

Spatial Studies

at the University of Redlands



Learning Spatial Studies at the University of Redlands

Spatial thinking is the use of two - three - dimensional representations of information to structure problems, find answers and express solutions. The ability to visualize and interpret location, distance, direction, relationships, movement and change through space is fundamental to content understanding and problem solving. Spatial literacy is a critical skill in the sciences, humanities, and social sciences; indeed, a spatial approach helps to reveal the interdisciplinary, interconnected nature of many problems. Learning to think spatially is a form of learning how to learn.

In this “Age of Context” where spatial technologies, data, and analyses provide the foundation for governmental, business, and academic pursuits, spatial professionals are in high demand and spatial understanding is considered a basic professional competency. At the University of Redlands, students apply spatial thinking in creative and exciting ways for research and study in anthropology, biology, business, chemistry, economics, environmental studies, gender studies, history, government, religious studies, and sociology. The University’s goal is to empower students to create a better world through meaningful applications of spatial thinking in their personal, academic, and professional lives.

The Spatial Studies Minor has been intentionally designed to work with and compliment any major. We have found that infusing any field of study with spatial understanding helps make meaningful connections and broadens the context where it can be applied. Some examples of our interdisciplinary combinations are Religious Studies with a Spatial Minor, Chemistry with a Spatial Minor, and History with a Spatial Minor.

Requirements for all Spatial Studies minors

Spatial Studies is an interdisciplinary program that includes courses from a wide array of departments. Requirements include two of the three core spatial courses and four electives chosen from a diverse range of programs at the university. Students minoring in Spatial Studies must complete six courses totaling 22-24 credits, including the following requirements:

I. Three Core Courses, take any two:

- SPA 100 Foundations of Spatial Thinking
- SPA 110 Introduction to Spatial Analysis & GIS
- SPA 210 Advanced Spatial Analysis & GIS

II. Four Elective Courses, taken from at least two of the following categories:

- Physical World
- Culture and Communities
- Methods and Representations

At least two of the electives must be taken at the 200-level or higher.

Physical World Elective Courses

- BIOL 340 Conservation
- CHEM 102 Introduction to Chemistry of the Environment*
- CHEM 290 Environmental Chemistry Field Experience: Mile High Chemistry
- CHEM 311 Environmental Chemistry Field Experience: Environmental Modeling
- CHEM 312 Advanced Environmental Chemistry
- EVST 205 Great Environmental Disasters
- EVST 220 Physical Geography
- EVST 230 Biodiversity
- EVST 250, 350 Environmental Design Studio I
- EVST 283 Mapping Animals
- EVST 290 Environmental Geology
- EVST 305 Ecology for Environmental Scientists
- EVST 351, 451 Panamapping: GIS in the Jungle
- EVST 375 Tropical Rainforest: The Amazon, The Andes and The Inca
- EVST 391 Environmental Hydrology
- EVST 392 Oceanography
- EVST 430 Advanced Geology Seminar
- PHYS 360 Topics in Physics and Astronomy*

Culture and Communities Elective Courses

- ENGL 261 Cultures and Communities
- ENGL 334 Representing the Holocaust
- HIST 251 Mapping African History
- HIST 327 Modern African-American History
- HIST 376 California Indian Seminar
- MUS 347 History of Opera
- POLI 227 Political Geography
- REL 125 World Religions *

(Continued on reverse)

- REL 206 The 'Other' Jesus
- REL 252 African-American Religion and Spirituality
- REL 308 Christian Scriptures
- REST 330 Race in the City
- SOAN 305 Mapping People Mapping Place

Methods and Representations Elective Courses

- ART 132 2D Design
- ART 145 Introduction to Sculpture
- ART 252 Introduction to Graphic Design
- BUS-333 Labor and Global Economy
- BUS 351 GIS and Spatial Analysis for Orgs
- GIS 411 Fundamentals of Geographic Information, Research, and Applications
- GIS 467 Introduction to Programming for GIS
- MATH 221 Calculus III
- MATH 111 Elementary Statistics with Applications
- MATH 221 Calculus III
- MATH 222 Calculus IV, Vector Calculus
- MATH 231 Introduction to Modeling*
- MATH 241 Linear Algebra*
- MATH 251 College Geometry
- PHYS 232 General Physics II
- PHYS 332 Electricity and Magnetism
- POLI 202 Statistical Analysis and Mapping of Social Science Data
- SPA 230 Field Methods in GIS
- SPA 240 Applied GIS
- SPA 260 Topics in Spatial Thinking & GIS
- SPA 360 Advanced Topics in Spatial Thinking & GIS
- SPA 425 Remote Sensing Image Analysis

* assuming spatial content

Negotiable Electives

Appropriate additional courses from a variety of departments may be counted toward the SPA minor. To be eligible, a course must include significant attention to spatial studies in an explicit, rather than implicit, fashion. Students should discuss the potential of a course counting toward the minor with the instructor as early as possible (ideally, before the course has begun) and negotiate special assignments or projects in consultation with the instructor and the Spatial Studies Advisory Committee. Negotiable courses must be approved by the Advisory Committee for credit toward the minor.

Student Portfolios

Although not required, a Senior Story Map Spatial Portfolio is highly recommended to showcase your work and to use as a resume piece. See your SPA minor advisor for details.

Job/Internship Placements

Occupations that one might acquire upon graduation with the minor include working at ESRI, the GIS software manufacturer in here in Redlands as a GIS specialist, working in Environmental Consulting Firms as the GIS specialist, and working for states or municipalities as a GIS technician. Examples of municipalities that hire GIS specialists are Water Districts (concerned with water appropriation and conservation), development departments (responsible for siting new developments) and utilities. State employment possibilities include Department of Transportation, and many of those listed with municipalities at a state-wide level.

Advisory Committee

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