

**Departmental/Program Major Courses (25 credits)**

**Required 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 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
- \_\_\_\_\_ (4) CHM 11500 General Chemistry I ([satisfies a UCC Science requirement](#))
- \_\_\_\_\_ (4) CHM 11600 General Chemistry II ([satisfies a UCC Science requirement](#))
- \_\_\_\_\_ (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 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
- \_\_\_\_\_ (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)
- \_\_\_\_\_ [Multicultural Awareness](#) (3 credits - may be met with UCC or COA Core Requirement)

**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. 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	<b>CHM 11500*</b>	pre/co: MA 16100/16500	3-4	<b>CS 15900 or (CS 17700, PABE only)</b>	CHM 11500
2	<b>ENGR 13100*</b>		2	<b>ENGR 13200</b>	ENGR 13100
4-5	<b>MA 16500* or MA 16100</b>	min. ALEKS score=85	4	<b>PHYS 17200*</b>	pre/co: MA 16100/16500
3	<a href="#">Human Cultures: Humanities Selective</a>		4-5	<b>MA 16600 or MA 16200</b>	MA 16100/16500 (≥ C-)
3-4	<a href="#">Written Communication Selective*</a>		3	<a href="#">Oral Communication Selective*</a>	
<b>16-18</b>			<b>16-18</b>		

Credits	Fall 2nd Year	Prerequisite	Credits	Spring 2nd Year	Prerequisite
3	<b>ABE 20500<sup>†</sup></b>	ENGR 13200	3	<b>ABE 21000<sup>‡</sup></b>	CHM 11500, PHYS 17200
1	<b>ABE 29000<sup>†</sup></b>		3	<b>AGRY 25500</b>	
4	<b>CHM 11600</b>	CHM 11500	4	<b>MA 26200</b>	MA 26100 (≥ C-)
4	<b>MA 26100</b>	MA 16200/16600 (≥ C-)	3	<b>ME 27400</b>	ME 27000, MA 26200 (co)
3	<b>ME 27000</b>	ENGR 13200, PHYS 17200, MA 16600, MA 26100 (co)	4	<a href="#">Biological Science Selective</a>	
3	<b>PHYS 24100</b>	PHYS 17200			
<b>18</b>			<b>17</b>		

Credits	Fall 3rd Year	Prerequisite	Credits	Spring 3rd Year	Prerequisite
3	<b>ABE 30500<sup>†</sup></b>	ABE 20500	3	<b>ABE 31400<sup>‡</sup></b>	MA 26200
4	<b>ABE 32500<sup>†</sup></b>	AGRY 25500 (co), MA 26200	3	<b>CE 38300</b>	CE 34000 (co)
3	<b>CE 34000</b>	ME 27400	3	<b>ABE 42500<sup>†</sup> or ABE 42600<sup>‡</sup></b>	ABE 32500
1	<b>CE 34300</b>	CE 34000 (co)	3	<a href="#">Agricultural Selective</a>	
3	<a href="#">Humanities or Social Science Selective</a>		4	<a href="#">Biological Science Selective</a>	
3	<a href="#">Economics Selective</a>				
<b>17</b>			<b>16</b>		

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

\* Fulfills University Undergraduate Core Curriculum Requirement.

<sup>†</sup> Indicates Fall only course

<sup>‡</sup> 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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