

Updated 4/13/2018

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
<i>Careers in BRAE</i> <b>BRAE 128 (2)</b>	<i>CAD for Agricultural Engineering</i> <b>BRAE 151 (1)</b>	<i>3-D Solids Modeling</i> <b>BRAE 152 (1)</b> (BRAE 133, BRAE 151 or equiv)	<i>Principles of Irrigation</i> <b>BRAE 236 (4)</b> (MATH 141, SS 121)	Choose one: <b>BIO 213 (2) &amp; BRAE 213 (2)</b> OR <b>MCRO 221 (4)*</b> [B2]	<i>Agricultural Structures Planning</i> <b>BRAE 232 (4)</b> (BRAE 151, PHYS 132)	<i>Hydraulics</i> <b>BRAE 312 (4)</b> (PHYS 132, ME 211)	<i>Irrigation Theory</i> <b>BRAE 331 (3)</b> (BRAE 236 or 340)	<i>Irrigation Engineering</i> <b>BRAE 414 (4)</b> (BRAE 331 or 340; 312 w/ min C)	<i>Equipment Engineering</i> <b>BRAE 421 (3)</b> (BRAE 152; CE 204; ME 212)	<i>Equipment Engineering</i> <b>BRAE 422 (4)</b> (BRAE 421)	<i>Agricultural Systems Engineering</i> <b>BRAE 403 (4)</b> (MATH 242 or 244)
<i>Laboratory Skills and Safety</i> <b>BRAE 129 (1)</b>			<i>Fundamentals of Electricity</i> <b>BRAE 216 (4)</b> (BRAE 129, MATH 142, PHYS 131)	<b>Computer Programming</b> Choose one: <b>CSC 231 (2)*</b> <b>CSC 232 (3)*</b> <b>CSC 234 (3)*</b>	<i>Intro to Mechanical Systems in Ag</i> <b>BRAE 234 (4)</b> (PHYS 131)	<i>Electronics &amp; Laboratory</i> <b>EE 321 (3) &amp; EE 361 (1)</b> (EE 201 or BRAE 216)	<i>Measurements &amp; Computer Interfacing</i> <b>BRAE 328 (4)</b> (EE 321; 361; & CSC 231 or 232 or 234)	<i>Principles of Bioresource Engineering</i> <b>BRAE 320 (4)</b> (BRAE 232, BRAE 236, PHYS 132)	<i>Agricultural Structures Design</i> <b>BRAE 433 (4)</b> (BRAE 232, CE 204)		<i>Ag Robotics Automation</i> <b>BRAE 428 (4)</b> (BRAE 328)
<i>Engineering Surveying</i> <b>BRAE 239 (4)</b> (MATH 119 or equiv)				<i>Gen Chem for Physical Science &amp; Engineering I &amp; II</i> <b>CHEM 124 (4)*</b> [B3/B4]	<i>Intro to Mechanical Systems in Ag</i> <b>CHEM 125 (4)*</b> [Add'l Area B]	<i>Statistical Methods for Engineers</i> <b>STAT 312 (4)</b> (MATH 142) [B6]			<i>Sr Proj Org</i> <b>BRAE 460 (1)</b> (GE A3)	<i>Senior Project I</i> <b>BRAE 461 (2)</b> (BRAE 460)	<i>Senior Project II</i> <b>BRAE 462 (2)</b> (BRAE 461)
<i>Intro to Engineering Design Graphics</i> <b>BRAE 133 (1)</b>		<i>Introductory Soil Science</i> <b>SS 121 (4)</b> *	<i>Calculus IV</i> <b>MATH 241 (4)</b> (MATH 143)	<i>Linear Analysis I</i> <b>MATH 244 (4)</b> (MATH 143)		<i>Economics</i> Choose one: <b>ECON 201 or 222 (4)</b> [D2]			<b>Approved Elective (3)</b>		
<i>Calculus I, II, &amp; III</i> <b>MATH 141 (4)</b> * [B1]	<i>Calculus I, II, &amp; III</i> <b>MATH 142 (4)</b> (MATH 141 w/ min C-) [B1]	<i>Calculus I, II, &amp; III</i> <b>MATH 143 (4)</b> (MATH 142 w/ min C-) [Add'l Area B]		<i>Engineering Statics</i> <b>ME 211 (3)<sup>1</sup></b> (MATH 241 or concurrently, PHYS 131 or 141)	<i>Engineering Dynamics</i> <b>ME 212 (3)<sup>1</sup></b> (MATH 241; ME 211 or ARCE 211)			<i>Mechanics of Materials I &amp; II</i> <b>CE 204 (3)</b> (ME 211)			
	<i>Physics IA, II, &amp; III</i> <b>PHYS 141 (4)</b> *	<i>Physics IA, II, &amp; III</i> <b>PHYS 132 (4)</b> (PHYS 131, HNRS 131, or PHYS 141)	<i>Physics IA, II, &amp; III</i> <b>PHYS 133 (4)</b> (PHYS 131, HNRS 131, or PHYS 141; MATH 142. Recom: MATH 241)						<b>GE (4)**</b>	<b>GE (4)**</b>	
<i>Expository Writing</i> <b>ENGL 133 or 134 (4)**</b> [A1] Can be taken anytime during Freshman Year						<b>GE (4)<sup>1</sup>**</b>	<b>GE (4)**</b>		<b>GE (4)**</b>	<b>GE (4)**</b>	
<i>Oral Communication</i> <b>COMS 101 or 102 (4)<sup>1</sup>**</b> [A2] Can be taken anytime during Freshman Year						<b>Graduation Writing Requirement GWR*</b> (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)					
<i>Technical Writing for Engineers</i> [A3] <b>ENGL 149 (4)</b> (Completion of GE A1 w/min C-; Recom: GE Area A2) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.											
16	13	17	16	17-18	15	16	18	14	16	17	12-14
										<b>TOTAL:</b>	<b>187-190</b>

**Notes:**

**MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET**

\* Refer to current catalog for prerequisites.

\*\*One course from each of the following GE areas must be completed: A1, A2, C1, C2, C3, C4, D1, D3, and D4. C4 should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C3, C4, D1, D3, or D4.

<sup>1</sup> Students are encouraged to take summer courses online or at a community college when possible. This is not mandatory.

**Legend:**

<i>Course Title</i>		<b>Major (74-76)</b>
<b>Course # (Units)</b>		<b>Support (77-78)</b>
<i>(Prerequisite)</i>		<b>General Ed. (36)</b>
[GE Area]		