## EARTH SCIENCES  B.S. with Science Education concentration

### INTRODUCTORY REQUIREMENTS

**Calculus:**

- MATH 11A (FWS) ___ + 11B (FWS)
- OR MATH 19A (FWS) ___ + 19B (FWS)

**Chemistry:**

- CHEM 1A (FWS) ___ + CHEM 1B/M (FWS) ___ + CHEM 1C/N (FWS) ___

**Biology:**

- BIOL 20A (FWS) ___
- BIOE 20B (FWS) ___
- BIOE 20C (FWS) ___

**Geology:**

- One from the following...
  - EART 5/L California Geology (preferred) (F) ___ (strongly recommended)
  - EART 10/L Geological Principles (W) ___
  - EART 20/L Environmental Geology (S) ___

**Physics:**

- PHYS 6A/L (FWS) ___ + PHYS 6B/M (WS) ___

**Astronomy:**

- OR any lower division ASTR course ___

**Advanced Math:**

- ONE from the following...
  - AMS 5 Statistics (FWS) ___
  - EART 111 Mathematics in Earth Sciences (F) ___
  - MATH 21 Linear Algebra (FWS) ___
  - MATH 22 Calculus of Several Variables (WS) ___

**Education:**

- EDUC 50C Cal Teach 1: Science (2 units) (FWS) ___

### ADVANCED REQUIREMENTS

**Earth Science:**

- EART 110A/L Evolution of the Earth (F) ___
- EART 110B/M Earth as a Chemical System (W) ___
- EART 109/L Elements of Field Geology (FS) ___ OR BOTH EART 120/L (S) ___ + EART 150/L (F) ___

**Ocean Science:**

- OCEA 102 Oceans and Climates: Past, Present, and Future (*) ___

**Education:**

- EDUC 100C Cal Teach 2: Science (2 units) 2 (S) ___
- EDUC 185C Introduction to Teaching Science (W) ___
- EDUC 185L Introduction to Teaching: Cal Teach 3 (3 units) (*) ___

**Science Elective:**

- ONE upper-division EART or OCEA course ___

**Laboratory:**

- ONE upper-division course in EART or OCEA that requires a 1 or 2 unit lab ___

**Education Elective:**

- ONE from the following...
  - EDUC 128 Immigrants and Education (S) ___
  - EDUC 141 Bilingualism and Schooling (W) ___
  - EDUC 164 Urban Education (F) ___
  - EDUC 181 Race, Class, and Culture in Education (F) ___

### COMPREHENSIVE REQUIREMENT

- EDUC 194F Group Projects (2 units) (*) ___

### DC REQUIREMENT:

For information on the DC requirement please see-

http://registrar.ucsc.edu/catalog/programs-courses/disciplinary-communicationchart.pdf