



Department of Mathematics and Statistics, Discovery Hall  
University of Nebraska at Kearney

**Computer Science Comprehensive plus Math Minor**

Adding a math minor to your CS degree is one of the most beneficial combinations for a Computer Science major, especially if you are interested in machine learning, cryptography, or research. Your math minor will give you a good foundation in set theory, logic, and discrete probability, as well as providing you with a high level of mathematical understanding.

If you would like to discuss the possibility of earning a math minor, please contact Barton Willis, PhD, Department of Mathematics and Statistics, Discovery Hall, Room 368; email or phone: willisb@unk.edu or 308-865-8868.

This plan is up-to-date for the 2023–2024 catalog. The designation of a fall or spring class is anticipated, but is subject to change.

**For your General Studies LOPER 4 requirement take**

- **MATH 115** Calculus I with Analytic Geometry (fall and spring) ..... 5 credits

**To complete the Mathematics Minor take**

- **MATH 202** Calculus II with Analytic Geometry (fall and spring, prerequisite: MATH 115) ..... 5 credits
- **MATH 250** Foundations of Math (fall and spring, prerequisite: MATH 115) ..... 3 credits
- **MATH 280** Linear Algebra (spring only, prerequisite: MATH 115) ..... 3 credits
- **MATH 413** Discrete Mathematics (fall only, prerequisite: MATH 250) ..... 3 credits
- **STAT 345** Applied Statistics I (fall only, prerequisite: MATH 123 or MATH 115) ..... 3 credits

These are the classes that we recommend for a computer science major. Your academic advisor can assist you with choosing alternatives to MATH 280, MATH 413, and STAT 345. Additionally, your academic advisor will help you build a four-year plan for earning a minor in mathematics that fits with your goals and other classes. If you start on a path toward earning a math minor, but later decide to earn a Mathematics B.S., all the mathematics and statistics classes listed here will count toward the B.S. degree.

**Suggested mathematics course sequence**

Year	Fall	Spring
First	MATH 115	MATH 202, MATH 280
Second	STAT 345	MATH 250
Third	MATH 413	



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## Computer Science Comprehensive plus Mathematics Bachelor of Science

Adding a math major to your CS degree is one of the most beneficial combinations for a Computer Science degree, especially if you are interested in machine learning, cryptography, or research. Your math major will give you a solid foundation in set theory, logic, and discrete probability, as well providing you with a high level of mathematical understanding.

If you would like to discuss the possibility of earning a math major, please contact Barton Willis, PhD, Department of Mathematics and Statistics, Discovery Hall, Room 368; email or phone: willisb@unk.edu or 308-865-8868.

This plan is up-to-date for the 2023–2024 catalog. The designation of a fall or spring class is anticipated, but is subject to change.

### For your General Studies LOPER 4 requirement take

- **MATH 115** Calculus I with Analytic Geometry (fall and spring) ..... 5 credits

### For your LOPER 8 requirement take

- **PHYS 275 and PHYS 275L** (corerequisite: MATH 115) ..... 5 credits

### For your Program Specific Requirement take

- **ENG 102**, Special Topics in Academic Writing and Research (prerequisite: ENG 101) ..... 3 credits

### For your Math Core requirements take

- **MATH 202** Calculus II with Analytic Geometry (fall and spring, prerequisite: MATH 115) ..... 5 credits
- **MATH 250** Foundations of Math (fall and spring, prerequisite: MATH 115) ..... 3 credits
- **MATH 260** Calculus III (fall and spring, prerequisite: MATH 202) ..... 5 credits
- **MATH 280** Linear Algebra (spring only, prerequisite: MATH 115) ..... 3 credits
- **MATH 305** Differential Equations (spring only, prerequisite: MATH 260) ..... 3 credits
- **MATH 350** Abstract Algebra (spring only, prerequisite: MATH 250) ..... 3 credits
- **MATH 365** Complex Analysis (spring only, prerequisite: MATH 260) ..... 3 credits
- **MATH 460** Advanced Calculus I (fall only, prerequisite: MATH 250) ..... 3 credits

### For your Math Electives take

- **MATH 413** Discrete Mathematics (fall only, prerequisite: MATH 250) ..... 3 credits
- **STAT 441** Probability and Statistics (spring only, prerequisite: MATH 260) ..... 3 credits

These are the classes that we recommend for a computer science major. Your academic advisor can assist you with choosing alternatives to MATH 413 and STAT 441. Additionally, your academic advisor help you build a four-year plan for earning a Mathematics B.S that fits with your goals and other classes.

