



TWO DEGREES, ONE PATH

TRANSFER PATHWAY GUIDE 2024-2025

Associate of Science to Bachelor of Science in Chemistry

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 Chemistry 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 who aspire to careers as professional chemists should seek to obtain the Bachelor of Science. Students must complete the core courses listed below plus one of the four tracks:

General Chemistry Track (ACS Certified)
Biochemistry Track
Forensics Track
Pharmaceutical Sciences Track

Students majoring in chemistry are urged to participate in independent research (CHE 292 or CHE 492) and are also encouraged to take at least one year of a foreign language and additional mathematics coursework beyond the required Calculus II. A student completing the Bachelor of Science in chemistry is not required to complete a minor or a focus.

The general chemistry track is approved by the American Chemical Society, as it meets certain requirements prescribed by that organization. Students may also receive ACS approval in the Bachelor of Science Biochemistry and Forensics tracks by selecting appropriate course options as indicated below.

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 prerequisites are met.

CINCINNATI STATE AS TO NKU BS IN CHEMISTRY 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 251	Calculus I	5	MAT 129 + MAT 100T	
CHE 121/131	General Chemistry 1 with Lab	5	CHE 120/120L	
CHE 122/132	General Chemistry 2 with Lab	5	CHE 121/121L	
PHY 151/ PHY 152 or PHY 201/ 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 or PHY 220/ PHY 224	
Subtotal General Education Core		44-46		

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	
MAT 252	Calculus 2	5	MAT 229	
TBS XXX	Directed Electives	8-10	TBD XXX	
Total Associate Degree Credit Hours		64		

Northern Kentucky University

Category 3: NKU Major Requirements for the BS in Chemistry

NKU Course	Course	Credits	CState Course	Taken at CState
CHE 125	Introduction to Chemistry & Biochemistry	1		
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
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 360	Physical Chemistry I	3		
CHE 391W	Chemical Information and Writing	3		
CHE 482	Biochemistry I	3		
MAT 129	Calculus I	4	MAT 251	x
MAT 229	Calculus II	5	MAT 252	x
PHY 211/213 or PHY 220/222	General Physics I and II with Lab or University Physics I and II with Lab (Students may request a substitution of PHY 224 for PHY 222)	8	PHY 151/ PHY 152 or PHY 201/ PHY 202	x
	Select one of the following tracks: General Chemistry Track Biochemistry Track Forensics Track Pharmaceutical Sciences Track (requires additional credit hours) Courses for the tracks are listed in Categories 5-	23-38		
	Subtotal Major Credit Hours at NKU	46-61		
	Subtotal Major Credit Hours at CState	25		
	Total Major Credit Hours	71-86		

Category 4: Additional Requirements at NKU

	Category	Credits		
	Subtotal Elective Credit Hours (may need 300+ level courses)	0-10		
	Minimum Total Baccalaureate Degree Credit Hours	120		

Category 5: NKU General Chemistry Track

NKU Course	Course	Credits	CState Course	Taken at CState
CHE 300	Careers in Chemistry	1		
CHE 320/320L	Inorganic Chemistry with Lab	5		
CHE 350/350L	Instrumental Analysis with Lab	5		
CHE 361	Physical Chemistry II	3		
CHE 362L	Physical Chemistry Lab	2		
CHE 400	Chemistry Seminar	1		
Select 3 credit hours: CHE 410 CHE 440 CHE 450 CHE 460/460L CHE 483 CHE 511 CHE 512 CHE 560	Select 3 credits hours from the following advanced content coursework: Spectrometric Identification of Compounds (3) Environmental Chemistry (3) Advanced Chemical Analysis (3) Molecular Spectroscopy with Lab (4) Biochemistry II Natural and Medicinal Product Synthesis (3) Physical Organic Chemistry (3) Quantum Mechanics (3)	3		
Select 3 credit hours: CHE 392 CHE 482L CHE 483L CHE 492 CHE 505	Select at least 3 credit hours from the following advanced research methods coursework: Advanced Laboratory Projects (1-3) Biochemistry I Laboratory (1) Biochemistry II Laboratory (1) Research: Chemistry (1-3) The History of Chemistry (2-3)	3		
	Subtotal General Chemistry Track Additional Credit Hours	23		

Category 6: NKU Biochemistry Track

NKU Course	Course	Credits	CState Course	Taken at CState
CHE 300	Careers in Chemistry	1		
CHE 361	Physical Chemistry II	3		
CHE 362L	Physical Chemistry Lab	2		
CHE 400	Chemistry Seminar	1		
CHE 482L	Biochemistry I Laboratory	1		
CHE 483/483L	Biochemistry II with Lab	4		
BIO 150/150L	Introduction to Biology I with Lab	4	BIO 131	
BIO 151/151L	Introduction to Biology II with Lab	4	BIO 132	
BIO 349/349L	Genetics with Lab	4		
Select at least 2 courses, one with lab:	Select at least two courses from the following (7-9 credits). At least one of the courses must have an associated lab which must also be taken.			

