

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.

Programs Requirements: Units:

Units Required: 19 - 22

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|-------------|--|-----|
| 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 |
| PSCYH-104 | Statistics for the Behavioral Sciences | 4.0 |
| OR | | |
| SOCI-137 | Statistics for the Social Sciences | 4.0 |
| OR | | |
| STAT-C1000 | Introduction to Statistics | 4.0 |
| OR | | |
| STAT-C1000E | Introduction to Statistics | 4.0 |
| OR | | |
| STAT-C1000H | Introduction to Statistics - Honors | 5.0 |

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

Administration of Justice Focus

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

Anthropology and Archeology Focus

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|-------------|---------------------------------|-----|
| 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 |
| ATNHRO-105 | Introduction to Archeology | 3.0 |
| ANTHRO-210 | Indigenous People of California | 3.0 |

Architecture Focus

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

Biology Focus

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|-------------|--|-----|
| 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

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|------------|----------------------------------|-----|
| 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

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|-------------|-----------------------------|-----|
| 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

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|-------------|--------------------------------|-----|
| 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

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

Public Health Science Focus

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

Real Estate Focus

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

Sociology Focus

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|-----------|--|-----|
| 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 |