

**BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE**

**Computer & Information Technologies  
Associate in Applied Science**

With options in Applications, Internet Technologies, Network  
Technology, and Programming  
Academic Plan Code – 1103017039

**Description:**

The CIT program includes options in Applications, Internet Technologies, Network Technology, and Programming, with a core of courses common to all. The core includes a general education component central to a collegiate education and technical courses giving students an introduction to information systems, computer applications, program development, system maintenance, and networking including the Internet.

In addition to core courses, students take specialty courses for their selected option. The *Applications option* emphasizes several aspects of microcomputer system configuration, applications software, end-user documentation, and training. Students completing this option are prepared to work with microcomputer-based systems in business and industry. The *Internet Technologies option* prepares students to design, program, and maintain Internet-based services. With an emphasis on client and server programming, this option prepares students for positions developing and maintaining interactive web sites. The *Network Technology option* provides the concepts and skills needed to set up, maintain, and expand networked computer systems. Employment opportunities include entry level positions in installation and administration of local area networks in medium to large organizations and as computer network administrators in small businesses. The *Programming option* provides students with an introduction to at least two programming languages with at least one of the languages studied at the intermediate level. Students completing this option are prepared for entry-level positions in computer programming.

Course Number	Course Title	Credit Hours
<b>General Education Core</b>		
ENG 101	Writing I	3
ENG 102	Writing II	3
MA 109	College Algebra	3
	Heritage/Humanities/Foreign Language Course	3
	Science Course	3
	Social Interaction Course	3
	Oral Communications Course	3
	<b>Subtotal Credit Hours</b>	<b>21</b>
<b>Technical Core or Support Courses</b>		
CIT 105	Introduction To Computing	3
CIT 111	Hardware & Software Systems Concepts	4
CIT 120	Programming Concepts	4
CIT 130	Productivity Software	3
CIT 150	Internet Technologies	3
CIT 160	Data Communications and Networking	4
CIT 180	Security Fundamentals	3
	Approved Level I Programming Language Course	3
	<b>Subtotal Credit Hours</b>	<b>27</b>

(Courses are listed by category and not necessarily in the order to be taken)

<b>Options (choose one of the following)</b>		
<b>Applications Option</b>		
CIT 170	Introduction to Database Design	3
CIT 232	Applications Development & Utilization OR	3
CIT 253	PHP/MySQL—Data Driven Web Pages	(3)
	Approved Applications Specialization	9
	Approved Management Course OR	3
	Approved Accounting course	(3)
	Approved Technical Course	3
	<b>Subtotal Credit Hours</b>	<b>21</b>
<b>Internet Technologies Option</b>		
CIT 170	Introduction to Database Design	3
CIT 253	PHP/MySQL—Data Driven Web Pages	3
	Approved Internet Technologies Specialization	12-15
CIT 294	Seminar in Web Technologies	3
	<b>Subtotal Credit Hours</b>	<b>21-24</b>
<b>Networking Technology Option</b>		
CIT 269	Internet Protocols	3
CIT 289	Network Security	3
	Approved Level I Network Technology Specialization	6
	Approved Level II Network Technology Specialization	6
	Approved Level I,II, or III Network Technology Specialization	6
	<b>Subtotal Credit Hours</b>	<b>24</b>
<b>Programming Option</b>		
CIT 170	Introduction to Database Design	3
CIT 253	PHP/MySQL—Data Driven Web Pages	3
	Approved Level I Programming Language	3
	Approved Level II Programming Language	3
	Approved Level II Programming Language	3
	Approved Level I or II Programming Language	3
	Approved Management Course OR	3
	Approved Accounting course	(3)
	<b>Subtotal Credit Hours</b>	<b>21</b>
<b>Capstone Course</b>		
CIT 291	System Development and Implementation	4

## BLUEGRASS COMMUNITY AND TECHNICAL COLLEGE

### Approved Accounting Courses\*

ACC 201 Financial Accounting I  
ACC 202 Managerial Uses of Accounting Information

### Approved Management Courses\*

MGT 200 Small Business Management  
MGT 283 Principles of Management  
MKT 291 Retail Management  
MGT 101 Quality Management Principles

### Approved Applications Specialization Courses\*

CIT 232 Applications Development and Utilization  
CIT 234 Advanced Spreadsheet Applications  
CIT 236 Advanced Database Applications  
CIT 253 PHP/MySQL—Data-Driven Web Pages  
CIT 171 SQL I  
CIT 271 SQL II  
GIS 110 Spatial Data Analysis and Map Interpretation  
GIS 120 Introduction to Geographic Information Systems  
GIS 210 Advanced Geographic Information Systems  
IMD 235 Advanced Word Processing

### Approved Applications Specializations\*

#### *Productivity Software Specialization*

IMD 235 Advanced Word Processing  
CIT 234 Advanced Spreadsheet Applications  
CIT 236 Advanced Database Applications

#### *Database Developer Specialization*

CIT 171 SQL I  
CIT 271 SQL II  
CIT 236 Advanced Database Applications

#### *Geographic Information Systems*

GIS 110 Spatial Data Analysis & Map Interpretation  
GIS 120 Intro to Geographic Information Systems  
GIS 210 Advanced Geographic Information Systems

