

**Biosystems Engineering Catalog 2024**  
**Bioprocess & Food Systems Concentration**

Fall 16 hours	<b>Math 132 or 141 or 147 (3-4) (QR) FA,SP,SU</b> Math 132 Prereq- Math 131 Math 141 Prereq- ACT Math 28 or SAT Math 660	<b>EF 142 or 151 or 157 (4) (EI) FA, SP</b> EF 142 Prereq- EF 141 with C- or better and Math 131 EF 142 Coreq- Math 132 EF 151 Coreq- 141/147 or higher and EF 105 or COSC 101 or CS 102	<b>EF 105 (1) FA, SP</b> Coreq- EF 151 or 157	<b>Chem 122(3) and 123(1) or 128 (4) (NS) FA, SP, SU</b> Prereq-Math 119; recommended background in Math 131	<b>English 101 or 131 (3) FA, SP, SU</b> 101 Standard; 131 English as Second Language	
	<b>Math 142 or 148 (4) (QR) FA, SP, SU</b> Prereq- Math 132 or 141 or 147	<b>EF 152 or 158 (4) (NS and EI) FA, SP, SU</b> Prereq-EF 142/151/157 with C or higher Coreq- Math 142 or 148	<b>ME 202 (2) FA, SP, SU</b> Coreq- EF 152 or 158 and Math 142 or 148	<b>Chem 132(3) and 133(1) or 138 (4) FA, SP, SU</b> Prereq- Chem 122 & 123 or 128	<b>English 102 or 112 or 298 or 132 132 (3) FA, SP, SU</b> see catalog for prereqs	<b>BSE 104 (1) SP</b> Coreq- EF 142 or 151 or 157
Fall 17 hours	<b>Math 241 or 247 (4) FA, SP, SU</b> Prereq- Math 142 or 148	<b>ME 231 (3) FA, SP, SU</b> Prereq- EF 152 or 158 and ME 202 with grades of C or better	<b>Philosophy 244 (3) FA, SP</b> Arts & Humanities	<b>BSE 201 (1) FA</b>	<b>BSE 221 (3) FA</b> Prereq- Chem 122 and 123 or 128 Coreq- EF 152 or 158	<b>BSE 231 (3) FA</b> Prereq- Chem 122 and 123 or 128 and Math 141 or 147
	<b>Math 231 or 237 (3) FA, SP, SU</b> Prereq- Math 142 or 148	<b>Microbiology 210 (3) (NS) FA, SP</b> May not be applied toward the biological science major.	<b>Chem 260 or 268 (3) FA, SP, SU</b> formerly Chem 350/358 Prereq- Chem 132 and 133 or 138	<b>Chem 269 (1) FA, SP, SU</b> Prereq- Chem 132 and 133 or 138 Coreq- Chem 260 or 268	<b>ME 321 (3) FA, SP, SU</b> Prereq- ME 202 with C or better and Math 142/148 with C better	<b>BSE 321 (3) SP</b> Prereq- BSE 221 or ENVE 200
Fall 15 hours	<b>Food Science 421 (3) FA</b> Prereq-Micro 210 or Biology 220 and 229	<b>BSE 326 (3) FA, SP</b> Prereq- EF 152 or 158 and Math 241 or 247	<b>BSE 351 (3) FA, SP</b> Prereq- EF 152 or 158 and Math 231 or 237	<b>Stats 251 (3) FA, SP, SU</b> or <b>IE 200 (3) FA, SP</b> Prereq- Math 142 or 148	<b>English 360 (3) (WC) FA, SP</b> Prereq- English 102 or 112 or 132 or 298 Minimum level- junior	
	<b>BSE 411 or 417 (3) SP</b> Prereq- ME 231 and 321 with grades of C or better	<b>BSE 431 or 437 (3) SP</b> Prereq- BSE 321 with grade of C or better	<b>BSE 451 or 457 (3) SP</b> Prereq- ECE 301 with grade of C or better	<b>Food Science 410 or 418 (3) SP</b> Prereq- Chemistry 260 or 268	<b>Math 200 (2) FA, SP</b>	
Fall 14 hours	<b>Vol Core (3) FA, SP, SU</b> Social Science (SS)	<b>Food Science 110 (3) FA</b> Global Citizenship International (GCI)	<b>BSE 400 (2) FA</b> Prereq- Three of BSE 411/417, 431/437, 451/457 Coreq- BSE 404 and 444	<b>BSE 444 (3) FA</b> Prereq- Three of BSE 411/417, 416/418 or CE 495,498,431,451 Coreq- BSE 400 and 404	<b>BSE 404 (3) (OC) FA</b> Prereq- Three of BSE 411/417, 416/418, or CE 495,498, 431/437, 451/457 Coreq- BSE 400 and 444	
	<b>Vol Core (3) FA, SP, SU</b> Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS	<b>Vol Core (3) FA, SP, SU</b> Expanded Perspectives- choose from AH, AAH, GCUS, GCI, or SS	<b>Vol Core (3) FA, SP, SU</b> Global Citizenship United States (GCUS)	<b>BSE 402 (5) (EI) SP</b> Prereq- BSE 400 and 404 and 444 Co-req- BSE 403	<b>BSE 403 (1) (AOC) SP</b> Prereq- BSE 400 and 404 and 444 Co-req BSE 402	

**BSE Graduation requirements:** a) achieve at least a 2.0 GPA in all BSE courses; b) only one BSE course with a grade of D+, or D may be used toward graduation; c) no BSE course with a grade of D- may be used for graduation; d) achieve at least a 2.0 GPA in the required math courses.

Students also have opportunities for an Honors Concentration. See the Undergraduate Catalog for details and requirements.

Volunteer Core courses highlighted in light orange.