TRANSFER PATHWAY GUIDE
FOR
Associate in Applied Science in Cybersecurity to Murray State University's Bachelor of Science in Cybersecurity and Network Management

Overview
Completion of the following curriculum will satisfy the requirements for Associates in Applied Science Cybersecurity at the Kentucky Community and Technical College System and leads to the Bachelor's of Science in Cybersecurity and Network Management at Murray State University.

Admission Requirements
Murray State University admission requirements for domestic first-time transfer students can be found online. Current link is available [here](#).

Degree Requirements
At least 42 semester hours of the 120 hours required for a baccalaureate degree must be earned in courses at the 300-level or above (upper-level courses). Transfer courses at the 100 or 200-level that are direct equivalents of upper-level Murray State courses will be considered upper-level credit. Transfer courses at the 100 or 200-level that may be substituted for upper-level Murray State courses or requirements will not be considered upper-level credit.

The baccalaureate degree candidate must have a GPA of at least 2.00: (1) in all credits presented for graduation whether earned at Murray State or elsewhere (cumulative GPA); (2) in all credits completed at Murray State; and (3) in the courses for each major, minor or area.

General Transfer Requirements
Students can apply for Murray State online here: https://www.murraystate.edu/admissions/apply.aspx Transfer requirements, scholarship information, and other relevant transfer information can also be found at www.murraystate.edu/admissions/transfer. Once the student has been accepted at Murray State and they receive their student ID (M#), they can apply for scholarships within our student portal, MyGate.

For specific questions concerning the transfer, students can contact the Transfer Center at (270)-809-3350 or msu.transfercenter@murraystate.edu.

A list of Murray State's General Education courses can be found here:
https://www.murraystate.edu/academics/UniversityStudies/courses.aspx

The institution has rolling admissions; students may enter the CNM program at either the August or January entry point. There may be limited offerings every summer term.

The general University Scholarship application is due at or before February 5th before the Fall semester entry. All students must complete the FAFSA to be eligible for scholarships.

KCTCS Cybersecurity AAS TO Murray State University's Bachelor's of Science in Cybersecurity Network Management CHECKLIST

Kentucky Community and Technical College System

Category 1: KCTCS General Education Requirements (15-33 hours)

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
ENG 101	Writing I	3	ENG 105 (w/102)	
MAT 150	College Algebra	3	MAT 140	
Choose one: ECO 201	Principles of Microeconomics	3	ECO 231	
ECO 202	Principles of Macroeconomics (Social/Beh)	3	ECO 230	
TBS XXX	Heritage and Humanities Elective	3	TBD XXX	
TBS XXX	Natural Science elective (+ lab, below)	3	TBD XXX	
		15		
For full Category Certification: Students may wish to pursue full category certification at KCTCS. Please complete the additional courses listed below to complete category certification prior to transfer.				
ENG 102	Writing II	3	ENG 105 (w/101)	
TBS XXX	Natural Science Lab	1	TBD XXX	
TBS XXX	Heritage and Humanities Elective	3	TBD XXX	
TBS XXX	Social and Behavioral Science	3	TBD XXX	
TBS XXX	Social and Behavioral Elective	3	TBD XXX	
COM 181	Basic Public Speaking	3	COM 161	
STA 220	Statistics	3	STA 135	
Subtotal General Education Courses		**34**		

TBS XXX means to be selected by KCTCS student.
TBD XXX means to be determined by Murray State University based on course selected.

Category 2: KCTCS Technical Core Requirements

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
CYS 100	Cybersecurity Orientation	1	TBD XXX	
CYS 101	Cybersecurity Foundations	3	CNM 135	
CYS 130	Introduction to Cyber Forensics	3	CNM 140	
CYS 140	Data Security	3	CNM 232	
CYS 145	Foundations of Cyber Systems	3	CNM233	
CYS 150	Secure Software Development I	3	CNM 241	
CYS 202	Human, Organizational, and Societal Security	3	CNM 251	
CYS 245	Advanced Cyber Systems	3	CNM 260	
CYS 285	Cryptography	3	CSC 101	
CYS 299	Cybersecurity Capstone	3	CSC 199	
CYS - Track	Secure Coding, Network Defense, Cyber Forensics, Cyber Science	12-18		
	Subtotal AAS Requirement Courses	**64-67**		

