

UC Santa Barbara

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Title

The UCSB Minor in Spatial Studies

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Acquire knowledge and perspective to:

- unite quantitative and qualitative thinking
- engage multimedia graphic display with the analysis and communication of information
- understand and work within an active area of knowledge development and societal application
- think and work across disciplinary boundaries . . .

Spatial Studies is an interdisciplinary minor that can complement a broad range of academic majors, providing students with concepts and tools for spatial thinking, spatial analysis, and spatial representation. This Minor is unique to the University of California, Santa Barbara. It provides opportunities for students to engage with an active area of knowledge development that is recognized internationally as especially strong at UCSB.

- In the social, biological, and physical sciences, spatial reasoning and tools of analysis (e.g., maps, data visualizations, and spatial statistics) are used to analyze, model, and visualize problems and research outcomes.
- In the design professions (e.g., architecture, engineering, and planning), the ability to see, process, and understand information spatially plays an important role in the success of projects.
- Many forms of artistic expression and interpretation in the humanities depend on an understanding of spatiality and spatial form to convey meaning.

For the minor in spatial studies, students select one of three foci that allies most clearly with their areas of disciplinary and/or career interest. These include:

(a) **Spatial Thinking**, (b) **Space and Place**, and (c) **Spatial Science**.

Consultation Available at:
THE CENTER FOR SPATIAL STUDIES
Department of Geography

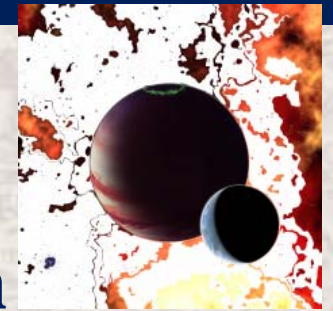
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Information Available at:

geog.ucsb.edu/undergraduates/minor-spatial-studies/ or spatial.ucsb.edu/programs/academic-minor.php

THE UCSB Minor in Spatial Studies



Why is spatial perspective important?

- **Sciences** seek identification and understanding of spatio-temporal patterns and processes related to the physical world and its phenomena.
- **Social sciences** focus on interdependence among people and groups, grounded in place, space, and time and the need to understand spatial patterns and processes of human behavior.
- **Engineering and design sciences** focus on problem solving and product development that frequently entails the planned (re) arrangement of spatial entities.
- **Humanities** focus on human creativity and aesthetic renderings (stories, visualizations, sounds) that often affirm affinity to sense of place and regional identity, use spatial metaphor, and rely on spatialized languages for communication.

Spatial Literacy draws on specialized tools and modes of reasoning that apply across many domains of knowledge:

- *spatialized notation systems in music*
- *abstract geometries in mathematics*
- *physical realities in physics and materials science*
- *spatial dependencies in social networks*
- *bonding concepts in chemistry*
- *tangible and symbolic roles of place in cultural identity*
- *conceptions of place and space in religious studies and social anthropology*
- *environmental correlates in the natural sciences*
- *behavioral structuring of architectural, engineering, and planning designs*

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Spatial Thinking

concentrates on the science of spatial learning at individual and societal levels, and on the mental associations that facilitate learning about and functioning within human and natural environments.



Requirements

Lower-Division

- Geog 12, Maps & Spatial Reasoning
- Geog 5 and Psy 1 are recommended; may be required for selected upper-division courses

Upper-Division

minimum of 20 units; maximum of 3 courses from any single department or program

(a) One of:

- Geog 153A, Behavioral Geography
- Geog 153B, Introduction to Spatial Decision Making & Behavior
- Geog 153C, Environmental Perception & Cognition
- Psy 107, Introduction to Perception
- Psy 108, Introduction to Cognitive Psychology
- Psy 110A, Perception: Vision

(b) 16–17 units selected from designated courses in: Anthropology; Art; Comparative Literature; Engineering; Geography; Mathematics; Music; Philosophy; and Psychology.

See list of designated courses at:

geog.ucsb.edu/undergraduates/minor-spatial-studies/spatial-thinking.html



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Space and Place builds on courses that apply spatial reasoning and visualization in the humanities such as creative and aesthetic renderings, the design of lived-in environments and landscape ecologies to accommodate human values and activities, the documentation and assessment of places and regions, and communication through use of spatial metaphor and spatialized languages.

Requirements

Lower-Division

- Geog 12, Maps & Spatial Reasoning
- Art Studio 1A, 7A, 7B, 7C, and 12; Geography 5; History of Art & Architecture 5A may be required for selected upper-division courses



Upper-Division

minimum of 20 units; maximum of 3 courses from any single department or program

(a) One of:

- Arthi 136I, The City in History
- Arthi 136Y, Modern Architecture in Southern California
- Artst 105, Intermediate Spatial Practices
- Geog 148, California
- Geog 150, Geography of the United States
- Geog 155, Geography of Latin America
- Geog 159, Geography of Europe
- Geog 182, Global Cities in the Information Age

(b) 16–17 units selected from designated courses in: Art; Comparative Literature; Classics; East Asian Languages & Cultural Studies; Engineering; Film & Media Studies; Geography; History; History of Art & Architecture; Linguistics; Music; Philosophy; and Religious Studies.

See list of designated courses at:

geog.ucsb.edu/undergraduates/minor-spatial-studies/space-and-place.html

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Spatial Science emphasizes the analysis and visualization of information, featuring courses that build methodological and technological competencies for documenting space-time patterns and processes about phenomena in the physical world as well as about behavior and its consequences in the human world.

Requirements

Lower-Division

- Geog 12, Maps & Spatial Reasoning



Upper-Division

minimum of 20 units; maximum of 3 courses from any single department or program

20 units selected from designated courses in: Anthropology; Art; Computer Science; Earth Science; Electrical & Computer Engineering; Economics; Ecology, Evolution & Marine Biology; Environmental Studies; Film & Media Studies; Geography; Linguistics; Materials; Mathematics; Molecular, Cellular, & Developmental Biology; Music; Philosophy; Physics; Statistics & Applied Probability; Psychology; and Sociology.

See list of designated courses at:

geog.ucsb.edu/undergraduates/minor-spatial-studies/spatial-science.html

*Geography 12
Maps and Spatial Reasoning
treats the fundamental science
of mapping and the use of
maps to document and
communicate information.
Maps and the understanding
of spatial patterns and
processes are increasingly
important for data
visualization and problem
solving, aid interpretation in
the humanities, and play a role
in the design professions.*