TRANSFER PATHWAY GUIDE
2019-2020

Associate of Applied Science in Computer and Information Technologies – Network Administration Track to Bachelor of Science in Computer Information Technology – All Tracks

Overview
Completion of the following curriculum will satisfy the requirements for the Associate of Applied Science (AAS) in Computer and Information Technologies (Network Administration Track) degree at a Kentucky Community and Technical College System institution and leads to the Bachelor of Science in Computer Information Technology degree at Northern Kentucky University.

There are two pathways in this document. The first pathway is built using the Microsoft Windows Administration Course Sequence in the Network Administration Track at KCTCS and second pathway is built using the Cisco Networking Associate Course Sequence in the Network Administration Track. Each pathway leads into a Computer Information Technology degree at NKU.

Applying to the KCTCS2NKU Program
Students can apply to participate in the pathway program by completing the online application on the NKU transfer webpage. Students must be enrolled in at least six credit hours at their KCTCS institution, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at their KCTCS institution.

Degree Requirements for KCTCS
1) completion of minimum 60 credit hours, 2) minimum cumulative GPA 2.0, 3) minimum of 25 percent of credit hours required for the degree earned at the institution awarding the degree, 4) demonstration of digital literacy.

Admission Requirements to NKU
Students completing an associate degree with a cumulative GPA of 2.0 or higher will be accepted into NKU.

Degree Requirements for NKU
To earn a bachelor's degree at NKU, students must complete a minimum of 120 credit hours with at least 45 credit hours numbered 300 and above. In addition, at least 25% of the credit hours required for the degree and the last 30 credit hours must be completed at NKU. Students must

have an overall GPA of 2.0 and meet all prerequisites for courses and requirements for the major. In some cases, students must complete a focus or minor as indicated on the pathway.

General Transfer Information
Students must complete the online application to NKU. There is no application fee for students who are transferring from a KCTCS institution.

KCTCS Scholars Award: Students who are KY residents transferring directly from a KCTCS institution with at least 36 hours from that institution and minimum GPA of 3.0, were never enrolled as a degree-seeking student at NKU, and will be enrolled in at least 12 credit hours both fall and spring semester are eligible for a limited number of $2,500 annual scholarships ($1,250 per fall and spring). Students must gain admission to NKU by June 15 for fall and November 1 for spring to be eligible for a possible scholarship. Online accelerated programs are not eligible for the KCTCS Scholars Award.

Credits for Certifications: Students with a current certification at the time of registering for classes will receive credit for equivalent NKU courses based on the following course mappings.

Examination	Equivalent NKU Courses	Semester Credits
CCNA Routing and Switching	CIT 247 Networking Fundamentals CIT 447 Network Design/Troubleshooting	6
CCNA Security	CIT 247 Networking Fundamentals CIT 484 Network Security	6
Security+ (versions SY0-501 and later)	CIT 285 Cybersecurity Fundamentals	3
OCA – Oracle Certified Associate	CIT 472 Database Administration	3

Note: Students with Security+ exams SY0-401 and below will be required to take CIT 285.

KCTCS AAS IN COMPUTER & INFORMATION TECHNOLOGIES – NETWORK ADMINISTRATION TRACK (MICROSOFT WINDOWS ADMINISTRATION) TO NKU BS IN COMPUTER INFORMATION TECHNOLOGY CHECKLIST

Kentucky Community and Technical College System

Category 1: KCTCS General Education Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
ENG 101	Writing I (WC)	3	ENG 101	
MAT 150	College Algebra (QR)	3	(MAT 102 or MAT 103) + MAT 100T	
TBS XXX	Social & Behavioral Sciences (SB)	3	TBD XXX	
TBS XXX	Arts & Humanities (AH) Heritage or Humanities	3	TBD XXX	
TBS XXX	Natural Science Course with Lab (SL)	3-4	TBD XXX	
	Subtotal General Education Courses	**15-16**		

TBS XXX means to be selected by KCTCS student.
TBD XXX means to be determined by NKU based on course selected.

A grade of A or B in MAT 150 equates to MAT 103 + MAT 100T. Grade of C or D in MAT 150 equates to MAT 102 + MAT 100T.

