Agricultural and Biological Engineering Technical Electives
Technical electives are upper-level engineering courses. Students can choose from the recommended list below or seek consent of their advisor for other alternatives. A minimum of 20 hours is required.

At least 12 hours of course work selected from:		Hours
ABE 361	Principles of Off-Road Machines	3
ABE 374	Environmental Control for Biological Buildings	3
ABE 397	Independent Study	1-4
ABE 420	Kinem & Dynamics of Mechanical Systems	
ABE 425[1]	Engineering Measurement Systems	4
ABE 426	Applied Machine Vision	3
ABE 436	Renewable Energy Systems	3-4
ABE 455	Erosion and Sediment Control	2
ABE 456	Land and Water Resources Engineering	3
ABE 459	Drainage and Water Management	3-4
ABE 463	Eletrohydraulic Systems	3
ABE 466	Engineering Off-Road Vehicles	3
ABE 469	Industry-Linked Design Project	4
ABE 476	Indoor Air Quality Engineering	3
ABE 479	Light Frame Structure Design	3
ABE 482	Package Engineering	3
ABE 483	Engineering Properties of Food Materials	3
ABE 485	Food and Process Engineering Design	2
ABE 487	Grain Drying and Conditioning	3
ABE 488	Bioprocessing Grains for Fuels	3
ABE 489	Corn Milling Process Design	3
ABE 497	Independent Study	1-4

Remainder of the 20 hours of course work selected from:		Hours
CEE 311	Engineering Surveying or CEE 312 Route Surveying	4
CEE 330	Environmental Engineering	3
CEE 350	Water Resources Engineering	3
CEE 360	Structural Engineering	3
CEE 380	Geotechnical Engineering	3
CEE 450	Surface Hydrology	3
CEE 460	Steel Structures, I	3
CEE 461	Reinforced Concrete, I	3
CHBE 221	Principles of Chemical Engineering	3
CHBE 421	Momentum and Heat Transfer	4
CHBE 422	Mass Transfer Operations	4
GE 330	OR Methods for Profit and Value Engineering	3
ME 330	Engineering Materials	4
ME 350	Design for Manufacturability	3
ME 370	Mechanical Design, I	3
ME 461	Computer Controls of Mechanical Systems	3-4
MFGE 310	Manufacturing Systems	3
MFGE 450	Information Management in Manufacturing	3
PHYS 214	Univ. Physics: Quantum Physics	2

or any 300- or 400-level engineering course approved by advisor.

[1]This course is strongly recommended.
[2]Students must take a department-approved capstone design course.