccommunitycolleges.edu or at (919) 807-7120.

SEM/dm
Attachments
c: Curriculum Review Committee
    Ms. Elizabeth Self
    Mr. Van Wilson
    Ms. Cynthia Liston
    Ms. Jennifer Frazelle
    Program Coordinators

CC12-009
E-mail

Curriculum Course Requests Approved By the Curriculum Review Committee (CRC)
on February 29, 2012

Course Prefix #	Title	Request	Effective Semester	Curriculum Standard Core Course
CTI 140	Virtualization Concepts	New course	Summer 2012 (2012*02)	n/a
CTI 141	Cloud & Storage Concepts	New course	Summer 2012 (2012*02)	n/a
CTI 240	Virtualization Admin I	New course	Summer 2012 (2012*02)	n/a
CTI 241	Virtualization Admin II	New course	Summer 2012 (2012*02)	n/a
DET 110	Dietetic Technician I	Change description	Summer 2012 (2012*02) **	Dietetic Technician A45310
DET 120	Dietetic Technician III	Change description	Summer 2012 (2012*02) **	Dietetic Technician A45310
DET 210	Dietetic Technician IV	Change description	Summer 2012 (2012*02) **	Dietetic Technician A45310
DET 220	Dietetic Technician V	Change description	Summer 2012 (2012*02) **	Dietetic Technician A45310
EFL 111	English for Internationals I	Change prerequisites from "none" to "EFL 084 and EFL 094" Change description	Spring 2013 (2013*01)	n/a
EFL 112	English for Internationals II	Change prerequisites from "none" to "EFL 064 and EFL 074" Change description	Spring 2013 (2013*01)	n/a
FIP 224	Instructional Methodology	Change title from "Instructional Methodology" to "Fire Instructor I & II " Change description	Summer 2012 (2012*02) **	n/a
FIP 226	Fire Officer I & II	New course	Summer 2012 (2012*02)	n/a
HBI 210	Intro to Health Info Net	New course	Summer 2012 (2012*02)	n/a
HBI 230	Infa & App Supp in Healthcare	New course	Summer 2012 (2012*02)	n/a
HMT 215	Legal Asp Healthcare Admin	New course	Summer 2012 (2012*02)	n/a

Curriculum Course Requests Approved By the Curriculum Review Committee (CRC)
on February 29, 2012

Course Prefix #	Title	Request	Effective Semester	Curriculum Standard Core Course
MAT 175	Precalculus	Change prerequisite from "DMA 010, DMA 020, DMA 030, DMA 040, DMA 050, DMA 060, DMA 070 and DMA 080" to "none"	Restores original prerequisite of "none" on original version of course (1997*02)	Mathematics AS Premajor (A1040E) Mathematics Education AS Premajor (A1040F)
PED 229	Disc Golf-Advanced	New course	Summer 2012 (2012*02)	n/a
PHO 222	Video Production	Change hours from "1-6-0-3" to "2-2-0-3"	Fall 2012 (2012*03) **	n/a
PHO 242	Digital Video Prod & Ed	Change hours from "1-3-0-2" to "2-2-0-3"	Fall 2012 (2012*03) **	n/a
SEC 110	Security Concepts	Change hours from "3-0-0-3" to "2-2-0-3"; Change description;	Spring 2013 (2013*01)	Computer Information Technology A25260 Computer Programming A25130 Computer Technology Integration A25500 Database Management A25150 Healthcare Business Informatics A25510 Information Systems Security A25270 Information Systems Security/Security Hardware A2527B Networking Technology A25340 Web Technologies A25290
SRV 230	Subdivision Planning	Change prerequisites from "SRV-111, SRV-210, and CIV-211" to "SRV-111, SRV-210, and CIV-211 or SRV 211".	Summer 2012 (2012*02) **	Surveying Technology A40380

CURRICULUM STANDARD

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.

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*Curriculum Requirements**
[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

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, CTI, CTS, DBA, DES, DME, ECO, ELN, GIS, GRD, HBI, 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.*			

CURRICULUM STANDARD

Curriculum Program Title	**Computer Programming**	Code	**A25130**
Concentration	**(not applicable)**		

Curriculum Description

The Computer Programming curriculum prepares individuals for employment as computer programmers and related positions through study and applications in computer concepts, logic, programming procedures, languages, generators, operating systems, networking, data management, and business operations.

