

Educational Mathematics

Doctor of Philosophy



Mathematics, Pedagogy and Cognition

UNC boasts one of the nation's largest educational mathematics programs, housed in the School of Mathematical Sciences. You'll receive comprehensive training that prepares you to excel as a university mathematics instructor, conduct original research in mathematics education, offer professional development to K-12 mathematics teachers and influence public policy related to STEM education. In addition, many of our students receive

teaching assistantships to help offset the cost of tuition. Our educational mathematics Ph.D. program takes an innovative approach that integrates mathematics, mathematics education and cognition.

After completing a dissertation based on original research, you'll enter the job market with in-demand expertise and excellent prospects for a tenure-track faculty position or employment with government, nonprofit or educational employers.

Career Pathway

The world is finally acknowledging the importance of numbers, data and mathematical fluency. Expertise in educational mathematics has increased in demand substantially. Graduates of our program are prepared for the following careers:

- Tenure-track university faculty
- Professional development consulting
- Researching within the government or non-profit sectors

Degree Options

Entry into the Ph.D. in Educational Mathematics program can be done in one of two ways:

- **Ph.D. -** After earning a master's degree students will take advanced coursework in mathematics, mathematics education, cognition and related subjects.
- **Master's en route to Ph.D. -** Students can also enter the program with a strong bachelor's degree that includes high level coursework in abstract algebra, point-set topology and real or complex analysis.

Program Details

- Greeley Campus Delivery
- Credits Required: 71
- Time to Completion: Four to Five years
- Classes Start: Fall

Cost and Value

Tuition rates are based on the 2021-22 Academic Year:

Colorado Resident Tuition: \$685 per credit hour plus fees.

Nonresident Tuition: \$1,296 per credit hour plus fees. You may qualify for CO resident tuition — see WRGP information at right.

UNC is regularly called out as a top value for both resident and nonresident students, and the university offers financial aid packages for qualified students. For more information, visit [UNCO.EDU/COSTS](https://unco.edu/costs).

What Students Say

“Excellent and supportive faculty. I learned a lot in every class I took at UNC and found it easy to locate mentors in both mathematics and education. I appreciate the great deal of support I received from the faculty at UNC, and feel that they care greatly about the grad students in the program.”

-Jonathan Troup, 2015

Financing your Education

UNC offers a variety of financial support options, including:

- Colorado resident tuition for students from 15 western states is offered through the Western Regional Graduate Program. To see if you qualify visit [UNCO.EDU/GRADUATE-SCHOOL/FUNDING/WESTERN-REGIONAL-GRADUATE-PROGRAM.ASPX](https://unco.edu/graduate-school/funding/western-regional-graduate-program.aspx)
- Several competitive teaching assistantships that include tuition waivers
- Grant funding may be available for students in this program through the (Critical Career) Colorado Graduate Grant, funded by the Colorado General Assembly. To find out if you qualify, fill out the FAFSA. Students must be a Colorado resident and show high financial need.

For more information contact Financial Aid at [UNCO.EDU/FINANCIAL-AID/](https://unco.edu/financial-aid/).

Faculty Spotlight

Gulden Karakok, Ph.D.

Gulden Karakok earned her Ph.D. in mathematics education from Oregon State University and her MS. in mathematics from University of Oregon. Before moving to the U.S. for graduate degrees, she received her undergraduate degree in mathematics from Middle East Technical University in Ankara, Turkey. Her research area is in undergraduate mathematics education exploring how learners transfer their mathematics knowledge learning from one area to another. As an extension to this area of research, she explores the ways to enhance students' mathematical creativity.

Program Contact

Gulden Karakok, Ph.D.
Associate Professor
Gulden.Karakok@unco.edu
970-351-2215

Kayleen Allen
Graduate Admissions Counselor
kayleen.allen@unco.edu
970-351-1711

About UNC Graduate School

The University of Northern Colorado, founded in 1889, is Colorado's right-sized doctoral research university, serving a diverse student body around the world. Given its size, program mix, and mission, UNC offers students the access and opportunities of a small college along with the nationally recognized programs, research funding and facilities that come with being a leading U.S. university. Students seeking preparation for a world (and workplace) full of opportunities and options, complexities and cultures, diversity and demands, will find faculty mentors and excited fellow students to engage with here at UNC.



UNC

UNIVERSITY OF NORTHERN COLORADO

Graduate School

[UNCO.EDU/GRADUATE-SCHOOL](https://unco.edu/graduate-school)