

environment and society that enables graduates to move beyond entry-level positions, and the regional and global perspectives needed by responsible citizens. For similar reasons, geography provides a sound foundation for students who plan to enter graduate work in a variety of fields, from geography to business, planning, law, and medicine.

The potential for *practicing* geography in private enterprise and government has grown considerably in recent years, although many such positions are not designated with the title of geographer. Opportunities exist for individuals trained in cartography, geographic information systems, locational analysis, remote sensing, site selection, and transportation, among others. Business geographers use GIS for retail market analysis and retail site selection. The travel industry and publishers of maps, atlases, textbooks, encyclopedias, and news and travel magazines also employ geographers. In government, geographers work as cartographers, information system specialists, intelligence analysts, map curators, soil conservation officers, and transportation planners, among other occupations. Geographers are employed at all levels of government from local municipalities through the United Nations and other multinational organizations. Roughly a quarter of all geographers work in the private sector and in government agencies.

Geography offers rewarding opportunities in teaching at all levels of the educational system. The revitalization of geography in elementary and high school curricula has increased the demand for K-12 teachers who are qualified in the discipline. College and university geography professors are in demand because of the steady increase of college students who study geography not only in geography departments, but also in urban and environmental studies programs.

Becoming A Geographer

Ultimately, geography's origins lie in humankind's innate curiosity regarding the world—a curiosity shared by all people at all times in all places. Every one of us is born with an inherent

curiosity about the world around us; the discipline of geography channels this innate intellectual curiosity into a systematic and rigorous method of study.

A professional geographer will usually seek training beyond the undergraduate level. Persons preparing for teaching careers in two-year colleges or in middle-level research or government posts should earn masters degree. Those seeking university teaching positions and upper-level posts in research, business, and government should complete a Ph.D. Most graduate degrees require specialized training in selected subfields of geography, ability in at least one foreign language, and training in field techniques, cartography, GIS, and analytical methods.

Success as a geographer is usually based upon an interest in the natural and the social sciences, enthusiasm for research, the ability to organize and interpret data, and a desire to share one's discoveries with others. For additional information about the discipline, contact a local institution that offers courses or degrees in geography or the Association of American Geographers.

Further Information

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GEOGRAPHY AS A DISCIPLINE

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The Need for Geography

Scarcely a day goes by without reminders of the struggle for survival in the far-flung corners of Planet Earth. Headlines tell of floods in Bangladesh, famines in Africa, and earthquakes in Japan. We read of ethnic conflict in former Yugoslavia, terrorism in Europe, and strife in the Middle East. TV screens shock us with on-the-spot photos of violence in many places. But some of the most important news is never reported because it is pervasive, insidious, and continuous. Examples are the growth of the world's population and the deterioration of the natural environment. The air we breathe and the water we drink are often fouled; acid rain takes a rising toll on forests and lakes; depletion of the ozone layer threatens the planet with increased radiation; devastation of tropical rain forests and the depletion of groundwater reserves continue apace; problems of waste disposal loom steadily larger; the AIDS epidemic spreads its scourge ever farther and wider.

These problems and processes are now everyone's business. A world shrunken in distance and time enables people to communicate almost instantly with any city on any continent, and to fly to its remotest corners in a matter of hours. In such a world, knowledge of differing peoples and places is no longer a luxury for a few; it is a necessity for all. Interdependence is now so complete that business decisions made in Tokyo or Singapore have immediate repercussions in Copenhagen and Peoria. To function effectively, global citizens must learn *where* these events are occurring, *why* they are taking place there, and *how* they will impact their lives. Those considerations are the very essence of the discipline of geography.

What Geography Is

Geographers study space in the same way historians study time. Geographers concentrate on two essential questions: *where* are things located? and *why* are they located where they are? Geographers interpret and explain the occurrence, distribution, and interactions of natural and cultural features on the earth. They analyze phenomena according to the attributes of location, extent, and density. The constantly changing

natural and human landscapes of the earth's surface challenge geographers to provide continuing interpretations of the arrangement and interactions of all parts of the world.

Geography is a natural and social science. It examines people and the environments they occupy, thereby bridging the natural and cultural worlds. Physical geographers study patterns of climates, vegetation, soils, and land forms. They may engage in weather forecasting, watershed management, coastal land use planning, forest resource utilization, and soil erosion control. Human geographers concentrate on features and phenomena resulting from peoples' activities and characteristics. They might investigate the abandonment of agricultural land, the intensification of settlement in some areas, territorial disputes, the trade areas of cities, the incidence of pollution, or how people perceive their environments. Though most geographers address contemporary phenomena, historical geographers look backward to reconstruct geographies of the past.

Traditionally, geographers relied on field observation for gathering data. Such observations were in turn combined and generalized into *maps*. If observations were limited to what could be seen directly, our understanding of geographical relationships would be poor indeed. Geographers have expanded their purview by gathering data from aircraft and satellites, and they have employed computers that merge data from many sources into *geographic information systems* (GIS). Geographers have recently sparked an explosion in data collection, processing, and analysis based on GIS.

What Geographers Do

Geography is an especially attractive major for Liberal Arts students. Its theories and methods provide analytical techniques applicable to a wide range of questions asked over a broad spectrum of occupations. For students planning to end their formal education with the bachelor's degree, a geography major provides marketable skills, a broader perspective on