Students will solve business computer problems through programming techniques and procedures, using appropriate languages and software. The primary emphasis of the curriculum is hands-on training in programming and related computer areas that provide the ability to adapt as systems evolve.

Graduates should qualify for employment in business, industry, and government organizations as programmers, programmer trainees, programmer/analysts, computer operators, systems technicians, or database specialists.

*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204(3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours

[ref. 23 NCAC 02E.0204(3)]

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 Programming A25130

	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.*	**41-42 SHC**	**12 SHC**	

Required Courses:

CIS 115	Intro to Prog & Logic	3 SHC	
CTS 285	Systems Analysis & Design	3 SHC	
CSC 289	Programming Capstone Proj	3 SHC	
DBA 110	Database Concepts	3 SHC	
NOS 110	Operating Systems Concepts	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

Operating Systems. Select one:

NOS 120	Linux/UNIX Single User	3 SHC
NOS 130	Windows Single User	3 SHC
NOS 149	Operating System – MVS ™	3 SHC
NOS 244	Operating System - AS/400	3 SHC

Continued on next page

Computer Programming A25130 (continued)			
Programming. Select two:			
CSC 133 C Programming 3 SHC			
CSC 134 C+ + Programming 3 SHC			
CSC 135 COBOL Programming 3 SHC			
CSC 136 Fortran Programming 3 SHC			
CSC 138 RPG Programming 3 SHC			
CSC 139 Visual BASIC Progr 3 SHC			
CSC 141 Visual C+ + Progr 3 SHC			
CSC 142 Visual COBOL Progr 3 SHC			
CSC 150 Visual RPG Progr 3 SHC			
CSC 151 JAVA Programming 3 SHC			
CSC 153 C# Programming 3 SHC			
Advanced Programming. Select two:			
CSC 233 Adv C Programming 3 SHC			
CSC 234 Adv C+ + Programming 3 SHC			
CSC 235 Adv COBOL Programming 3 SHC			
CSC 236 Adv Fortran Programming 3 SHC			
CSC 238 Adv RPG Programming 3 SHC			
CSC 239 Adv Visual BASIC Prog 3 SHC			
CSC 241 Adv Visual C+ + Prog 3 SHC			
CSC 242 Adv Visual COBOL Prog 3 SHC			
CSC 250 Adv Visual RPG Prog 3 SHC			
CSC 251 Adv JAVA Programming 3 SHC			
CSC 253 Adv C# Programming 3 SHC			
B. **CONCENTRATION** *(not applicable)*			
C. **OTHER MAJOR HOURS** *To be selected from the following prefixes:*			
ACC, BUS, CET, CIS, COE, CSC, CTS, DBA, ECM, ECO, GRA, GRD, ISC, MAT, NET, NOS, OMT, OST, SEC, SGD, SGR, 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.*			

CURRICULUM STANDARD

Curriculum Program Title **Computer Technology Integration** Code A25500

Concentration

Curriculum Description

The Computer Technology Integration (CTI) curriculum prepares graduates for employment as designers, testers, support technicians, administrators, developers, or programmers with organizations that use computers to design, process, manage, and communicate information, depending on the technical path selected within this curriculum.

Course work includes development of a student's ability to communicate and solve technical issues related to information support and services, interactive media, network systems, programming and software development, and other emerging technologies based on the selected area of study.

Graduates should qualify for employment in entry-level positions with businesses, educational systems, and governmental agencies which rely on computer systems to design and manage information. The program will incorporate the competencies of industry-recognized certification exams.

*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204(3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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Approved by the State Board of Community Colleges on November 13, 1996.

