

## Certificate of Achievement: Applied GIS and Spatial Studies

Applied GIS & Spatial Studies uses multi-dimensional representations of information to help structure problems, find answers, and express solutions. The ability to visualize and interpret relationships through space is essential for understanding content and solving problems across a wide spectrum of disciplines in the earth sciences, environmental sciences, social sciences, business, urban planning, public safety and health sciences. With this certificate, students will use spatial thinking, analysis, modeling, and mapping skills to interpret and present information.

### Certificate Student Learning Outcome:

Students will apply principles of Spatial Science and GIS to solve spatial problems and inquiries in their field of study.

Units:

Programs Requirements:

Units Required: 19 - 22

GIS-101	Introduction to Geographic Information Systems	3.0
GIS-102	Applied Techniques for GIS	3.0
GEOGRPH-110	Maps and Spatial Reasoning	3.0
MATH-140	Introductory Statistics	4.0
OR		
MATH-140H	Introductory Statistics - Honors	4.0
OR		
MATH-140X	Statistics with Support	5.0
OR		
PSCYH-104	Statistics for the Behavioral Sciences	4.0
OR		
SOCI-137	Statistics for the Social Sciences	4.0

Plus six to eight units from one of the following focus areas:

### Administration of Justice Focus

ADMJUS-101	Introduction to Administration of Justice	3.0
ADMJUS-155	Criminal Investigation	3.0

### Anthropology and Archeology Focus

ANTHRO-101	Physical Anthropology	3.0
OR		
ANTHRO-101H	Physical Anthropology – Honors	3.0
ANTHRO-103	Cultural Anthropology	3.0
OR		
ANTHRO-103H	Cultural Anthropology – Honors	3.0
ANTHRO-105	Introduction to Archeology	3.0
ANTHRO-210	Indigenous People of California	3.0

### Architecture Focus

ARCHT-120	Design I – Elements of Architectural Drafting	3.0
ARCHT-200A	Sustainable Development & Environmental Design	3.0

### Biology Focus

BIOSCI-106	Organismal & Environmental Biology	4.0
OR		
BIOSCI-106H	Organismal & Environmental Biology – Honors	4.0
BIOSCI-115	General Zoology	4.0
BIOSCI-116	General Botany	4.0
BIOSCI-130	Contemporary Issues in Environmental Biology	3.0

### Business Focus

BUS-100	Introduction to Business	3.0
BUS-117A	Introduction to Entrepreneurship	3.0
BUS-117B	Developing a Business Plan for Entrepreneurs	3.0
BUS-140	Principles of Marketing	3.0
BUS-141	Principles of Advertising	3.0

### Environment Focus

ENVRMT-101	Introduction to Environmental Studies	3.0
ENVRMT-103	Introduction to Environmental Science	4.0
ENVRMT-104	Energy Resources Conservation	3.0

### Fire Technology Focus

FIRETC-101	Principles of Emergency Services	3.0
FIRETC-102	Fire Prevention	3.0
FIRETC-110	Wildland Fire Behavior	3.0
FIRETC-123	Fire Investigation	3.0

### Geography Focus

GEOGRPH-100	Physical Geography	3.0
GEOGRPH-101	Physical Geography with Lab	4.0
GEOGRPH-102	Human Geography	3.0
GEOGRPH-103	Weather and Climate	3.0
GEOGRPH-104	World Regional Geography	3.0
GEOGRPH-105	California Geography	3.0

### Geology Focus

GEOLOGY-100	Physical Geology	3.0
GEOLOGY-101	Physical Geology with Lab	4.0
GEOLOGY-102	Historical Geology	4.0
GEOLOGY-104	Environmental Geology	3.0
GEOLOGY-105	California Geology	3.0

### Global Studies Focus

GLST-101	Introduction to Global Studies	3.0
GLST-102	Global Issues	3.0
GEOGRPH-104	World Regional Geography	3.0
POLISC-270	International Relations	3.0

Marine Sciences Focus

BIOSCI-119	Marine Biology	4.0
OR		
OCEAN-119	Marine Biology	4.0
OCEAN-101	Introduction to Oceanography	4.0

Public Health Science Focus

HLHSCI-100	Health Education	3.0
HLHSCI-140	Introduction to Public Health	3.0

Real Estate Focus

REAL-100	Real Estate Principles	3.0
REAL-101	Real Estate Practices	3.0
REAL-120	Real Estate Appraisal	3.0

Sociology Focus

SOCI-101	Introduction to Sociology	3.0
OR		
SOCI-101H	Introduction to Sociology – Honors	3.0
SOCI-102	Introduction to Sociological Research	3.0
SOCI-104	Introduction to Social Justice Studies	3.0
SOCI-207	Social Problems	3.0
SOCI-210	Sociology of Deviance	3.0
SOCI-250	Introduction to Criminology	3.0