



***Associate of Science to Bachelor of Science in Chemistry (Biochemistry Track)***

Completion of the following curriculum will satisfy the requirements for the **Associate of Science** degree at Gateway Community and Technical College and leads to the **Bachelor of Science in Chemistry (Biochemistry Track)** degree at Northern Kentucky University.

**Degree requirement 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 studies course, and 5) demonstration of computer/digital literacy.


**Degree requirements for a Bachelor of Science in Chemistry (Biochemistry Track):**

Student must meet pre-requisites for each course, must earn a minimum average GPA 2.0 across all major coursework AND earn at least a C- in each course counted toward the major.

Students may receive ACS certification in the Bachelor of Science Biochemistry track by selecting appropriate course options indicated below.


## GCTC AS TO NKU BS IN CHEMISTRY (BIOCHEMISTRY) CHECKLIST


### Gateway Community and Technical College

Category I: General Education Core Requirements				
GCTC Course	Course or Category	Credits	NKU Course	
ENG 101	Writing I (WC)	3	ENG 101	
ENG 102	Writing II (WC)	3	ENG 102	
COM 181	Basic Public Speaking (OC)	3	CMST 101	
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	
CHE 170/175	General College Chemistry I/Lab I (NS)	5	CHE 120/120L	
CHE 180/185	General College Chemistry II/Lab II (SL)	5	CHE 121/121L	
MAT 175	Calculus I (QR)	5	MAT 129	
MAT 185	Calculus II (QR)	5	MAT 229	
<b>Subtotal General Education Courses</b>		<b>41</b>		

TBS XXX means to be selected by GCTC student.

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

Category II: AS Requirements				
GCTC Course	Course or Category	Credits	NKU Course	
CHE 270/275	Organic Chemistry I/Laboratory I	5	CHE 310/310L	
CHE 280/285	Organic Chemistry II/Laboratory II	5	CHE 311/311L	
<b>Subtotal AS Requirement Courses</b>		<b>10</b>		

Category III: Electives				
GCTC Course	Course or Category	Credits	NKU Course	
CIT 105 OR OST 105	Introduction to Computing OR Introduction to Information Systems (Fulfills Digital Literacy Requirement)*	0-3	BIS 101	
PHY 201/202	College Physics I/Lab I	5	PHY 211	
PHY 203/204	College Physics II/Lab II	5	PHY 213	
<b>Subtotal Elective Courses</b>		<b>10-13</b>		
<b>Total Associate Degree Hours</b>		<b>61-64</b>		

\*If Fulfilling Digital Literacy Requirement in another way besides CIT 105 or OST 105, may need additional hours.

## Northern Kentucky University

Category IV: Major Requirements for the BS in Chemistry (Biochemistry Track)				
NKU Course	Course	Credits	GCTC Course	Taken at GCTC
CHE 125	Introduction to Chemistry & Biochem...	1		
CHE 120/120L	General Chemistry I/General Chem I Lab	4	CHE 170/CHE 175	X
CHE 121/121L	General Chemistry II/Gen Chem II Lab	4	CHE 180/CHE 185	X
CHE 310/310L	Organic Chemistry I/Org Chem I Lab	4	CHE 270/CHE 275	X
CHE 311/311L	Organic Chemistry II/Org Chem II Lab	4	CHE 280/285	X
CHE 340/340L	Analytical Chemistry/Analyt. Chem 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 175	X
MAT 229	Calculus II	5	MAT 185	X
PHY 211	General Physics with Laboratory I	5	PHY 201/202	X
PHY 213	General Physics with Laboratory II	5	PHY 203/204	X
CHE 300	Careers in Chemistry	1		
CHE 361/362L	Physical Chemistry II/Phys Chem Lab	5		
CHE 400	Chemistry Seminar	1		
CHE 482L	Biochemistry I Laboratory	1		
CHE 483/483L	Biochemistry II/Biochem II Lab	4		
BIO 150/150L	Intro to Biology I/Intro to Bio I Lab	4		
BIO 151/151L	Intro to Biology II/Intro to Bio II Lab	4		
BIO 349/349L	Genetics/Genetics Lab	4		
	Choose at least TWO courses (7-9 credits) from the following**:			
BIO 302/302L	General Microbiology/Lab	4		
BIO 400/400L	Advanced Molecular Biology/Lab	4		
BIO 436	Advanced Biology of the Cell	3		
CHE 320/320L	Inorganic Chemistry/Lab	5		
CHE 350/350L	Instrumental Analysis/Lab	5		
<b>Subtotal Major Credit Hours Taken at NKU</b>		<b>46-48</b>		

\*\*To receive ACS certification CHE 320 and CHE 320L must be taken as one course in this distribution area.

Graduation from NKU requires that a student successfully complete a minimum of 120 hours in college-level coursework, 45 of which must be earned at the 300/400 level. Students should work closely with their NKU academic advisor to ensure all major and graduation requirements are fulfilled.

Category V: Additional Requirements			
<b>Subtotal Elective Hours:</b>	<b>8-13</b>		
<b>Total Baccalaureate Degree Credit Hours:</b>	<b>120</b>		

Updated May 2018