TWO DEGREES, ONE PATH

TRANSFER PATHWAY GUIDE
2023-2024

Associate in Science to Bachelor of Science in Data Science

Overview

Completion of the following curriculum will satisfy the requirements for the Associate in Science (AS) degree at a Kentucky Community and Technical College System (KCTCS) institution and leads to the Bachelor of Science (BS) in Data Science degree at Northern Kentucky University (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 15 credit hours earned at the institution awarding the degree, 4) cultural competence course, 5) demonstration of digital literacy, and 6) college success requirement.

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. A Computer Science minor is built into this major.

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.

KCTCS AS TO NKU BS IN DATA SCIENCE CHECKLIST

Kentucky Community and Technical College System

Category 1: KCTCS General Education Core Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
ENG 101	Writing I (WC)	3	ENG 101	
ENG 102	Writing II (WC)	3	ENG 102	
TBS XXX	Oral Communication (OC)	3	TBD XXX	
TBS XXX	Arts & Humanities (AH) – Heritage	3	TBD XXX	
TBS XXX	Arts & Humanities (AH) – Humanities	3	TBD XXX	
TBS XXX	Social & Behavioral Sciences Course (SB)	3	TBD XXX	
TBS XXX	Social & Behavioral Sciences Course (SB)	3	TBD XXX	
TBS XXX	Natural Science Course with Lab (SL)	4	TBD XXX	
TBS XXX	Natural Science Course (NS)	3	TBD XXX	
MAT 171	Precalculus (QR)	5	MAT 103 + MAT 119	
MAT 175	Calculus I (QR)	5	MAT 129	
	Subtotal General Education Core Courses	**38**		

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

For Social and Behavioral Sciences courses, two disciplines must be represented and different from those in the Arts and Humanities category.

Category 2: KCTCS AS Requirements

KCTCS Course	Course or Category	Credits	NKU Course	Completed
MAT 185	Calculus II (QR)	5	MAT 229	
MAT 275	Calculus III (QR)	4	MAT 329	
	Subtotal AS Requirement Courses	**9**		

Category 3: KCTCS Electives

KCTCS Course	Course or Category	Credits	NKU Course	Completed
	First-Year Experience	0-3		
CIT 105	Introduction to Computers	3	BIS 101	
CIT 120	Computational Thinking	3	CIT 120 + CIT 149 + CIT 249 = INF 120 + CSC 260 + CSC 360	

KCTCS Course	Course or Category	Credits	NKU Course	Completed
CIT 149	Java I	3	CIT 120 + CIT 149 + CIT 249 = INF 120 + CSC 260 + CSC 360	
CIT 155	Web Page Development	3	INF 286	
CIT 249	Java II	3	CSC 200T	
	Subtotal Elective Courses	**15-18**		
	Total Associate Degree Hours	**62-65**		

Degree Requirement: One course must be selected from the KCTCS identified cultural competence course list in the KCTCS catalog.

Students who do not take MAT 171 Precalculus could take CIT 170 Database Design Fundamentals and CIT 171 SQL I (equates to CSC 350) or MAT 285 (equates to MAT 325) to satisfy an NKU major requirement.

Northern Kentucky University

Category 4: NKU Major Requirements for BS in Data Science

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
INF 120	Elementary Programming	3	CIT 120 + CIT 149 + CIT 249	x
INF 128	Principles of Informatics	3		
INF 286	Introduction to Web Development	3	CIT 155	x
CSC 260	Object-Oriented Programming I	3	CIT 149	x
CSC 350	Database Programming	3	CIT 170 + CIT 171	
CSC 360	Object-Oriented Programming II	3	CIT 249	x
CSC 364	Data Structures and Algorithms	3		
CSC 425	Artificial Intelligence	3		
CYS 320	Information Assurance, Security and Privacy	3		
DSC 101	Introduction to Data Science	1		
DSC 200	Data Wrangling	3		
DSC 311	Data Analytics and Visualization	3		
DSC 411	Data Mining	3		
DSC 421	Big Data	3		
DSC 496	Data Science Capstone	3		
BIO 292 or DSC 292	Introduction to Research in Biology or Introductory Research Experience in DSC	0-3		
MAT 128	Calculus A	3	MAT 175	x

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
MAT 227	Calculus B	3	MAT 185 + MAT 275	x
MAT 228	Calculus C	3	MAT 185 + MAT 275	x
MAT 234	Linear Algebra	3		
STA 250	Probability and Statistics	3		
STA 341	Statistics II	3		
PHI 310	Information Ethics	3		
Select 2: ASE 230 CSC 362 CSC 402 CSC 426 CSC 450 CSC 460 CSC 464 CSC 482 DSC 396 DSC 431 DSC 494 DSC 499 MAT 325 MAT 329 MAT 375 STA 312 STA 316 STA 317 STA 327 STA 340 STA 360 STA 370	Select two guided electives: Server-Side Programming Computer Systems Advanced Programming Methods Deep Learning Database Systems Operating Systems Design and Analysis of Algorithms Computer Security Data Science Practicum Network Analysis Advanced Topics: Data Science Advanced Independent Study: Data Science Differential Equations Calculus III Applied Mathematical Models Elementary Survey Sampling Regression Analysis Introduction to Time Series Analysis Categorical Data Analysis Probability Statistical Computing Introduction to Statistical Consulting	3	MAT 275	x
	Complete one of the following Application Areas: BIS Application Area GIS Application Area Biological Sciences Application Area Courses for the application areas are in the Categories 6-8 Tables below.	11-15		
	Subtotal Major Credit Hours at NKU	**54-58**		
	Subtotal Major Credit Hours at KCTCS	**24**		
	Total Major Credit Hours	**78-82**		

Category 5: Additional Requirements at NKU

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
	Subtotal Elective (300/400 level) Hours	**0-4**		
	Minimum Baccalaureate Degree Credit Hours	**120**		

Category 6: NKU Major Requirements for the Business Information Systems (BIS) Application Area

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
BIS 275	Introduction to Business Analysis	3		
BIS 300	Management Information Systems	3		
BIS 330	IT Project Management	3		
BIS 384	Business Analytics	3		
BIS 420	Business Intelligence & Enterprise Applications	3		
	Credit Hours for Track	**15**		

Category 7: NKU Major Requirements for the Geographic Information System (GIS) Application Area

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
GEO 415	Cartography	3		
GEO 418	Geographic Information Systems	4		
GEO 419	Remote Sensing of Environment	3		
GEO 518	Geographic Information Analysis	3		
	Credit Hours for Track	**13**		

Category 8: NKU Major Requirements for the Biological Sciences Application Area

NKU Course	Course	Credits	KCTCS Course	Taken at KCTCS
BIO 150/150L	Introduction to Biology I with lab	4	BIO 114/115	
BIO 151/151L	Introduction to Biology II with lab	4	BIO 116/117	
BIO 304 or BIO 349/349L	General Ecology or Genetics with lab	3-4	EST 150	
	Credit Hours for Track	**11-12**		

Updated August 2023