EARTH SCIENCES B.S. - Ocean Sciences Concentration **2015/16**

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 Mathemtatics: 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) ___
EART 190 Earth Science Mentorship (F) ___ (One Credit; Optional)
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 (*) ___
EART 105 Coastal Geology (W) ___
EART 107 Remote Sensing of the Environment (F) ___
EART 109/L Elements of Field Geology/ Lab (FS) ___
EART 111 Mathematics in the Earth Sciences (F) ___
EART 116 Hydrology (*) ___
EART 119 Introduction to Scientific Computing (W) ___
EART 120/L Sedimentology and Stratigraphy (S) ___
EART 121 The Atmosphere (*) ___
EART 125 Statistics and Data Analysis in the Geosciences (W) ___
EART 128 Isotopes (*) ___
EART 130/L Magmas and Volcanoes Laboratory (S) ___
EART 148 Glaciology (W) ___
EART 172 Geophysical Fluid Dynamics (S) ___
OCEA 101 The Marine Environment (W) ___
OCEA 102 Oceans & Climates: Past, Present, & Future (*) ___
OCEA 118 Marine Microbial Ecology (S) ___
OCEA 120 Aquatic Chemistry: Principles & Applications (S) ___
OCEA 130 Biological Oceanography (S) ___
OCEA 200 Physical Oceanography (F) ___
OCEA 220 Chemical Oceanography (W) ___
OCEA 260 Data Analysis in the Ocean and Earth Sciences (W) ___

DC Requirement:

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

EART 100 Vertebrate Paleontology (W) ___
EART 101 Invertebrate Paleobiology (F) ___
EART 102 Marine Geology (*) ___
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 (W) ___
EART 150 Structural Geology (F) ___
EART 152 Tectonics (W) ___
EART 160 Planetary Sciences (F) ___
EART 188A Summer Field Internship (S) ___
EART 191 Climate Change Science and Policy (S) ___
EART 195 Senior Thesis (FWS) ___

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

COMPREHENSIVE REQUIREMENT OPTIONS

ONE from the following list of Senior Capstone options:
Summer Senior Field: EART 188A (S)___ + 188B (S) ___ (EART 109/L is a prerequisite)
Senior Thesis: enroll in EART 195 (FWS) ___ in the quarter that the thesis will be completed (required)
Graduate course or seminar: Must achieve grade of B or better; course must be 5-units and include written report ___
EART 191 Climate Change Science & Policy (S) ___ (or other approved senior seminar course)
Internship: Must complete written report, may enroll in EART 198 (FWS) ___(Required)
NOTE: none of the above may count toward fufilling an upper-division elective if used as a capstone.