*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours
[ref. 23 NCAC 02E.0204 (3)]

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 Technology Integration A25500	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. **CORE** *Courses required for the diploma are designated with * *	26-27 SHC	26-27 SHC	

Required Courses:

*	CTS	115	Info Sys Business Concept	3 SHC
*	CTI	110	Web, Pgm, & DB Foundation	3 SHC
*	CTI	120	Network & Sec Foundation	3 SHC

***Select one set:**

CTI 130	OS and Device Foundation	6 SHC
or		
NOS 110	Operating System Concepts	3 SHC
and		
CTS 120	Hardware/Software Support	3 SHC
or		
CET 111	Computer Upgrade/Repair I	3 SHC
and		
CET 211	Computer Upgrade/Repair II	3 SHC
or		
CTS 120	Hardware/Software Support	3 SHC
and		
CTS 220	Adv Hard/Software Support	3 SHC

Required Subject Areas:
Select one course from one of the five (5) subject areas and an additional (9) credit hours from prefixes within the same subject area selected:

Information Support and Services

CIS	110	Introduction to Computers	3 SHC
CIS	111	Basic PC Literacy	2 SHC
OST	122	Office Computations	2 SHC

Computer Technology Integration A25500 (Continued)			
Interactive Media			
DEA 111 Introduction to DEAT 3 SHC			
DME 110 Intro to Digital Media 3 SHC			
GRD 110 Typography I 3 SHC			
SGD 111 Introduction to SGD 3 SHC			
WEB 110 Internet/Web Fundamentals 3 SHC			
Network Systems			
NET 110 Networking Concepts 3 SHC			
NET 125 Networking Basics 3 SHC			
NOS 110 Operation Systems Concepts 3 SHC			
TNE 111 Campus Networks I 3 SHC			
Programming and Software Development			
CIS 115 Intro to Prog & Logic 3 SHC			
CSC 133 C Programming 3 SHC			
CSC 134 C+ + Programming 3 SHC			
CSC 135 COBOL Programming 3 SHC			
CSC 139 Visual BASIC Prog 3 SHC			
CSC 141 Visual C+ + Prog 3 SHC			
CSC 142 Visual COBOL Prog 3 SHC			
CSC 151 JAVA Programming 3 SHC			
CSC 153 C# Programming 3 SHC			
DBA 110 Database Concepts 3 SHC			
Emerging Information Technology:			
CCT 110 Intro to Cyber Crime 3 SHC			
EGR 115 Intro to Technology 3 SHC			
GIS 111 Introduction to GIS 3 SHC			
HPC 110 Intro to HPC 3 SHC			
SEC 110 Security Concepts 3 SHC			
B. **CONCENTRATION**			
C. **OTHER MAJOR HOURS** *To be selected from the following prefixes:* ACC, BUS, CCT, CET, CIS, CJC, COE, CSC, CTI, CTS, DBA, DEA, DES, DME, ECM, ECO, EGR, ELN, GIS, GRA, GRD, HIT, HPC, ISC, MIT, MKT, NET, NOS, OMT, OST, SEC, SGD, SGR, TNE 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.*			

CURRICULUM STANDARD

Curriculum Program Title   **Database Management**   Code   **A25150**

Concentration   **(not applicable)**

Curriculum Description

The Database Management curriculum prepares graduates for employment with organizations that use database management system software to process, manage, and communicate information. Additionally, the curriculum provides the student with a foundation to begin professional certification with Microsoft or ORACLE database programs.

Course work includes terminology and design, database administration, backup and recovery, performance and tuning, database programming and tools, and related topics. Studies will provide an opportunity for students to implement, support, and manage industry standard database systems.

Graduates should qualify for a wide variety of database and computer related entry-level positions that provide opportunities for advancement with increasing experience and ongoing training.

*Curriculum Requirements**
[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

Major Hours
[ref. 23 NCAC 02E.0204 (3)]

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.

Database Management A25150

	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.*	**41-42 SHC**	**12 SHC**	

Required Courses:

CIS 115	Intro to Programming and Logic	3 SHC
CTS 285	Systems Analysis & Design	3 SHC
DBA 110	Database Concepts	3 SHC
DBA 115	Database Applications	3 SHC
DBA 120	Database Programming I	3 SHC
DBA 210	Database Administration	3 SHC
DBA 230	Database in Corp Environs	3 SHC
DBA 240	Database Analysis/Design	3 SHC
DBA 289	Database Project	3 SHC
NOS 110	Operating Systems Concepts	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:

BUS, CIS, COE, CSC, CTS, DBA, ECM, HPC, ISC, ITN, NET, NOS, SEC, 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.

