

**Undergraduate Curriculum in Biological Systems Engineering  
Food & Bioprocess Engineering Option**

2022-2023 Catalog

Total Credits 128

**First Year (32 cr.)**

<b>Semester 1 (16 cr.)</b>		<b>Semester 2 (16 cr.)</b>			
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 (S)
4	Chem 167	General Chemistry (FS)	4	Math 166	Calculus II (FSSS)
1	Chem 167L	General Chemistry Lab (FS)	4	Phys 231	Classical Physics I (FSSS)
4	Math 165	Calculus I (FSSS)	1	Phys 231L	Classical Physics I Lab (FS)
3	Engl 150	Crit. Think. and Comm.(FSSS)	3	Engl 250	Writ/Oral/Vis/Elec Composition (FSSS)
1	Lib 160	Information Literacy (FSSS)			

**Second Year (31 cr.)**

<b>Semester 3 (16 cr.)</b>		<b>Semester 4 (15 cr.)</b>			
3	A B E 216	Fund. Ag. and Biol. Engineering (F)	2	A B E 218	Project Mgmt/Design Ag & Bio Engr (S)
3	C E 274	Statics of Engineering (FSSS)	1	A B E 201	Preparing for the Workplace (FS)
3	Biol 212	Principles of Biology II (FS)	1	A B E 273	2D Auto CAD (FS)
3	Chem 231	Elementary Org. Chemistry (FSSS)	3	M E 231	Thermodynamics (FSSS)
1	Chem 231L	Elementary Org. Chemistry Lab (FSSS)	4	Math 267	Differential Equations (FSSS)
3	→	U. S. Diversity Elective (FSSS)	3	Micro 302	Biology of Microorganisms (FSSS)
			1	Micro 302L	Microbiology Lab (FS)

**Third Year (32 cr.)**

<b>Semester 5 (16 cr.)</b>		<b>Semester 6 (16 cr.)</b>			
3	A B E 316	Applications and Systems Modeling (FS)	4	A B E 363	Electric Power and Electronics (FS)
3	A B E 378	Mechanics of Fluids (FS)	3	A B E 380	Principles of BSE (S)
3	FS HN 311	Food Chemistry (F)	3	A B E 469	Grain Processing and Handling (S)
1	FS HN 311L	Food Chemistry Lab (F)	3	E M 324	Mechanics of Materials (FSSS)
3	STAT 305	Engineering Statistics (FSSS)	3	I E 305	Engineering Economic Analysis (FSSS)
3	→	Communication Elective (FSSS)			

**Fourth Year (33 cr.)**

<b>Semester 7 (17 cr.)</b>		<b>Semester 8 (16 cr.)</b>			
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 452X	Emerging Tech. in Biomanufacturing (F)	1	E M 327	Mechanics of Materials Lab (FS)
3	A B E 480	Engineering Analysis of Bio Systems (F)	4	M E 436	Heat Transfer (FSSS)
3	→	Option Elective (F)	3	→	SS/H Elective (FSSS)
3	→	International Perspectives Elect. (FSSS)	3	→	SS/H Elective (FSSS)

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