Students who do not complete a science course with a lab will be required to take an additional science with a lab at NKU.

Category 2: KCTCS AAS Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
CIT 105	Introduction to Computers	3	BIS 101	
CIT 111 + CIT 217 + CIT 160 or CIT 161	Computer Hardware and Software + UNIX/Linux Net Infrastructure (CIT Technical) + Intro to Networking Concepts (Level I Networking) or Introduction to Networks (Level I Networking)	4 3 4	CIT 130 + CIT 100T + INF 284	
CIT 120	Computational Thinking	3	INF 100T	
CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	Level I Programming Language Course: PHP I or C++ I or C# I or Python I or Perl I or Swift I or Programming I: Language or Visual Basic I or Java I or Introduction to Computer Programming	3	INF 120	
CIT 150 or CIT 155 or IMD 230	Internet Technologies (CIT Technical) or Web Page Development (CIT Technical) or Advanced Web Design	3	INF 286	
CIT 170	Database Design Fundamentals	3	INF 282	

KCTCS Course	Course or Category	Credits	NKU Course	Completed
CIT 180 + CIT 182	Security Fundamentals + Perimeter Defense (CIT Technical)	3 3	CIT 285 + CIT 200T	
CIT 213 + CIT 214 + CIT 215 Or CIT 213 + CIT 261 + CIT 262 + CIT 264	Microsoft Client Configuration + Microsoft Server Configuration + Microsoft Server Administration Or Microsoft Client Configuration + MS Network Infrastructure +	9-12	CIT 271 + CIT 200T	
CIT 216	Microsoft Server Advanced Services	3	CIT 200T	
CIT 293	CIT Employability Studies	1	CIT 200T	
	Subtotal AAS Requirement Courses	**45**		
	Total Associate Degree Hours	**60-64**		

Northern Kentucky University

Category 3: Additional General Education Courses

NKU Course	Course or Category	Credits	KCTCS Course	Taken at KCTCS
ENG 102	Advanced College Writing	3	ENG 102	
CMST 101	Public Speaking	3	COM 181	
TBS XXX	Self & Society	6		
TBS XXX	Culture & Creativity	3		
TBS XXX	Global Viewpoints	3		
	Subtotal General Education Credit Hours	**18**		

Category 4: Major Requirements for BS in Computer Information Technology

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF 100	Orientation to College of Informatics	1	Waived for students with AAS degree	
INF 120	Elementary Programming	3	CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	x
INF 282	Introduction to Databases	3	CIT 170	x
INF 284	Introduction to Computer Networks	3	CIT 160 or CIT 161	x
INF 286	Introduction to Web Development	3	CIT 150 or CIT 155 or IMD 230	x
CIT 130	Information Technology Fundamentals	3	CIT 111 + CIT 217 + CIT 160 or CIT 161 = CIT 130 + CIT 100T + INF 284	x

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CIT 271	Windows Administration	3	CIT 213 + CIT 215 = CIT 271 + CIT 200T	x
CIT 285	Cybersecurity Fundamentals	3	CIT 180 +CIT 182 = CIT 285 +CIT 100T	x
CIT 371	Unix Systems	3		
CIT 383	Scripting I	3		
STA 205 or STA 250	Statistical Methods or Probability and Statistics	3	STA 220 or (MAT 151 or STA 151 or MAT 161) + STA 251	
PHI 310	Information Ethics	3		
ENG 347	Technical Writing	3		
	Select one track from following tracks: Network and System Administration Track Web and Database Administration Track Cybersecurity Track Non-Specialist Track (Required courses are listed in Category 6 tables below.)	18		
	Subtotal Major Credit Hours at NKU	**34**		
	Subtotal Major Credit Hours KCTCS	**21**		
	Total Major Credit Hours	**55**		

Category 5: Additional Requirements at NKU

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
	Subtotal Minor Credit Hours Focus or Minor and Electives to meet NKU graduation requirements. Any NKU focus or minor may be selected. Information Systems and Computer Science are common choices and require 9-15 additional credits. (Required courses for these minors are listed in Category 7 tables below.)	At Least 18		
	Total Baccalaureate Degree Credit Hours	**130-134**		

Students must choose a track as part of the Computer Information Technology major. Track requirements are listed in the Category 6 tables below.