CURRICULUM STANDARD

Curriculum Program Title	**Dietetic Technician**	Code	**A45310**

Concentration   **(not applicable)**

Curriculum Description

The Dietetic Technician program prepares individuals to promote optimal health through proper nutrition by providing personalized services to meet client's needs, and ensure balanced diets. Dietetic Technicians work under the supervision of a registered, licensed dietician.

Course work includes content related to food, nutrition, communication, and management. The physical, biological, behavioral, and social sciences support these areas.

Employment opportunities include childcare centers, hospitals, correctional centers, public health agencies, retirement centers, rehabilitation centers, hospices, clinics, nursing homes, home care programs, or medical offices.

Curriculum Requirements*

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204(3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

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.

Dietetic Technician A45310			
	AAS	**Diploma**	**Certificate**
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. **CORE**	**51 SHC**	**NR**	
Required Courses: BIO 275 Microbiology 4 SHC CHM 130 Gen, Org, & Biochemistry 3 SHC CHM 130A Gen, Org, & Biochemistry Lab 1 SHC DET 110 Dietetic Technician I 8 SHC DET 115 Dietetic Technician II 2 SHC DET 120 Dietetic Technician III 9 SHC DET 210 Dietetic Technican IV 9 SHC DET 220 Dietetic Technican V 10 SHC DET 225 Dietetic Technican VI 2 SHC PSY 241 Developmental Psychology 3 SHC **Required Subject Areas:** None			
B. **CONCENTRATION** *(Not applicable)*			
C. **OTHER MAJOR HOURS** BIO, CHM, CIS, COE, CUL, DET, ENG, HEA, MAT, MED, NUT, PED, PSF, PSY, and SOC *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.*			

CURRICULUM STANDARD

Curriculum Program Title	**Healthcare Business Informatics**	Code	**A25510**
Concentration	**(not applicable)**		

Curriculum Description

The Healthcare Business Informatics curriculum prepares individuals for employment as specialists in installation, data management, data archiving/retrieval, system design and support, and computer training for medical information systems.

Students learn about the field through multidisciplinary coursework including the study of terminology relating to informatics, systems analysis, networking technology, computer/network security, data warehousing, archiving and retrieval of information, and healthcare computer infrastructure support.

Graduates should qualify for employment as database/data warehouse analysts, technical support professionals, informatics technology professionals, systems analysts, networking and security technicians, and computer maintenance professionals in the healthcare field.

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*Curriculum Requirements**
[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours
[ref. 23 NCAC 02E.0204 (3)]

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.

Healthcare Business Informatics A25510			
	AAS	**Diploma**	**Certificate**
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. **CORE** *Courses required for the diploma are designated with **	**39-48 SHC**		
Required Courses:			
CIS 115 Intro to Prog & Logic 3 SHC			
CTS 120 Hardware/Software Support 3 SHC			
*HBI 110 Issues and Trends in HBI 3 SHC			
*HBI 113 Survey of Med Insurance 3 SHC			
*HBI 250 Data Mgmt and Utilization 3 SHC			
*HBI 289 HBI Project 3 SHC			
Require Subject Areas:			
Basic Computer Skills. **Select one:**			
CIS 110 Introduction to Computers 3 SHC			
CIS 111 Basic PC Literacy 2 SHC			
Operating Systems. **Select one:**			
CTI 130 OS and Device Foundation 6 SHC			
NOS 110 Operating System Concepts 3 SHC			
Information Security. **Select one:**			
CTI 120 Network & Sec Foundation 3 SHC			
SEC 110 Security Concepts 3 SHC			
Continued on next page			

