BS EARTH SCIENCES  Flowchart

☐ 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  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

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GENERAL EDUCATION (GE)
- 72 units required, 16 of which are specified in Major.
- See page 50 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...............  4
- B3 Physical Science * 4 units in Major.........  0
- B4 One lab taken with either a B2 or B3 course  0

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-divison 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)

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

180

CONCENTRATIONS (select one):

Climate Change Studies Concentration
- ERSC 463 Undergraduate Seminar ................  2
- GEOG 325 Climate and Humanity .................  4
- GEOG 415 Applied Meteorology/Climatology ....  4
- MATH 118 Pre-Calculus Algebra ...................  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

Approved electives ..................................... 7-8
Choose from: CRP 375, 438, CRP/FNR 404; EDES 406; ENVE 324; GEOG 301, 440; PHIL 340.

Note: CRP 438 or ENVE 324 recommended

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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

Approved electives ..................................... 11
Select 11 units from the following:
- CRP 212, 336;
- CRP/NR 404, 408;
- GEOG 440;
- NR 306, 320, 416, 418, 425;
- SS 339†

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† 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.
**Geosciences Teaching Concentration**

- ASTR 102 Introduction to the Stars and Galaxies 4
- BIO 113 Animal Diversity and Ecology ................. 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.......................... 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

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**Land and Water Resources Concentration**

- ERSC 202 Soil Erosion and Water Conservation 4
- ERSC 463 Undergraduate Seminar.......................... 2
- BRAE 415 Hydrology ............................................ 4
- CHEM 129 General Chemistry ............................. 4
- MATH 141, MATH 142 Calculus I, II (B1)* ........... 4,4
- PHYS 141, 132 General Physics IA, II..................... 4,4

† 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

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**Individualized Course of Study**

- ERSC 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

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† 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.