

COMPUTER AND INFORMATION TECHNOLOGIES - AAS

Offered at: Ashland Community and Technical College, Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Hazard Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southcentral Kentucky Community and Technical College, Southeast Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 1101017089

May be available completely online. Please check with your academic advisor.

All approved CIT technical elective course choices can be viewed by clicking this link: (<https://catalog.kctcs.edu/programs-of-study/aas/computer-information-technologies/#technicalelectivestext>)

Course	Title	Credits
General Education		
ENG 101	Writing I	3
Select one of the following 11 options:		3-5
MAT 126	Technical Algebra and Trigonometry	
MAT 146	Contemporary College Mathematics	
MAT 150	College Algebra	
MAT 155	Trigonometry	
MAT 160	Precalculus	
MAT 161	Statistics and Algebra	
MAT 165	Finite Mathematics and its Applications	
MAT 170	Brief Calculus with Applications	
MAT 171	Precalculus	
MAT 174	Calculus I	
MAT 175	Calculus I	
Social and Behavioral Science		3
Heritage or Humanities		3
Natural Sciences		3
General Education Subtotal		15-17
Technical Core Requirements		
CIT 105	Introduction to Computers	3
CIT 111	Computer Hardware and Software	4
CIT 120	Computational Thinking	3
CIT 170	Database Design Fundamentals	3
CIT 180	Security Fundamentals	3
Approved Level I Networking Course		4
Approved Level I Programming Language Course		3
Approved CIT Capstone Course		1-3

Technical Core Subtotal	24-26
General Education and Technical Core Subtotal	39-43
<i>Students must complete one of the tracks listed below to complete the AAS requirements.</i>	

Business Software and Support Track

Offered at: Ashland Community and Technical College, Bluegrass Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College, Owensboro Community and Technical College, Southeast Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 110101717

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
CIT 130	Productivity Software	3
CIT 234	Advanced Productivity Software	3
CIT 236	Adv Data Organization Software	3
Approved Business or Management Course		3
Completion of a Business Software and Support Track Course		9
Sequence in:		
Business Software Specialist (p. 1)		
Computer Support (p. 1)		
Software Support (p. 1)		
Total Credits		60-64

Business Software Specialist Sequence

Course	Title	Credits
CIT 171	SQL I	3
Approved CIT Technical Course		3
Approved Business or Management Course		3
Total Credits		9

Computer Support Sequence

Course	Title	Credits
CIT 232	Help Desk Operations	3
Approved CIT Technical Course		3
Approved CIT Technical Course		3
Total Credits		9

Software Support Sequence

Course	Title	Credits
Select one of the following three options:		
CIT 150	Internet Technologies	3
CIT 155	Web Page Development	
CIT 157	Web Site Design and Production	
CIT 253	Data Driven Web Pages: (Topic)	3
Select one of the following two options:		
ENG 102	Writing II	3

Oral Communications Course	
Total Credits	9

Cloud Computing Technologies Track

Offered at: Ashland Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Jefferson Community and Technical College, Maysville Community and Technical College, Somerset Community College, West Kentucky Community and Technical College

Program Plan Number: 110101716

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
Approved Cloud Computing Elective Course		3
CIT 227	Introduction to UNIX/Linux Administration	3
CIT 262	MS Network Infrastructure	3
Completion of a Cloud Computing Technologies Track Course Sequence in one of the following:		12-13
Amazon Web Services (p. 2)		
Data Center Technologies (p. 2)		
Total Credits		60-65

Amazon Web Services Sequence

Course	Title	Credits
CIT 206	Amazon Web Services Practitioner	3
CIT 207 or CIT 208	Amazon Web Services Architecting AWS Systems Operations	3
Approved Cloud Computing Elective		3
Approved CIT Elective		3
Total Credits		12

Data Center Technologies Sequence

Course	Title	Credits
CIT 203	Introduction to Virtualization	3
CIT 204	VMware Optimize and Scale	3
CIT 205	Cloud Infrastructure and Services	3
Approved Networking Elective		3-4
Total Credits		12-13

General Track

Offered at: Ashland Community and Technical College, Elizabethtown Community and Technical College, Hazard Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College, Owensboro Community and Technical College, Southcentral Kentucky Community and Technical College

Program Plan Number: 110101720

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
CIT Technical Electives ¹		21-25
Total Credits		60-68

¹ At least 12 credit hours of the CIT Technical Electives must be from the Approved General Track Electives list. Students **must** meet with the Program Coordinator or designee and complete a study plan **prior** to beginning the General Track.

