

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

2012-2013 Catalog

Total Credits 128

First Year (32 cr.)

Semester 1 (16 cr.)		Semester 2 (16 cr.)	
R	Engr101 Orientation (FS)	1	BSE 110 Experiencing BSE (S)
3	BSE 170 Graphics and Design (FS)	3	Engr 160 Engineering Problems (FS)
4	Math 165 Calculus I (FS)	4	Math 166 Calculus II (FS)
4	Chem 167 General Chemistry (FS)	5	Phys 221 Classical Physics I (FSSS)
	or 177/178		
1	Chem 167L General Chemistry Lab (FS)	3	SS&H Elective (FSSS)
3	Engl 150 Crit. Think. and Comm.(FSSS)		
1	Lib 160 Library Instruction (FSSS)		

Second Year (31 cr.)

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

Third Year (33 cr.)

Semester 5 (17 cr.)		Semester 6 (16 cr.)	
4	AE 363 Electric Power and Electronics (F)	3	ChE 356 Transport Phenomena I (FS)
3	BSE 316 Applications and Systems Modeling (F)	3	Micro 302 Biology of Microorganisms (FS)
3	Chem 331 Organic Chemistry (FS)	1	Micro 302L Microbiology lab (FS)
1	Chem 331L Organic Chemistry Lab(FS)	3	BSE 380 Principles of BSE (S)
3	AE 388 Sustain Engr. and Int Dev (F)	3	Chem 332 Organic Chemistry (FS)
3	SS&H Elective (FSSS)	3	ME 231 Thermodynamics (FS)

Fourth Year (32 cr.)

Semester 7 (15 cr.)		Semester 8 (17 cr.)	
3	AE 404 Instrumentation for Ag and Bio Engr (F)	2	BSE 416 Ag & Biosystems Engr. Design II (FS)
2	BSE 415 Ag & Biosystems Engr. Design I (FS)	3	BSE 403 Modeling & Control for Ag Systems (Alt. S)
3	ChE 357 Transport Phenomena II (FS)	3	Biorenewable Elective II (FSSS)
3	BSE 480 Engineering Analysis of Bio Systems (F)	3	Diversity Elective(FSSS)
4	Biorenewable Elective I (FSSS)	3	International Perspectives Elective (FSSS)
		3	Communication Elective (FSSS)