PLANT SCIENCES B.S.

2018-19

Name: ____________________________________  Date: ____________________  ID#: ____________________

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

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

**All courses on check list MUST be taken for a letter grade.**

**LOWER DIVISION REQUIREMENTS**

Calculus: MATH 11A (FWS) ___ + 11B (FWS) ___  
OR MATH 19A (FWS) ___ + 19B (FWS) ___

General Chemistry: CHEM 1A (FWS) ___ + 1B (FWS) ___ + 1C/N (FWS) ___

Biology: BIOL 20A (FWS) ___ + BIQE 20B (FWS) ___ + BIQE 20C (FWS) ___

Physics: PHYS 6A/L (FWS) ___ + 6B (WS) ___  OR PHYS 6A/L (FWS) ___ + 6C (FS) ___  
OR PHYS 7A/6L (-) ___ + 7B (-) ___

Biostatistics: AMS 7/L (FWS) ___

**UPPER DIVISION REQUIREMENTS** (11 total including 2 lab/field courses: __________ __________)

Genetics: BIOL 105 (FWS) ___

Ecology: BIQE 107 Ecology (FWS) ___

Evolution: BIQE 109 Evolution (FWS) ___

Plant Physiology: ONE from the following...

- BIQE 135/L Plant Physiology (F) ___  
- *ENVS 162 Plant Physiological Ecology ___

Botany: One from the following...

- BIQE 117/L Systematic Botany (W) ___  
- BIQE 120/L Marine Botany (S) ___

**Topical Electives:** THREE from the following...

- BIQE 117/L Systematic Botany (W) ___  
- BIQE 118 Plants and Society (S) ___  
- BIQE 120/L Marine Botany (S) ___  
- BIQE 125 Ecosystems of California (WS) ___  
- BIQE 135/L Plant Physiology (F) ___  
- *ENVS 129 Integrated Pest Management ___  
- BIQE 137/L Molecular Ecology (S) ___  
- *ENVS 130A/L Agroecology & Sustainable Agriculture ___  
- BIQE 145 Plant Ecology (F) ___  
- *ENVS 131 Insect Ecology ___  
- BIQE 145L Field Methods in Plant Ecology (F18) ___  
- *ENVS 160 Restoration Ecology ___  
- BIQE 148A Quantitative Ecology (-) ___  
- *ENVS 161A Soils & Plant Nutrition ___  
- BIQE 148B Quantitative Ecology (W) ___  
- *ENVS 162 Plant Physiological Ecology ___  
- BIQE 149 Disease Ecology (S) ___  
- *ENVS 163 Plant Disease Ecology ___  
- BIQE 161 Kelp Forest Ecology (F19) ___  
- *Permission of instructor required to enroll in ENVS courses  
- BIQE 161L Kelp Forest Ecology Lab (F19) ___  
- Field Quarter:  
  - __________  
  - BIQE 151ABCD Ecology & Conservation in Practice (S19)**  
  - __________  
  - BIQE 153ABC Arctic Ecology (S20)**  
  - **See course equivalencies on reverse  

**THREE additional EEB General Electives:** ___________________ ___________________ ___________________

**Major Qualification Policy:**

1) CHEM 1A  
2) CHEM 1B  
3) BIQE 20A  
4) BIQE 20B  
5) BIQE 20C  

Must complete all six courses with a "C" or better; no more than 1 non-passing grade in the first 5 qualification courses is accepted.

6) MATH 11A or MATH 19A

**DC Completion of TWO approved BIQE courses: ___________________ ___________________**

Note: DC courses must be completed at UCSC. Review approved courses here:  
https://www.eeb.ucsc.edu/academics/undergrad/majors-academic-planning/majors-academic-planning-dc.html

**COMPREHENSIVE REQUIREMENT** (Senior Exit Requirement): ___________________

For details see: https://www.eeb.ucsc.edu/academics/undergrad/majors-academic-planning/majors-academic-planning-exit.html
Ecology & Evolutionary Biology GENERAL ELECTIVES

Quarter offered: F=Fall, W=Winter, S=Spring, (-) = Not offered this year
NOTE: Courses appearing in more than one category can fulfill only one requirement.

