BACHELOR OF SCIENCE IN EARTH SCIENCE
Major Requirements Worksheet
2012-2013 Catalog

*Name:*_____ *Student ID:*_____

Note: This checklist is not intended to replace advising from the major department. Students should consult with the major advisor to determine the appropriate sequence of courses. CSULB Enrollment Services prepares the Academic Requirements Report, which is the official graduation verification.
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Grade	Course #	Course Title	Semester	Prerequisites *(All prerequisite courses must have a "C" or better)*
	GEOL 102	General Geology (3)		Pre/Corequisite: A course that fulfills the A.1 GE Requirement and High School Math*
	GEOL 104	Geology Laboratory (1)		Pre/Corequisite: A course that fulfills the A.1 GE Req., HS math*, Concurrent or prior enrollment in GEOL 102
	GEOL 240	Historical Geology (4)		GEOL 106 or *both* GEOL 102, 104
	GEOL 250	Introduction to Field Petrology and Geological Field Techniques (3)		GEOL 102 with 104 or 105; or GEOL 106.Pre/ Corequisite GEOL 240
	GEOL 273	Computer Statistical Methods in Geology (4)		GEOL 240, MATH 117 or 122
	CHEM 111A	General Chemistry (5)		A passing score on the CPT; MATH 113 or 117 or 119A or 122
	MATH 122	Calculus I (4)		Appropriate MDPT placement; or MATH 111 *and* 113, or 117
	MATH 123	Calculus II (4)		MATH 122
	MATH 224	Calculus III (4)		MATH 123 or 222
	PHYS 151	Mechanics and Heat (4)		MATH 122 (can also be a corequisite)
	PHYS 152	Electricity and Magnetism (4)		PHYS 151; Pre/corequisite MATH 123

Upper Division (for upper division advising, see your faculty advisor)**. Take ALL of the following courses:**

	GEOL 322	Crystallography, Mineralogy and Optical Methods (5)		GEOL 250; CHEM 101 or 111A
	GEOL 350	Spring Field Geology (2)		GEOL 250 *and* 443. Pre/Corequisite GEOL 433
	GEOL 428	Igneous and Metamorphic Petrology and Petrography (4)		GEOL 322; CHEM 111A, 111B
	GEOL 433	Structural Geology (4)		GEOL 250, 322; PHYS 151
	GEOL 443	Stratigraphy/Sedimentology (4)		GEOL 240, 322
	GEOL 460	Introduction to Geophysics (3)		PHYS 151, 152; MATH 123; *and* GEOL 273
	GEOL 461	Introduction to Geochemistry (3)		CHEM 111A, 111B *and* MATH 123

Additional Required Courses (for the *various* emphasis are listed below (see catalog for Prerequisites):

1. Geohydrology/Environmental Geology (122 units)
C E 205 Analytical Mechanics I (Statics) (3)
C E 335 Fluid Mechanics (3)
C E 336 Fluid Mechanics Laboratory (1)
CHEM 111B General Chemistry (5)
ES P 300I Environmental Law and Policy (3)
GEOL 450 Summer Field Geology (4)
GEOL 461 Introduction to Geochemistry (3)
GEOL 477 Hydrogeology (3)
MICR 200 General Microbiology for Health Professionals (4)

2. Engineering Geology (129 units)
C E 205 Analytical Mechanics I (Statics) (3)
C E 345 Geotechnical Engineering I (3)
C E 346 Geotechnical Engineering Laboratory (1)
C E 445 Geotechnical Engineering II (3)
CHEM 111B General Chemistry (5)
GEOL 444 Engineering Geology (4)
GEOL 450 Summer Field Geology (4)
GEOL 477 Hydrology (3)
MAE 373 Mechanics of Deformable Bodies (3)

3. Exploration Geophysics (126 units)
BIOL 200 General Biology (4)
GEOL 462 Physics and Chemistry of Earth's Interior (3)
MATH 247 Introduction to Linear Algebra (3)
Math 370AApplied Mathematics I (3)
PHYS 310 Analytic Mechanics I (3)
PHYS 340A Electricity and Magnetism I (3)
Take 8 units in consultation with undergraduate advisor.

4. Marine Geology/Oceanography (122 units)
BIOL 200 General Biology (4)
CHEM 111B General Chemistry (5)
GEOL 341 Paleontology and Biostratigraphy (4)
GEOL 364 Introduction to Geological Oceanography (2)
GEOL 461 Introduction to Geochemistry (3)
GEOL 465 Physical and Chemical Oceanography (3)
GEOL 466 Oceanography Lab and Ocean Studies (1)
GEOL 496 Investigations in Geology & Other Earth Sciences (1)

*See catalog for more detail

NOTE: See the catalog for courses that do not meet any specific or elective requirements for the major

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