### Suggested mathematics course sequence

Year	Fall	Spring
First	MATH 115	MATH 202 , MATH 280
Second	MATH 260, MATH 250	MATH 305, math elective
Third	MATH 460	MATH 365
Fourth	math elective	MATH 350



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**Cyber Security Operations Comprehensive, Bachelor of Science plus Math Minor**

Adding a math minor to your CS degree is one of the most beneficial degree combinations for a Computer Science major, especially if you are interested in machine learning, cryptography, or research. Your math minor will give you a good foundation in set theory, logic, and discrete probability, as well providing you with a high level of mathematical understanding.

If you would like to discuss the possibility of earning a math minor, please contact Barton Willis, PhD, Department of Mathematics and Statistics, Discovery Hall, Room 368; email or phone: willisb@unk.edu or 308-865-8868.

This plan is up-to-date for the 2023–2024 catalog. The designation of a fall or spring class is anticipated, but is subject to change.

**For your General Studies LOPER 4 requirement take**

- **MATH 115** Calculus I with Analytic Geometry (fall and spring) ..... 5 credits

**To complete the Mathematics Minor take**

- **MATH 202** Calculus II with Analytic Geometry (fall and spring, prerequisite: MATH 115) ..... 5 credits
- **MATH 250** Foundations of Math (fall and spring, prerequisite: MATH 115) ..... 3 credits
- **MATH 280** Linear Algebra (spring only, prerequisite: MATH 115) ..... 3 credits
- **STAT 345** Applied Statistics I (fall only, prerequisite: MATH 123 or MATH 115) ..... 3 credits
- **MATH 413** Discrete Mathematics (fall only, prerequisite: MATH 250) ..... 3 credits

These are the classes that we recommend for a computer science major. Your academic advisor can assist you with choosing alternatives to STAT 345 and MATH 413. Additionally, your academic advisor help you build a four-year plan for earning a minor in mathematics that fits with your goals and other classes. If you start on a path toward earning a math minor, but latter decide to earn a Mathematics B.S., all the mathematics and statistics classes listed here will count toward the B.S. degree.

**Suggested mathematics course sequence**

Year	Fall	Spring
First	MATH 115	MATH 202, MATH 280
Second	STAT 345	MATH 250
Third	MATH 413	



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### Physics Comprehensive plus Math Minor

Success in Physics classes, especially Analytic Mechanics (PHYS 402), Electricity & Magnetism (PHYS 407), and Quantum Mechanics (PHYS 419) require a firm understanding of mathematics. That might help explain why nationwide about one-third of undergraduate physics majors also earn a degree in mathematics. If you choose to attend a graduate program in physics, earning a math minor will help you be successful with the math intense first year core physics graduate classes.

If you would like to discuss the possibility of earning a math minor, please contact Barton Willis, PhD, Department of Mathematics and Statistics, Discovery Hall, Room 368; email or phone: willisb@unk.edu or 308-865-8868.

This plan is up-to-date for the 2023–2024 catalog. The designation of a fall or spring class is anticipated, but is subject to change.

#### For your General Studies LOPER 4 requirement take

- **MATH 115** Calculus I with Analytic Geometry (fall and spring) ..... 5 credits

#### For your BS Science-related course requirements take

- **MATH 202** Calculus II with Analytic Geometry (fall and spring, prerequisite: MATH 115) ..... 5 credits
- **MATH 305** Differential Equations (spring only, prerequisite: MATH 260) ..... 3 credits

#### Physics Comprehensive Math Requirements take

- **MATH 260** Calculus III (fall and spring, prerequisite: MATH 202) ..... 5 credits

#### For your Math minor, take

- **MATH 250** Foundations of Math (fall and spring, prerequisite: MATH 115) ..... 3 credits

Your academic advisor help you build a four-year plan that fits with your goals and other classes. If you start on a path toward earning a math minor, but latter decide to earn a Mathematics B.S., all the math classes listed here will count toward the B.S. degree.

