

**REQUIREMENTS FOR THE BACHELOR OF SCIENCE**  
**DODGE COLLEGE OF ARTS AND SCIENCES**  
**THE UNIVERSITY OF OKLAHOMA**

Academic Year
For Students Entering the Oklahoma State System for Higher Education Summer 2023 through Spring 2024

General Requirements	
Minimum Total Credit Hours .....	122
Minimum Upper-Division Hours .....	48
Major Hours .....	34
<b>Minimum Retention/Graduation Grade Point Averages:</b>	
Overall - Combined and OU .....	2.00
Major - Combined and OU .....	2.00

Program
<b>Plant Biology: Biotechnology</b>
B787 P061
Bachelor of Science

OU encourages students to complete at least 31 hours of applicable coursework each year to have the opportunity to graduate in 4 years.

**GENERAL EDUCATION AND COLLEGE REQUIREMENTS**

Courses for fulfillment of General Education and Dodge College of Arts & Sciences requirements must be from the approved General Education course list published in the Class Schedule or at <http://www.ou.edu/gened/courses>. **Courses graded P/NP will not apply.**

**UNIVERSITY-WIDE GENERAL EDUCATION (MINIMUM 40 HOURS) AND COLLEGE REQUIREMENTS**

Code	Title	Credit Hours
<b>Core Area I: Symbolic and Oral Communication</b>		
<i>English Composition (6 hours)</i>		
ENGL 1113	Principles of English Composition	3
ENGL 1213	Principles of English Composition	3
or EXPO 1213	Expository Writing	
<i>Language (0-13 hours in the same language)</i>		
The college requirement cannot be met by high school coursework.		
	Beginning Course	0-5
	Beginning Course, continued	0-5
	Intermediate Course (2000 level) <sup>1,2</sup>	0-3
<i>Mathematics (3 hours)</i>		
	Choose one course from the General Education Mathematics list	3
<b>Core Area II: Natural Science (7 hours, including one laboratory component)</b>		
<i>Biological Science</i>		
	Choose an approved General Education Natural Science course with one of the following prefixes: BIOL, HES, MBIO, or PBIO <sup>1</sup>	3-4
<i>Physical Science</i>		
	Choose one approved General Education Natural Science course with one of the following prefixes: AGSC, ASTR, CHEM, GEOG, GEOL, GPHY, METR, or PHYS <sup>1</sup>	3-4
<b>Core Area III: Social Science (6 hours)</b>		
P SC 1113	American Federal Government	3
	Choose one course from the General Education Social Science list	3
<b>Core Area IV: Arts and Humanities (18 hours)</b>		
<i>Artistic Forms</i>		
	Choose one course from the General Education Artistic Forms list	3
<i>Western Culture</i>		
HIST 1483	United States to 1865	3
or HIST 1493	United States, 1865 to the Present	
	Choose one course from the General Education Western Culture list (excluding HIST 1483/1493)	3
<i>World Culture</i>		
	Choose one course from the General Education World Culture list	3
<i>Additional Core IV Upper-Division Arts &amp; Humanities courses</i>		
	Choose one course from Artistic Forms, Western Culture, or World Culture <sup>1,3</sup>	3
	Choose one course from Artistic Forms, Western Culture, or World Culture <sup>1,3</sup>	3
<b>Core Area V: First Year Experience (3 hours)</b>		
	Choose one course	3
<b>Total Credit Hours</b>		<b>56</b>

<sup>1</sup>College of Arts and Sciences Requirements: college requirements are not automatically fulfilled by a previous degree.

<sup>2</sup>One course at the intermediate level or demonstrated competency at that level

<sup>3</sup>6 upper-division hours, 2 courses, at the 3000- 4000-level. **Must be outside the major.**

**FREE ELECTIVES**

Electives to bring total applicable hours to the minimum total required for the degree including 48 upper-division hours.

- Some courses required for the major may also fulfill University General Education and/or Dodge College of Arts & Sciences Requirements.
- A grade of C or better must be earned in each course presented for major credit and in the required major support courses.

**MAJOR REQUIREMENTS**

- Minimum of 34 hours of major work including twenty-six (26) upper-division hours.
- BIOL 1005, PBIO 2404, and MBIO 2815 will not be accepted for major credit.

