

# Learning Goals for Undergraduate Geography Majors

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**When they graduate with a geography major from UC Berkeley, undergraduates should have the following knowledge and skills:**

## 1.0 Spatial, holistic thinking at the intersections of society, space, and nature

- 1.1 Phenomena in place. Explain the spatial dimensions (location, place, landscape, region, and territory) of human life and the global environment—how human and earth science phenomena “take their place” on the surface of the earth
- 1.2 Earth systems. Comprehend how the earth functions as a complex system of interacting components and how this system applies to and is affected by humanity
- 1.3 Scales of space and time. Understand processes operating at different spatial and temporal scales in the earth system and in human histories
- 1.4 Nature and society. Recognize natural resource flows through human systems and identify social constructions of nature and vulnerabilities to natural disasters
- 1.5 Interdisciplinarity. Combine insights from the natural sciences, social sciences, and humanities to better understand the problems of our increasingly interconnected and ecologically fragile world

## 2.0 Addressing diversity in both human and physical geography

- 2.1 Peoples and places. Discuss, interpret, and explain differences of wealth, power, health, and well-being between and within societies, and the processes that create these patterns
- 2.2 Physical processes. Discuss, interpret, and explain the diversity of—and the processes responsible for—the landforms, climates, and ecosystems that constitute our planet’s physical landscapes.
- 2.3 Reading landscapes. Deduce questions and hypotheses through clues in material landscapes

## 3.0 Analysis and application for students who choose the Economy, Culture, and Society track

- 3.1 The role of space. Understand the function of boundaries, territories, places, networks, and other spatial forms in the workings of human societies.
- 3.2 Power and landscapes. Understand the projection, protection, and contestation of power through the production of ideas, cultures, empires, and spatial forms
- 3.3 Roles of cities. Grasp the roles and forms of cities as records and motors of modern life, and the interactions of urban areas with hinterlands and global networks
- 3.4 Food systems. Compare and contrast agrarian and industrial food supply systems around the world
- 3.5 Society-environment interactions. Understand the mutual influences and ramifications of biophysical and social processes in the dynamics of societies at scales from the local to the global.

## 4.0 Analysis and application for students who choose the Earth Systems Science track

- 4.1 Earth system science. Analyze interconnected environmental systems with process-based geophysical, geochemical, and biological sciences in the context of current social environmental problems
- 4.2 Modeling. Construct models of the earth as a system of interconnected components, highlighting forcings and feedbacks
- 4.3 Experiments. Formulate and apply scientific hypotheses and devise tests for them
- 4.4 Science and society. Analyze and evaluate the role of science in shaping social forces, and being shaped by them

5.0 Application of basic skills in research, knowledge of literature, analysis, and communication

- 5.1 Write clearly. Demonstrate ability to focus and elaborate on chosen topics
- 5.2 Read critically. Critically analyze and assess arguments in professional journals, public media, and advocacy literature
- 5.3 Empirical plus theoretical. Produce work with robust empirical research (that locates, interprets, and puts together relevant and reliable sources of information) as well as intellectual and theoretical rigor
- 5.4 Use of mapping. Understand the production, interpretation, and use of mapping in all its forms and scales
- 5.5 Applying quantitative skills. Apply basic quantitative skills such as statistics, algebra, and interpreting graphs
- 5.6 Analytical ability. Demonstrate analytical ability: including the ability to identify questions, differentiate descriptions from explanations, make connections between empirical observations and arguments, and differentiate between competing explanations of a given phenomenon

6.0 Lifetime skills

- 6.1 Continuing concern. Show continuing concern, curiosity, and zeal for geography and for applying geographical understanding
- 6.2 Representing geography. Represent the usefulness of geography and geographical points of view to—depending on the circumstances—prospective employers, educators, policy makers, resource managers, developers, engineers, the public, and acquaintances.