BIOE 107 Ecology [Marine Biology only] (FWS) ___
BIOE 108 Marine Ecology (W) ___
BIOE 112/L Ornithology (F19) ___
BIOE 114/L Herpetology (S20) ___
BIOE 117/L Systematic Botany of Flowering Plants (W) ___
BIOE 118 Plants and Society (S) ___
BIOE 120/L Marine Botany (S) ___
BIOE 122/L Invertebrates (W) ___
BIOE 125 Ecosystems of California (WS) ___
BIOE 124/L Mammalogy (F) ___
BIOE 127/L Ichthyology (W20) ___
BIOE 128/L Large Marine Vertebrates Field (S) ___
BIOE 129/L Biology of Marine Mammals (lab optional) (S) ___
BIOE 131/L Animal Physiology (lab optional) (W) ___
BIOE 133/L Exercise Physiology (S20) ___
BIOE 134/L Comparative Vertebrate Anatomy (S) ___
BIOE 135/L Plant Physiology (F) ___
BIOE 136 Environmental Physiology (F) ___
BIOE 137/L Molecular Ecology (S) ___
BIOE 140 Behavioral Ecology (F) ___
BIOE 141L Behavioral Ecology Field Course (W19) ___
BIOE 145 Plant Ecology (F) ___
BIOE 145L Field Methods Plant Ecology (F18) ___
BIOE 147 Community Ecology (S) ___
BIOE 148A Quantitative Ecology (-) ___
BIOE 148B Quantitative Methods (W) ___
BIOE 149 Disease Ecology (S) ___
BIOE 150 Ecological Field Methods (-) ___
BIOE 150L Ecological Field Methods Lab (-) ___
BIOE 155 Freshwater Ecology (F) ___
BIOE 155L Freshwater Ecology Lab (-) ___
BIOE 158L Marine Ecology Lab (-) ___
BIOE 161 Kelp Forest Ecology (F19) ___
BIOE 161L Kelp Forest Ecology Lab (F19) ___
BIOE 163/L Ecology of Reefs, Mangroves & Seagrasses (W) ___
BIOE 165 Marine Conservation Biology (F) ___
BIOE 171 Disciplinary Communications for Biologists (-) ___
BIOE 172/L Population Genetics (F) ___

BIOL 100 Biochemistry (FW) ___
BIOL 101/L Molecular Biology (WS) ___
BIOL 110 Cell Biology (FS) ___
BIOL 115 Eukaryotic Molecular Biology (S) ___
BIOL 120 Developmental Biology (W) ___
EART 100/L Vertebrate Paleontology (-) ___
EART 101/L Invertebrate Paleobiology (F) ___
EART 102 Marine Geology (-) ___
EART 105 Coastal Geology (F) ___
ECON 166A Game Theory and Applications I ___
ECON 166B Game Theory and Applications II ___
ENVS 104A/L Intro, Environmental Field Methods ___
ENVS 108 General Entomology ___
ENVS 115A/L GIS & Environmental Applications ___
ENVS 120 Conservation Biology ___
ENVS 122 Tropical Ecology & Conservation ___
ENVS 123 Animal Ecology & Conservation ___
ENVS 129 Integrated Pest Management ___
ENVS 130A/L Agroecology & Sustainable Agriculture ___
ENVS 130B Principles of Sustainable Agriculture ___
ENVS 131 Insect Ecology ___
ENVS 160 Restoration Ecology ___
ENVS 161A Soils & Plant Nutrition ___
ENVS 162 Plant Physiological Ecology ___
ENVS 163 Plant Disease Ecology ___
ENVS 167 Freshwater & Wetland Ecology ___
ENVS 168 Biochemistry & the Global Environment ___
METX 119 Microbiology (FS) ___
METX 119L Microbiology Lab (FWS) ___
OCEA 118 Marine Microbial Ecology (S) ___
OCEA 130 Biological Oceanography (S) ___
*PSYC 123 Behavioral Neuroscience ___

*Permission of instructor is required to enroll in theses courses; be sure to check timing of offerings

Field Quarter Equivalencies:
___ BIOE 151ABCD Ecology & Conservation in Practice (SP19) = BIOE 150 + 150L + 1 EEB general elective
___ BIOE 153ABC Arctic Ecology (S20) = 1 Topical Elective + 2 EEB General Electives
___ BIOE 159ABCD Marine Ecology Field Quarter (F19) = BIOE 127/L + BIOE 108 + BIOE 158L
___ ENVS 107ABC Natural History Field Quarter (S18) = Topical Elective (5 units) + EEB General Elective (5 units)

One of the following may also be used as an upper-division general elective:
BIOE 183W Undergraduate Research in EEB (2 units) (FWS) ___ + BIOE 183L, 193, or 195 (minimum 3 units) (FWS) ___
ENVS 183 Environmental Studies Internship (5 unit) ___