TRANSFER PATHWAY GUIDE
2024-2025

Associate in Science to
Bachelor of Science in Neuroscience (All Tracks)

Overview
Completion of the following curriculum will satisfy the requirements for the Associate in Science (AS) degree at Gateway Community and Technical College (GCTC) and leads to the Bachelor of Science (BS) in Neuroscience 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, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at Gateway.

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.

Students pursuing a degree in the neuroscience must complete all the core courses along with one of three different tracks. Students must earn a grade of C- or better in all core courses, a cumulative GPA of

2.0 or higher in core courses, and a cumulative GPA of 2.0 or higher in track courses. Students must complete a 3-credit hour experiential learning project and the final report associated with that project.

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 NEUROSCIENCE 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	
Taken at NKU	Advanced Writing in Biology (WC)	3	BIO 291W	
TBS XXX	Oral Communication (OC)	3	TBD XXX	
TBS XXX	Arts & Humanities Course (AH) – Heritage	3	TBD XXX	
TBS XXX	Arts & Humanities Course (AH) – Humanities	3	TBD XXX	
PSY 110	General Psychology (SB)	3	PSY 100	
Taken at NKU	Neuroscience for Life: Sex to Society (SB)	3	NEU 101	
MAT 150	College Algebra (QR)	3	(MAT 102 or MAT 103) + MAT 100T	
STA 220	Statistics (QR)	3	STA 205	
BIO 114/115	Biology I / Lab (SN/SL)	4	BIO 150/150L	
CHE 170/175	General Chemistry I / Lab (SN/SL)	5	CHE 120/120L	
	Subtotal General Education Core Courses	**36**		

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.

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

Category 2: GCTC AS Requirements

GCTC Course	Course or Category	Credits	NKU Course	Completed
BIO 116/117	Biology II / Lab (SN/SL)	4	BIO 151/151L	
	Subtotal AS Requirement Courses	**4**		

Category 3: GCTC Electives

GCTC Course	Course or Category	Credits	NKU Course	Completed
FYE 105	Achieving Academic Success	3	UNV 100T	
CIT 105 or OST 105	Introduction to Computers or Intro to Information Systems	3	BIS 101	
INF 120	Elementary Programming	3	INF 120	
TBS XXX	Review the three tracks in the Neuroscience major at NKU and choose	11	TBD XXX	

GCTC Course	Course or Category	Credits	NKU Course	Completed
	your GCTC elective courses according to the Categories 4-6 tables below.			
	Subtotal Elective Courses	**20**		
	Total Associate Degree Hours	**60**		

If completing digital literacy using other means, additional credits will be required in order to fulfill elective requirements.

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

Category 4: Electives at GCTC for Cognitive Neuroscience Track

GCTC Course	Course or Category	Credits	NKU Course	Completed
PHI 250	Symbolic Logic	3	PHI 265	
PSY 223	Developmental Psychology	3	PSY 321	
PSY 298	Essentials of Abnormal Psychology	3	PSY 333	
BIO 137	Human Anatomy and Physiology I	4	BIO 208/L	
CHE 270/275	Organic Chemistry I with Lab	5	CHE 310/L	
	Subtotal Elective Courses	**18**		

Category 5: Electives at GCTC for Social Neuroscience Track

GCTC Course	Course or Category	Credits	NKU Course	Completed
PSY 223	Developmental Psychology	3	PSY 321	
FAM 253	Human Sexuality: Development, Behavior, and Attitudes	3	PSY 315	
Taken at NKU	Select 1 course from the Social Neuroscience Track at NKU	3	TBD XXX	
	Subtotal Elective Courses	**9**		

Category 6: Electives at GCTC for Computational Neuroscience Track

GCTC Course	Course or Category	Credits	NKU Course	Completed
CIT 149 + CIT 249	Java I + Java II	6	CSC 260 + CSC 360	
PHI 250 or MAT 170 or MAT 175	Symbolic Logic (QR) or Brief Calculus with Applications (QR) or Calculus I (QR)	3-5	PHI 265 or MAT 112 or MAT 129	
	Subtotal Elective Courses	**9-11**		