### Approved Internet Technologies Specializations\*

#### *Web Programming Specialization*

CIT 140 Javascript I OR  
CIT 144 Flash Programming with ActionScript I  
CIT 171 SQL I  
Level I Web Programming Language Course  
Level II Web Programming Language Course

#### *Web Server Administration Specialization*

CIT 255 Internet Server Administration  
CIT 269 Internet Protocols  
CIT 289 Network Security  
Level I Network Technologies Specialization

### Approved Level I Network Technology Specializations\*

#### *Microsoft Windows Specialization*

Any six credit hours of course work from the Microsoft Windows Network Specialization Course List

#### *Unix Specialization*

CIT 217 Unix Administration  
CIT 218 Advanced Unix Administration

#### *Cisco Specialization*

CIT 281 Routing and Switching (4)

### Approved Level II Network Technology Specializations\*

#### *Microsoft Windows Specialization II*

Any six credit hours of course work from the Microsoft Windows Network Specialization Course List (after completing the requirements for the Microsoft Windows Specialization I)

*Students are advised to consult the Bluegrass Community and Technical College Catalog credit hour and prerequisite information*

#### *Cisco Specialization II*

CIT 282 Advanced Routing and Switching (4)  
CIT 283 Wide Area Network Design and Management (4)

### Approved Level III Network Technology Specializations\*

#### *Microsoft Windows Specialization III*

Any six credit hours of course work from the Microsoft Windows Network Specialization Course List (after completing the requirements for the Microsoft Windows Specialization II)

#### *Internet Servers Administration Specialization*

CIT 255 Internet Server Administration  
CIT 265 Microsoft Applications Server Infrastructure

### Microsoft Windows Network Specialization Courses\*

CIT 213 Microsoft Windows Client and Server Configuration  
CIT 261 Microsoft Windows Directory Services Administration  
CIT 262 Microsoft Windows Network Infrastructure  
CIT 263 Advanced Topics in Microsoft Windows  
CIT 264 Microsoft Server Administration  
CIT 265 Microsoft Applications Server Infrastructure  
CIT 266 Microsoft Enterprise Administration

### Approved Level I Web Programming Languages\*

CIT 140 JavaScript I                      CIT 144 Flash Programming with ActionScript  
CIT 145 Perl I                              CIT 148 Visual Basic I  
CIT 149 Java I                              CIT SQL I

### Approved Level II Web Programming Languages\*

CIT 245 Perl II                              CIT 248 Visual Basic II  
CIT 249 Java II                              CIT 271 SQL II

### Approved Level I Programming Languages\*

CIT 140 JavaScript I                      CIT 143 COBOL I  
CIT 145 Perl I                              CIT 148 Visual Basic I  
CIT 149 Java I                              CIT 171 SQL I  
CIT 144 Flash Programming with ActionScript  
CS 115 Intro to Computer Programming (C++)

### Approved Level II Programming Languages\*

CIT 243 COBOL II                      CIT 245 Perl II  
CIT 248 Visual Basic II                      CIT 249 Java II  
CIT 271 SQL II  
CS 215 Introduction to Program Design, Abstraction, and Problem Solving (C++) (4)  
CS 216 Introduction to Software Engineering

### Approved CIT Technical Courses\*

Additional CIT or CS Course(s) EXCEPT CIT 103, CS 100, or CS 101  
Approved Accounting Courses                      ACH 100 Construction Documents I  
ACH 185 Computer-Aided Drafting I                      CAD 100 Intro to Computer-Aided Design  
COE 199 Cooperative Education: CIT                      GIS 120 Intro to Geographic Info Systems  
IMD 126 Intro to Desktop Publishing                      IMD 180 Intermediate Web Design  
IMD 226 Advanced Desktop Publishing                      IMD 240 Web Develop. with Adobe Flash

\*Or other courses approved by Computer and Information Technologies Program Coordinator

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**Notes:**

- Students may not use one course to fulfill multiple requirements
- Students may choose CIT 260 or COE 199 for a maximum of 3 credit hours
- Students may not use an approved computer literacy course to fulfill the technical elective
- No CIT or CS courses more than 10 years old can be used to fulfill requirements toward graduation

**Computer and Information Technologies  
Certificates**

**Basic Skills**

Plan Code - 1103013019

<b>Course Number</b>	<b>Course Title</b>	<b>Credit Hours</b>
ENG 101	Writing I	3
	Oral Communications Course	3
CIT 105	Introduction to Computing	3
CIT 111	Hardware & Software Systems Concepts	4
CIT 120	Programming Concepts	4
CIT 130	Productivity Software	3
	<b>Total Credit Hours</b>	<b>20</b>
<i>No CIS or CIT credits more than 10 years old may be used to fulfill requirements for this certificate</i>		

**Intermediate Skills Certificate**

Plan Code - 1103013029

<b>Course Number</b>	<b>Course Title</b>	<b>Credit Hours</b>
Have been awarded a Basic Computer Skills Certificate		
MA 109	College Algebra	3
ENG 102	Writing II	3
CIT 150	Internet Technologies	3
CIT 160	Data Communications and Networking	4
	Approved Level I Programming Language Course	3
	Approved CIT Technical Course	3
	<b>Total Credit Hours</b>	<b>19</b>
<i>No CIS or CIT credits more than 10 years old may be used to fulfill requirements for this certificate</i>		