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 or research. Your math minor will give you a good foundation set theory, logic, and discrete probability, as well providing you with a high level of mathematical understanding. The curriculum guide for the American Association of Computing Machinery (ACM) deems these topics and skills as essential components for Computer Science education.

This guide shows you how to choose the electives in your program to also earn a math minor, but it does not list the non-math classes that you need to take.

If you would like to discuss the possibility of adding a math minor to your Computer Science Comprehensive degree, please contact Dr. Barton Willis (Department of Mathematics and Statistics, Discovery Hall (DSCH), Room 368, willisb@unk.edu or 308-865-8868).

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 260** Calculus III (fall and spring, prerequisite: MATH 202) .... 5 credits
- **MATH 413** Discrete Mathematics (fall only, prerequisite: MATH 250) .... 3 credits
- **MATH 440** Linear Algebra (spring only, prerequisite: MATH 115) .... 3 credits

Instead of taking MATH 413, you make take any *one* of MATH 310 (College Geometry, fall), MATH 350 (Abstract Algebra, spring), MATH 404 (Theory of Numbers, spring), or MATH 460 (Advanced Calculus I, fall), but of these options, MATH 413 is the class that is most relevant to the CS program.

As an alternative to MATH 440, you may take any *one* of MATH 305 (Differential Equations, spring only), MATH 365 (Complex Analysis, spring only), MATH 400 (History of Mathematics, fall only), MATH 420 (Numerical Analysis, spring only), STAT 441 (Probability and Statistics, spring only), but of these options, MATH 440 is the class that is most beneficial to the CS program.

Suggested mathematics course sequence

Freshman year Fall: MATH 115, Spring: MATH 202
Sophomore year Fall: MATH 260, Spring: MATH 250 and MATH 440
Junior year Fall: MATH 413

Once you declare a mathematics minor, your academic advisor will be happy to help you build a four-year plan for earning a minor in mathematics that fits with your other classes. If you start on a path toward earning a math minor, but latter decide to earn a Mathematics Bachelor of Science, all the mathematics and statistics classes listed here will count toward the Bachelor of Science degree.

---

*This plan is up to date for the 2020-2021 catalog. Also, the designation of a fall or spring class is anticipated, but it is subject to change.