Secure Coding Track

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
	General Education and Technical Core Required Courses	49		
Choose one:				
CYS 250	Secure Software Development II	3	TBD XXX	
CYS 251	Secure Software Development Bridge	3	TBD XXX	
CYS 255	Secure Software Development III	3	TBD XXX	
CYS 258	Survey of Programming Languages	3	TBD XXX	
CYS 270	Secure Web Applications	3	TBD XXX	
	Cyber Elective	0-3	TBD XXX	
	Subtotal Secure Coding Track	**12-15**		

Network Defense Track

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
	General Education and Technical Core Required Courses	49		
CYS 265	Network and Cloud Forensics	3	TBD XXX	
CYS 247	Linux Security	3	TBD XXX	
CYS 248	Netwrok Security Authentication	3	TBD XXX	
CYS 249	Ethical Hacking	3	TBD XXX	
	Cyber Elective	0-3	TBD XXX	
	Subtotal Network Defense Track	**12-15**		

Cyber Forensics Track

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
General Education and Technical Core Required Courses		49		
CYS 234	Computer Operating Systems Forensics	3	TBD XXX	
CYS 265	Network and Cloud Forensics	3	TBD XXX	
CYS 266	Mobile Device Forensics	3	TBD XXX	
CYS 249	Ethical Hacking	3	TBD XXX	
	Cyber Elective	0-3	TBD XXX	
	Subtotal Cyber Forensics Track	**12-15**		

Cyber Science Track

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
General Education and Technical Core Required Courses		49		
Choose one:				
TBS XXX	Heritage or Humanities Course[1][3]	3	TBD XXX	
TBS XXX	Social and Behavioral Course[2][3]	3	TBD XXX	
TBS XXX	Natural Science Course with a Lab	3-4	TBD XXX	
Choose one:				
STA 220	Statistics	3	STA 135	
STA 210	Statistics: A Force in Human Judgement	3	PSY 300	
STA 296U	Statistical Methods and Motivations	3	TBD XXX	
MAT 174	Calculus I	4	MAT 250	
MAT 175	Calculus I	5	MAT 250	
Choose one:				
TBS XXX	Cyber Electives	6	TBD XXX	
TBS XXX	Natural Science AND Quantitative Reasoning Course(s)[4]	6	TBD XXX	
	Subtotal Cyber Science Track	**15-18**		

[1]The category fulfilled here must be in the category not fulfilled by the Heritage or Humanities course in the General Education core.

[2]The course taken must be from a different prefix from the Social and Behavioral course taken in the General Education core.

[3]One course with this notation must fulfill the Cross-Cultural designation for General Education certification.

[4]The total number of hours combined of Natural Science and/or Quantitative Reasoning courses for this requirement cannot exceed 6 hours).

Cybersecurity Electives

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
CYS 231	Internet of Things Security and Forensics	3	TBD XXX	
CYS 234	Computer Operating Systems Forensics	3	TBD XXX	
CYS 249	Ethical Hacking	3	TBD XXX	
CYS 250	Secure Software Development II	3	TBD XXX	
CYS 258	Survey of Programming Languages	3	TBD XXX	
CRJ 211	Liability and Legal Issues	3	TBD XXX	
Electives must be approved by CYS Coordinator[5]				

[5]CIT 120 may be accepted as an elective only for those bridging from CIT - Programming to Cybersecurity - Secure Coding

Murray State University

Major Requirements for B.S. in Cybersecurity and Network Management (Any Track)

Murray State Course	Course	Credits	KCTCS Course	Taken at KCTCS
ACC 200[1]	Principles of Financial Accounting	3	ACC 201	
ACC 201[1]	Principles of Managerial Accounting	3	ACC 202	
CNM 100T[2]	Transitions	1		
CNM 320	Introduction to Wireless Technology	3		
CNM 343	Protocol Analysis	3		
CNM 353	Network Security	3		
CNM 381	Information Technology Project Mgmt	3		
CNM 411	Network Design, Operations and Mgmt	3		
CNM 440	Information Assurance Policy and Mgmt	3		
FIN 330	Principles of Finance	3		
MKT 360	Principles of Marketing	3		
SOE 350	Technology Management	3		
SOE 399	Professional Development Seminar I	1		
CNM 488	Cooperative Education/Internship	3		
	Electives/Track Courses	*6-18*		
	Any general education courses remaining	*0-17*		
	Hours not otherwise specified	*0-8*		
Note that there is a 42 hour minimum required for upper level credits				
Subtotal Murray State University Credit Hours		42-79		
Total Baccalaureate Degree Credit Hours		120		

[1]ACC 200 and ACC 201 are only typically offered online at MSU during the summer terms, as of 2024.
[2]Transitions courses are waived for students who transfer 30 hours of more to Murray State University.

Updated: April 16, 2025