

**AGRICULTURAL ENGINEERING CURRICULUM  
ANIMAL PRODUCTION SYSTEMS ENGINEERING OPTION**

A total of 128 credits required for graduation  
(2017-2018 Catalog)

**I. Communications (10 credits)**

3 cr.	Engl 150 (FSSS)	Critical Thinking and Communication
3 cr.	Engl 250 (FSSS)	Written, Oral, Visual, and Electronic Composition
3 cr.	Comm. Elect.	Select one of the courses below:
	<i>Engl 309 (FS)</i>	<i>Report and Proposal Writing</i>
	<i>Engl 314 (FSSS)</i>	<i>Technical Communication</i>
	<i>Sp Cm 212 (FSSS)</i>	<i>Fundamentals of Public Speaking</i>
	<i>Ag Eds 311 (FS)</i>	<i>Presentation and Sales Strategies for Ag Audiences</i>
	<i>Mkt 343 (FS)</i>	<i>Personal Sales</i>
1 cr.	Lib 160 (FSSS)	Library Instruction

**II. Mathematical Sciences (14 credits)**

4 cr.	Math 165 (FSSS)	Calculus I
4 cr.	Math 166 (FSSS)	Calculus II
3 cr.	Math 266 (FSSS)	Elementary Differential Equations
3 cr.	Stat 305 (FSSS)	Engineering Statistics

**III. Biological, Chemical, Physical Sciences (13 credits)**

3 cr.	Biology Elect.	Select one of the courses below:
	<i>BIOL 251 (S)</i>	<i>Biological Processes in the Environment</i>
	<i>BIOL 211(FS)</i>	<i>Principles of Biology I</i>
4 cr.	CHEM 167 (FS)	General Chemistry for Engineering Students
1 cr.	CHEM 167L (FS)	Laboratory in General Chemistry for Engineering
5 cr.	PHYS 221 (FSSS)	Introduction to Classical Physics I

**IV. Social Sciences and Humanities (12 credits)**

3 cr.	U. S. Diversity Course (Select from University-approved list).	
3 cr.	International Perspectives Course (Select from University-approved list).	
6 cr.	Social Science and Humanities Electives (Select from CALS-approved list).	

**V. Engineering Core (23 credits)**

R cr.	ENGR 101 (FS)	Engineering Orientation
1 cr.	A B E 110 (S)	Experiencing Agricultural and Biosystems Engineering
3 cr.	A B E 160 (FS)	Engineering Problems with Computer Applications Laboratory
3 cr.	A B E 170 (FS)	Engineering Graphics and Introductory Design
3 cr.	E M 274 (FSSS)	Statics of Engineering
3 cr.	E M 324 (FSSS)	Mechanics of Materials
1 cr.	E M 327 (FSSS)	Mechanics of Materials Laboratory
3 cr.	E M 378 (FSSS)	Mechanics of Fluids
3 cr.	I E 305 (FSSS)	Engineering Economic Analysis
3 cr.	M E 231 (FS)	Thermodynamics

**VI. Agricultural Engineering Core (21 credits)**

1 cr.	A B E 201 (FS)	Entrepreneurship and Internship Seminar
3 cr.	A B E 216 (F)	Fundamentals of Agricultural and Biological Engineering

2 cr.	A B E 218 (S)	Project Management and Design
1 cr.	Computer Graphics	Select two of the courses below:
	<i>A B E 271 (FS)</i>	<i>Engineering Applications of Parametric Solid Modeling</i>
	<i>A B E 272 (FS)</i>	<i>Parametric Solid Models, Drawings, Assemblies using Pro/ENGINEER</i>
	<i>A B E 273 (FS)</i> preferred	<i>CAD for Process Facilities and Land Use Planning</i>
3 cr.	A B E 316 (FS)	Computer Applications and Systems Modeling
4 cr.	A B E 363 (FS)	Agri-Industrial Applications of Electric Power and Electronics
3 cr.	A B E 404 (F)	Instrumentation for Agricultural and Biological Engineering
2 cr.	A B E 415 (FS)	Agricultural Engineering Design I
2 cr.	A B E 416 (FS)	Agricultural Engineering Design II

**VII. Animal Production Systems Engineering Option (35 credits)**

3 cr.	A B E 469 (S)	Grain Processing and Handling
3 cr.	A B E 472 (S-even)	Design of Environmental Systems for Agricultural Structures
2 cr.	A B E 475 (FS)	APSE Practicum
3 cr.	A B E 478 (S-odd)	Design of Agricultural Structures
3 cr.	A B E Elect	Select one of the courses below:
	<i>A B E 431 (F)</i>	<i>Design and Evaluation of Soil and Water Conservation Systems</i>
	<i>A B E 340 (F)</i>	<i>Functional Analysis and Design of Agricultural Field Machinery</i>
	<i>A B E 408 (F)</i>	<i>GIS and Natural resource Management</i>
	<i>A B E 480 (F)</i>	<i>Engineering Analysis of Biological Systems</i>
2 cr.	AN S 114	Survey of the Animal Industry
3 cr.	AN S/AGRON. Elect.	Select one of the courses below:
	<i>AGRON 206 (FS)</i>	<i>Introduction to Meteorology</i>
	<i>AN S 223 (FS)</i>	<i>Poultry Science</i>
	<i>AN S 225 (FS)</i>	<i>Swine Science</i>
	<i>AN S 226 (FS)</i>	<i>Beef Cattle Science</i>
	<i>AN S 229 (FS)</i>	<i>Sheep Science</i>
	<i>AN S 235 (F)</i>	<i>Dairy Cattle Science</i>
3 cr.	C E 332 (FS)	Structural Analysis I
3 cr.	C E 333 (FS)	Structural Steel Design I
3 cr.	C E 334 (FSSS)	Reinforced Concrete Design I
3 cr.	Math/Science	Select one of the courses below:
	<i>AGRON 181 (S)</i>	<i>Introduction to Crop Science</i>
	<i>AGRON 182 (S)</i>	<i>Introduction to Soil Science</i>
	<i>CHEM 178 (FSSS)</i>	<i>General Chemistry II</i>
	<i>MATH 207 (FSSS)</i>	<i>Matrices and Linear Algebra</i>
	<i>MATH 265 (FSSS)</i>	<i>Calculus III</i>
4 cr.	M E 436 (FSSS)	Heat Transfer

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