BIO 302/302L	General Microbiology with Lab	4		
BIO 400/400L	Advanced Molecular Biology with Lab	4		
BIO 430/430L	Immunology with Lab	4		
BIO 436	Advanced Biology of the Cell	3		
BIO 452	Cancer Genetics	3		
BIO 455	Scanning Electron Microscopy	3		
BIO 467	Endocrinology	3		
BIO 470/470L	Medical Microbiology with Lab	4		
BIO 475	Virology	3		
CHE 320/320L	Inorganic Chemistry with Lab	5		
CHE 350/350L	Instrumental Analysis with Lab	5		
	Subtotal Biochemistry Track Additional Credit Hours	31-34		

Note: To receive American Chemistry Society (ACS) approval, CHE 320 and CHE 320L must be taken as one course in this track

Category 7: NKU Forensic Track

NKU Course	Course	Credits	CState Course	Taken at CState
CHE 300	Careers in Chemistry	1		
CHE 361	Physical Chemistry II	3		
CHE 362L	Physical Chemistry Lab	2		
CHE 400	Chemistry Seminar	1		
CHE 482L	Biochemistry I Laboratory	1		
BIO 150/150L	Introduction to Biology I with lab	4	BIO 131	
BIO 151/151L	Introduction to Biology II with lab	4	BIO 132	
BIO 349/349L	Genetics with lab	4		
BIO 400/400L	Advanced Molecular Biology with lab	4		
STA 205	Statistical Methods	3	MAT 131 + MAT 132	
JUS 101	Introduction to Criminal Justice	3	CRJ 105	
JUS 204	Criminal Investigation	3	CRJ 130	
Select at least one course: BIO 455 CHE 350/350L	Select at least one course from the following: Scanning Electron Microscopy Instrumental Analysis with lab	3 5		
	Subtotal Forensic Track Additional Credit Hours	36-38		

Note: To receive American Chemistry Society (ACS) approval, CHE 320 and CHE 320L must also be taken in addition to the coursework specified in the track.

Category 8: NKU Pharmaceutical Sciences Track

The pharmaceutical sciences track is designed for students who wish to attend pharmacy school following completion of their third year at NKU. Coursework at your pharmacy school will transfer back to satisfy remaining requirements for graduation (see below for more details). Should you not decide to

attend pharmacy school, you can complete the requirements for the biochemistry track during your fourth year. Due to the complexity of this program, it is critical that students work closely with their advisor throughout their NKU academic career.

NKU Course	Course	Credits	CState Course	Taken at CState
CHE 482	Biochemistry I	3		
BIO 150/150L	Introduction to Biology I with Lab	4	BIO 131	
BIO 151/151L	Introduction to Biology II with Lab	4	BIO 132	
BIO 208/208L	Human Anatomy and Physiology I with Lab	4	BIO 151	
BIO 302/302L	General Microbiology with Lab	4		
ECO 100	Principles of Macroeconomics	3		
STA 205	Statistical Methods	3	MAT 131 + MAT 132	
	<p>Pharmacy School Coursework</p> <p>Complete 27-29 credits of approved coursework as described in the approved pathway agreement with a pharmacy school (pathways include Sullivan University and the University of Cincinnati (pending)).</p> <p>Of these listed credits, 14 are used to fulfill the remaining requirements for this degree track, while the others are used to fulfill remaining general education (each pathway includes a substitute course for PHI 110: Philosophy, Individuals and Society) and university requirements.</p> <p>Because pathways can change as a result of curriculum modifications at our partner institutions, it is crucial to work with your advisor to obtain the most up-to-date requirements associated with these agreements.</p>	27-29		
	Subtotal Pharmaceutical Sciences Track Additional Credit Hours	52-54		

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