Geospatial Technologies Track

Offered at: Bluegrass Community and Technical College, Jefferson Community and Technical College

Program Plan Number: 110101718

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
CIT 125	Intro to Digital Maps	3
CIT 225	GIS Data Analysis	3
GIS 145	Remote Sensing	3
GIS 255	Geospatial Programming	3
GIS 260	Geospatial Web Mapping	3
CIT 229	Selected Topics in GIS	3
CIT 290	Internship	3
Total Credits		60-64

Informatics Track

Offered at: Bluegrass Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 110101719

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
ENG 102	Writing II	3
Oral Communications Course		3
Select one of the following three options:		3
CIT 150	Internet Technologies	
CIT 155	Web Page Development	
CIT 157	Web Site Design and Production	
CIT 249 or INF 260U	Java II Object Oriented Programming I	3
Completion of an Informatics Track Course Sequence in one of the following:		9-11
Business (p.)		
Data Science (p. 3)		
Informatics Programming (p. 3)		
Total Credits		60-66

Business Sequence

Course	Title	Credits
IFM 111	Client-side Informatics Software	3
IFM 128	Principles of Informatics	3
or INF 128U	Principles of Informatics	
Select one of the following six options:		3
IFM 211	Collaboration Software	
IFM 225	Advanced Informatics	
ACC 201	Financial Accounting	
ACC 202	Managerial Accounting	
ECO 201	Principles of Microeconomics	
ECO 202	Principles of Macroeconomics	
Total Credits		9

Data Science Sequence

Course	Title	Credits
MAT 155	Trigonometry	3
MAT 174	Calculus I	4
or MA 113U	Calculus I	
Select one of the following four options:		3-4
CS 275U	Discrete Mathematics	
STA 210	Statistics: A Force in Human Judgement	
STA 220	Statistics	
STA 296U	Statistical Methods and Motivations	
Total Credits		10-11

Informatics Programming Sequence

Course	Title	Credits
CIT 253	Data Driven Web Pages: (Topic)	3
Select one of the following three options:		3-4
CS 215U	Introduction to Program Design, Abstraction, and Problem Solving	
CIT 242	C++ II	
CIT 243	C# II	
Select one of the following three options:		3
CS 216U	Introduction to Software Engineering	
STA 210	Statistics: A Force in Human Judgement	
STA 220	Statistics	
Total Credits		9-10

Information Security Track

Offered at: Ashland Community and Technical College, Big Sandy Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southcentral Kentucky Community and Technical College, Southeast Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 110101712

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
CIT 182	Perimeter Defense	3
CIT 184	Attacks and Exploits	3
CIT 227	Introduction to UNIX/Linux Administration	3
Approved Network Elective Courses		6
Approved Security Elective Course		3
Approved CIT Technical Course(s)		3
Total Credits		60-64

Internet Technologies Track

Offered at: Ashland Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southcentral Kentucky Community and Technical College, Southeast Kentucky Community and Technical College

Program Plan Number: 110101710

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
Select two of the following three options:		6
CIT 150	Internet Technologies	
CIT 155	Web Page Development	
CIT 157	Web Site Design and Production	
CIT 257	Applied Internet Technologies	3
or CIT 258	Internet Technologies Seminar	
Completion of an Internet Technologies Track Course Sequence in one of the following:		12
Web Programming (p. 3)		
Web Administration (p. 3)		
Total Credits		60-64

Web Programming Sequence

Course	Title	Credits
Approved Level I Web Programming Language Course		3
Approved Level II Web Programming Language Course		3
CIT 171	SQL I	3
CIT 253	Data Driven Web Pages: (Topic)	3
Total Credits		12

Web Administration Sequence

Course	Title	Credits
CIT 219	Internet Protocols	3
CIT 255	Web Server Administration	3
Select one of the following three options:		6
CIT 261	MS Active Directory Services & CIT 262 and MS Network Infrastructure	
CIT 262	MS Network Infrastructure & CIT 264 and Microsoft Server Management	

CIT 227 & CIT 228	Introduction to UNIX/Linux Administration and Advanced UNIX/Linux Administration	
Total Credits		12

Network Administration Track

Offered at: Ashland Community and Technical College, Big Sandy Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southcentral Kentucky Community and Technical College, Southeast Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 110101708

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
Approved CIT Technical Courses		9
Network Administration Track Course Sequence in one of the following:		12-14
Microsoft Windows Administration (p. 4)		
Cisco Network Associate (p.)		
UNIX/Linux Platform (p.)		
Total Credits		60-66

