

Departmental/Program Major Courses (34 credits)

Required 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 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
- _____ (4) CHM 11500 General Chemistry I ([satisfies a UCC Science requirement](#))
- _____ (4) CHM 11600 General Chemistry II ([satisfies a UCC Science requirement](#)) or
_____ (3) CS 15900 C Programming or
_____ (4) CS 17700 Programming with Multimedia Objects
- _____ (4) MA 16500 Analytic Geometry & Calculus I or (5) MA 16100 ([satisfies UCC Quantitative Reasoning requirement](#))
- _____ (4) MA 16600 Analytic Geometry & Calculus II or (5) MA 16200
- _____ (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 \(satisfies UCC Human Cultures: Behavioral/Social Sci requirement & COA Economics selective\)](#)
- _____ (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)
- _____ [Multicultural Awareness](#) (3 credits - may be met with UCC or COA Core Requirement)

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. The student is ultimately responsible for knowing and completing all degree requirements. The myPurduePlan powered by Degree Works is the knowledge source for specific requirements and completion.

Suggested Arrangement of Courses

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)

Please see your academic advisor for other options creating your personalized plan of study

PRE-ABE Curriculum – must earn C- or higher in all Pre-ABE courses					
Credits	Fall 1st Year	Prerequisite	Credits	Spring 1st Year	Prerequisite
4	CHM 11500*	pre/co: MA 16100/16500	3-4	CHM 11600* or CS 15900 or (CS 17700, PABE only) Preferred: CS 15900 or CS 17700	CHM 11500
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, MA 26200 (co)
3	ME 27000	ENGR 13200, PHYS 17200, MA 16600, MA 26100 (co) (≥ C-)	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 (≥ C-)
4	ABE 32500[†]	AGRY 25500 (co), MA 26200	3	ABE 32000[‡]	MA 26200, NUCL 27300, ME 27400
3	AGRY 25500		3	ABE 33000[‡]	NUCL 27300, ABE 20500 (co)
3	CE 34000	ME 27400	4	Biological Science Selective	
1	CE 34300	CE 34000 (co) ME 27400	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 Requirement.

[†] Indicates Fall only course

[‡] Indicates Spring only course

[International Understanding \(6 credits\)](#) and [Multicultural Awareness \(3 credits\)](#) may be met with UCC or COA Core Requirements.

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