



---

## TWO DEGREES, ONE PATH

---

### TRANSFER PATHWAY GUIDE 2024-2025

#### Associate of Science to Bachelor of Science in Biological Sciences

##### **Overview**

Completion of the following curriculum will satisfy the requirements for the Associate of Science (AS) degree at Cincinnati State (CState) and leads to the Bachelor of Science (BS) in Biological Sciences degree at Northern Kentucky University (NKU).

##### **Applying to the CState2NKU 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 Cincinnati State, enrolled in an associate degree program, plan to transfer to NKU, and maintain a minimum 2.0 cumulative GPA at Cincinnati State.

##### **Degree Requirements for Cincinnati State**

1) Completion of minimum 62 credit hours, 36 of which from approved Ohio Transfer 36 courses, 2) minimum cumulative GPA 2.0, 3) completion of an FYE course as part of the first 12 credit hours taken at Cincinnati State, and 4) completion of Cooperative Education.

##### **Admission Requirements for 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 biological sciences may do so by choosing one of five different tracks. These tracks allow the individual student to place an emphasis on areas of biology that they find of

interest. However, the faculty of the department feel very strongly that each student completing a degree in biology must have a solid foundation in the discipline. Therefore, there is a core of courses required of all majors. A grade of C- or better must be earned in all biology courses that count toward completion of major requirements. The department has also identified a common core of support courses that must be completed with a C- or better by all biological science majors. A biological sciences major does not require a secondary area of study (e.g. minor or focus).

***Advising Note***

Students in the CState2NKU program should work closely with their advisors when choosing courses. This document serves as a guide but does not replace academic advising. When choosing Cincinnati State courses, student may also consult the Associate of Science advising brochure or the catalog for A and B list courses in Arts and Humanities or Social and Behavioral Sciences. Some courses in this document may have prerequisites that are not reflected in the grid. Students should work with their advisor to ensure that all prerequisites are met.

## CINCINNATI STATE AS TO NKU BS IN BIOLOGICAL SCIENCES CHECKLIST

### Cincinnati State

#### Category 1: Ohio Transfer 36 Requirements

CState Course	Course or Category	Credits	NKU Course	Completed
ENG 101	English Composition 1	3	ENG 101	
ENG 102 or ENG 103 or ENG 104 or ENG 105	English Composition 2: Contemporary Issues English Composition 2: Writing about Literature English Composition 2: Technical Communication English Composition 2: Business Communication	3	ENG 102 or (GWR 200G)	
COMM 110	Public Speaking	3	CMST 101	
TBS XXX	Arts/Humanities List A Elective	3	TBD XXX	
TBS XXX	Arts/Humanities List B Elective	3	TBD XXX	
TBS XXX	Social/Behavioral Science List A Elective	3	TBD XXX	
TBS XXX	Social/Behavioral Science List B Elective	3	TBD XXX	
MAT 215 or MAT 251	Business Calculus or Calculus I	5-6	MAT 112 MAT 129	
BIO 131	Biology 1	5	BIO 150/150L	
BIO 132	Biology 2	5	BIO 151/151L	
MAT 131	Statistics 1	3	MAT 131 + MAT 132 = STA 113 + STA 205	
MAT 132	Statistics 2	3	MAT 131 + MAT 132 = STA 113 + STA 205	
<b>Subtotal General Education Core</b>		<b>42-43</b>		

TBS XXX means to be selected by Cincinnati student.

TBD XXX means to be determined by NKU based on course selected at Cincinnati State.