Northern Kentucky University

Category 7: NKU Major Requirements for the BS in Neuroscience

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
BIO 150/150L	Introduction to Biology I with Lab	4	BIO 114/115	x
BIO 151/151L	Introduction to Biology II with Lab	4	BIO 116/117	x
CHE 120/120L	General Chemistry I with Lab	4	CHE 170/175	x
STA 205 or STA 250	Statistical Methods or Probability and Statistics	3	STA 220	x
INF 120	Elementary Programming	3	INF 120	x
PSY 100	Introduction to Psychology	3	PSY 110	x
NEU 101	Neuroscience for Life: Sex to Society	3	Taken at NKU	x
BIO 155 or PSY 210R or DSC 101	Orientation to Biology or Career Planning for Psychology Majors or Intro to Data Science	1		
BIO 291W	Advanced Writing in Biology	3	Taken at NKU	x
PSY 311	Biopsychology	3		
PSY 311L or PSY 338L	Biopsychology Lab or Cognitive Processes Lab	2		
NEU 493	Neuroscience Seminar	1		
ANT 342 or PSY 210	Quantitative Methods in Anthropology or Research Methods and Lab	3-5		
BIO 440/440L or BIO 402/402L or NEU 401/401L	Animal Behavior with Lab or Evolutionary Neurobiology with Lab or Brain, Behavior and Immunity	4		
PHI 300 or PHI 302 or PHI 306 or PHI 315 or PHI 342 or PHI 345	Ethics and Social Responsibility or Ethics and Scientific Research or Philosophy and Science or Knowledge and Reality or Philosophy and Neuroscience or AI & Philosophy of Mind	3		
NEU 301/301L or NEU 302/302L	Neuroanatomy with Lab or Neurosignaling with Lab	4		
PSY 338 or PSY 421	Cognitive Processes or Psychopharmacology	3		
NEU 491	Neuroscience Capstone	0		
NEU 492 or NEU 495 or NEU 496 or NEU 499	Neuroscience Research or Neuroscience Study Abroad or Neuroscience Internship or Independent Study in Neuroscience	0-3		
TBS XXX	Select one of the following tracks: Cognitive Neuroscience Track Social Neuroscience Track Computational Neuroscience Track	15	9 credits taken at GCTC, need 6 more credits	x (9 cr)

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
	(See Categories 9-11 tables below for courses)			
	Subtotal Major Credit Hours at NKU	**31-35**		
	Subtotal Major Credit Hours at GCTC	**36**		
	Total Major Credit Hours	**67-71**		

Category 8: Additional Requirements at NKU

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
	Subtotal Focus or Minor Credit Hours	**12-21**		
	Subtotal Elective (300/400 level) Hours	**1-14**		
	Total Baccalaureate Degree Credit Hours	**120**		

Category 9: NKU Cognitive Neuroscience Track

Take a minimum of 15 credits in at least three different disciplines with at least 12 credits at the 300-level or above.

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
ANT 348	Primate Sexuality	3		
BIO 208/208L	Human Anatomy and Physiology I with Lab	4	BIO 137	Can be taken at GCTC
BIO 305/305L	Developmental Biology with Lab	4		
BIO 342	Biometry	3		
BIO 349/349L	Genetics with Lab	4		
BIO 400/400L	Advanced Molecular Biology with Lab	4		
BIO 402/402L	Evolutionary Neurobiology with Lab	4		
BIO 407/407L	Ornithology with Lab	4		
BIO 425/425L	Adv. Human Anatomy and Physiology	4		
BIO 436	Advanced Biology of the Cell	3		
BIO 440/440L	Animal Behavior with Lab	4		
BIO 467	Endocrinology	3		
CHE 310/310L	Organic Chemistry I	4	CHE 270/275	Can be taken at GCTC
CHE 311/311L	Organic Chemistry II	4		
HSC 413	Aging in Today's Society	3		
HSC 415	Ethical and Legal Issues in Healthcare	3		
NEU 301/301L	Neuroanatomy with Lab	4		
NEU 302/302L	Neurosignaling with Lab	4		
NEU 401/401L	Brain, Behavior and Immunity with Lab	4		
NEU 494	Special Topics in Neuroscience	3		

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
PHI 265	Logic	3	PHI 250	Can be taken at GCTC
PHI 302	Ethics and Scientific Research	3		
PHI 342	Philosophy and Neuroscience	3		
PSY 210	Research Methods and Lab	5		
PSY 301	Evolutionary Psychology	3		
PSY 305	Psychological Testing & Measurement	3		
PSY 309	Psychology of Perception	3		
PSY 321	Lifespan Development	3	PSY 223	Can be taken at GCTC
PSY 321L	Developmental Science Laboratory	2		
PSY 333	Abnormal Psychology	3	PSY 298	Can be taken at GCTC
PSY 337	Learning and Behavior	3		
PSY 338	Cognitive Processes	3		
PSY 338L	Cognitive Processes Laboratory	2		
PSY 340	Social Psychology	3		
PSY 340L	Social Psychology Laboratory	2		
PSY 421	Psychopharmacology	3		
PSY 465	Health Psychology	3		
PSY 465L	Health Psychology Laboratory	2		
	Subtotal Track Credit Hours at NKU	**6**		
	Subtotal Track Credit Hours at GCTC	**9**		
	Total Track Hours	**15**		

Category 10: NKU Social Neuroscience Track

Take a minimum of 15 credits in at least three different disciplines with at least 12 credits at the 300-level or above. Select two courses to be taken while at GCTC.

