



**Bachelor of Science**

**Major: Agricultural and Biosystems Engineering**

**2021-2022 Sample 4-Year Plan**

**Total Degree Requirements: 130 credits**

Student \_\_\_\_\_ Student ID# \_\_\_\_\_ Student Phone # \_\_\_\_\_  
 Advisor \_\_\_\_\_ Minimum GPA 2.00 Minor/Career Interest(s) \_\_\_\_\_

Students are not limited to this plan; it is meant to be used as a guide for planning purposes in consultation with your advisor. The sample schedule is one possible path to completing your degree within four years. For official program requirements, please refer to the [Undergraduate Catalog](#).

**First Year**

**Fall**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 101	Intro to ABE		1		
BIOL 103/103L	Biology Survey and Lab		3		
GE 101	Intro to Engineering and Technical Professions		1		
MATH 123	Calculus I (SGR #5)	p. Placement or MATH 115	4		
SGR #3	Social Sciences/Diversity (SGR #3)		3		
CMST 101	Fundamentals of Speech (SGR #2)		3		
<b>Total Credit Hours</b>			15		

**Spring**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 132	Engineering Tools for ABE		1	S	
CHEM 112/112L	General Chemistry I and Lab	p. MATH 114 or higher	4		
ENGL 101	Composition I (SGR #1)	p. Placement	3		
GE 121	Graphics I		1		
MATH 125	Calculus II	p. MATH 123	4		
SGR #4	Arts and Humanities/Diversity (SGR #4)		3		
<b>Total Credit Hours</b>			16		

**Second Year**

**Fall**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 343/343L	Properties of Biomaterials & Lab		3	F	
EM 214	Statics	p. MATH 123	3		
GE 123	Computer Aided Drawing	p. GE 121	1		
MATH 225	Calculus III	p. MATH 125	4		
PHYS 211/211L	Physics I and Lab (SGR #6)	c. MATH 123	4		
<b>Total Credit Hours</b>			15		

**Spring**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 222	Project Development for ABE		1	S	
EM 215	Dynamics	p. EM 214	3		
MATH 321	Differential Equations	p. MATH 125	3		
PHYS 213/213L	Physics II and Lab (SGR #6)	p. PHYS 211/L and MATH 125	4		
SGR #3	Social Sciences/Diversity (SGR #3)		3		
SGR #4	Arts and Humanities/Diversity (SGR #4)		3		
<b>Total Credit Hours</b>			17		



**Third Year**

**Fall**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 314/314L	Ag Power and Machines & Lab	p. EM 215	4	F	
CSC 130 or CSC 150	Visual BASIC or Computer Science I		3		
EE 300/300L	Circuits and Lab	p. MATH 125	3	F	
EM 321	Mechanics of Materials	p. EM 214	3		
ME 314	Thermodynamics		3	F	
<b>Total Credit Hours</b>			16		

**Spring**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 444/444L	Unit Operations and Lab		4	S	
CHEM 108/108L or CHEM 326/326L	Organic and Biochemistry and Lab (4,1) or Organic Chemistry I and Lab (3, 1)	CHEM 108 - p. CHEM 106 CHEM 326 - p. CHEM 114	4		
ENGL 277	Technical Communications (SGR #1)	p. ENGL 101 and GE 101, GE 109, PHYS 109, or PHYS 119 or instructor consent	3		
	TECH ELECTIVE*	Select from Emphasis - Food and Biomaterials, Power and Machinery, Structures and Environment, Water and Natural Resources	3		
	TECH ELECTIVE*	COE 300 level or higher; Select from Emphasis - Food and Biomaterials, Power and Machinery, Structures and Environment, Water and Natural Resources	3		
<b>Total Credit Hours</b>			17		

**Summer**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 494 or ABE 496 or ABE 498	Internship or Field Experience or Undergraduate Research/Scholarship		2		
<b>Total Credit Hours</b>			2		

**Fourth Year**

**Fall**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 411	Design Project III		2	F	
ABE 434/434L	Natural Resources Engineering and Lab	c. EM 331	4	F	
ABE 463/463L	Instrumentation and Lab	p. EE 300	3	F	
EM 331	Fluid Dynamics	p. EM 215, recommend fall section	3		
	TECH ELECTIVE*	Select from Emphasis - Food and Biomaterials, Power and Machinery, Structures and Environment, Water and Natural Resources	3		
<b>Total Credit Hours</b>			15		

**Spring**

Prefix + Number	Course Title	Prerequisites/Comments	Credits	Semester	Grade
ABE 324/324L	Ag Structures and Environment & Lab	p. ME 314 and EM 331	4	S	
ABE 422	Design Project IV		2	S	
ABE 464/464L	Monitoring and Control & Lab	p. ABE 463	2	S	
STAT 281, STAT 381 or MATH 331	Introduction to Statistics or Advanced Engineering Mathematics	p. MATH 103 or higher p. MATH 125 p. MATH 321	3		
	TECH ELECTIVE*	COE 300 level or higher; Select from Emphasis - Food and Biomaterials, Power and Machinery, Structures and Environment, Water and Natural Resources	3		
	TECH ELECTIVE*	Select from Emphasis - Food and Biomaterials, Power and Machinery, Structures and Environment, Water and Natural Resources	3		
<b>Total Credit Hours</b>			17		

**Comments/Notes**

Students from all academic majors can pursue graduation with Fishback Honors College distinction. View the [Honors program requirements](#).

\*Select Emphasis from Catalog – Food and Biomaterials, Power and Machinery, Structures – and Environment, or Water and Natural Resources.

**Information Subject to Change. This is not a contract.**

p. = Course Prerequisite  
Semester: F = Fall, S = Spring, SU = Summer