#### Category 2: CState Degree Requirements for the AS and NKU Recommendations

CState Course	Course or Category	Credits	NKU Course	Completed
FYE 1XX	First Year Experience Elective	1	UNV 100T	
HUM 190	Career Exploration Seminar: AA/AS	2	CEP 101	
HUM XXX	Co-op/Internship Elective 1 and Elective 2	2	CEP 300	
CHE 121/131	General Chemistry 1 with Lab	5	CHE 120/120L	

CState Course	Course or Category	Credits	NKU Course	Completed
CHE 122/132	General Chemistry 2 with Lab	5	CHE 121/121L	
PHY 151 and PHY 152 or PHY 201 and PHY 202	Physics 1: Algebra and Trigonometry-Based Physics 2: Algebra and Trigonometry-Based or Physics 1: Calculus-Based Physics 2: Calculus-Based	8-10	PHY 211 PHY 213  PHY 220 PHY 224	
	<b>Total Associate Degree Credit Hours</b>	<b>65-68</b>		

### Northern Kentucky University

#### Category 3: NKU Major Requirements for the BS in Biology

NKU Course	Course	Credits	CState Course	Taken at CState
BIO 150/150L	Introduction to Biology I with Lab	4	BIO 131	x
BIO 151/151L	Introduction to Biology II with Lab	4	BIO 132	x
BIO 155	Orientation to Biology	1		
BIO 291W	Advanced Writing in Biology	3		
BIO 304/304L	General Ecology with Lab	4		
BIO 349/349L	Genetics with Lab	4		
BIO 458	Evolution of Organisms	3		
BIO 491	Comprehensive Examination	0		
CHE 120/120L	General Chemistry I with Lab	4	CHE 121/ CHE 131	x
CHE 121/121L	General Chemistry II with Lab	4	CHE 122/ CHE 132	x
PHY 211/213 or PHY 220/222	General Physics with Lab I and II or University Physics with Lab I and II (Students may request a substitution of PHY 224 for PHY 222)	8	PHY 151/ PHY 152 or PHY 201/ PHY 202	x
STA 205	Statistical Methods	3	MAT 131 + MAT 132	x
TBS XXX	Foreign language at the 102 or higher level. Can be met by a two-course sequence, CLEP or AP exam equivalency.	0-6		
	Select a track. Additional credit hours at NKU vary by track. General Biology Track Cellular/Molecular/Genetics Track Ecology/Evolution/Organismal Track Forensic Science Track	21-25 27-30 24-28 41-47		

NKU Course	Course	Credits	CState Course	Taken at CState
	Pharmaceutical Sciences Track Courses for the tracks are listed in Categories 5-9 tables below.	50-59		
	<b>Subtotal Major Credit Hours at NKU</b>	<b>36-68</b>		
	<b>Subtotal Major Credit Hours at CState</b>	<b>27</b>		
	<b>Total Major Credit Hours</b>	<b>63-95</b>		

#### Category 4: Additional Requirements at NKU

Category	Credits		
<b>Subtotal Elective Credit Hours ( may need 300+ level courses)</b>	<b>0-19</b>		
<b>Minimum Total Baccalaureate Degree Credit Hours</b>	<b>120</b>		

#### Category 5: NKU General Biology Track

NKU Course	Course	Credits	CState Course	Taken at CState
TBS XXX	Select one course from the cellular/molecular/genetics group (see NKU catalog for choices)	3-4		
TBS XXX	Select one course from the ecology/evolution/organismal group (see NKU catalog for choices)	3-4		
TBS XXX	Select 3 courses from the CMG, EEO, or general elective groups. Students may take electives from across these different groups. At least one of the 5 total electives must be a course with an associated lab component.	9-12		
CHE 310/310L	Organic Chemistry I with Lab	4		
CHE 311/311L	Organic Chemistry II with Lab	4		
MAT 112 or MAT 128 or MAT 129	Applied Calculus or Calculus A or Calculus I	3-4	MAT 215 or MAT 251	x
	<b>Subtotal General Biology Track Additional Credit Hours</b>	<b>27-32</b>		

#### Category 6: NKU Cellular/Molecular/Genetics Track

NKU Course	Course	Credits	CState Course	Taken at CState
BIO 302/302L	General Microbiology with Lab	4		

BIO 436	Advanced Biology of the Cell	3		
TBS XXX	Select 1 course from the Cellular/Molecular/Genetics group (see NKU catalog for choices)	3-4		
TBS XXX	Select 1 course from the CMG, EEO or general electives group (see NKU catalog for choices)	3-4		
CHE 310/310L	Organic Chemistry I with Lab	4		
CHE 311/311L	Organic Chemistry II with Lab	4		
CHE 482	Biochemistry I	3		
CHE 483	Biochemistry II	3		
MAT 112 or MAT 128 or MAT 129	Applied Calculus or Calculus A or Calculus I	3-4	MAT 215 or MAT 251	x
	<b>Subtotal Cellular/Molecular/Genetics Track Additional Credit Hours</b>	<b>30-33</b>		