#### Suggested mathematics course sequence

Year	Fall	Spring
First	MATH 115	MATH 202
Second	MATH 260, MATH 250	MATH 305



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## Adding a Math Minor to your Major

As you may know, at UNK every Bachelor of Science program of study requires a second major or minor. So supplementing your major with a math minor is not only a great way to build your résumé, but it also fulfills a degree requirement.

By choosing to take Calculus I with Analytic Geometry (five credits) to satisfy your LOPER 4 General Studies requirement, you will gain five credits out of a required twenty-one for a mathematics minor. That leaves only sixteen credits to complete a math minor. Of these remaining credits, eight are electives, allowing you to choose from classes ranging from History of Mathematics to Applied Statistics.

If you would like to discuss the possibility of earning a math minor, please contact Barton Willis, PhD, Department of Mathematics and Statistics, Discovery Hall, Room 368; email or phone: willisb@unk.edu or 308-865-8868.

This plan is up-to-date for the 2023–2024 catalog. The designation of a fall or spring class is anticipated, but is subject to change.

### For your General Studies LOPER 4 requirement take

- **MATH 115** Calculus I with Analytic Geometry (fall and spring) ..... 5 credits

### For your Math minor, take

- **MATH 202** Calculus II with Analytic Geometry (fall and spring, prerequisite: MATH 115) ..... 5 credits
- **MATH 250** Foundations of Math (fall and spring, prerequisite: MATH 115) ..... 3 credits

### For your Math minor electives take

From the following, take *at least eight* credits from

- **MATH 260** Calculus III (fall and spring, prerequisite: MATH 202) ..... 5 credits
- **MATH 280** Linear Algebra (spring only, prerequisite: MATH 115) ..... 3 credits
- **MATH 310** College Geometry (fall only, prerequisite: MATH 250) ..... 3 credits
- **MATH 350** Abstract Algebra (spring only, prerequisite: MATH 250) ..... 3 credits
- **MATH 404** Theory of Numbers (spring only, prerequisite: MATH 250) ..... 3 credits
- **MATH 413** Discrete Mathematics (fall only, prerequisite: MATH 250) ..... 3 credits
- **MATH 460** Advanced Calculus I (fall only, prerequisite: MATH 250) ..... 3 credits
- **MATH 305** Differential Equations (spring only, prerequisite: MATH 260) ..... 3 credits
- **STAT 345** Applied Statistics I (fall only, prerequisite: MATH 123 or MATH 115) ..... 3 credits
- **MATH 365** Complex Analysis (spring only, prerequisite: MATH 260) ..... 3 credits
- **MATH 400** History of Mathematics (fall only, prerequisite: MATH 115) ..... 3 credits
- **MATH 420** Numerical Analysis (spring only, prerequisite: MATH 202) ..... 3 credits
- **STAT 441** Probability and Statistics (spring only, prerequisite: MATH 260) ..... 3 credits

### Suggested mathematics course sequence

Year	Fall	Spring
First	MATH 115	MATH 202
Second	MATH 250	math elective
Third	math elective	math elective (if needed)



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## Adding a Math Major to your Major

As you may know, at UNK every Bachelor of Science program of study requires a second major or minor. So supplementing your program of study with a math major is not only a great way to build your résumé, but it also fulfills a degree requirement.

If you would like to discuss the possibility of earning a math major, please contact Barton Willis, PhD, Department of Mathematics and Statistics, Discovery Hall, Room 368; email or phone: willisb@unk.edu or 308-865-8868.

This plan is up-to-date for the 2023–2024 catalog. The designation of a fall or spring class is anticipated, but is subject to change.

