BS EARTH SCIENCES

☐ 60 units upper division  ☐ GWR  2.0 GPA  ☐ USCP

* = Required in Major; also satisfies GE

Note: No major, support or concentration courses may be taken as credit/no credit.

MAJOR COURSES

ERSC/SS 110 Orientation in Earth & Soil Sciences or
NR 140 Careers in Forestry & Env Mgmt (7/2/13) 1
ERSC 144 Introduction to Earth Systems .............. 4
ERSC 223 Rocks and Minerals .......................... 4
ERSC/GEOG 250 Physical Geography .................. 4
ERSC 323 Geomorphology ................................ 4
ERSC/GEOG 333 Human Impact on the Earth ....... 4
ERSC/GEOG 414 Global & Regional Climatology 4
ERSC or SS 461, 462 Senior Project I, II ............. 1,3
ASTR 101 Introduction to the Solar System .......... 1
BOT 121 General Botany (B2 & B4)* .................. 4
BOT 326 Plant Ecology ................................ 4
BRAE 237 Intro to Engineering Surveying .......... 2
CHEM 127, 128 General Chemistry (B3 & B4)* .... 4,4
GEOG 318 Applications in GIS ......................... 4
GEOG 328 Applications in Remote Sensing .......... 4
GEOL 201 Physical Geology ........................... 3
GEOL 241 Physical Geology Lab ........................ 1
GEOL 415 Structural Geology .......................... 4
PSC 201 Introduction to Physical Oceanography ... 4
SS 121 Introductory Soil Science ........................ 4
SS 321 Soil Morphology ................................ 4
STAT 218 Applied Statistics-Life Sciences (B1)* .. 4
Concentration (see below; 4 units B1)* ....... 41-42

GENERAL EDUCATION (GE)

72 units required, 16 of which are specified in Major.
→ See page 39 for complete GE course listing.
→ Minimum of 12 units required at the 300 level.

Area A Communication (12 units)

A1 Expository Writing ...................................... 4
A2 Oral Communication ..................................... 4
A3 Reasoning, Argumentation, and Writing .......... 4

Area B Science and Mathematics (no add'l units req’d)

B1 Math/Statistics * 8 units in Major & Conc. ...... 0
B2 Life Science * 4 units in Major ..................... 0
B3 Physical Science * 4 units in Major .............. 0
B4 One lab taken with either a B2 or B3 course...

Area C Arts and Humanities (20 units)

C1 Literature ............................................... 4
C2 Philosophy ............................................. 4
C3 Fine/Performing Arts ................................... 4
C4 Upper-division elective ............................... 4
Area C elective (Choose one course from C1-C4) 4

Area D/E Society and the Individual (20 units)

D1 The American Experience (40404) .............. 4
D2 Political Economy ..................................... 4

D3 Comparative Social Institutions ................. 4
D4 Self Development (CSU Area E) ................. 4
(KINE 250 recommended for Geosciences
Teaching Concentration)
D5 Upper-division elective ............................ 4
(PSY 352 recommended for Environmental
Interpretation and Assessment Concentration)

Area F Technology Elective (upper division) ....... 4
(BRAE 340 recommended for Geosciences
Teaching Concentration)

FREE ELECTIVES ........................................ 0

CONCENTRATIONS (select one):

Climate Change Studies Concentration

ERSC or SS 463 Undergraduate Seminar ............ 2
GEOG 325 Climate and Humanity .................... 4
GEOG 415 Applied Meteorology/Climatology .... 4
MATH 118 Pre-Calculus Algebra (B1)* .............. 4
MATH 119 Pre-Calculus Trigonometry .............. 4
PHYS 121 College Physics I ........................... 4
SOC 218 International Political Economy .......... 4
UNIV 350 The Global Environment ................ 4
Energy/Sustainability: BRAE 348 or PSC 320 ... 4

Appr. electives .......................................... 1-7
Choose from: CRP 375, 438, CRP/FNR 404;
EDES 406; ENVE 324; GEOG 301, 440;
PHIL 340.

Note: CRP 438 or ENVE 324 recommended

Environmental Interpretation and Assessment
Concentration

ERSC 202 Soil Erosion and Water Conservation 4
ERSC/GEOG 325 Climate and Humanity .......... 4
ERSC or SS 463 Undergraduate Seminar .......... 2
CRP 420 Land Use Law ................................. 4
GEOG 301 Geography of Resource Utilization .... 4
MATH 118 Pre-Calculus Algebra (B1)* .......... 4
MATH 119 Pre-Calculus Trigonometry .......... 4
PHYS 121 College Physics I ......................... 4

Appr. electives .......................................... 11
Select 11 units from the following:
CRP 212, 336; CRP/NR 404, 408;
GEOG 440; NR 306, 320, 416, 418, 425; NR/ES 406 (6/30/13)
SS 339†

Geology Concentration

GEOL 206 Geologic Excursions ..................... 1
GEOL 305 Fundamentals of Seismology .......... 4
GEOL 310 Igneous and Metamorphic Petrology 4

† Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.

† No more than 4 units of SS 339 may be used.
GEOL 330 Principles of Stratigraphy 4
GEOL/ERSC 401 Field-Geology Methods 4
GEOL/ERSC 402 Geologic Mapping 4
GEOL 420 Applied Geophysics 3
ERSC or SS 463 Undergraduate Seminar 2
MATH 141, 142 Calculus I, II (B1)* 4,4
PHYS 141 General Physics IA 4
PHYS 132 General Physics II 4

Geosciences Teaching Concentration
ASTR 102 Introduction to the Stars and Galaxies 4
BIO 113 Animal Diversity and Ecology or BIO 112 (10/3/13) 4
EDUC 300 Intro to the Teaching Profession 3
GEOG 301 Geography of Resource Utilization 4
GEOG 325 Climate and Humanity 4
GEOL 203 Fossils and the History of Life 4
GEOL 204 Geologic History of California 3
MATH 118 Pre-Calculus Algebra (B1)* 4
MATH 119 Pre-Calculus Trigonometry 4
PHYS 121 College Physics I 4
PSC 424 Organizing/Teaching of Phys Sciences or EDUC 480 Computer Based Curriculum 4/3

Land and Water Resources Concentration
ERSC 202 Soil Erosion and Water Conservation 4
ERSC or SS 463 Undergraduate Seminar 2
CHEM 129 General Chemistry 4
MATH 141, MATH 142 Calculus I, II (B1)* 4,4
PHYS 141, 132 General Physics IA, II 4,4
SS 432 Soil Physics 5

1 Approved electives (min 6 units 300-400 level) 11

Select 11 units from the following:
ANT 202, 309, 310;
CRP/NR 408;
ERSC/GEOG 415;
ERSC/GEOL 401, 402;
GEOG 440;
NR 306, 320, 418;
SS 339†, 432

Individualized Course of Study
ERSC or SS 463 Undergraduate Seminar 2
MATH 118 Pre-Calculus Algebra (B1)* 4
MATH 119 Pre-Calculus Trigonometry 4
PHYS 121 College Physics I 4
Approved electives (min 10 units 300-400 level) 27

1 Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.