Microsoft Windows Administration

Course	Title	Credits
CIT 213	Microsoft Client Configuration	3
CIT 261	MS Active Directory Services	3
CIT 262	MS Network Infrastructure	3
CIT 264	Microsoft Server Management	3

Cisco Networking Associate

Course	Title	Credits
CIT 167	Switching & Routing Essentials	4
CIT 212	Connecting and Scaling Networks	4
CIT 227	Introduction to UNIX/Linux Administration	3
Choose one of the following two courses:		3
Approved Security Elective Course		
Approved Network Elective Course		

UNIX/Linux Platform

Course	Title	Credits
CIT 227	Introduction to UNIX/Linux Administration	3
CIT 228	Advanced UNIX/Linux Administration	3
CIT 267	UNIX/Linux Network Services	3
CIT 286	UNIX/Linux OS Security	3

Network Technologies Track

Offered at: Ashland Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and

Technical College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College

Program Plan Number: 110101713

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
CIT 219	Internet Protocols	3
CIT 288	Network Security	3
Select 15-17 hours of Approved Network Technologies Courses. At least eight hours must be from a single platform and at least four hours must be from a different platform:		15-17
Microsoft Platform (p. 4)		
Cisco Platform (p. 4)		
UNIX/Linux Platform (p. 4)		
Data Center Platform (p. 4)		
Security Platform (p. 5)		
Total Credits		60-66

Microsoft Platform

Course	Title	Credits
CIT 213	Microsoft Client Configuration	3
CIT 261	MS Active Directory Services	3
CIT 262	MS Network Infrastructure	3
CIT 264	Microsoft Server Management	3

CISCO Platform

Course	Title	Credits
CIT 167	Switching & Routing Essentials	4
CIT 212	Connecting and Scaling Networks	4

UNIX/Linux Platform

Course	Title	Credits
CIT 227	Introduction to UNIX/Linux Administration	3
CIT 228	Advanced UNIX/Linux Administration	3
CIT 255	Web Server Administration	3
CIT 267	UNIX/Linux Network Services	3
CIT 286	UNIX/Linux OS Security	3

Data Center Platform

Course	Title	Credits
CIT 201	Information Storage Management	3
CIT 203	Introduction to Virtualization	3
CIT 204	VMware Optimize and Scale	3
CIT 205	Cloud Infrastructure and Services	3
CIT 206	Amazon Web Services Practitioner	3
CIT 207	Amazon Web Services Architecting	3
CIT 208	AWS Systems Operations	3

Security Platform

Course	Title	Credits
CIT 182	Perimeter Defense	3
CIT 184	Attacks and Exploits	3

Programming Track

Offered at: Ashland Community and Technical College, Big Sandy Community and Technical College, Bluegrass Community and Technical College, Elizabethtown Community and Technical College, Gateway Community and Technical College, Henderson Community College, Hopkinsville Community College, Jefferson Community and Technical College, Madisonville Community College, Maysville Community and Technical College, Owensboro Community and Technical College, Somerset Community College, Southeast Kentucky Community and Technical College, West Kentucky Community and Technical College

Program Plan Number: 110101709

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
Approved Level II Programming Language		3
Approved Level I, II, or III Programming Language		3
Approved CIT Technical Course(s)		3
Completion of a Programming Track Course Sequence in one of the following:		12
Information Systems (p. 5)		
Programming Software Development (p. 5)		
Total Credits		60-64

Information Systems Sequence

Course	Title	Credits
CIT 171	SQL I	3
Approved CIT Technical Courses		3
Approved Management or Business Course		3
Approved Business Course		3

Programming Software Development Sequence

Course	Title	Credits
Approved Level I Programming Language		3
Approved Level II Programming Language		3
Select one of the following three options:		3
CIT 150	Internet Technologies	
CIT 155	Web Page Development	
CIT 157	Web Site Design and Production	
CIT 253	Data Driven Web Pages: (Topic)	3

Video Game Design Track

Offered at: Bluegrass Community and Technical College, Madisonville Community College, Maysville Community and Technical College

Program Plan Number: 110101715

Course	Title	Credits
General Education and Technical Core Subtotal		39-43
CIT/IMD 124	Introduction to Game Development	3
CIT/IMD 221	Computer Graphics	3
CIT/IMD 222	3D Modeling for Video Games	3
CIT/IMD 223	3D Animation for Video Games	3
CIT/IMD 273	Game Production	3
CIT/IMD 274	Seminar in Game Development	3
Video Game Design Elective		3
Total Credits		60-64