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
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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
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Hien Trong Tran
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Dmitry Valerievich Zenkov

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**Assistant Professors**
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Zixuan Cang
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Mohammad Mehdi Farazmand
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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 Loock 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
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Aloysius G. Helminck
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