

National Needs Fellowship

Opportunities for prospective Master and PhD students
in soil health and data science at the University of Florida

With support from the National Needs Graduate Fellowship program (NNF) of the U.S. Department of Agriculture's National Institute of Food and Agriculture, the University of Florida (UF) is seeking five Graduate Fellows from historically underrepresented communities (four at the Master level and one at the Doctoral level) to study Soil Health and Data Science.

The cohort of Fellows will matriculate through the Soil and Water Sciences Department in the UF Institute of Food and Agricultural Sciences while also collaborating with and receiving training from data science experts in the Department of Biology and the School of Forest, Fisheries and Geomatics Sciences. The Fellowships are available to start in Fall 2022 and all Fellows will receive a bi-weekly stipend, full tuition waiver, and health insurance. Two years of support is available for the Master-level Fellowships and four years of support is available for the Doctoral-level Fellowship.

Training within this cohort will equip Fellows with an expertise in the fundamentals of soil science and soil health and the interdisciplinary training to couple cutting edge data analytics with those fundamentals. Fellows will be engaged in data-enabled, team-based research that translates complex soil data into actionable management practices, extension recommendations, and/or policy recommendations and will receive focused training in leadership, diversity, and extension. Fellows will also have multiple opportunities to attend/present their work at professional research and/or extension-based conferences.

Who should apply?

- Students looking for graduate level training in various aspects of Soil Health and Data Analytics.
- Students interested in developing extension-based tools and experiences.
- Those with backgrounds in the following fields are particularly encouraged to apply:
 - Soil Science
 - Water Science
 - Environmental Science
 - Environmental Microbiology
 - Forestry
 - Statistics
 - Data Science
 - Computer Science
 - Computer Engineering
 - Geography
- In line with the NNF objectives, those that can increase the number and diversity of students from traditionally underrepresented groups are particularly encouraged to apply.
- The NNF Fellowships are only available to citizens or nationals of the United States of America.

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How to apply?

- 1) Contact at least one of the faculty listed below and indicate your interest in the NNF program.
- 2) After communication with at least one potential advisor, apply for a Masters (Thesis) or PhD program through the Department of Soil and Water Sciences. General deadline is January 1st, 2022. Instructions can be found here: <https://soils.ifas.ufl.edu/academics/graduate-studies/apply/>
- 3) In the online application, include a two-page Statement of Purpose reflecting on personal experience and career interests in soil health, environmental sustainability, or data science. Note that GRE score is NOT considered or required for the application.
- 4) Once your application is complete, email Dr. Yang Lin at ylin2@ufl.edu to state your intent to be considered for the Fellowships.
For questions regarding the application process, email Dr. Yang Lin at ylin2@ufl.edu.

Potential advisors

- Dr. Yang Lin, NNF Team Lead and main contact (ylin2@ufl.edu; statistical assessment of soil health, <https://ylinterra.com>)
- Dr. Allan Bacon (allan.bacon@ufl.edu; advising on the physical aspects of Soil Health)
- Dr. Gabriel Maltais-Landry (maltaislandryg@ufl.edu; advising on the biological and chemical aspects of Soil Health; <https://soils.ifas.ufl.edu/sustainable-nutrient-management-systems/>)
- Dr. Sarah Strauss (strauss@ufl.edu; advising on the soil microbiology components of Soil Health; <https://swfrec.ifas.ufl.edu/programs/soil-microbiology/>)

Collaborators

- Dr. Matthew Gitzendanner (magitz@ufl.edu; genetics, genomics, AI, programming)
- Dr. Geraldine Klarenberg (gklarenberg@ufl.edu; forestry, hydrology; Lecturer Quantitative Data Science)
- Dr. Alexander J. Reisinger (reisingera@ufl.edu; urban watershed and ecosystem dynamics focused on soil and water quality; State Extension Specialist for urban soil and water quality)

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