

# MINOR IN GEOGRAPHIC INFORMATION SCIENCE

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Units required for Minor: 18

## Program Description

Geography students at Sacramento State explore Earth's natural and cultural environments using methods from the natural sciences and the social sciences. They study climate, weather, landforms, water resources, and plants and animals, as well as peoples, societies, economies, and cities. These phenomena overlap in intricate ways, giving rise to distinctive places and regions. Geography's approach emphasizes Earth's spatial relationships and patterns, and the processes that govern them, whether found in nature or in human behavior.

## Program Requirements

Code	Title	Units
<b>Required Courses (18 Units) <sup>1</sup></b>		
GEOG 3	Introduction to Maps and Geographic Technologies	3
GEOG 109	Geographic Information Systems	3
GEOG 110	Advanced Geographic Information Systems	3
GEOG 150	Programming for GIS	3
GEOG 155	GIS Data Acquisition and Management	3
Select one of the following:		3
GEOG 105	Cartography	
GEOG 107	Remote Sensing	
GEOG 151	Programming for GIS II	
GEOG 163	Applied GIS	
GEOG 181	Quantitative Methods in Geography	
Three units of upper division GIS coursework from another department with permission of the GIS Minor advisor.		
<b>Total Units</b>		<b>18</b>

<sup>1</sup> Courses must be selected in consultation and approved by a faculty advisor in Geography. A minimum of 6 upper division units must be earned in residence.