



Associate of Science to Bachelor of Science in Applied Mathematics

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 Applied Mathematics 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 Applied Mathematics:

- The Applied Mathematics major at NKU requires that:
- At least 45 credit hours must be 300 level or above.
- Students must meet the pre-requisites for each course.
- Students must make a C- or better in all courses. At least 20 percent of the total required hours must be taken at NKU.
- At least 9 credit hours toward the major must be completed at NKU
- A double major in mathematics and statistics consists of satisfying the degree requirements of both majors with a minimum of 58 credit hours of courses applicable to either major.
- A student majoring in mathematics and seeking a focus in statistics must complete four additional 300 or 400-level STA courses not used to satisfy the mathematics major.
- Any substitutions in these programs must be made in consultation with the chair of the department.


GCTC AS TO NKU BS IN APPLIED MATHEMATICS 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	3	TBD XXX	
TBS XXX	Social & Behavioral Sciences	3	TBD XXX	
TBS XXX	Natural Sciences	3	TBD XXX	
TBS XXX	Natural Science Course with Lab (SL)	4	TBD XXX	
MAT 175	Calculus I	3	MAT 129	
MAT 185	Calculus II	5	MAT 229	
Subtotal General Education Courses		36		

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	
MAT 275	Calculus III	4	MAT 329	
MAT 285	Differential Equations	3	MAT 325	
Subtotal AS Requirement Courses		7		

Category III: Electives				
GCTC Course	Course or Category	Credits	NKU Course	
CIT 105*	Introduction to Computing *	3	BIS 101	
CIT 120	Computational Thinking	5	INF 120	
CIT 149	JAVA I	3	CSC 260	
MAT 261	Introduction to Number Theory	3	MAT 310	
Gateway2NKU	Mathematics Software Programming	3	CSC 270	
Subtotal Elective Courses		17		
Total Associate Degree Hours		60		

*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 Mathematics				
NKU Course	Course	Credits	GCTC Course	Taken at GCTC
MAT 129	Calculus I - QR	4	MAT 175	X
MAT 229	Calculus II	5	MAT 185	X
MAT 329	Calculus III	4	MAT 275	X
MAT 194	Mathematical Sciences Seminar	1		
MAT 234	Linear Algebra	3		
STA 250	Probability and Statistics	3		
MAT 489	Comprehensive Examination	0		
CSC 260	Object Orient Programming	3	CIT 149	X
CSC 270	Mathematics Software Programming	3		
MAT 325	Differential Equations	3	MAT 285	x
Choose Two: MAT 330 MAT 360 MAT 375 MAT 430 MAT 483	Choose Two: Classical Applied Analysis Numerical Methods Applied Mathematical Methods Complex Variables Cryptology	6		
MAT 310	Elementary Theory of Numbers	3	MAT 261	x
TBS XXX TBS XXX	Choose 2 courses from Applied Math Track (See catalog for courses 300 level or above)	6		
Subtotal Major Credit Hours Taken at NKU		22		

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. Unless otherwise noted, students are required to have a minor and should work closely with their NKU academic advisor to ensure all major/minor and graduation requirements are fulfilled.

Category V: Additional Requirements			
Subtotal Minor (2 courses at 300/400 level) Credit Hours:		21	
Subtotal Elective (300/400 level) Hours:		17	
Total Baccalaureate Degree Credit Hours:		120	

Updated May 2018