Transfer Pathway

KCTCS AAS in Computer Information Technologies (CIT) to Murray State BS in Computer Science

Overview

Completion of the following curriculum will satisfy the requirements for Associate in Applied Science in **Computer Information Technologies (CIT)** at the Kentucky Community and Technical College System and leads to the Bachelor of Science in **Computer Science** at Murray State University.

Admission Requirements

Murray State University admission requirements can be found online:
https://www.murraystate.edu/admissions/transfer

Degree Requirements

At least 120 total credit hours are required to complete a baccalaureate degree. At least 42 of those hours must be earned in courses at the 300-level or above (upper-level courses). 30 hours must be completed in residence at Murray State.

To meet the requirements for graduation, students must have a cumulative GPA of at least 2.0 in the following 3 areas: all college-level coursework, including transfer credits, all coursework completed at Murray State, and all courses in the student's major.

General Transfer Requirements

- Transfer Admissions Webpage: https://www.murraystate.edu/admissions/transfer
- CSIS Department Webpage: https://murraystate.edu/csis
- Students can apply here: https://www.murraystate.edu/apply

Murray State offers rolling admissions. Once admitted, students may begin the program in either the Fall or Spring semester. Details about transfer requirements, scholarship opportunities, and other important information can be found on the Transfer Admissions webpage (linked above). The general University Scholarship application is due on or before February 5th before the Fall semester enrollment at Murray State. All students must complete the FAFSA to be eligible for scholarships.

KCTCS CIT to Murray State Computer Science CHECKLIST

Kentucky Community and Technical College System

Category 1: KCTCS General Education Requirements

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	
ECO 201 or ECO 202	Microeconomics or Macroeconomics	3	ECO 231 or ECO 230	
TBS XXX	*Arts & Humanities (Heritage)*	3	TBD XXX	
TBS XXX**	*Natural Science* (+ 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	*Arts & Humanities (Humanities)*	3	TBD XXX	
TBS XXX	*Social & Behavioral (1st discipline)*	3	TBD XXX	
TBS XXX	*Social & Behavioral (2nd discipline)*	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.

**Students pursuing the CS/Game Dev track at MSU must take Physics for the Natural Science category.

Category 2: KCTCS AAS Requirements

KCTCS Course	Course or Category	Credits	Murray State Course	Completed
CIT 105	Introduction to Computers	3	CSC 199	
CIT 111	Computer Hardware and Software	4	CNM 135	
CIT 120	Computational Thinking	3	CSC 101	
CIT 170	Database Design Fundamentals	3	TBD XXX	
CIT 180	Security Fundamentals	3	CNM 251	
CIT 160 or CIT 161	Approved Level 1 Networking Course	4	CNM 241	
CIT 149	Java 1	3	CSC 145	
TBS XXX	Approved CIT Capstone Course	1-3	TBD XXX	
Track Requirements				
CIT 249	Java 2	3	TBD XXX	
CIT 143 or CIT 144**	C# or Python 1	3	CSC 232 or CSC 233	
CIT 243 or CIT 244**	C# or Python 2	3	CSC 332 or CSC 333	
TBS XXX	Additional track requirements	12-16	TBD XXX	
Subtotal AAS Requirement Courses		**45-51**		

**Students pursuing the CS/Data Science track at MSU must take Python for the second programming language.

Murray State University

Major Requirements for B.S. in Computer Science

Murray State Course	Course	Credits	KCTCS Course	Completed
CSC 100T **	Transitions	1		
CSC 300	Discrete Structures	3		
CSC 325	Advanced Object-Oriented Programming	3		
CSC 345	Data Structures	3		
CSC 415	Programming Languages	3		
CSC 430	Software Construction	3		
CSC 445	Computer Algorithms	3		
CSC 540	Social, Ethical and Professional Issues	3		
CSC 405 or CSC 410	Computer Architecture or Parallel and Distributed Computing	3		
CSC 425 or CIS 325	Web-Based Services and Applications or Web Application Development	3		
CSC 530 or CIS 420	Senior Capstone Project	3		
MAT 145	Trigonometry	3	MAT 154 or 155	
MAT 250	Calculus I	5	MAT 174 or 175	
MAT 308	Calculus II	5	MAT 184 or 185	
CIS 407 or CIS 509	Advanced Database or Data Management	3		
	Track Courses (see next page)	***3-28***		
	Any general education courses or free electives remaining	***0-3***		
	Note that there is a 42-hour minimum required for upper-level credits.			
Subtotal Murray State University Credit Hours		51-75		
Total Baccalaureate Degree Credit Hours				120

**Transitions courses are waived for students who transfer 30 hours of more to Murray State University.

Track/Restricted Electives Options – MSU to KCTCS Equivalencies

Murray State Course	Course	Credits	KCTCS Course	Completed
General (no track) - Pick at least ONE of the following				
CNM 260	DevOps Fundamentals	3		
CSC 370	Introduction to Artificial Intelligence	3		
CSC 375	Introduction to Machine Learning	3		
CSC 385	Introduction to Special Topics	3		
CSC 450	Cryptography	3		
CSC 488	Internship	3		
CSC 565	Embedded Systems and Robotics	3		
CSC 585	Special Problems	3		
Game Development Track - Take ALL of the following				
ENG 214	Introduction to Creative Writing	3	ENG 207	
MAT 335	Matrix Theory and Linear Algebra	3		
ART 350	Introduction to Graphic Design 1	3		
CSC 275	Introduction to Game Programming	3	CIT 124	
CSC 370	Introduction to Artificial Intelligence	3		
CSC 515	Computer Graphics	3		
CSC 575	Advanced Game Development	3		
TBD XXX	Pick 2 Approved Electives	6		
Data Science & AI Track - Take ALL of the following				
MAT 335	Matrix Theory and Linear Algebra	3		
CSC 370	Introduction to Artificial Intelligence	3		
CSC 372	Generative AI	3		
CSC 375	Introduction to Machine Learning	3		
CSC 508	Advanced Machine Learning	3		
STA 265	Methods of Statistics and Data Science	3		
CIS 543	Advanced Business Analytics	3		
TBD XXX	Pick 2 Approved Electives	6-7		