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) at Gateway Community and Technical College (GCTC) and leads to the Bachelor of Science (BS) in Data Science degree at Northern Kentucky University (NKU).

Applying to the Gateway2NKU 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 Gateway CTC, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at Gateway CTC.

Degree Requirements for GCTC
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, 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 GCTC.

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.

GCTC AS TO NKU BS IN DATA SCIENCE CHECKLIST

Gateway Community and Technical College

Category 1: GCTC General Education Core Requirements

GCTC 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	
Taken at NKU	Principles of Informatics (SB)	3	INF 128	
MAT 175	Calculus I (QR)	5	MAT 129	
MAT 185	Calculus II (QR)	5	MAT 229	
INF 120	Elementary Programming	3	INF 120	
TBS XXX	Natural Science with lab (SL)	4	TBD XXX	
	Subtotal General Education Core Courses	**38**		

TBS XXX means to be selected by GCTC 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: GCTC AS Requirements

GCTC Course	Course or Category	Credits	NKU Course	Completed
MAT 275	Calculus III	4	MAT 329	
	Subtotal AS Requirement Courses	**4**		

Category 3: GCTC Electives

GCTC Course	Course or Category	Credits	NKU Course	Completed
CIT 105	Introduction to Computers	3	BIS 101	
FYE 105	Achieving Academic Success	3	UNV 100T	
CIT 120	Computational Thinking	3	CIT 100T	
CIT 149	Java I	3	CSC 260	
CIT 155	Web Page Development	3	INF 286	
Taken at NKU	Probability and Statistics	3	STA 250	
	Subtotal Elective Courses	**18**		
	Total Associate Degree Hours	**60**		

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

Northern Kentucky University

Category 4: NKU Major Requirements for the BS in Data Science

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
INF 120	Elementary Programming	3	INF 120	x
INF 128	Principles of Informatics	3	Taken at NKU	x
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		
CSC 360	Object-Oriented Programming II	3		
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
MAT 227	Calculus B	3	MAT 185 + MAT 185	x
MAT 228	Calculus C	3	MAT 175 + MAT 185	x
MAT 234	Linear Algebra	3		
STA 250	Probability and Statistics	3	Taken at NKU	x
STA 305	Intermediate Statistical Methods	3		
PHI 310	Information Ethics	3		
Select 1: ASE 230 CSC 362 CSC 402 CSC 426 CSC 450 CSC 460 CSC 464 CSC 482 DSC 396 DSC 431 DSC 494	Select one 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	3	MAT 275	x

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
DSC 499 MAT 325 MAT 329 MAT 375 STA 312 STA 316 STA 317 STA 327 STA 341 STA 360 STA 365 STA 370	Advanced Independent Study: Data Science Differential Equations Calculus III Applied Mathematical Models Elementary Survey Sampling Regression Analysis Introduction to Time Series Analysis Statistics II Categorical Data Analysis Statistical Computing Statistics with Simulation and Resampling Introduction to Statistical Consulting			
	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	**51-58**		
	Subtotal Major Credit Hours at GCTC	**27**		
	Total Major Credit Hours	**78-85**		

Category 5: Additional Requirements at NKU

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
	Subtotal Elective Credit Hours	**2-9**		
	Total Baccalaureate Degree Credit Hours	**120**		

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

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
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	GCTC Course	Taken at GCTC
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	GCTC Course	Taken at GCTC
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 April 2023