

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

2019-2020 Catalog

Total Credits 128

First Year (32 cr.)

Semester 1 (16 cr.)		Semester 2 (16 cr.)	
R	Engr 101 Orientation (FS)	1	A B E 110 Experiencing BSE (S)
3	A B E 170 Graphics and Design (FS)	3	A B E 160 Engineering Problems (FS)
4	Chem 167 General Chemistry (FS)	4	Math 166 Calculus II (FSSS)
1	Chem 167L General Chemistry Lab (FS)	5	Phys 221 Classical Physics I (FSSS)
4	Math 165 Calculus I (FSSS)	3	Engl 250 Writ/Oral/Vis/Elec Composition (FSSS)
3	Engl 150 Crit. Think. and Comm.(FSSS)		
1	Lib 160 Information Literacy (FSSS)		

Second Year (31 cr.)

Semester 3 (16 cr.)		Semester 4 (15 cr.)	
3	A B E 216 Fund. Ag. and Biol. Engineering (F)	2	A B E 218 Project Mgmt/Design Ag & Bio Engr (S)
3	EM 274 Statics of Engineering (FSSS)	1	A B E 201 Preparing for the Workplace (FS)
3	Biol 212 Principles of Biology II (FSSS)	1	A B E 273 2D Auto CAD (FS)
4	→ Chemistry Sequence I with lab(FS)	3	ME 231 Thermodynamics (FSSS)
3	→ U. S. Diversity Elective(FSSS)	4	Math 267 Differential Equations (FSSS)
		4	→ Chemistry Sequence II with Lab(FS)

Third Year (32 cr.)

Semester 5 (16 cr.)		Semester 6 (16 cr.)	
3	A B E 316 Applications and Systems Modeling (FS)	4	A B E 363 Electric Power and Electronics (FS)
3	A B E 325 Biorenewable Systems (F)	3	A B E 380 Principles of BSE (S)
3	E M 378 Mechanics of Fluids (FS)	3	EM 324 Mechanics of Materials (FSSS)
3	Micro 302 Biology of Microorganisms (FSSS)	3	I E 305 Engineering Economic Analysis (FSSS)
1	Micro 302L Microbiology lab (FSSS)	3	→ International Perspective (FSSS)
3	STAT 305 Engineering Statistics (FSSS)		

Fourth Year (33 cr.)

Semester 7 (17 cr.)		Semester 8 (16 cr.)	
2	A B E 415 Ag & Biosystems Engr. Design I (FS)	2	A B E 416 Ag & Biosystems Engr. Design II (FS)
3	A B E 404 Instrumentation for Ag and Bio Engr (F)	3	A B E 451 Food and Bioprocess Engineering (S)
3	A B E 480 Engineering Analysis of Bio Systems (F)	3	A B E 469 Grain Processing and Handling (S)
3	→ Biorenewable Elective	1	E M 327 Mechanics of Materials Lab (FSSS)
3	→ Communication Elective (FSSS)	4	M E 436 Heat Transfer
3	→ SS/H Elective (FSSS)	3	→ SS/H (FSSS)

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