### EARTH SCIENCES B.S. with Planetary Sciences concentration

**2012/13**

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.

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### INTRODUCTORY REQUIREMENTS

**Calculus:**
- MATH 11A (FWS) ___ + 11B (FWS) ___ OR AMS 15A (W) 15B (S) ___
- OR MATH 19A (FWS) ___ + 19B (FWS) ___ (preferred)

**Advanced Mathematics:**
- MATH 22 (WS) ___ OR MATH 23A (FWS) ___ OR EART 111 (F) ___

**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 (S) ___ (preferred)
  - EART 20/L Environmental Geology Laboratory (W) ___

**Astronomy:**
- ONE from the following...
  - ASTR 12 Stars and Stellar Evolution (F) ___
  - ASTR 16 Astrobiology: Life in the Universe (S) ___
  - ASTR 18 Planets and Planetary Systems (*) ___

**Physics:**
- PHYS 5A/L (F) ___ + PHYS 5B/M (W) ___ + PHYS 5C/N (S) ___ (preferred)
- OR PHYS 6A/L (FWS) ___ + PHYS 6B/M (WS) ___ + PHYS 6C/N (FS) ___

### 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 119 Scientific Computing (W) ___
EART 160 Planetary Science (F) ___
EART 190 Earth Science Mentorship (F) ___ (Optional)

**Topical Electives:**
- ONE from the following...
  - EART 162 Planetary Interiors (*) ___
  - EART 163 Planetary Surfaces (F) ___
  - EART 164 Planetary Atmospheres (S) ___

**General Electives:**
- THREE from the following...
  - EART 107 Remote Sensing of the Environment (W) ___
  - EART 109/L Field Geology Laboratory (FS) ___
  - EART 116 Hydrology (W) ___
  - EART 117/L Paleomagnetism Laboratory (*) ___
  - EART 121 The Atmosphere (W) ___
  - EART 128 Isotopes: Fundamental & Application in Earth & Marine Sciences (*) ___
  - EART 130/L Magmas and Volcanos Laboratory (S) ___
  - EART 140/L Geomorphology Laboratory (W) ___
  - EART 148 Glaciology (*) ___
  - EART 150/L Structural Geology Laboratory (F) ___
  - EART 152 Active Tectonics (S) ___
  - EART 162 Planetary Interiors (*) ___
  - EART 163 Planetary Surfaces (F) ___
  - EART 164 Planetary Atmospheres (S) ___
  - EART 172 Geophysical Fluid Dynamics (S) ___
  - EART 209 Solid Earth Geochemistry (*) ___
  - EART 210 Overview of Stellar and Planetary Formation and Evolution (*) ___
  - ASTR 112 Physics of Stars (W) ___
  - ASTR 118 Physics of Planetary Systems (*) ___
  - MATH 130 Celestial Mechanics (*) ___

### COMPREHENSIVE REQUIREMENTS

ONE OF the following...
- Senior Field Internship EART 188A (S) ___ + 188B (S) ___
- Senior Thesis (Optional) Planetary Science (recommended)
- ONE 5-unit graduate course or seminar ___