Geospatial Analytics

The Center for Geospatial Analytics innovative Ph.D. program brings together departments from across NC State University to train a new generation of interdisciplinary data scientists skilled in developing novel understanding of spatial phenomena and in applying new knowledge to grand challenges.

This one-of-a-kind degree focuses on integrative thinking and experiential learning:

- Multidisciplinary advising unites expertise from across complementary academic departments
- Cross-cutting curriculum spans core classes in solution-driven analytics and discipline-specific electives
- Geospatial externship enriches practical understanding through a one-week internship with an external partner

If your research goals intersect geospatial problem-solving from any number of fields, you will find your fit here. Our Faculty Fellows advise students interested in a range of disciplines—from design, to cognitive science, natural resources and the environment, computer science, engineering and more—and approach their work in a range of geospatial research areas. Students with strong backgrounds in quantitative methods in geography, geomatics/informatics, remote sensing and earth sciences are strongly encouraged to apply.

Admission Requirements

Minimum requirements include:

- Undergraduate GPA # 3.0
- Graduate GPA # 3.0 (if entering with a Master’s degree)
- GRE Scores (within last 5 years). There is no minimum, but students accepted for Fall 2019 admission earned the following average scores: Quantitative: 159 (73rd percentile), Verbal: 158 (80th percentile), Writing: 4 (60th percentile)
- IBT TOEFL Score # 80 overall (18 in each section) (International Applicants; the Office of International Services offers additional helpful information)

Required supporting documents

- Official NC State Graduate School application.
- Unofficial transcripts from all colleges/universities attended (official transcripts will be required if admitted to the program).
- A personal statement, not to exceed 2 pages. We encourage you to consider the following:
  - Your academic and career goals
  - Special interests and prior research in the area of geospatial analytics
  - What makes you well-suited to our program
  - Describe any computational, quantitative, and/or geospatial training
  - You are encouraged to suggest prospective advisor(s) and describe shared research interests
  - 3 letters of recommendation. Submit the names and contact information for your recommenders through the online application, and they will receive an email with instructions for submitting their letters online.

Degree Requirements

The Ph.D. program consists of:

- 72 credit hours beyond the Bachelor’s degree. The core required courses comprise 18 credit hours. The remaining 54 credit hours are devoted to an individually tailored selection of electives and research.
- an off-campus professional experience. By the beginning of their third year in the program, students participate in an experiential learning activity within government (local, state, federal), industry, private and academic research institutions, or other organizations in the geospatial arena.
- a comprehensive exam. The written exam is required by the end of the 4th semester, followed by an oral exam consisting of the dissertation proposal defense, typically before the start of the 5th semester.
- a written dissertation and final dissertation oral defense required to complete the degree.

Degrees

- Geospatial Analytics (PhD) (http://catalog.ncsu.edu/graduate/natural-resources/geospatial-analytics/geospatial-analytics-phd/)

Full Professors

Sankarasubramanian Arumugam
Emily Zechman Berglund
DellWayne R. Bohnenstiehl
Ryan E. Emanuel
David Brian Hill
Yu-Fai Leung
Ross Kendall Meentemeyer
Helena Mitasova
Stacy Arnold Charles Nelson
Peter Ojiambo
Brian J. Reich
Robert Michael Scheller
Sandra E. Yuter

Associate Professors

Justin Scott Baker
Paul Kevin Byrne
Caren Beth Cooper
Bethany Brooke Cutts
James Aaron Hipp
Christopher Lee Osburn
William Michael Rand
Mirela Gabriela Tulbure
Ranga Raju Vatsavai
Benjamin Allen Watson
Karl William Wegmann

Assistant Professors
Eric Charles Edwards
Joshua Michael Gray
Anders Schmidt Huseth
Gustavo Machado
Katherine Lee Martin
Natalie Genevieve Nelson Sagues
Daniel R. Obenour
Jamian Krishna Pacifici
Jelena Vukomanovic

Practice/Research/Teaching Professors
Perver Korca Baran
Daniela Jones
Eric Shane Money
Jennifer Richmond-Bryant
Laura Gray Tateosian
Vaishnavi Thakar

Adjunct Faculty
Adam J. Terando

Research Associates
Georgina Sanchez Salas
Lindsey Smart
Chelsey Walden-Schreiner