

Applied Mathematics

The Department of Mathematics is a national leader in several areas of mathematics, both pure and applied. We have active groups in continuous mathematics (control theory, dynamical systems, geometry, partial differential equations, probability, topology), discrete mathematics (algebra, combinatorics, linear programming) and computational mathematics (symbolic computation, modeling, numerical analysis, uncertainty quantification).

The Department of Mathematics offers programs leading to the degrees of Master of Science and Doctor of Philosophy in Mathematics and in Applied Mathematics. Students may opt for the Concentration in Computational Mathematics, which is attached to the program in applied mathematics. The Concentration in Interdisciplinary Mathematics (MAI) is available to Ph.D. students in either Mathematics or Applied Mathematics. It is not available to Masters Students. Joint research endeavors with industrial and governmental partners are facilitated and encouraged. The Department of Mathematics also offers a Certificate.

Master of Science Requirements

The M.S. degree requires a minimum of 30 credit hours with courses chosen to satisfy certain requirements to cover material from three different areas in the department, and some level of depth of material.

Ph.D. Requirements

The Ph.D. requires a minimum of 72 credit hours. A student will typically take 50-60 semester hours of course credits for the Ph.D. The written preliminary examination consists of examinations in three areas of mathematics chosen by the student from 12 possibilities. The research dissertation should represent a substantial contribution to an area of mathematics or its applications.

Student Financial Support

Teaching assistantships and some research assistantships are available. Teaching assistants benefit from a structured program of training in university-level teaching.

More Information

Applied Mathematics Program Website (<https://math.sciences.ncsu.edu/graduate/>)

Admissions Requirements

Applicants for admission should have an undergraduate or Master's degree in mathematics or applied mathematics. This should include courses in advanced calculus, analysis, modern algebra and linear algebra. Applicants with degrees in other subjects may be admitted but may be required to take certain undergraduate courses in mathematics without receiving graduate credit. GRE general scores are not currently required. The GRE Subject Test in Mathematics is not required but a good score can be a positive factor in admission.

Applicant Information

- **Delivery Method:** On Campus
- **Entrance Exam:** None
- **Interview Required:** None

Application Deadlines

- **Fall:** January 25 (for first round PhD offers and invitation to recruitment weekend), March 15 (for funded PhD offers), June 15 (Master's Students and Certificate Students)
- **Spring:** November 25 (Master's Students and Certificate Students)

Degrees

- Applied Mathematics (MS) (<http://catalog.ncsu.edu/graduate/sciences/applied-mathematics/applied-mathematics-ms/>)
- Applied Mathematics (PhD) (<http://catalog.ncsu.edu/graduate/sciences/applied-mathematics/applied-mathematics-phd/>)
- Applied Mathematics (PhD): Computational Mathematics Concentration (<http://catalog.ncsu.edu/graduate/sciences/applied-mathematics/applied-mathematics-phd-computational-mathematics/>)
- Applied Mathematics (PhD): Interdisciplinary Applied Math Concentration (<http://catalog.ncsu.edu/graduate/sciences/applied-mathematics/applied-mathematics-phd-interdisciplinary-applied-math-concentration/>)
- Applied Mathematics (Minor) (<http://catalog.ncsu.edu/graduate/sciences/applied-mathematics/applied-mathematics-minor/>)

Faculty

Full Professors

Bojko Nentchev Bakalov

Lorena Bociu

Alina Emil Chertock

Moody Ten-Chao Chu

Jo-Ann D. Cohen

Patrick Louis Combettes

Pierre Alain Gremaud

Mansoor Abbas Haider

Hoon Hong

Ilse Ipsen

Kazufumi Ito

Naihuan Jing

Erich L. Kaltofen

Carl Timothy Kelley

Irina Aleksandrovna Kogan

Rachel Levy

Zhilin Li

Alun L. Lloyd

Sharon R. Lubkin

Negash G. Medhin

Kailash Chandra Misra

Mette Olufsen

Tao Pang

Nathan P. Reading

Jesus Rodriguez

Ralph Conover Smith

Seth M. Sullivant

Hien Trong Tran

Semyon Victor Tsynkov

Dmitry Valerievich Zenkov

Associate Professors

Alen Alexanderian

Kevin Flores

Min Jeong Kang

Tye Lidman

Tien Khai Nguyen

Andrew Papanicolaou

David Papp

Arvind Krishna Saibaba

Radmila Sazdanovic

Assistant Professors

Erik Walter Bates

Zixuan Cang

Chao Chen

Mohammad Mehdi Farazmand

Laura Colmenarejo Hernando

Hangjie Ji

C. Jones

Zane Kun Li

Andrew Jason Manion

Jacob Paul Matherne

P. McGrath

Ryan William Murray

Dominykas Norgilas

Yairon Cid Ruiz

Andrew O'Shea Sageman-Furnas

T. Saksala

Yeonjong Shin

Fatma Terzioglu

Adjunct Faculty

Scott Christopher Batson

Jonathan D. Hauenstein

Patricia L. Hersh

John Lavery

Sarah Katherine Mason

Jordan E. Massad

Jessica Looock Matthews

Johnny T. Ottesen

Practice/Research/Teaching Professors

Elisabeth M. M. Brown

L. Castle

Alina Nicoleta Duca

Molly A. Fenn

Mikhail Gilman

Bevin Laurel Maultsby

S. Paul

Brenda B. Williams

Emeritus Faculty

John William Bishir

Stephen LaVern Campbell

Richard E. Chandler

H. Charlton

Ethelbert N. Chukwu

Lung-ock Chung

Joseph C. Dunn

Gary Doyle Faulkner

John E. Franke

Ronald O. Fulp

Dennis E. Garoutte

John Richard Griggs

Robert E. Hartwig

Aloysius G. Helminck

Robert H. Martin Jr

Carl Meyer Jr.

Thomas J. Lada

Xiao-Biao Lin

Joe A. Marlin

Larry Keith Norris

L. Page

Sandra Paur

E. Peterson

Mohan Sastri Putcha

N. Rose

Stephen Schecter

Jeffrey Scott Scroggs

James Francis Selgrade

Michael Shearer

C. Siewert

Robert Silber

Jack Silverstein

Michael F. Singer

Ernest Stitzinger

R. White