

# PLANT AND SOIL SCIENCES: PLANT BIOTECHNOLOGY AND IMPROVEMENT, BSAG

**Requirements for Students Matriculating in or before Academic Year 2024-2025.** Learn more about University Academic Regulation 3.1 (<http://catalog.okstate.edu/university-academic-regulations/#matriculation>).

**Minimum Overall Grade Point Average: 2.00**

**Total Hours: 120**

Code	Title	Hours
<b>General Education Requirements</b>		
<i>English Composition</i>		
See Academic Regulation 3.5 ( <a href="http://catalog.okstate.edu/university-academic-regulations/#english-composition/">http://catalog.okstate.edu/university-academic-regulations/#english-composition/</a> )		
ENGL 1113	Composition I	3
or ENGL 1313	Critical Analysis and Writing I	
Select one of the following:		3
ENGL 1213	Composition II	
ENGL 1413	Critical Analysis and Writing II	
ENGL 3323	Technical Writing	
<i>American History &amp; Government</i>		
Select one of the following:		3
HIST 1103	Survey of American History	
HIST 1483	American History to 1865 (H)	
HIST 1493	American History Since 1865 (DH)	
POLS 1113	American Government	3
<i>Analytical &amp; Quantitative Thought (A)</i>		
STAT 2013	Elementary Statistics (A) <sup>1</sup>	3
<i>Humanities (H)</i>		
Courses designated (H)		6
<i>Natural Sciences (N)</i>		
Must include one Laboratory Science (L) course		
CHEM 1314	Chemistry I (LN) <sup>1</sup>	4
Course designated (N)		3
<i>Social &amp; Behavioral Sciences (S)</i>		
AGEC 1113	Introduction to Agricultural Economics (S) <sup>1</sup>	3
<i>Additional General Education</i>		
Courses designated (A), (H), (N), or (S)		9
<b>Hours Subtotal</b>		<b>40</b>
<b>Diversity (D) &amp; International Dimension (I)</b>		
May be completed in any part of the degree plan		
Select at least one Diversity (D) course		
Select at least one International Dimension (I) course		
<b>College Requirements</b>		
UNIV 1111	First Year Seminar (or other approved first year seminar course)	1
ENTO 2993	Introduction to Entomology (LN)	3
<b>Departmental Requirements</b>		
Select one of the following:		3

AGCM 3103	Written Communications in Agricultural Sciences and Natural Resources	
BCOM 3113	Written Communication	
BCOM 3443	Business Communication for International Students	
ENGL 3323	Technical Writing <sup>2</sup>	
Select one of the following:		3
AGCM 3203	Oral Communications in Agricultural Sciences & Natural Resources (S)	
SPCH 2713	Introduction to Speech Communication (S)	
SPCH 3733	Elements of Persuasion (S) <sup>3</sup>	
PLNT 1213	Introduction to Plant and Soil Systems (N)	3
PLNT 2041	Career Development in Plant and Soil Sciences	1
PLNT 4033	Applied Agricultural Meteorology	3
PLNT 4080	Professional Internship	3
or PLNT 4990	Senior Thesis in Plant and Soil Sciences	
PLNT 4571	Professional Preparation in Plant and Soil Sciences	1
SOIL 2124	Fundamentals of Soil Science (N)	4
SOIL 4234	Soil Nutrient Management	4
Select one of the following:		3
MATH 1513	College Algebra (A) <sup>4</sup>	
MATH 2103	Business Calculus (A)	
MATH 2144	Calculus I (A)	
BIOL 1113	Introductory Biology (N)	4
& BIOL 1111	and Introductory Biology Laboratory (LN)	
or BIOL 1114	Introductory Biology (LN)	
CHEM 1515	Chemistry II (LN) <sup>5</sup>	5
or CHEM 1225	Chemical Principles II (LN)	
<b>Hours Subtotal</b>		<b>41</b>
<b>Major Requirements</b>		
<i>Core Courses</i>		
PBIO 1404	Plant Biology (LN)	4
PBIO 4463	Plant Physiology	3
or PLNT 4123	Plant-Environment Interactions	
or HORT 4963	Horticulture Physiology	
PLNT 2013	Applied Plant Science	3
PLNT 3012	Crops of Oklahoma	2
PLNT 4013	Principles of Weed Science	3
PLNT 4353	Plant Breeding	3
PLNT 4933	Gene Editing and Genetically Modified Crops	3
BIOL 3023	General Genetics	3
or ANSI 3423	Animal Genetics	
CHEM 3053	Organic Chemistry I	3
or CHEM 3013	Survey of Organic Chemistry	
BIOC 3713	Biochemistry I	3
or BIOC 3653	Survey of Biochemistry	
<i>Related Courses</i>		
Select 9 hours of the following:		9
BIOC 2344	Chemistry and Applications of Biomolecules	

BIOC 3723	Biochemistry and Molecular Biology Laboratory	
BIOC 3813	Biochemistry II	
CHEM 3153	Organic Chemistry II	
HORT 3113	Greenhouse Management	
HORT 4133	Temperature Stress Physiology	
HORT 4953	Plant Growth and Development	
MICR 2123	Introduction to Microbiology	
MICR 2132	Introduction to Microbiology Laboratory	
MICR 3223	Advanced Microbiology	
PBIO 4005 or PBIO 3114	Field Botany Plant Taxonomy	
PLNT 2011	Agronomic Problem Solving	
PLP 3343	Principles of Plant Pathology	
SOIL 4483	Soil Microbiology	
ENVR 4033	Ecology of Invasive Species	
NREM 4033	Ecology Of Invasive Species	
PHYS 1014	Descriptive Physics (N)	
Upper-level PLNT		
<b>Hours Subtotal</b>		<b>39</b>
<b>Electives</b>		
Select 0 hours or hours to complete required total for degree		0
<b>Total Hours</b>		<b>120</b>

- Degrees that follow this plan must be completed by the end of Summer 2030.

1

College & Departmental requirements that may be used to meet General Education requirements.

2

If ENGL 3323 Technical Writing is used to satisfy ENGL 1213 Composition II above; hours in this block are reduced by 3.

3

If used as (S) course above, hours in this block reduced by 3.

4

If used as (A) course above, hours in this block reduced by 3.

5

If used as (N) course above, hours in this block reduced by 5.

## Other Requirements

- A minimum of 40 semester credit hours and 100 grade points must be earned in courses numbered 3000 or above.
- A 2.00 GPA or higher in upper-division hours.

## Additional State/OSU Requirements

- At least: 60 hours at a four-year institution; 30 hours completed at OSU; 15 of the final 30 or 50% of the upper-division hours in the major field completed at OSU.
- Limit of: one-half of major course requirements as transfer work; one-fourth of hours earned by correspondence; 8 transfer correspondence hours.
- Students will be held responsible for degree requirements in effect at the time of matriculation and any changes that are made, so long as these changes do not result in semester credit hours being added or do not delay graduation.