PURDUE
U N I V E R S I T Y

Environmental and Natural Resources Engineering
Department of Agricultural and Biological Engineering

Departmental/Program Major Courses (25 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
_____ (4) ABE 32500 Soil and Water Resource Engineering
_____ (3) ABE 42500 Water Quality Engineering or
         _____ (3) ABE 42600 Ecological Restoration Engineering
_____ (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 (101-105 credits)

_____ (3) AGRY 25500 Soil Science
_____ (4) CE 34000 Hydraulics *(3)* and CE 34300 *(1)* Elementary Hydraulics Laboratory
_____ (3) CE 38300 Geotechnical Engineering I
_____ (3) CHM 11510 General Chemistry I I *(satisfies a UCC Science & COA Chemistry requirement)*
_____ (1) CHM 11520 General Chemistry I Laboratory
_____ (3) CHM 11610 General Chemistry II I *(satisfies a UCC Science & COA Chemistry requirement)*
_____ (1) CHM 11620 General Chemistry II Laboratory
_____ (3) CS 15900 C Programming or
         _____ (4) CS 17700 Programming with Multimedia Objects
_____ (2) ENGR 13100 Transforming Ideas to Innovation I *(satisfies UCC Information Literacy requirement)*
_____ (2) ENGR 13200 Transforming Ideas to Innovation II
_____ (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
_____ (4) PHYS 17200 Modern Mechanics
_____ (3) PHYS 24100 Electricity and Optics
_____ (3) Agricultural Selective
_____ (8) Biological Science Selective (two or more courses)
_____ (6) Engineering Technical Selective (two or more courses)
_____ (6) Environmental and Natural Resources Engineering Technical Selective (two or more courses)
_____ (3) Economics Selective *(satisfies UCC Human Cultures: Behavioral/Social Sci requirement & COA Economics selective)*
_____ (3) Human Cultures: Humanities Selective *(satisfies UCC Human Cultures: Humanities requirement)*
_____ (6) Humanities or Social Science Selective
_____ (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 (0-2 credits)

_____ (0-2) _____

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.

PURDUE UNIVERSITY

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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 15900 or CS 17700 (preferred)	
1	CHM 11520 (preferred) or CHM 11530	pre/co: CHM 11510	2	ENGR 13200	ENGR 13100
2	ENGR 13100*		4	PHYS 17200*	pre/co: MA 16100/16500
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		3	Oral Communication Selective*	
3-4	Written 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†		3	AGRY 25500	
3	CHM 11610	CHM 11510	4	MA 26200	MA 26100 (≥ C-)
1	CHM 11620¥	Pre/co: CHM 11610	3	ME 27400	ME 27000, pre/co: MA 26200
4	MA 26100	MA 16200/16600 (≥ C-)	4	Biological Science Selective	
3	ME 27000	ENGR 13200, PHYS 17200, MA 16600, pre/co: MA 26100			
3	PHYS 24100	PHYS 17200			
18			**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	CE 38300	pre/co: CE 34000
3	CE 34000	ME 27400	3	ABE 42500† or ABE 42600‡	ABE 32500
1	CE 34300	Pre/co: CE 34000	3	Agricultural Selective	
3	Humanities or Social Science Selective		4	Biological Science Selective	
3	Economics Selective				
17			**16**		

Credits	Fall 4th Year	Prerequisite	Credits	Spring 4th Year	Prerequisite
1	ABE 48400†	ABE 32500, ABE 33000	3	ABE 48600‡	ABE 48400
1	ABE 49000†	ABE 29000	3	Environmental and Natural Resources Engineering Technical Selective	
3	Environmental and Natural Resources Engineering Technical Selective		3	Humanities or Social Science Selective	
3	Engineering Technical Selective		3	Humanities or Social Science Selective (30000+)	
3	Engineering Technical Selective		0-2	Elective	
3	Written or Oral Communication Selective (20000+)				
14			**12-14**		

* Fulfills University Undergraduate Core Curriculum (UCC) Requirement

¥ In-person lab required

† Indicates Fall only course

‡ Indicates Spring only course

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