The Department of Geography is a leader in the field of geography and offers exceptional opportunities for graduate education. The department has been consistently rated as one of the best in the country and, for over 100 years, has been the training ground for generations of geographers. The department's strength is reflected in its ability to attract top-caliber students, compete for significant research funding, and publish foundational scholarly work. The department maintains strength across the full spectrum of subfields within the discipline, and is organized into four major thematic areas: physical geography, people and environment, human geography, and cartography/GIS.

Department faculty and graduate students represent a diverse community within which a wide range of perspectives, approaches and research strategies is accommodated. The faculty has long been recognized nationally and internationally for outstanding contributions to geography and beyond. Many graduate students have gone on to prominence within government, industry, and academia and some of the most influential names in geography received their training in Madison.

The department offers a master of science in geography; a master of science in cartography and geographic information systems (including an online-only, non-thesis named option titled GIS development); and a doctor of philosophy in geography. The department also offers a capstone certificate in geographic information systems for students not currently enrolled in a UW–Madison graduate degree program. Capstone certificate applicants are admitted as University Special students through the Division of Continuing Studies.

Graduate students at the M.S. level are expected to acquire a broad foundation in geography in addition to specializing in one or more areas of concentration. (Students pursuing the GIS development option in cartography/GIS focus on GIS and web map programming skills to bring to the workforce.) Students who earn the M.S. degree are prepared to continue on for the Ph.D., or for applied positions in government agencies, planning organizations, environmental agencies, nongovernmental organizations, and private industry.

The Ph.D. degree is founded primarily upon specialized advanced training and research. Students may specialize in a single subdisciplinary area or a combination of areas and are expected to engage in research leading to a dissertation that makes an original and significant contribution to geographic knowledge and ideas.

Currently 69 students are enrolled in the graduate program: 7 are pursuing the M.S. in geography, 13 are pursuing the M.S. in cartography/GIS, and 49 are completing the Ph.D. The department takes in roughly 10–15 new graduate students each year. In recent years, about half of all incoming graduate students have majored in a subject other than geography, and a third arrived having already received a master's degree from another institution.