#### Category 7: NKU Ecology/Evolution/Organismal Track

NKU Course	Course	Credits	CState Course	Taken at CState
BIO 342	Biometry	3		
TBS XXX	Select four courses from the ecology/evolution/organismal group (see NKU catalog for choices)	12-16		
TBS XXX	Select one course from the CMG, EEO or general electives groups. At least one of the 5 total electives must be a course with an associated lab component. (see NKU catalog for choices)	3-4		
CHE 310/310L	Organic Chemistry I with Lab	4		
CHE 311/311L or GEO 418	Organic Chemistry II with Lab or Geographic Information Systems	4		
MAT 112 or MAT 128 or MAT 129	Applied Calculus or Calculus A or Calculus I	3-4	MAT 215 or MAT 251	x
	<b>Subtotal Ecology/Evolution/Organismal Track Additional Credit Hours</b>	<b>30-35</b>		

#### Category 8: NKU Forensic Science Track

NKU Course	Course	Credits	CState Course	Taken at CState
BIO 342	Biometry	3		
BIO 302/302L	General Microbiology with Lab	4		
BIO 320/320L	Entomology with Lab	4		
BIO 400/400L	Advanced Molecular Biology with Lab	4		

BIO 455 or CHE 350/350L	Scanning Electron Microscopy or Instrumental Analysis with Lab	3-5		
CHE 310/310L	Organic Chemistry I with Lab	4		
CHE 311/311L	Organic Chemistry II with Lab	4		
CHE 340/340L	Analytical Chemistry with Lab	5		
CHE 482/482L	Biochemistry I with Lab	4		
JUS 101	Introduction to Criminal Justice	3	CRJ 105	
JUS 204	Criminal Investigation	3	CRJ 130	
MAT 129	Calculus I	4	MAT 251	May be completed
	<b>Subtotal Forensic Science Track Additional Credit Hours</b>	<b>41-47</b>		

### Category 9: NKU Pharmaceutical Sciences Track

Pharmacy schools do not require students to complete a bachelors degree prior to admission. The pharmaceutical sciences track is designed to enable students interested in applying to pharmacy school early (generally after their third year) to complete a bachelors degree by transferring coursework from pharmacy school back to satisfy the remaining requirements for graduation. Due to the fact that pharmacy schools have a varied list of prerequisites and due to the complexity of the pharmaceutical sciences track, students need to work closely with their NKU academic advisor to ensure success. Should a student decide not to attend pharmacy school, they can complete the requirements for the cellular/molecular/genetics track during their last year.

In order to complete the requirements for graduation, you will need to complete 30-39 credits of approved coursework in a pharmacy school which has a pathway agreement with NKU. Due to curriculum differences between pharmacy school and the fact that schools can change their curriculum, you will need to work closely with your advisor to determine what courses you need to complete as outlined in the pathway designed with your pharmacy school. These credits include: 3 credits for Foundations of Knowledge through the completion of a medical ethics course and 27-36 credits to fulfill the track requirements and meet the university graduate requirement of 120 credit hours.

NKU Course	Course	Credits	CState Course	Taken at CState
BIO 302/302L	General Microbiology with Lab	4		
BIO 425/425L	Advanced Human Anatomy and Physiology I with Lab	4		
CHE 310/310L	Organic Chemistry I with Lab	4		
CHE 311/311L	Organic Chemistry II with Lab	4		
CHE 482	Biochemistry I	4		
MAT 112 or MAT 129	Applied Calculus or Calculus I	3-4	MAT 215 MAT 251	x
	Transfer credits from Pharmacy School	30-39		
	<b>Subtotal Pharmaceutical Sciences Track Additional Credit Hours</b>	<b>50-59</b>		

Updated April 2024