PLANT SCIENCES B.S. **2016-17**

Name:_____ Date: _____

ID#: _____

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

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

INTRODUCTORY 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) ___ + BIOE 20B (FWS) ___ + BIOE 20C (FWS) ___

Physics: PHYS 6A/L (FWS) ____ + 6B (WS) ____ **OR** PHYS 6A/L (FWS) ___ + 6C (FS) ___
OR PHYS 7A/6L (F) ___ + 7B (W)

Biostatistics: AMS 7/L (FWS) ____

ADVANCED REQUIREMENTS (11 total including 2 lab/field courses: _____ _____)

Genetics: BIOL 105 (FWS) ___

Ecology: BIOE 107 Ecology (FWS) ___

Evolution: BIOE 109 Evolution (FWS) ___

Plant Physiology: ONE from the following…
BIOE 135/L Plant Physiology (W) ___
*ENVS 162 Plant Physiological Ecology (S17) ___

Botany: One from the following…
BIOE 117/L Systematic Botany (W) ___
BIOE 120/L Marine Botany (S) ___

Major Qualification Policy:
1) CHEM 1A
2) CHEM 1B
3) BIOL 20A
4) BIOE 20B
5) BIOE 20C

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

6) MATH 11A or MATH 19A

Topical Electives: THREE from the following…

BIOE 117/L Systematic Botany (W) ___
BIOE 118 Plants and Society (S) ___
BIOE 120/L Marine Botany (S) ___
BIOE 135/L Plant Physiology (W) ___
BIOE 137/L Molecular Ecology (W) ___
BIOE 145 Plant Ecology (F) ___
BIOE 145L Field Methods in Plant Ecology (F) ___
BIOE 148A Quantitative Ecology (F) ___
BIOE 149 Disease Ecology (S) ___
BIOE 188 Intro to Science Writing (-) ___
BIOL 100 Biochemistry (FW) ___
BIOL 101/L Molecular Biology (WS)
BIOL 110 Cell Biology (FS) ___
BIOL 115 Eukaryotic Molecular Biology (S) ___

*ENVS 104A/L Intro to Environmental Field Methods ___
*ENVS 125, Ecosystems of California ___
*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 ___
*Permission of instructor required to enroll in ENVS courses

Field Quarter:
___ BIOE 151ABCD Ecology & Conservation in Practice (S17)**
___ ENVS 107ABC Natural History Field Quarter (S17)**
**See course equivalencies on reverse

THREE additional EEB General Electives: _____ _____ _____

Disciplinary Communication: Successful completion of BIOE 107 Ecology and Bioe 109 Evolution
(Note: DC courses must be completed at UCSC.)
COMPREHENSIVE REQUIREMENT (Senior Exit Requirement): _____
For more information see: http:
http://undergrad.pbsci.ucsc.edu/eeb/completing-the-major/senior-exit.html

Ecology & Evolutionary Biology GENERAL ELECTIVES **2016-17**

(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] (WS) ___
BIOE 108 Marine Ecology (W) ___
BIOE 112/L Ornithology (F17) ___
BIOE 114/L Herpetology (S18) ___
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 124/L Mammalogy (F) ___
BIOE 127/L Ichthyology (F17) ___
BIOE 128L 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 (S17) ___
BIOE 134/L Comparative Vertebrate Anatomy (F) ___
BIOE 135/L Plant Physiology (W) ___
BIOE 137/L Molecular Ecology (W) ___
BIOE 140 Behavioral Ecology (F) ___
BIOE 141L Behavioral Ecology Field Course (W17) ___
BIOE 145 Plant Ecology (F) ___
BIOE 145L Field Methods Plant Ecology (F) ___
BIOE 147 Community Ecology (S) ___
BIOE 148A Quantitative Ecology (F) ___
BIOE 149 Disease Ecology (S) ___
BIOE 150 Ecological Field Methods (-) ___
BIOE 150L Ecological Field Method s Lab (-) ___
BIOE 155 Freshwater Ecology (F) ___
BIOE 155L Freshwater Ecology Lab (S) ___
BIOE 158L Marine Ecology Lab (S18) ___
BIOE 161 Kelp Forest Ecology (F17) ___
BIOE 161L Kelp Forest Ecology Lab (F17) ___
BIOE 163/L Ecology of Reefs, Mangroves & Seagrasses (W) ___
BIOE 165 Marine Conservation Biology (F)___
BIOE 172/L Population Genetics (F16) ___
BIOE 188 Intro to Science Writing (-) ___

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 (S) ___
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 125 Ecosystems of California ___
*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 (-) ___
OCEA 130 Biological Oceanography (S) ___
*PSYC 123 Behaviorial 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 (S17) = BIOE 150 + 150L + 1 EEB general elective
___ BIOE 159ABCD Marine Ecology Field Quarter (F16) = BIOE 127/L + BIOE 108 + BIOE 158L
___ ENVS 107ABC Natural History Field Quarter (S17) = 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) (WS) ___ + BIOE 183L, 193, or 195 (minimum 3 units) (FWS) ___
ENVS 183 Environmental Studies Internship (5 unit) ___