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
ANT 202	Biological Anthropology	4		
ANT 275	Language and Culture	3		
ANT 333	Paleoanthropology Lab	3		
ANT 334	Behavioral Field Methods	3		
ANT 340	Ethnographic Methods and Research	3		
ANT 342	Quantitative Methods in Anthropology	3		
ANT 347	Primate Behavioral Ecology	3		
ANT 348	Primate Sexuality	3		
ANT 371	Psychological Anthropology	3		
HSC 413	Aging in Today's Society	3		
HSC 415	Ethical and Legal Issues in Healthcare	3		

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
MKT 205	Principles of Marketing	3	BAS 282	Can be taken at GCTC
MKT 320	Applied Consumer Behavior	3		
NEU 301/301L	Neuroanatomy with Lab	4		
NEU 302/302L	Neurosignaling with Lab	4		
PHI 306	Philosophy and Science	3		
PHI 315	Knowledge and Reality	3		
PHI 342	Philosophy and Neuroscience	3		
PSY 304	Consumer Psychology	3		
PSY 315	Psychology of Human Sexuality	3	FAM 253	Can be taken at GCTC
PSY 321	Lifespan Development	3	PSY 223	Can be taken at GCTC
PSY 321L	Developmental Science Lab	2		
PSY 330	Behavior Modification	3		
PSY 340	Social Psychology	3		
PSY 340L	Social Psychology Lab	2		
PSY 405	Counseling Psychology	3		
PSY 421	Psychopharmacology	3		
PSY 465	Health Psychology	3		
PSY 465L	Health Psychology Lab	2		
SOC 303	Social Psychology	3		
SOC 305	Criminology	3		
SOC 319	Managing and Analyzing Databases	3		
SOC 320	Social Research	3		
SOC 322	Qualitative Research Methods	3		
SOC 332	Collective Behavior	3		
SOC 342	Sociology of Aging	3		
SOC 450	Medical Sociology	3		
	Subtotal Track Credit Hours at NKU	**6**		
	Subtotal Track Credit Hours at GCTC (Six credit hours selected from above taken while at GCTC)	**9**		
	Total Track Hours	**15**		

Category 11: NKU Computational Neuroscience Track

Take a minimum of 15 credits in at least three different disciplines with at least 12 credits at the 300-level or above. One of the chosen courses and two additional 300 or above courses can be taken while at GCTC.

NKU Course	Course	Credits	GCTC Course	Taken at GCTC
ANT 342	Quantitative Methods in Anthropology	3		
BIO 342	Biometry	3		
CSC 260	Object-Oriented Programming I	3	CIT 149	Can be taken at GCTC
CSC 260L	Object-Oriented Programming Laboratory	1		
CSC 270	Mathematics Software Programming	3		
CSC 325	Introduction to Neural Networks and A.I.	3		
CSC 360	Object-Oriented Programming II	3		
CSC 364	Data Structures and Algorithms	3		
CSC 425	Artificial Intelligence	3		
CSC 426	Deep Learning	3		
DSC 200	Data Wrangling	3		
DSC 311	Data Analytics	3		
DSC 411	Data Mining	3		
MAT 112 or MAT 128 or MAT 129	Applied Calculus or Calculus A or Calculus I	3-4	MAT 170 or MAT 175	Can be taken at GCTC
NEU 494	Special Topics in Neuroscience	3		
PHI 265	Logic	3	PHI 250	Can be taken at GCTC
PHI 300	Ethics and Social Responsibility	3		
PHI 342	Philosophy and Neuroscience	3		
PHI 345	Philosophy of Mind	3		
PSY 210	Research Methods and Lab	5		
PSY 305	Psychological Testing & Measurement	3		
SOC 322	Qualitative Research Methods	3		
STA 305	Intermediate Statistical Methods with R	3		
STA 314	Design and Analysis of Experiments	3		
STA 316	Regression Analysis	3		
STA 327	Categorical Data Analysis	3		
STA 360	Statistical Computing	3		
	Subtotal Track Credit Hours at NKU	**6**		
	Subtotal Track Credit Hours at GCTC (Six credit hours selected from above taken while at GCTC)	**9**		
	Total Track Hours	**15**		

Note: Only one PHI course can count as a track elective.

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