TO: The Faculty of the College of Engineering

FROM: The School of Agricultural and Biological Engineering

RE: Curriculum Changes - Agricultural Engineering Plan of Study

The faculty of the School of Agricultural & Biological Engineering have approved the following changes to the curriculum for Agricultural Engineering. The requested changes to the plan of study decrease the credit hours required for English Composition from 4 credits to 3 credits and increase the 2 credits Humanities selective to 3 credits.

Summary of Changes:

1. The English Composition requirement has been reduced from 4 credits to 3 credits.
2. The 2 credit Humanities selective has been changed to 3 credits

Reasons:

1. The College of Agriculture has updated the English Composition Core Requirement so that it may be fulfilled with 3 credits, rather than 4. Adjusting the Agricultural Engineering Plan of Study to incorporate the change provides additional flexibility to students and better aligns with First Year Engineering's Plan of Study and the College of Engineering's general education requirements.

Agricultural Engineering: Minimum Degree Requirements; Credit Hours Required for Graduation

Present	**Total Credit Hours**	**128**	**Proposed**	**Total Credit Hours**	**128**
Courses		***Credit Hours***	***Courses***		***Credit Hours***
Mathematics and Basic Sciences			**Mathematics and Basic Sciences**		
Calculus: MA16500 (or 16100), 16600 (or 16200), 26100, 26200		**16**	Calculus: MA16500 (or 16100), 16600 (or 16200), 26100, 26200		**16**
Chemistry: CHM 11500, 11600 or CS 15900 (AE option)		**8/7**	Chemistry: CHM 11500, 11600 or CS 15900 (AE option)		**8/7**
Physics: PHYS 17200, 24100		**7**	Physics: PHYS 17200, 24100		**7**
Biological Sciences			**Biological Sciences**		
Electives		**8**	Electives		**8**
Engineering Tools and Skills			**Engineering Tools and Skills**		
ENGR 13100, ENGR 13200		**4**	ENGR 13100, ENGR 13200		**4**
Professional Development			**Professional Development**		
ABE 29000, 49000		**2**	ABE 29000, 49000		**2**
Agricultural			**Agricultural**		
AGRY 25500 and a selective (any course taught in the College of Agriculture)		**6**	AGRY 25500 and a selective (any course taught in the College of Agriculture)		**6**
General Education Courses			**General Education Courses**		
Students must satisfy the requirements of both the College of Engineering's General Education Program and the College of Agriculture's Core. Selections must be chosen from approved lists in accordance with counsel from a faculty advisor. ENGL 10600 and COM 11400 are required, 3 credit hours must be in economics (UCC approved) and 3 must be in the humanities (UCC approved). The remaining credit hours needed to attain the minimum of 24 should be chosen carefully and should also be used to meet College of Agriculture requirements for International Understanding and Multicultural Awareness.		**24**	Students must satisfy the requirements of both the College of Engineering's General Education Program and the College of Agriculture's Core. Selections must be chosen from approved lists in accordance with counsel from an advisor. COM 11400 and ***3 credits of English Composition are required***, 3 credit hours must be in economics (UCC approved) and 3 must be in the humanities (UCC approved). The remaining credit hours needed to attain the minimum of 24 should be chosen carefully and should also be used to meet College of Agriculture requirements for International Understanding and Multicultural Awareness.		**24**
Core Engineering Courses			**Core Engineering Courses**		
Mechanics: ME 27000, 27400, NUCL 27300		**9**	Mechanics: ME 27000, 27400, NUCL 27300		**9**
Computations and Thermodynamics: ABE 20500, 21000		**6**	Computations and Thermodynamics: ABE 20500, 21000		**6**
Engineering Fundamentals and Sciences: ABE 30500, 31400, 45000, CE 34000, 34300; ABE 32000 and ABE 43500 (AE) or 6 cr. Technical Selectives (ENRE)		**19**	Engineering Fundamentals and Sciences: ABE 30500, 31400, 45000, CE 34000, 34300; ABE 32000 and ABE 43500 (AE) or 6 cr. Technical Selectives (ENRE)		**19**
Design: ABE 32500, 33000, 48400, 48600		**11**	Design: ABE 32500, 33000, 48400, 48600		**11**

