

Departmental/Program Major Courses (34 credits)

- ____ (3) ABE 20500 Computations For Engineering Systems
- ____ (3) ABE 21000 Thermodynamics Principles Of Engineering And Biological Systems
- ____ (1) ABE 29000 Sophomore Seminar ([satisfies UCC & COA Science, Technology & Society requirement](#))
- ____ (3) ABE 30500 Physical Properties Of Biological Materials
- ____ (3) ABE 31400 Design Of Electronic Systems
- ____ (3) ABE 32000 Solid Modeling, Simulation, And Analysis
- ____ (4) ABE 32500 Soil And Water Resource Engineering
- ____ (3) ABE 33000 Design Of Machine Components
- ____ (3) ABE 43500 Hydraulic Control Systems For Mobile Equipment
- ____ (3) ABE 45000 Finite Element Method IN Design And Optimization
- ____ (1) ABE 48400 Project Planning And Management
- ____ (3) ABE 48600 Agricultural Engineering Design (Capstone) ([satisfies COA Capstone or Experience Selective](#))
- ____ (1) ABE 49000 Professional Practice in Agricultural and Biological Engineering

Other Department/Program Course Requirements (91-95 credits)

- ____ (3) AGRY 25500 Soil Science
- ____ (2) ENGR 13100 Transforming Ideas to Innovation I ([satisfies UCC Information Literacy requirement](#))
- ____ (2) ENGR 13200 Transforming Ideas to Innovation II
- ____ (4) CE 34000 Hydraulics (3) and CE 34300 (1) Elementary Hydraulics Laboratory or
____ (4) ME 30800 Fluid Mechanics (3) and ME 30801 (1) Fluid Mechanics Laboratory
- ____ (3) CHM 11510 General Chemistry I ([satisfies a UCC Science & COA Chemistry requirement](#)) and
____ (1) CHM 11520 General Chemistry I Laboratory or (1) CHM 11530 General Chemistry I Laboratory
- ____ (3-4) (4) CS 17700 Programming with Multimedia Objects or
____ (3) CS 15900 C Programming or
____ (3) CHM 11610 General Chemistry II ([satisfies a UCC Science & COA Chemistry requirement](#)) and
____ (1) CHM 11620 General Chemistry II Laboratory or (1) CHM 11630 General Chemistry II Laboratory
- ____ (4) MA 16500 Analytic Geometry & Calculus I or (5) MA 16100
[\(satisfies UCC Quantitative Reasoning & COA Calculus requirements\)](#)
- ____ (4) MA 16600 Analytic Geometry & Calculus II or (5) MA 16200 ([satisfies COA Additional math or science requirement](#))
- ____ (4) MA 26100 Multivariate Calculus
- ____ (4) MA 26200 Linear Algebra and Differential Equations
- ____ (3) ME 27000 Basic Mechanics I
- ____ (3) ME 27400 Basic Mechanics II
- ____ (3) NUCL 27300 Mechanics Of Materials
- ____ (4) PHYS 17200 Modern Mechanics
- ____ (3) PHYS 24100 Electricity And Optics
- ____ (3) [Economics Selective](#) ([satisfies UCC Human Cultures: Behavioral/Social Sci requirement](#))
- ____ (3) [Agricultural Selective](#)
- ____ (8) [Biological Science Selective](#) (two or more courses)
- ____ (6) [Engineering Technical Selective](#) (two or more courses)
- ____ (3) [Human Cultures: Humanities Selective](#) ([satisfies UCC Human Cultures: Humanities requirement](#))
- ____ (6) [Humanities or Social Science Selective](#) (two or more courses)
- ____ (3) [Humanities or Social Science Selective](#) (30000+ level)
- ____ (3) [Oral Communication Selective](#) ([satisfies UCC Oral Communication requirement](#))
- ____ (3-4) [Written Communication Selective](#) ([Written Communication requirement](#))
- ____ (3) [Written or Oral Communication Selective](#) (20000+ level)
- ____ [International Understanding](#) (6 credits - may be met with UCC or COA Core Requirements)

Electives (0-3 credits)

- ____ (0-3) _____

The student is ultimately responsible for knowing and completing all degree requirements. The myPurduePlan powered by DegreeWorks is the knowledge source for specific requirements and completion. 128 semester credits required for degree completion. 2.0 Graduation GPA required for Bachelor of Science degree.

Suggested Arrangement of Courses; Please see your academic advisor for other options creating your personalized plan of study
Note that course placement is dependent upon both pre-requisite requirements as well as limited offering terms
(ABE courses ONLY offered in Fall or Spring terms – not both)

PRE-ABE Curriculum – must earn C- or higher in all Pre-ABE courses					
Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
3	CHM 11510*	pre/co: MA 16100/16500	3-4	CS 17700 or CS 15900 or CHM 11610* and CHM 11620* or CHM 11630*	pre/co: CHM 11510 pre/co: CHM 11610
1	CHM 11520* or CHM 11530*	pre/co: CHM 11510			
2	ENGR 13100*		2	ENGR 13200	ENGR 13100
4-5	MA 16500* or MA 16100	min. ALEKS score=85%	4-5	MA 16600* or MA 16200	MA 16100/16500 (≥ C-)
3	Human Cultures: Humanities Selective*		4	PHYS 17200*	pre/co: MA 16100/16500
3-4	Written Communication Selective*		3	Oral Communication Selective*	
16-18			16-18		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	ABE 20500†	ENGR 13200, pre/co: PHYS 17200	3	ABE 21000†	CHM 11500, PHYS 17200
1	ABE 29000**		4	MA 26200	MA 26100 (≥ C-)
4	MA 26100	MA 16200/16600 (≥ C-)	3	ME 27400	ME 27000, pre/co: MA 26200
3	ME 27000	ENGR 13200, PHYS 17200, MA 16600, pre/co: MA 26100	3	NUCL 27300	ME 27000
3	PHYS 24100	PHYS 17200	4	Biological Science Selective	
3	Economics Selective*				
17			17		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3	ABE 30500†	ABE 20500	3	ABE 31400†	MA 26200
4	ABE 32500†	MA 26200, pre/co: AGRY 25500	3	ABE 32000†	MA 26200, NUCL 27300, ME 27400
3	AGRY 25500		3	ABE 33000†	NUCL 27300, pre/co: ABE 20500
3	CE 34000	ME 27400	4	Biological Science Selective	
1	CE 34300	ME 27400 pre/co: CE 34000	3	Humanities or Social Science Selective	
3	Agricultural Selective				
17			16		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
3	ABE 43500†	CE 34000, CE 34300	3	ABE 48600†	ABE 48400
3	ABE 45000†	MA 26200, NUCL 27300	3	Engineering Technical Selective	
1	ABE 48400†	ABE 32500, ABE 33000	3	Humanities or Social Science Selective	
1	ABE 49000†	ABE 29000	3	Humanities or Social Science Selective (30000+)	
3	Engineering Technical Selective		0-3	Elective	
3	Written or Oral Communication Selective (20000+)				
14			13-15		

* Fulfills University [Undergraduate Core Curriculum \(UCC\) Requirement](#)

* Both in-person or virtual options are acceptable

† Indicates Fall only course; ‡ Indicates Spring only course

[International Understanding](#) (6 credits) may be met with UCC or COA Core Requirements.

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