BS BIORESOURCE AND AGRICULTURAL ENGINEERING

MAJOR COURSES
BRAE 128 Careers in Bioresource & Ag Engr. ........ 2
BRAE 129 Laboratory Skills and Safety ............. 1
BRAE 133 Engineering Design Graphics ............. 1
BRAE 151 CAD for Agricultural Engineering ...... 1
BRAE 152 3-D Solids Modeling .................. 1
BRAE 216 Fundamentals of Electricity ............ 4
BRAE 232 Agricultural Structures Planning .......... 4
BRAE 234 Intro Mechanical Systems-Agric ....... 4
BRAE 236 Principles of Irrigation ................ 4
BRAE 239 Engineering Surveying .................. 4
BRAE 312 Hydraulics ................................ 4
BRAE 320 Principles of Bioresource Engr .......... 4
BRAE 328 Measurements/Computer Interfacing ... 4
BRAE 331 Irrigation Theory ...................... 3
BRAE 403 Agricultural Systems Engineering ....... 4
BRAE 414 Irrigation Engineering .................. 4
BRAE 421, 422 Equipment Engineering ............ 3,4
BRAE 433 Agricultural Structures Design ........ 4
BRAE 460 Senior Project Organization ............ 1
BRAE 461, 462 Senior Project I, II ............. 2,2

1 Approved electives ................................ 10
Select 10 units from the following, with a minimum of 6 units upper division:
BRAE 302, 335, 337, 345, 348, 4001, 405, 427, 434, 435, 447, 448, 532, 533; (5/15/15)
any upper division CE course;
CHEM 312;
any upper division ENVE course;
FSN 204;
IME 141, 142, 143, 144, 319;
MATE 210, 215;
MCRO 221, 421;
any upper division ME course
(4/19/12) 75

SUPPORT COURSES
BIO 213 and ENGR/BRAE 213 or MCRO 221
Microbiology (B2)* .................................. 4
2 CE 201 Mechanics of Materials (6) or CE 204 and CE 207 Mechanics of Materials I, II (3) (2/3) (2/4/16) ... 5-6
CHEM 124 General Chemistry for the Engineering Disciplines (B3/B4)* .................. 4
CHEM 125 General Chemistry for the Engineering Disciplines (Add’t Area B)* ........ 4
CSC 231/CSC 232/CSC 234 ................................ 2/3

ECON 201 Survey of Economics (D2)* or
ECON 222 Microeconomics (D2)* (10/3/13) ........ 4
EE 321 Electronics and EE 361 Electronics Lab ... 3,1
ENGL 149 Technical Writing for Engineers (A3)* 4
MATH 141, 142 Calculus I, II (B1)* ............... 4,4
MATH 143 Calculus III (Add’t Area B) .......... 4
MATH 241 Calculus IV ......................... 4
MATH 244 Linear Analysis I .................. 4
ME 211 Engineering Statics .................... 3
ME 212 Engineering Dynamics .................. 3
ME 302 Thermodynamics ..................... 3
PHYS 141 General Physics IA ................. 4
PHYS 132, 133 General Physics ............ 4,4
SS 121 Introductory Soil Science ............ 4
STAT 312 Statistical Methods-Engr. (B6)* ......... 4

GENERAL EDUCATION (GE)
72 units required, 36 of which are specified in Support.
→See page 39 for complete GE course listing.
→Minimum of 8 units required at the 300 level.

Area A Communication (8 units)
A1 Expository Writing ............................. 4
A2 Oral Communication .......................... 4
A3 Reasoning, Argumentation, and Writing * 4 in Support ........................................ 0

Area B Science and Mathematics (no additional units are required)
B1 Mathematics/Statistics * 8 units in Support ...... 0
B2 Life Science * 4 units in Support .......... 0
B3 Physical Science * 4 units in Support ........ 0
B4 One lab taken with either a B2 or B3 course
B5 (requirement for Liberal Arts students only)
B5 (not required for Engineering students)
B6 Upper-division Area B * 4 units in Support .... 0
Additional Area B units* 8 units in Support ........ 0

Area C Arts and Humanities (16 units)
C1 Literature .................................. 4
C2 Philosophy ................................. 4
C3 Fine/Performing Arts ..................... 4
C4 Upper-division elective .................. 4

Area D/E Society and the Individual (12 units)
D1 The American Experience (40404) ............ 4
D2 Political Economy * 4 units in Support .......... 0
D3 Comparative Social Institutions .......... 4
D4 Self Development (CSU Area E) .......... 4

FREE ELECTIVES ......................................... 0

1 4 unit maximum. (5/15/15)
2 Consultation with advisor is recommended prior to selecting approved electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.
3 If CE 207 is taken for 2 units then one additional unit of Free Electives is required. (2/4/16)