

**Undergraduate Curriculum in Biological Systems Engineering  
Biorenewable Resources Engineering Option**

2014-2015 Catalog

Total Credits 128

**First Year (32 cr.)**

<b>Semester 1 (16 cr.)</b>		<b>Semester 2 (16 cr.)</b>	
R	Engr101 Orientation (FS)	1	A B E 110 Experiencing BSE (S)
3	A B E 170 Graphics and Design (FS)	3	Engr 160 Engineering Problems (FS)
4	Math 165 Calculus I (FSSS)	4	Math 166 Calculus II (FSSS)
4	Chem 167 General Chemistry (FS)	5	Phys 221 Classical Physics I (FSSS)
1	Chem 167L General Chemistry Lab (FS)	3	→ SS&H Elective (FSSS)
3	Engl 150 Crit. Think. and Comm.(FSSS)		
1	Lib 160 Information Literacy (FSSS)		

**Second Year (31 cr.)**

<b>Semester 3 (17 cr.)</b>		<b>Semester 4 (14 cr.)</b>	
3	A B E 216 Fund. Ag. and Biol. Engineering (F)	1	A B E 201 Preparing for the Workplace (FS)
3	EM 274 Statics of Engineering (FSSS)	2	A B E 218 Project Mgmt/Design Ag & Bio Engr (S)
3	Stat 305 Engineering Statistics (FSSS)	3	EM 324 Mechanics of Materials (FSSS)
5	Phys 222 Classical Physics II (FSSS)	1	EM 327 Mechanics of Materials Lab (FSSS)
3	Biol 212 Principles of Biology II (FSSS)	4	Math 267 Differential Equations (FSSS)
		3	Engl 250 Writ/Oral/Vis/Elec Composition (FSSS)

**Third Year (33 cr.)**

<b>Semester 5 (17 cr.)</b>		<b>Semester 6 (17 cr.)</b>	
4	A B E 363 Electric Power and Electronics (F)	3	A B E 380 Principles of BSE (S)
3	A B E 316 Applications and Systems Modeling (F)	3	ChE 356 Transport Phenomena I (FS)
3	<i>A B E 388 Sustain Engr. and Int Dev (F)</i>	3	Micro 302 Biology of Microorganisms (FSSS)
<b>or</b>	<i>A B E 325 Biorenewable Systems</i>	1	Micro 302L Microbiology lab (FSSS)
3	Chem 331 Organic Chemistry I (FSSS)	3	Chem 332 Organic Chemistry II (FSSS)
1	Chem 331L Organic Chemistry I Lab (FSSS)	1	Chem 332L Organic Chemistry II lab(FSSS)
3	→ SS&H Elective (FSSS)	3	ME 231 Thermodynamics (FSSS)

**Fourth Year (32 cr.)**

<b>Semester 7 (15 cr.)</b>		<b>Semester 8 (17 cr.)</b>	
3	A B E 404 Instrumentation for Ag and Bio Engr (F)	2	A B E 416 Ag & Biosystems Engr. Design II (FS)
2	A B E 415 Ag & Biosystems Engr. Design I (FS)	3	→ Modeling/Simulation Elective
3	A B E 480 Engineering Analysis of Bio Systems (F)	3	→ Biorenewable Elective II (FSSS)
3	ChE 357 Transport Phenomena II (FS)	3	→ U. S. Diversity Elective(FSSS)
3	→ Biorenewable Elective I (FSSS)	3	→ International Perspectives Elective (FSSS)
		3	→ Communication Elective (FSSS)

*\*Please check the current catalog and Schedule of Classes for most recent offerings*