



FLORIDA AGRICULTURAL AND MECHANICAL UNIVERSITY

## Biological Systems Engineering Program Requirements

(Natural Resources Conservation Engineering Option in the B.S. Degree in BSE)

### FRESHMAN YEAR (32 Credits)

ENC 1101 Freshman Comm. Skills I	3
BSC 1010 Biology I	3
BSC 1010L Biology I Lab	1
MAC 2311 Calculus I	4
ABE 1002 Bio. Eng. Term. & Def.	1
AMH 2091 African American History	3
<b>Total</b>	<b>15</b>

PHY 2048 General Physics I	4
PHY 2048L General Physics I Lab	1
MAC 2312 Calculus II	4
CHM 1045 Chemistry I	3
CHM 1045L Chemistry I Lab	1
ABE 1010 Introduction to BSE	2
ABE 2001L Intro to Computer Applications	2
<b>Total</b>	<b>17</b>

### SOPHOMORE YEAR (32 Credits)

ENC 1102 Freshman Comm. Skills II	3
PHY 2049 General Physics II	4
PHY 2049L General Physics II Lab	1
CHM 1046 Chemistry II	3
CHM 1046L Chemistry II Lab	1
ABE 2930 BSE Sophomore Seminar	1
BSC 1011 Biology II	2
BSC 1011L Biology II Lab	2
<b>Total</b>	<b>17</b>

ABE 3650 Eng. Properties of Bio. Materials	3
SUR 2140/CEG 2202 Elem. Survey OR Geomatics	3
SUR 2140L/CEG 2202L Elem. Survey OR Geomatics Lab	1
ABE 2122 Computer Graphics for Engineers	2
CWR 3201 Hydraulics	3
CWR 3200L/3201L Envir. & Hydraul. Eng. Lab	1
EEL 3003 Intro to Electrical Eng.	3
<b>Total</b>	<b>15</b>

### JUNIOR YEAR (30 Credits)

SWS 3022 Nature and Prop. of Soils	3
SWS 3022L Nature and Prop. of Soils Lab	1
MAC 2313 Calculus III	5
EGM 3502 Engineering Mechanics	4
ABE 3614 Bio-Thermodynamics	2
<b>Total</b>	<b>15</b>

ABE 3013 Introduction to Design Analysis	3
CEG 3011 Soil Mechanics	3
MAP 2302 Differential Equations	3
EGN 3613 Principles Engineering Economy	2
ABE 3212 Nat. Res. Conservation Eng.	3
ABE 3212L Nat. Res. Conservation Eng. Lab	1
<b>Total</b>	<b>15</b>

### SENIOR YEAR (33 Credits)

ABE 4042 Senior Design Project I	2
EGN 3331 Strength of Materials	2
Social Sciences Core Elective	3
CWR 4101 Engineering Hydrology	3
ABE 4224 Non-Point Source Pollution	3
Science, Math, or Engineering Elective	3
<b>Total</b>	<b>17</b>

ABE 4043 Senior Design Project II	2
Humanities Gen. Ed. Core Requirement	3
Social Sciences Electives	3
Engineering Elective	3
Engineering Elective	2
Humanities Gen. Ed. Requirement	3
<b>Total</b>	<b>16</b>

**Total Completed Hours 128**  
**Engineering Topic Hours**

**Effective Fall 2022**