

# CURRICULUM STANDARD

Effective Term  
Fall 2009  
[2009\*03]

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.

	<b>AAS</b>	<b>Diploma</b>	<b>Certificate</b>
Minimum General Education Hours	15	6	0
Minimum Major Hours	49	30	12
Other Required Hours	0-7	0-4	0-1
<b>Total Semester Hours Credit (SHC)</b>	<b>64-76</b>	<b>36-48</b>	<b>12-18</b>

*\*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																																																																												
<b>Minimum Major Hours Required</b>	<b>49 SHC</b>	<b>30 SHC</b>	<b>12 SHC</b>																																																																												
<p><b>A. CORE</b> <i>Courses required for the diploma are designated with *</i></p> <p><b>Required Courses:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;">*</td> <td style="width: 15%;">CTS 115</td> <td style="width: 60%;">Info Sys Business Concept</td> <td style="width: 20%; text-align: right;">3 SHC</td> </tr> <tr> <td>*</td> <td>CTI 110</td> <td>Web, Pgm, &amp; DB Foundation</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td>*</td> <td>CTI 120</td> <td>Network &amp; Sec Foundation</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p><b>* Select one set:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;"></td> <td style="width: 15%;">CTI 130</td> <td style="width: 60%;">OS and Device Foundation</td> <td style="width: 20%; text-align: right;">6 SHC</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><i>or</i></td> <td></td> </tr> <tr> <td></td> <td>NOS 110</td> <td>Operating System Concepts</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><i>and</i></td> <td></td> </tr> <tr> <td></td> <td>CTS 120</td> <td>Hardware/Software Support</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><i>or</i></td> <td></td> </tr> <tr> <td></td> <td>CET 111</td> <td>Computer Upgrade/Repair I</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><i>and</i></td> <td></td> </tr> <tr> <td></td> <td>CET 211</td> <td>Computer Upgrade/Repair II</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><i>or</i></td> <td></td> </tr> <tr> <td></td> <td>CTS 120</td> <td>Hardware/Software Support</td> <td style="text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;"><i>and</i></td> <td></td> </tr> <tr> <td></td> <td>CTS 220</td> <td>Adv Hard/Software Support</td> <td style="text-align: right;">3 SHC</td> </tr> </table> <p><b>Required Subject Areas:</b> <i>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:</i></p> <p><b>Information Support and Services</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 5%;"></td> <td style="width: 15%;">CIS 110</td> <td style="width: 60%;">Introduction to Computers</td> <td style="width: 20%; text-align: right;">3 SHC</td> </tr> <tr> <td></td> <td>CIS 111</td> <td>Basic PC Literacy</td> <td style="text-align: right;">2 SHC</td> </tr> <tr> <td></td> <td>OST 122</td> <td>Office Computations</td> <td style="text-align: right;">2 SHC</td> </tr> </table> <p style="text-align: right;"><i>Continued on next page</i></p>	*	CTS 115	Info Sys Business Concept	3 SHC	*	CTI 110	Web, Pgm, & DB Foundation	3 SHC	*	CTI 120	Network & Sec Foundation	3 SHC		CTI 130	OS and Device Foundation	6 SHC			<i>or</i>			NOS 110	Operating System Concepts	3 SHC			<i>and</i>			CTS 120	Hardware/Software Support	3 SHC			<i>or</i>			CET 111	Computer Upgrade/Repair I	3 SHC			<i>and</i>			CET 211	Computer Upgrade/Repair II	3 SHC			<i>or</i>			CTS 120	Hardware/Software Support	3 SHC			<i>and</i>			CTS 220	Adv Hard/Software Support	3 SHC		CIS 110	Introduction to Computers	3 SHC		CIS 111	Basic PC Literacy	2 SHC		OST 122	Office Computations	2 SHC	<p><b>26-27 SHC</b></p>	<p><b>26-27 SHC</b></p>	
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## Computer Technology Integration A25500 (Continued)

<b>Interactive Media</b>			
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	
<b>Network Systems</b>			
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	
<b>Programming and Software Development</b>			
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	
<b>Emerging Information Technology:</b>			
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>B. CONCENTRATION</b>			
<b>C. OTHER MAJOR HOURS</b>			
<i>To be selected from the following prefixes:</i>			
ACC, BUS, CCT, CET, CIS, CJC, COE, CSC, 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			
<i>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.</i>			