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Engineering Technical Selective	**6**	**Engineering Technical Selective**	**6**
Other Electives	**2/3**	**Other (Free) Electives**	**2/3**

Bernard A. Engel
Professor and Head
Agricultural and Biological Engineering Department

Date: December 1st, 2016

Agricultural Engineering Plan of Study Revisions

Present				Proposed			
Freshman Year							
First Semester							
(4)	CHM	11500	General Chemistry I	(4)	CHM	11500	General Chemistry I
(4)	ENGL	10600	English Composition I	***(3)***			***English Composition Selective***
(2)	ENGR	13100	Transforming Ideas to Innovation I	(2)	ENGR	13100	Transforming Ideas to Innovation I
(4)	MA	16500	Plane Analytic Geometry and Calculus I	(4)	MA	16500	Plane Analytic Geometry and Calculus I
(3)			UCC Approved Humanities Selective	(3)			UCC Approved Humanities Selective
16				**16**			
Second Semester							
(4/3)	CHM	11600	General Chemistry II (req'd. for ENRE; option for AE) or CS 15900 Programming Appl. for Engrs. (AE option)				
(3)	COM	11400	Fundamentals of Speech Communications				No Change
(4)	MA	16600	Plane Analytic Geometry and Calculus II				
(4)	PHYS	17200	Modern Mechanics				
(2)	ENGR	13200	Transforming Ideas to Innovations II				
18				**18**			
Sophomore Year							
Third Semester							
(3)	ABE	20500	Computations for Engineering Systems				
(3)	ME	27000	Basic Mechanics I				
(4)	MA	26100	Multivariate Calculus				No Change
(3)	PHYS	24100	Electricity and Optics				
(1)	ABE	29000	Sophomore Seminar				
(3)			Economics Selective				
18				**18**			
Fourth Semester							
(3)	ABE	21000	Thermodynamics Principles of Engineering and Biological Systems				
(4)	MA	26200	Linear Algebra and Differential Equations				
(3)	ME	27400	Basic Mechanics II				No Change
(3)	NUCL	27300	Mechanics of Materials				
(4)	BIOL	11000	Fundamentals of Biology I or BTNY 11000 Introduction to Plant Science				
16				**16**			

Present				Propose			
Junior Year							
Fifth Semester							
(3)	ABE	30500	Physical Properties of Biol. Materials				
(4)	ABE	32500	Soil and Water Resource Engineering				
(3)	AGRY	25500	Soil Science				No Change
(3)	CE	34000	Hydraulics (or 4 cr. ME 30900 in place of CE 34000 and 34100)				
(1)	CE	34300	Hydraulics Lab (see ME 30900 opt. abv.)				
(3)			Agricultural, Humanities, or Social Sciences Selective				
17				**17**			
Sixth Semester							
(3)	ABE	33000	Design of Machine Components				
(3)	ABE	31400	Design of Electronic Systems				
(4)	BTNY	11000	Intro. to Plant Science or BIOL 11000 or College of Agriculture Biol. Sci. Selective				No Change
(3)	ABE	32000	Solid Modeling, Simulation, and Analysis (AE option) or ENRE Technical Selective				
(3)			Agricultural, Humanities, or Social Sciences Selective				
16				**16**			
Senior Year							
Seventh Semester							
(3)	ABE	45000	Finite Element Method in Design and Optimization				
(1)	ABE	49000	Professional Practice in Agr.& Biol. Engr.				
(1)	ABE	48400	Project Planning and Management				No Change
(3)	ABE	43500	Hydraulic Control Systems for Mobile Equipment (AE) or ENRE Technical Selective				
(3)			Engineering Technical Selective				
(3)			Written & Oral Communication Selective				
14				**14**			
Eighth Semester							
(3)	ABE	48600	Agricultural Engineering Design	(3)	ABE	48600	Agricultural Engineering Design
(3)			Engineering Technical Elective	(3)			Engineering Technical Elective
(2)			Humanities or Social Science Selective	***(3)***			***Humanities or Social Science Selective***
(3)			Hum. or Soc. Sci. Selective (300+ level)	(3)			Hum. or Soc. Sci. Selective (300+ level)
(2/3)			Free Elective (3 cr. if took CS 15900)	(2/3)			Free Elective (3 cr. if took CS 15900)
14/ 15				**14/15**			
Total 128				**Total 128**			