

# Geographical and Sustainability Sciences

## Chair

- David A. Bennett

## Director, Undergraduate Studies

- Silvia Secchi

## Director, Graduate Studies

- Heather A. Sander

**Undergraduate majors:** geography (BA, BS); sustainability science (BS)

**Undergraduate minors:** geographic information science; geography

**Undergraduate certificate:** geographic information science

**Graduate degrees:** MA in geography; PhD in geography

**Faculty:** <https://clas.uiowa.edu/geography/people/faculty>

**Website:** <https://clas.uiowa.edu/geography/>

## Facilities

The department houses three geographic information computational laboratories. They support a variety of geographic information system (GIS) software packages, including the latest software from Esri (ArcGIS) and Erdas (Imagine) as well as a suite of other commercial and open-source software. All lab computers are regularly updated to ensure that they are capable of running the latest software at peak performance.

The Geographical Information Systems Instructional Lab (GISIL) is the department's center for GIS teaching as well as a place where students conduct geographic and GIS-related projects. It is equipped with 27 networked student workstations, instructional support technology (e.g., CRT projection), and a suite of peripherals, including a LiDAR 3D scanner, high-end global positioning system (GPS) units, and a large-format printer.

The environmental modeling and GIS research laboratories contain state-of-the-art machines (Windows and Linux platforms), geoprocessing and statistical software, and an array of software development tools. Projects requiring massive storage or high performance computing have access to additional resources managed by the university's Information Technology Services research support group. The University of Iowa is a charter member of Internet2, with a high performance network link to the Department of Geographical and Sustainability Sciences. The university also is a member of the University Consortium on Geographic Information Science.

To aid studies of water resources and physical geography, the department has a laboratory for the analysis of vegetation, soil, and water quality. The laboratory has a variety of field equipment, including soil probes, portable meteorological stations, GPS, ground-based 3D LiDAR, anemometers, spectrometers, light sensors, and data loggers.

Faculty and graduate students participate in multidisciplinary working groups through the university's Program in Applied Mathematical and Computational Sciences, the Center for Global and Regional Environmental Research, the Center for Health Effects of Environmental Contamination, International Programs, the Institute for Rural and Environmental Health, the Iowa Quaternary Studies Group, and the Public Policy Center. Participation in multidisciplinary working groups also is available through interdisciplinary research grants with investigators from other University of Iowa academic units, for example, the College of Engineering, the Carver College of Medicine, and the College of Public Health.

Geographic researchers also have access to other University of Iowa resources, such as the university's Main Library, whose collections include more than 115,500 maps; 3,600 atlases and reference works; and around 100,000 aerial photographs, primarily of Iowa.