Category 6: NKU Major Requirements for the Network and System Administration Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CIT 247	Networking Fundamentals	3	CIT 167	
CIT 447	Network Design/Troubleshooting	3		

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CIT 470	Advanced Network and System Administration	3		
CIT 484	Network Security	3		
CIT XXX	300/400-level CIT Course (not above)	3		
CIT XXX	300/400-level CIT Course (not above)	3		
	Additional Credit Hours for Track	**18**		

Category 6: NKU Major Requirements for the Web and Database Administration Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CSC 260	Object-Oriented Programming I	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CSC 360 or CIT 483	Object-Oriented Programming II or Scripting II	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CSC 301	Web Programming	3		
CIT 436	Web Server Administration	3		
CIT 472	Database Administration	3		
CSC 456 or CIT XXX	Advanced Web Application Development or One 300/400-level CIT course	3		
	Additional Credit Hours for Track	**18**		

Category 6: NKU Major Requirements for the Cybersecurity Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CIT 247	Networking Fundamentals	3	CIT 167	
CIT 430	Computer Forensics	3		
CIT 484	Network Security	3		
CIT 485	Advanced Cybersecurity	3		
CIT XXX	300/400-level CIT Course (not above)	3		
CIT XXX	300/400-level CIT Course (not above)	3		
	Additional Credit Hours for Track	**18**		

BIS 382, CSC 482 and CSC 483 may count as the CIT elective in the Cybersecurity Track.

Category 6: NKU Major Requirements for the Non-Specialist Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CSC 260	Object-Oriented Programming I	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CSC 360 or CIT 483	Object-Oriented Programming II or Scripting II	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CIT 436 or CIT 438 or CIT 472	Web Server Administration or Cloud Computing or Database Administration	3		

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CIT 470 or CIT 485	Advanced Network and System Administration or Advanced Cybersecurity	3		
CIT XXX	One 300/400-level CIT course (not above)	3		
CIT XXX	One 300/400-level CIT course (not above)	3		
	Additional Credit Hours for Track	**18**		

Students may choose one of the following minors listed below in Category 7 tables or any other minor offered at NKU.

Category 7: NKU Requirements for the Information Systems Minor

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF 120	Elementary Programming	3	CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	x
INF 282	Introduction to Databases	3	CIT 170	x
INF 286	Introduction to Web Development	3	CIT 150 or CIT 155 or IMD 230	x
BIS 275	Introduction to Business Analysis	3		
BIS 300	Management Information Systems	3		
BIS 310	Information Systems Analysis	3	CIT 291	
BIS 330	IT Project Management	3		
BIS XXX	One 300/400-level BIS course from list	3		
	Additional Credit Hours for Minor	**15**		

Category 7: NKU Requirements for the Computer Science Minor

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF 120	Elementary Programming	3	CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	x
CSC 260	Object-oriented Programming I	3	CIT 149 + CIT 249 = CSC 260 +CSC 360	
CSC 360	Object-oriented Programming II	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CSC 362 or CSC 364	Computer Systems or Data Structures and Algorithms	3		
CSC XXX	One 300/400-level CSC course	3		
CSC XXX	One 300/400-level CSC course	3		

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF XXX or CSC XXX or CIT XXX	Two 300/400-level INF, CSC, or CIT courses not listed above in Category 6 (met by CIT major requirements)	6		
	Additional Credit Hours for Minor	**15**		

KCTCS AAS IN COMPUTER & INFORMATION TECHNOLOGIES – NETWORK ADMINISTRATION TRACK (CISCO NETWORKING ASSOCIATE) TO NKU BS IN COMPUTER INFORMATION TECHNOLOGY CHECKLIST

Kentucky Community and Technical College System

Category 1: KCTCS General Education Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
ENG 101	Writing I (WC)	3	ENG 101	
MAT 150	College Algebra (QR)	3	(MAT 102 or MAT 103) + MAT 100T	
TBS XXX	Social & Behavioral Sciences (SB)	3	TBD XXX	
TBS XXX	Arts & Humanities (AH) Heritage or Humanities	3	TBD XXX	
TBS XXX	Natural Science Course with Lab (SL)	3-4	TBD XXX	
	Subtotal General Education Courses	**15-16**		

TBS XXX means to be selected by KCTCS student.
TBD XXX means to be determined by NKU based on course selected.

