

EARTH SCIENCES B.S. - Ocean Sciences Concentration**2019-20**

Name: _____

Date: _____

(Quarter offered: F=Fall, W=Winter, S=Spring, *=Not offered this year)

ID#: _____

NOTE: Courses appearing in more than one category can fulfill only one requirement.

INTRODUCTORY REQUIREMENTS**Calculus:** MATH 11A (FWS) ___ **OR** MATH 19A (FWS) ___
MATH 11B (FWS) ___ **OR** MATH 19B (FWS) ___**Advanced Mathematics:** EART 111 (F) ___ (recommended) **OR** MATH 22 (W) ___ **OR** MATH 23A (FWS) ___**General Chemistry:** CHEM 1A (FWS) ___ + CHEM 1B/M (FWS) ___ + CHEM 1C/N (FWS) ___**Geology:** ONE from the following...

EART 5/L California Geology Laboratory (F) ___

EART 10/L Geological Principles Laboratory (W) ___

EART 20/L Environmental Geology Laboratory (S) ___

Biology: BIOE 20C (FWS) ___**Physics:** PHYS 6A/L (FWS) ___ + PHYS 6 B/M (WS) ___ (preferred)**OR** PHYS 5 A/L (F) ___ **OR** PHYS 5B/M (W) ___**ADVANCED REQUIREMENTS**

EART 110A/L Evolution of the Earth (F) ___

EART 110B/M Earth as a Chemical System (W) ___

EART 110C/N The Dynamic Earth (S) ___

OCEA 101 (W) ___ **OR** OCEA 102 (*) ___**Electives:** Complete four elective courses (5+ credits each) from upper-division Earth Sciences or Ocean Sciences offerings.

Recommended courses for this major are listed below. _____

Recommended Electives:

EART 101/L Invertebrate Paleobiology (F) ___

EART 102 Marine Geology (W) ___

EART 105 Coastal Geology (W) ___

EART 107 Remote Sensing of the Environment (*) ___

EART 109/L Elements of Field Geology/ Lab (FS) ___

EART 111 Mathematics in the Earth Sciences (F) ___

EART 116 Hydrology (F) ___

EART 119 Introduction to Scientific Computing (F) ___

EART 120/L Sedimentology and Stratigraphy (S) ___

EART 121 The Atmosphere (F) ___

EART 125 Statistics and Data Analysis in the Geosciences (W) ___

EART 128 Isotopes (*) ___

EART 130/L Magmas and Volcanoes Laboratory (*) ___

EART 148 Glaciology (*) ___

EART 172 Geophysical Fluid Dynamics (S) ___

OCEA 100 Physical Oceanography (F) ___

OCEA 101 The Marine Environment (W) ___

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

OCEA 111 Climate Dynamics (S) ___

OCEA 118 Marine Microbial Ecology (*) ___

OCEA 120 Aquatic Chemistry (W) ___

OCEA 122 Chemical Oceanography (W) ___

OCEA 124 Aquatic Organic Geochemistry (*) ___

OCEA 130 Biological Oceanography (S) ___

ESCI 160 Data Analysis (F) ___

COMPREHENSIVE REQUIREMENT OPTIONS

ONE from the following list of Senior Capstone options:

EART 189A (S) ___ **AND** EART 189B (Summer) ___ Summer Senior Field (EART 109/L, 110A/L and 110B/M are prerequisites)

EART 195 Senior Thesis (FWS) ___ enroll in 195 the quarter that the thesis will be completed (required)

EART 191A Climate Change Science & Policy (*) ___ (or other approved senior seminar course)

EART 191B Planetary Capstone (*) ___ (or other approved senior seminar course)

EART 191C Practical Geophysics (F) ___ (or other approved senior seminar course)

EART 198 Internship (FWS) ___ Must complete written report

NOTE: none of the above may count toward fulfilling an upper-division elective if used as a capstone.**DC Requirement:**

Two of the four required courses must be completed from the Earth Sciences Disciplinary Communication Curriculum:

EART 100 Vertebrate Paleontology (W) ___

EART 101 Invertebrate Paleobiology (F) ___

EART 102 Marine Geology (W) ___

EART 104 Geologic Hazards (F) ___

EART 109 Elements of Field Geology (FS) ___

EART 120 Sedimentology and Stratigraphy (S) ___

EART 140 Geomorphology (W) ___

EART 146 Ground Water (S) ___

EART 148 Glaciology (*) ___

EART 150 Structural Geology (F) ___

EART 160 Planetary Sciences (F) ___

EART 189A Summer Field Internship (S) ___

EART 191 Climate Change Science and Policy (*) ___

EART 195 Senior Thesis (FWS) ___

NOTE: Courses may simultaneously satisfy both the upper division elective and DC requirement.