BIOSYSTEMS ENGINEERING

Ecological Engineering Emphasis

2020 – 2021 Curriculum (updated May 2020)

Student: _____
Date: _____
CUID: _____
Advisor: _____

FRESHMAN YEAR

_____ 4 CH 1010 General Chemistry
_____ 3 ENGL 1030 Composition & Rhetoric
_____ 2 ENGR 1020 Engineering Disciplines and Skills
_____ 4 MATH 1060 Calculus of One Variable I
_____ 3 Gen Ed_____
16

_____ 4 CH 1020 General Chemistry
_____ 3 ENGR 1410 Programming and Problem Solving
_____ 4 MATH 1080 Calculus of One Variable II
_____ 3 PHYS 1220 Physics with Calculus I
_____ 3 Gen Ed_____
17

SOPHOMORE YEAR

_____ 2 BE 2100 Intro. to Biosystems Engineering
_____ 3 BIOL 1030 General Biology I
_____ 1 BIOL 1050 General Biology Lab I
_____ 3 CE 2010 Statics
_____ 2 ENGR 2100 Computer-Aided Design & Engineering Applications
_____ 4 MATH 2060 Calculus of Several Variables
_____ 3 PHYS 2210 Physics with Calculus II
18

BIOL 1100 Principles of Biology I (4cr) can be taken in place of BIOL 1030 & BIOL 1050

_____ 2 BE 2120 Fundamentals of Biosystems Engineering
_____ 2 CE 2080 Dynamics
_____ 3 ENGL 3140 Technical Writing
_____ 4 MATH 2080 Int. to Ordinary Differential Equations
_____ 4 MICR 3050 General Microbiology
_____ 3 Global Sustainability Requirement_____
18

JUNIOR YEAR

_____ 3 BE 3100 Biosystems Engineering Thermodynamics *OR*
3 ME 3100 Thermodynamics and Heat Transfer
_____ 3 BE 3200 Principles and Practices of Geomatics
_____ 3 BE 4100 Biological Kinetics and Reactor Modeling
_____ 4 CE 3410 Introduction to Fluid Mechanics
_____ 2 ECE 2070 Basic Electrical Engineering
_____ 1 ECE 2080 Basic Electrical Engineering Lab.
16

_____ 3 BE 3220 Small Watershed Hydrology & Sedimentology
_____ 3 BE 4120 Heat & Mass Transport in Biosystems Engr.
_____ 3 BE 4240 Ecological Engineering
_____ 3 BE 4380 Bioprocess Engineering Design
_____ 3 CH 2230 Organic Chemistry
_____ 1 CH 2270 Organic Chemistry Laboratory
16

SENIOR YEAR

_____ 3 BE 4150 Instrumentation & Control for Biosystems Engineers
_____ 3 BE 4210 Engineering Systems for Soil Water Management
_____ 1 BE 4740 Biosystems Engr. Design Project Mgt.
_____ 3 BE 4750 Biosystems Engr. Capstone Design
_____ 3 BIOL 4410 Ecology
_____ 4 CE 2060 Structural Mechanics
17

_____ 3 Ecological Engineering Requirement_____
_____ 3 Ecological Requirement_____
_____ 3 Gen Ed_____
_____ 3 Gen Ed_____
12

130 Total Semester Hours

General Education Requirements					
LIT	Non-Lit	SS1	SS2	CCA	STS

Comments: _____

Change of Major Checklist	
Required	Completed
CH 1010	
ENGL 1030	
ENGR 1020	
ENGR 1410	
MATH 1060	
PHYS 1220	
GPA = 2.0; C or better required in each class	

Students should always refer to the Academic Catalog for course descriptions and for course pre-requisites, corequisites, and concurrent enrollment requirements. Academic Catalog can be found here: https://www.clemson.edu/registrar/academic-catalogs/