

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

2021-2022 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
3	A B E 170	Graphics and Design (FS)	3 A B E 160
4	Chem 167	General Chemistry (FS)	4 Math 166
1	Chem 167L	General Chemistry Lab (FS)	4 Phys 231
4	Math 165	Calculus I (FSSS)	1 Phys 231L
3	Engl 150	Crit. Think. and Comm.(FSSS)	3 Engl 250
1	Lib 160	Information Literacy (FSSS)	Experiencing BSE (S)
			Engineering Problems (FS)
			Calculus II (FSSS)
			Classical Physics I (FSSS)
			Classical Physics I Lab (FSSS)
			Writ/Oral/Vis/Elec Composition (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
3	C E 274	Statics of Engineering (FSSS)	1 A B E 201
3	Biol 212	Principles of Biology II (FSSS)	1 A B E 273
4	→	Chemistry Sequence I with lab(FS)	3 ME 231
3	→	U. S. Diversity Elective(FSSS)	4 Math 267
			4 →
			Project Mgmt/Design Ag & Bio Engr (S)
			Preparing for the Workplace (FS)
			2D Auto CAD (FS)
			Thermodynamics (FSSS)
			Differential Equations (FSSS)
			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
3	A B E 325	Biorenewable Systems (F)	3 A B E 380
3	A B E 378	Mechanics of Fluids (FS)	3 EM 324
3	Micro 302	Biology of Microorganisms (FSSS)	3 I E 305
1	Micro 302L	Microbiology lab (FSSS)	3 →
3	STAT 305	Engineering Statistics (FSSS)	Electric Power and Electronics (FS)
			Principles of BSE (S)
			Mechanics of Materials (FSSS)
			Engineering Economic Analysis (FSSS)
			Communication Elective (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
3	A B E 404	Instrumentation for Ag and Bio Engr (F)	3 A B E 451
3	A B E 480	Engineering Analysis of Bio Systems (F)	3 A B E 469
3	→	Biorenewable Elective	1 E M 327
3	→	International Perspectives Elect. (FSSS)	4 M E 436
3	→	SS/H Elective (FSSS)	3 →
			Ag & Biosystems Engr. Design II (FS)
			Food and Bioprocess Engineering (S)
			Grain Processing and Handling (S)
			Mechanics of Materials Lab (FSSS)
			Heat Transfer
			SS/H (FSSS)

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