A grade of A or B in MAT 150 equates to MAT 103 + MAT 100T. Grade of C or D in MAT 150 equates to MAT 102 + MAT 100T.

Students who do not complete a science course with a lab will be required to take an additional science with a lab at NKU.

Category 2: KCTCS AAS Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
CIT 105	Introduction to Computers	3	BIS 101	
CIT 111 + CIT 217 + CIT 161	Computer Hardware and Software + UNIX/Linux Net Infrastructure (CIT Technical) + Introduction to Networks (Level I Networking)	4 3 4	CIT 130 + CIT 100T + INF 284	
CIT 120	Computational Thinking	3	INF 100T	
CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	Level I Programming Language Course: PHP I or C++ I or C# I or Python I or Perl I or Swift I or Programming I: Language or Visual Basic I or Java I or Introduction to Computer Programming	3	INF 120	
CIT 150 or CIT 155 or IMD 230	Internet Technologies (CIT Technical) or Web Page Development (CIT Technical) or Advanced Web Design	3	INF 286	
CIT 170	Database Design Fundamentals	3	INF 282	
CIT 180 + CIT 182	Security Fundamentals + Perimeter Defense (CIT Technical)	3 3	CIT 285 + CIT 200T	

KCTCS Course	Course or Category	Credits	NKU Course	Completed
CIT 167	Routing and Switching Essentials	4	CIT 247	
CIT 209	Scaling Networks	4	INF 284	
CIT 212	Connecting Networks	4	INF 200T	
CIT 293	CIT Employability Studies	1	CIT 100T	
	Subtotal AAS Requirement Courses	**45**		
	Total Associate Degree Hours	**60-61**		

Northern Kentucky University

Category 3: Additional General Education Courses

NKU Course	Course or Category	Credits	KCTCS Course	Taken at KCTCS
ENG 102	Advanced College Writing	3	ENG 102	
CMST 101	Public Speaking	3	COM 181	
TBS XXX	Self & Society	6		
TBS XXX	Culture & Creativity	3		
TBS XXX	Global Viewpoints	3		
	Subtotal General Education Credit Hours	**18**		

Category 4: Major Requirements for BS in Computer Information Technology

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF 100	Orientation to College of Informatics	1		
INF 120	Elementary Programming	3	CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	x
INF 282	Introduction to Databases	3	CIT 170	x
INF 284	Introduction to Computer Networks	3	CIT 209	x
INF 286	Introduction to Web Development	3	CIT 150 or CIT 155 or IMD 230	x
CIT 130	Information Technology Fundamentals	3	CIT 111 + CIT 217 + CIT 161 = CIT 130 + CIT 100T + INF 284	x
CIT 271	Windows Administration	3	CIT 213 + CIT 215 = CIT 271 + CIT 200T	x
CIT 285	Cybersecurity Fundamentals	3	CIT 180 +CIT 182 = CIT 285 +CIT 100T	x
CIT 371	Unix Systems	3		
CIT 383	Scripting I	3		
STA 205 or STA 250	Statistical Methods or Probability and Statistics	3	STA 220 or (MAT 151 or STA 151 or MAT 161) + STA 251	
PHI 310	Information Ethics	3		
ENG 347	Technical Writing	3		

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
	Select one track from following tracks: Network and System Administration Track Web and Database Administration Track Cybersecurity Track Non-Specialist Track (Required courses are listed in Category 5 tables below.)	15-18		
	Subtotal Major Credit Hours at NKU	**31-34**		
	Subtotal Major Credit Hours KCTCS	**21-24**		
	Total Major Credit Hours	**55**		

Category 5: Additional Requirements at NKU

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
	Subtotal Minor Credit Hours Focus or Minor and Electives to meet NKU graduation requirements. Any NKU focus or minor may be selected. Information Systems and Computer Science are common choices and require 9-15 additional credits. (Required courses for these minors are listed in Category 7 tables below.)	At Least 18		
	Total Baccalaureate Degree Credit Hours	**127-131**		

Students must choose a track as part of the Computer Information Technology major. The course requirements for the tracks are listed in Category 6 tables below.

