

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

2024-2025 Catalog

Total Credits 128

First Year (32 cr.)

Semester 1 (16 cr.)		Semester 2 (16 cr.)	
R	Engr 1010 Orientation (FS)	1	ABE 1100 Experiencing BSE (S)
3	ABE 1700 Graphics and Design (FS)	3	ABE 1600 Engineering Problems (S)
4	Chem 1670 General Chemistry (FS)	4	Math 1660 Calculus II (FSSS)
1	Chem 1670L General Chemistry Lab (FS)	4	Phys 2310 Classical Physics I (FSSS)
4	Math 1650 Calculus I (FSSS)	1	Phys 2310L Classical Physics I Lab (FS)
3	Engl 1500 Crit. Think. and Comm.(FSSS)	3	Engl 2500 Writ/Oral/Vis/Elec Composition (FSSS)
1	Lib 1600 Information Literacy (FSSS)		

Second Year (31 cr.)

Semester 3 (16 cr.)		Semester 4 (15 cr.)	
3	ABE 2160 Fund. Ag. and Biol. Engineering (F)	2	ABE 2180 Project Mgmt/Design Ag & Bio Engr (S)
3	C E 2740 Statics of Engineering (FSSS)	1	ABE 2010 Preparing for the Workplace (FS)
3	Biol 2120 Principles of Biology II (FS)	1	ABE 2730 2D Auto CAD (FS)
3	Chem 3310 Organic Chemistry I (FSSS)	3	M E 2310 Thermodynamics (FSSS)
1	Chem 3310L Organic Chemistry I Lab (FSSS)	3	Chem 3320 Organic Chemistry II (FSSS)
3	→ US Communities & Cultures Elective	1	Chem 3320L Organic Chemistry II Lab (FSSS)
		4	Math 2670 Differential Equations (FSSS)

Third Year (33 cr.)

Semester 5 (17 cr.)		Semester 6 (16 cr.)	
3	ABE 3160 Applications and Systems Modeling (FS)	4	ABE 3630 Electric Power and Electronics (FS)
3	ABE 3780 Mechanics of Fluids (FS)	3	ABE 3800 Principles of BSE (S)
3	Micro 3020 Biology of Microorganisms (FSSS)	3	E M 3240 Mechanics of Materials (FSSS)
1	Micro 3020L Microbiology lab (FSSS)	3	I E 3050 Engineering Economic Analysis (FSSS)
3	STAT 3050 Engineering Statistics (FSSS)	3	→ Sequence Course I (FS)
3	→ Communication Elective (FSSS)		
1	→ Lab Elective (ABE 3780L Preferred)		

Fourth Year (32 cr.)

Semester 7 (17cr.)		Semester 8 (15 cr.)	
2	ABE 4150 Ag & Biosystems Engr. Design I (FS)	2	ABE 4160 Ag & Biosystems Engr. Design II (FS)
3	ABE 4040 Instrumentation for Ag and Bio Engr (F)	3	ABE 4510 Food and Bioprocess Engineering (S)
3	ABE 4800 Engineering Analysis of Bio Systems (F)	4	M E 4360 Heat Transfer (FSSS)
3	→ Sequence Course II (FS)	3	→ Sequence Course III (FS)
3	→ International Perspectives Elect. (FSSS)	3	→ SS/H Elective (FSSS)
3	→ SS/H Elective (FSSS)		

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