Network Systems. Select one:			
NET 110 Networking Concepts	3 SHC		
NET 125 Networking Basics	3 SHC		
TNE 111 Campus Networks I	3 SHC		
Database. Select one:			
DBA 110 Database Concepts	3 SHC		
DBA 120 Database Programming I	3 SHC		
DBA 210 Database Administration	3 SHC		
Medical Terminology. Select one set:			
MED 120 Survey of Med Terminology	2 SHC		
or			
MED 121 Medical Terminology I	3 SHC		
and			
MED 122 Medical Terminology II	3 SHC		
or			
OST 141 Med Terms I-Med Office	3 SHC		
and			
OST 142 Med Terms II-Med Office	3 SHC		
Medical Legal and Regulatory Issues. Select one:			
MED 118 Medical Law and Ethics	2 SHC		
OST 149 Medical Legal Issues	3 SHC		
Business Management. Select one:			
BUS 110 Introduction to Business	3 SHC		
ETR 210 Introduction to Entrepreneurship	3 SHC		
HMT 110 Intro to Healthcare Mgt	3 SHC		
LOG 110 Introduction to Logistics	3 SHC		
B. CONCENTRATION *(Not applicable)*			
C. OTHER MAJOR HOURS *To be selected from the following prefixes/courses:* ACC, BIO, BUS, CIS, COE, COM, CSC, CTI, CTS, DBA, ETR, GIS, GRO, HBI, HMT, ISC, LOG, MAT, MED, MKT, NET, NOS, OMT, OST, SEC, TNE, 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.*			

CURRICULUM STANDARD

Curriculum Program Title **Information Systems Security**   Code   **A25270**

Concentration   **(not applicable)**

Curriculum Description

Information Systems Security covers a broad expanse of technology concepts. This curriculum provides individuals with the skills required to implement effective and comprehensive information security controls.

Course work includes networking technologies, operating systems administration, information policy, intrusion detection, security administration, and industry best practices to protect data communications.

Graduates should be prepared for employment as security administrators. Additionally, they will acquire the skills that allow them to pursue security certifications.

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*Curriculum Requirements**
[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours
[ref. 23 NCAC 02E.0204 (3)]

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.

Information Systems Security A25270				
		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.* *Courses restricted to this curriculum are designated with ****		**44-45 SHC**	**12 SHC**	

Required Courses:

CIS	115	Intro to Programming and Logic	3 SHC
DBA	110	Database Concepts	3 SHC
NET	125	Networking Basics	3 SHC
NET	126	Routing Basics	3 SHC
NOS	110	Operating System Concepts	3 SHC
NOS	130	Windows Single User	3 SHC
SEC	110	Security Concepts	3 SHC
SEC	150	Secure Communications	3 SHC
SEC	160	Secure Admin I	3 SHC
SEC	210	Intrusion Detection	3 SHC
*** SEC	220	Defense-in-Depth	3 SHC
*** SEC	289	Security Capstone Project	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

Operating Systems. Select one:

NOS	120	Linux/UNIX Single User	3 SHC
NOS	230	Windows Admin I	3 SHC

B. **CONCENTRATION** *(not applicable)*

Information Systems Security A25270 (Continued)

C. **OTHER MAJOR HOURS** *To be selected from the following prefixes:* ACC, BUS, CCT, CET, CIS, CJC, COE, CSC, CTI, CTS, DBA, ECM, ITN, NET, NOS, OST, SEC, TNE, 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.*			

CURRICULUM STANDARD

Curriculum Program Title	**Information Systems Security**	Code	**A2527B**
Concentration	**Security Hardware**		

Curriculum Description

Security Hardware is a concentration under the curriculum title of Information Systems Security. This curriculum covers a broad expanse of technology concepts. This curriculum provides individuals with the skills required to implement effective and comprehensive information network security controls.

Course work includes advanced networking technologies, operating systems administration, information security policy, intrusion detection, firewall technologies, information assurance, security administration, and industry best practices to protect data communications.

Graduates should be prepared for employment as network security specialists, network administrators, or security administrators. Additionally, they will acquire the skills that allow them to pursue hardware, advanced networking and security certifications.

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*Curriculum Requirements**
[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

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.