### For your General Studies LOPER 4 and LOPER 8 requirements, take

- **MATH 115** Calculus I with Analytic Geometry (fall and spring) ..... 5 credits
- **PHYS 275 and PHYS 275L** (corerequisite: MATH 115) ..... 5 credits

### For your Program Specific Requirement take

- **ENG 102**, Special Topics in Academic Writing and Research (prerequisite: ENG 101) ..... 3 credits

### For your Math major requirements take

- **MATH 202** Calculus II with Analytic Geometry (fall and spring, prerequisite: MATH 115) ..... 5 credits
- **MATH 260** Calculus III (fall and spring, prerequisite: MATH 202) ..... 5 credits
- **MATH 280** Linear Algebra (spring only, prerequisite: MATH 115) ..... 3 credits
- **MATH 250** Foundations of Math (fall and spring, prerequisite: MATH 115) ..... 3 credits
- **MATH 305** Differential Equations (spring only, prerequisite: MATH 260) ..... 3 credits
- **MATH 350** Abstract Algebra (spring only, prerequisite: MATH 250) ..... 3 credits
- **MATH 365** Complex Analysis (spring only, prerequisite: MATH 260) ..... 3 credits
- **MATH 460** Advanced Calculus I (fall only, prerequisite: MATH 250) ..... 3 credits

### For your Math major electives take

From the following, take *at least six* credits from

- **MATH 310** College Geometry (fall only, prerequisite: MATH 250) ..... 3 credits
- **MATH 400** History of Mathematics (fall only, prerequisite: MATH 115) ..... 3 credits
- **MATH 404** Theory of Numbers (spring only, prerequisite: MATH 250) ..... 3 credits
- **MATH 413** Discrete Mathematics (fall only, prerequisite: MATH 250) ..... 3 credits
- **MATH 420** Numerical Analysis (spring only, prerequisite: MATH 202) ..... 3 credits
- **STAT 441** Probability and Statistics (spring only, prerequisite: MATH 260) ..... 3 credits

Your academic advisor help you build a four-year plan for earning a major in mathematics that fits with your goals and other classes.

### Suggested mathematics course sequence

Year	Fall	Spring
First	MATH 115	MATH 202 , MATH 280
Second	MATH 260, MATH 250	MATH 305, math elective
Third	MATH 460	MATH 365
Fourth	math elective	MATH 350



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### Adding a Statistics Minor to your major

As you may know, at UNK every Bachelor of Science program of study requires a second major or minor. So supplementing your program of study with a Statistics major is not only a great way to build your résumé, but it also fulfills a degree requirement.

If you would like to discuss the possibility of earning a math Statistics Minor, please contact Barton Willis, PhD, Department of Mathematics and Statistics, Discovery Hall, Room 368; email or phone: willisb@unk.edu or 308-865-8868.

This plan is up-to-date for the 2023–2024 catalog. The designation of a fall or spring class is anticipated, but is subject to change.

### For your Calculus Background (including your General Studies LOPER 4 requirement take

- **MATH 115** Calculus I with Analytic Geometry (fall and spring) ..... 5 credits
- **MATH 202** Calculus II with Analytic Geometry (fall and spring, prerequisite: MATH 115) ..... 5 credits

### To complete the Mathematics Statistics take

At least three credits from BIOL 305 (Bio Statistics), MGT 233 (Business Statistics), PSY 250 (Behavioral Statistics), STAT 235 (Introduction to Statistics for Social Sciences), or STAT 241 (Elementary Statistics). Additionally, take at least six credits from

- **STAT 345** Applied Statistics I (fall only, prerequisite: MATH 123 or MATH 115) ..... 3 credits
- **STAT 441** Probability and Statistics (spring only, prerequisite: MATH 260) ..... 3 credits
- **STAT 442** Mathematical Statistics (on demand, prerequisite: STAT 441) ..... 3 credits

### Suggested mathematics course sequence

Year	Fall	Spring
First	MATH 115	MATH 202
Second	STAT 345	elective
Third		STAT 441