

Emphasis in Science and Mathematics***Select 18 units minimum**

Anthropology 100, 101
 Astronomy 100, 120
 Biology 100, 101, 102, 105, 106, 110, 114, 118, 120, 125, 126, 130, 131, 135, 140, 141, 145, 185, 200, 201, 210, 211, 212
 Business 110
 Chemistry 100, 104, 105, 110, 115, 205, 220, 221
 CSIT-Information Technology 105
 Earth Sciences 100, 115
 Engineering 210
 Geography 100, 110, 115, 125
 Geology 100, 110, 120, 150
 Health 165
 Mathematics 56, 60, 100, 105, 106, 110, 115, 120, 130, 135, 140, 141, 200, 205, 206, 245
 Nutrition 165, 185
 Oceanography 100
 Physical Science 100, 101
 Physics 101, 102, 120, 121, 200, 201, 230, 231, 232
 Psychology 205, 210
 Sociology 205

*Although not listed, related lab courses may be included as part of the 18 unit minimum.

Emphasis in Social and Behavioral Sciences**Select 18 units minimum**

Administration of Justice 100
 Africana Studies 100, 101, 102, 120, 126
 Alcohol and Other Drug Studies 150
 American Indian Studies 101, 102, 115, 125, 130, 140, 165
 American Studies 200
 Anthropology 105, 107, 110, 115, 125, 126, 130, 137, 140
 Business 136
 Chicano Studies 101
 Child Development 100, 110, 115
 Communications 100, 105
 Counseling 100, 110, 115, 120, 148
 Economics 100, 101, 102, 110, 115, 120, 125
 English 150
 Family and Consumer Sciences 136, 150
 Geography 103, 105
 Graphic Communications-Multimedia & Web 100
 Health 100
 History 101, 102, 107, 108, 121, 130, 140, 141, 150, 151
 Legal Studies 121, 240
 Multicultural Studies 100, 125
 Nutrition 120
 Political Science 100, 101, 102, 110, 121, 240
 Psychology 100, 105, 110, 115, 120, 125, 130, 145, 150, 225, 235
 Religious Studies 102, 108
 Sociology 100, 105, 110, 115, 125, 130, 135, 145, 150, 165, 200
 Speech 120, 131
 *Military Service

*Palomar College will accept a minimum of 3 units of ACE recommended credit for completion of Basic/Recruit Training. Refer to the Associate Degree District Requirements, under Health and Fitness or see a Counselor for more information.

GEOGRAPHIC INFORMATION SYSTEMS (CA)

The Geographic Information Systems Certificate program is designed to provide entry-level training for students seeking employment in this fast-growing profession, or to upgrade the skills for those already working in the field of Geographic Information Systems. The program may be completed in one year including summer session.

CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
GEOG 120	Digital Earth: Introduction to Geographic Information Systems	4
GEOG 132	Database Management and Data Acquisition	4
GEOG 134	GIS Applications and Programming	2
GEOG 136	Intermediate ArcGIS: GIS Analysis	2
GEOG 138	GIS Internship	2
TOTAL UNITS		14

GEOGRAPHY (AA-T)

The Associate in Arts in Geography for Transfer provides students with a comprehensive study of the earth from a spatial perspective. The field of geography includes several subfields. Physical geography is the study of natural phenomena such as weather, climate, geological formations, and the distribution of plants and animals. Human geography is the study of the spatial distribution of culture, language, religion, population, economics, and politics. Regional geography incorporates in-depth studies of specific geographic areas of the world. Cartography and Geographic Information Systems are analytical tools used in all subfields of geography.

Pursuant to SBI440, the following completion requirements must be met:

“(1) Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:

- (A) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education - Breadth Requirements.
- (B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

(2) Obtainment of a minimum grade point average of 2.0.”

ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

AA-T TRANSFER MAJOR**Program Requirements**

GEOG 100	Earth's Dynamic Environment: Introduction to Physical Geography	3
GEOG 105	People and the Environment: Introduction to Human Geography	3

Electives: List A (Select 6 - 7 units)

GEOG 100L	Earth's Dynamic Environment: Physical Geography Lab	1
GEOG 103	World Regional Geography	3
GEOG 110	Meteorology: Weather and Climate	3
GEOG 120	Digital Earth: Introduction to Geographic Information Systems	4
GEOG 125	California Geography	3
GEOG 195	Regional Field Studies in Geography	1 - 3

Electives: List B (Select 6 units not previously used to satisfy List A)

ANTH 105	Introduction to Cultural Anthropology	3
GEOL 100	Basic Geology	3
GEOG 100L	Physical Geography Laboratory	1
GEOG 103	World Regional Geography	3
GEOG 110	Meteorology: Weather and Climate	3
GEOG 115/		
ES 115	Natural Disasters and Environmental Hazards	3
GEOG 120	Digital Earth: Introduction to Geographic Information Systems	4
GEOG 125	California Geography	3
GEOG 195	Regional Field Studies in Geography	1 - 3
TOTAL UNITS		18 - 19

GEOLOGY (AS)

Provides the student with sufficient background to begin upper division coursework and will prepare the student for entry-level jobs that require basic geologic knowledge. The student is advised to check with the school to which he/she may wish to transfer for additional courses which may be required.

A.S. DEGREE MAJOR**Program Requirements****Group One**

GEOL 100	Physical Geology	3
GEOL 100L	Geology Laboratory	1
GEOL 150	Dinosaurs and Earth History	3
GEOL 150L	Dinosaurs and Earth History Laboratory	1

Group Two (A minimum of 2 units from the following)

GEOL 195A	Field Studies in Geology: Regional	1 - 3
GEOL 195B	Field Studies in Geology: Southern California Coastal Region	1 - 3
GEOL 195C	Field Studies in Geology: Salton Trough Region	1 - 3
GEOL 195D	Field Studies in Geology: Colorado Plateau Region	1 - 3
GEOL 195E	Field Studies in Geology: Sierra Nevada Region	1 - 3
GEOL 195F	Field Studies in Geology: Death Valley Region	1 - 3

Group Three (Select at least two of the three options)**Option 1**

MATH 140	Calculus with Analytic Geometry, First Course	5
MATH 141	Calculus with Analytic Geometry, Second Course	4

Option 2

PHYS 120	General Physics	4
PHYS 121	General Physics	4
	or	
PHYS 230	Principles of Physics	5
PHYS 231	Principles of Physics	5

Option 3

CHEM 110	General Chemistry	3
CHEM 110L	General Chemistry Laboratory	2
CHEM 115	General Chemistry	3
CHEM 115L	General Chemistry Laboratory	2

Group Four (Select at least 8 units or any course from Groups 2 or 3 not previously taken)

BIOL 100	General Biology	4
GEOG 120	Digital Earth: Introduction to Geographic Information Systems	4
GEOL 110	General Geology: National Parks and Monuments	3
GEOL/ASTR 120	Planets, Moons, and Comets	3
GEOL 197	Geology Topics	1 - 3
GEOL 295	Directed Study in Geology	1 - 3
MATH 205	Calculus with Analytic Geometry, Third Course	4
MATH 206	Calculus with Differential Equations	4
OCN 100	Oceanography Lecture	3
OCN 100L	Oceanography Laboratory	1
PHYS 232	Principles of Physics	4

TOTAL UNITS**34 - 38****GEOLOGY (AS-T)**

Geology is the study of the dynamic processes that shape Earth. Geology incorporates a multidisciplinary approach to describe and solve a variety of problems, including those related to human interaction with natural systems, geologic hazards, and resources. Students who successfully complete this degree will be prepared for transfer into upper division coursework in geology and will meet transfer requirements for admission to CSU.

Pursuant to SB1440, the following completion requirements must be met:

- “(1) Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:
- (A) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education - Breadth Requirements.
- (B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.
- (2) Obtainment of a minimum grade point average of 2.0.”

ADTs also require that students must earn a C or better in all courses required for the major or area of emphasis. A “P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

AS-T TRANSFER MAJOR**Program Requirements**

GEOL 100	Physical Geology	3
GEOL 100L	Geology Laboratory	1
GEOL 150	Dinosaurs and Earth History	3
GEOL 150L	Dinosaurs and Earth History Laboratory	1
CHEM 110	General Chemistry	3
CHEM 110L	General Chemistry Laboratory	2
CHEM 115	General Chemistry	3
CHEM 115L	General Chemistry Laboratory	2
MATH 140	Calculus with Analytic Geometry, First Course	5
MATH 141	Calculus with Analytic Geometry, Second Course	4

TOTAL UNITS**27****Additional Recommended Preparation**

PHYS 230	Principles of Physics	5
PHYS 231	Principles of Physics	5
BIOL 100	General Biology	4