Information Systems Security/Security Hardware A2527B

	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. CORE	**44-45 SHC**	**NR**	**NR**

*Courses restricted to this curriculum are designated with ***

Required Courses:

CIS 115	Intro to Prog & Logic	3 SHC
DBA 110	Database Concepts	3 SHC
NET 125	Networking Basics	3 SHC
NET 126	Routing Basics	3 SHC
NOS 110	Operating System Concepts	3 SHC
NOS 130	Window Single User	3 SHC
SEC 110	Security Concepts	3 SHC
SEC 150	Secure Communications	3 SHC
SEC 160	Secure Admin I	3 SHC
SEC 210	Intrusion Detection	3 SHC
*** SEC 220	Defense-in-Depth	3 SHC
*** SEC 289	Security Capstone Project	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

Operating Systems. Select one:

NOS 120	Linux/UNIX Single User	3 SHC
NOS 230	Windows Admin I	3 SHC

Continued on next page

Information Systems Security/Security Hardware A2527B

			13 SHC	NR	NR

B.	**CONCENTRATION** *(not applicable)*
	*Courses unique to a concentration are designated with ***
	
	    NET 225 Routing & Switching I 3 SHC
	    NET 226 Routing & Switching II 3 SHC
	** SEC 270 Secure Routing/Firewalls 3 SHC
	** SEC 275 Advanced Firewalls 4 SHC
			13 SHC	NR	NR

C.	**OTHER MAJOR HOURS** *To be selected from the following prefixes:* BUS, CCT, CET, CIS, CJC, COE, CSC, CTI, CTS, DBA, ITN, NET, NOS, SEC, TNE, 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.*				

CURRICULUM STANDARD

Curriculum Program Title   **Networking Technology**   Code   **A25340**

Concentration   **(not applicable)**

Curriculum Description

The Networking Technology curriculum prepares individuals for employment supporting network infrastructure environments. Students will learn how to use technologies to provide reliable transmission and delivery of data, voice, image, and video communications in business, industry, and education.

Course work includes design, installation, configuration, and management of network infrastructure technologies and network operating systems. Emphasis is placed on the implementation and management of network software and the implementation and management of hardware such as switches and routers.

Graduates may find employment in entry-level jobs as local area network managers, network operators, network analysts, and network technicians. Graduates may also be qualified to take certification examinations for various network industry certifications, depending on their local program.

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*Curriculum Requirements**

[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

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.

Networking Technology A25340

	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*	**44-45 SHC**	**12 SHC**	
Required Courses:			
CIS 115 Intro to Prog & Logic 3 SHC			
CTS 120 Hardware/Software Support 3 SHC			
DBA 110 Database Concepts 3 SHC			
NET 125 Networking Basics 3 SHC			
NET 126 Routing Basics 3 SHC			
NET 225 Routing & Switching I 3 SHC			
NET 226 Routing & Switching II 3 SHC			
NOS 110 Operating Systems Concepts 3 SHC			
NOS 120 Linux/UNIX Single User 3 SHC			
NOS 130 Windows Single User 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			
Design. Select one:			
NET 240 Network Design 3 SHC			
NET 289 Networking Project 3 SHC			
Operating System Administration. Select one:			
NOS 220 Linux/UNIX Admin I 3 SHC			
NOS 230 Windows Admin I 3 SHC			
B. CONCENTRATION *(Not applicable)*			

Networking Technology A25340 (Continued)			
C. **OTHER MAJOR HOURS** *To be selected from the following prefixes:* BUS, CCT, CET, CIS, COE, CSC, CTI, CTS, DBA, ELC, HBI, NET, NOS, SEC, SGD, TNE, 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.*			

CURRICULUM STANDARD

Curriculum Program Title	**Surveying Technology**	Code	**A40380**
Concentration	**(not applicable)**		

Curriculum Description

The Surveying Technology curriculum provides training for technicians in the many areas of surveying. Surveyors are involved in land surveying, route surveying, construction surveying, photogrammetry, mapping, global positioning systems, geographical information systems, and other areas of property description and measurements.

Course work includes the communication and computational skills required for boundary, construction, route, and control surveying, photogrammetry, topography, drainage, surveying law, and subdivision design, with emphasis upon applications of electronic data collection and related software including CAD.

Graduates should qualify for jobs as survey party chief, instrument person, surveying technician, highway surveyor, mapper, GPS technician, and CAD operator. Graduates will be prepared to pursue the requirements necessary to become a Registered Land Surveyor in North Carolina.

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*Curriculum Requirements**
[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

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.