Category 6: NKU Major Requirements for the Network and System Administration Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CIT 247	Networking Fundamentals	3	CIT 167	x
CIT 447	Network Design/Troubleshooting	3		
CIT 470	Advanced Network and System Administration	3		
CIT 484	Network Security	3		
CIT XXX	300/400-level CIT Course (not above)	3		
CIT XXX	300/400-level CIT Course (not above)	3		
	Additional Credit Hours for Track	**15**		

Category 6: NKU Major Requirements for the Web and Database Administration Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CSC 260	Object-Oriented Programming I	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CSC 360 or CIT 483	Object-Oriented Programming II or Scripting II	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CSC 301	Web Programming	3		
CIT 436	Web Server Administration	3		
CIT 472	Database Administration	3		
CSC 456 or CIT XXX	Advanced Web Application Development or One 300/400-level CIT course (not above)	3		
	Additional Credit Hours for Track	**18**		

Category 6: NKU Major Requirements for the Cybersecurity Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CIT 247	Networking Fundamentals	3	CIT 167	x
CIT 430	Computer Forensics	3		
CIT 484	Network Security	3		
CIT 485	Advanced Cybersecurity	3		
CIT XXX	300/400-level CIT Course (not above)	3		
CIT XXX	300/400-level CIT Course (not above)	3		
	Additional Credit Hours for Track	**15**		

BIS 382, CSC 482 and CSC 483 may count as the CIT elective in the Cybersecurity Track.

Category 6: NKU Major Requirements for the Non-Specialist Track

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
CSC 260	Object-Oriented Programming I	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CSC 360 or CIT 483	Object-Oriented Programming II or Scripting II	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CIT 436 or CIT 438 or CIT 472	Web Server Administration or Cloud Computing or Database Administration	3		
CIT 470 or CIT 485	Advanced Network and System Administration or Advanced Cybersecurity	3		
CIT XXX	One 300/400-level CIT course (not above)	3		
CIT XXX	One 300/400-level CIT course (not above)	3		
	Additional Credit Hours for Track	**18**		

Students may choose one of the following minors listed below in Category 7 tables or any other minor offered at NKU.

Category 7: NKU Requirements for the Information Systems Minor

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF 120	Elementary Programming	3	CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	x
INF 282	Introduction to Databases	3	CIT 170	x
INF 286	Introduction to Web Development	3	CIT 150 or CIT 155 or IMD 230	x
BIS 275	Introduction to Business Analysis	3		
BIS 300	Management Information Systems	3		
BIS 310	Information Systems Analysis	3	CIT 291	
BIS 330	IT Project Management	3		
BIS XXX	One 300/400-level BIS course from list	3		
	Additional Credit Hours for Minor	**15**		

Category 7: NKU Requirements for the Computer Science Minor

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF 120	Elementary Programming	3	CIT 141 or CIT 142 or CIT 143 or CIT 144 or CIT 145 or CIT 146 or CIT 147 or CIT 148 or CIT 149 or CS 115	x
CSC 260	Object-oriented Programming I	3	CIT 149 +CIT 24 = CSC 260 +CSC 360	
CSC 360	Object-oriented Programming II	3	CIT 149 + CIT 249 = CSC 260 + CSC 360	
CSC 362 or CSC 364	Computer Systems or Data Structures and Algorithms	3		
CSC XXX	One 300/400-level CSC course	3		
CSC XXX	One 300/400-level CSC course	3		
INF XXX or CSC XXX or CIT XXX	Two 300/400-level INF, CSC, or CIT courses not listed above in Category 6 (met by CIT major requirements)	6		
	Additional Credit Hours for Minor	**15**		

Updated: May 2019