Surveying Technology A40380			
	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.*	22-25 SHC	12 SHC	
Required Courses: SRV 110 Surveying I 4 SHC; SRV 111 Surveying II 4 SHC; SRV 210 Surveying III 4 SHC **Required Subject Areas. Select a set of courses from one of the following subject areas:** **Land Survey:** SRV 211 Introduction to Hydrology 3 SHC; SRV 220 Surveying Law 3 SHC; SRV 230 Subdivision Planning 3 SHC; SRV 240 Topo/Site Surveying 4 SHC **Civil Engineering:** CIV 110 Statics/Strength of Mater 4 SHC; CIV 111 Soils and Foundations 3 SHC; CIV 211 Hydraulics and Hydrology 3 SHC **Geospatial Technology:** GIS 111 Introduction to GIS 3 SHC; GIS 120 Introduction to Geodesy 3 SHC; GIS 121 Georeferencing and Mapping 3 SHC; GIS 240 Air Photo Interpretation 3 SHC			
B. CONCENTRATION *(Not applicable)*			
C. OTHER MAJOR HOURS *To be selected from the following prefixes:* CIS, CIV, COE, CSC, DFT, EGR, FOR, GIS, MAT, MEC, PHY, and SRV *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.*			

CURRICULUM STANDARD

Curriculum Program Title   **Web Technologies**   Code   **A25290**

Concentration   **(not applicable)**

Curriculum Description

The Web Technologies curriculum prepares graduates for careers in the information technology arena using computers and mobile devices to disseminate and collect information via the Internet.

Course work in this program covers the terminology and use of computers, Internet-ready devices, servers, databases, programming languages, as well as Internet applications, site development and design. Studies will provide opportunity for students to learn related industry standards.

Graduates should qualify for career opportunities as designers, administrators, or developers in the areas of Internet and mobile applications, websites, web services, and related areas of Internet technologies.

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*Curriculum Requirements**
[for associate degree, diploma, and certificate programs in accordance with 23 NCAC 02E.0204 (3)]

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 (SHC)	**64-76**	**36-48**	**12-18**

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*Within the degree program, the institution shall include opportunities for the achievement of competence in reading, writing, oral communication, fundamental mathematical skills, and basic use of computers.

Major Hours

[ref. 23 NCAC 02E.0204 (3)]

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.   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.

Web Technologies A25290

	AAS	Diploma	Certificate
Minimum Major Hours Required	**49 SHC**	**30 SHC**	**12 SHC**
A. CORE	**36-37 SHC**	**12 SHC**	

A diploma offered under this AAS degree requires a minimum of 12 SHC extracted from the required subject/course core of the AAS degree.

Required Courses:

CIS 115	Intro to Programming and Logic	3 SHC
DBA 110	Database Concepts	3 SHC
WEB 110	Internet/Web Fundamentals	3 SHC
WEB 115	Web Markup and Scripting	3 SHC
WEB 210	Web Design	3 SHC
WEB 250	Database Driven Websites	3 SHC
	Select Additional 9 SHC from WEB courses	9 SHC

Required Subject Areas:

Business/IT Project Management. Select one:

BUS 110	Introduction to Business	3 SHC
BUS 137	Principles of Management	3 SHC
BUS 151	People Skills	3 SHC
BUS 280	REAL Small Business	4 SHC
CTS 115	Info Sys Business Concepts	3 SHC
CTS 240	Project Management	3 SHC
ETR 210	Intro to Entrepreneurship	3 SHC

Networking/Security Concepts. Select one:

NET 110	Networking Concepts	3 SHC
NET 125	Networking Basics	3 SHC
SEC 110	Security Concepts	3 SHC
WEB 240	Internet Security	3 SHC

Web Development/Multimedia. Select one:

DME 110	Intro to Digital Media	3 SHC
WEB 120	Intro Internet Multimedia	3 SHC
WEB 140	Web Development Tools	3 SHC

B.   CONCENTRATION *(Not applicable)*

C.	OTHER MAJOR HOURS			
	To be selected from the following prefixes: ACC, BUS, CCT, CJC, CIS, COE, CSC, CTI, CTS, DBA, DFT, DME, ECM, ETR, GIS, GRA, GRD, ITN, MKT, NET, NOS, 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.			