Code	Title	Credit Hours
<b>Required Major Courses</b>		
BIOL 1134	Introductory Biology: Evolution, Ecology and Diversity	4
PBIO 1114	General Botany	4
PBIO 3453	Principles of Plant Ecology	3
PBIO 3673	Practical Bioinformatics	3
PBIO 4114	Principles of Plant Physiology	4
PBIO 4313	Biotechnology Applications	3
PBIO 4534	Plant Systematics	4
PBIO 4983	Senior Capstone: Plant Biol	3
	Choose 3 hours from the following:	3
	PBIO 3113 Cell Biology	
	PBIO 3333 Genetics	
	PBIO 4843 Molecular Biology	
	Choose 3 hours of additional Upper-Division laboratory coursework in PBIO or MBIO, or research with approval of advisor	3
<b>Total Credit Hours</b>		<b>34</b>

**MAJOR SUPPORT REQUIREMENTS**

Code	Title	Credit Hours
PHYS 2414	General Physics for Life Science Oriented Majors	4
PHYS 2424	General Physics for Life Science Oriented Majors	4
PHYS 1311	General Physics Lab I	1
PHYS 1321	General Physics Lab II	1
MATH 1743	Calculus I for Business, Life and Social Sciences (or equiv.)	3
CHEM 1315	General Chemistry (or equiv.)	5
CHEM 1415	General Chemistry (Continued) (or equiv.)	5
CHEM 3053	Organic Chemistry I: Biological Emphasis	3
CHEM 3152	Organic Chemistry Laboratory: Biological Emphasis	2
CHEM 3153	Organic Chemistry II: Biological Emphasis	3
CHEM 3653	Introduction to Biochemistry	3
MBIO 3812	Fundamentals of Microbiology Laboratory	2
MBIO 3813	Fundamentals of Microbiology	3
	Choose 3 hours from:	3
	HSTM 3333 Technology and Society in World History (also fulfills Upper-Division Core IV Humanities - Western Civ.)	
	Advisor-approved alternative	
<b>Total Credit Hours</b>		<b>42</b>

More information in the catalog: (<http://ou-public.courseleaf.com/dodge-arts-sciences/biological-sciences/plant-biology-biotechnology-bachelor-science/>).

## INFORMATION CONCERNING GENERAL RULES, REGULATIONS AND MINIMUM REQUIREMENTS

**Arts and Sciences Hours:** At least 80 semester hours of liberal arts and sciences courses are required for a BA degree. At least 55 semester hours of liberal arts and sciences courses are required for a BS degree.

**Pass/No Pass Enrollment:** A maximum of 16 semester hours of free elective credit may be attempted under this option.

**Individual Studies (e.g., courses titled "Independent Study"):** A maximum of 12 total semester hours may be counted toward graduation, excluding Honors Reading and Honors Research.

**P.E. Courses:** No physical education activity courses will be counted toward the 120 semester hours of acceptable credit for graduation.

**Senior Institution Hours:** A minimum of 60 semester hours applied toward graduation must be earned at senior (4-year) institutions.

**Residency:**

- At least 15 of the final 30 hours applied toward the degree or at least 50 percent of the hours required by the institution in the major field must be satisfactorily completed at the awarding institution.
- At least 15 semester hours of upper-division major work must be completed in residence at OU.
- OU correspondence courses are *not* considered resident credit.

**Grade Point Averages:** Students must earn a minimum over all 2.00 for each of the following: Combined Retention GPA (all college grades), OU Retention GPA, GPA for all major courses, and GPA for all major courses taken at OU. Some schools and departments of the College have higher minimum grade point averages required for their students.

### SUGGESTED SEMESTER PLAN OF STUDY

This plan shows one possible grouping of courses that would allow students to graduate in four years. Please refer to the front of the degree checksheet for official requirements. Students must consult with Dodge College of Arts and Sciences and/or Department of Microbiology and Plant Biology academic advisors to verify that courses selected each semester fulfill the recommended plan and satisfy University, College of Arts and Sciences, and Plant Biology major requirements.

Year	FIRST SEMESTER		Hours	SECOND SEMESTER		Hours
<b>FRESHMAN</b>	PBIO 1114	General Botany	4	CHEM 1315	General Chemistry	5
	ENGL 1113	Principles of English Composition ( Core I )	3	ENGL 1213 or EXPO 1213	Principles of English Composition ( Core I ) or Expository Writing	3
	MATH 1743	Calculus I for Business, Life and Social Sciences ( Core I )	3		First Year Experience (Core V)	3
		Beginning Foreign Language (Core I)	5		Beginning Foreign Language continued (Core I)	5
	<b>CREDIT HOURS</b>		<b>15</b>	<b>CREDIT HOURS</b>		<b>16</b>
<b>SOPHOMORE</b>	CHEM 1415	General Chemistry (Continued)	5	BIOL 1134	Introductory Biology: Evolution, Ecology and Diversity	4
	HIST 1483 or HIST 1493	United States to 1865 ( Core IV ) or United States, 1865 to the Present	3	CHEM 3053	Organic Chemistry I: Biological Emphasis	3
	PHYS 2414	General Physics for Life Science Oriented Majors	4	PHYS 2424	General Physics for Life Science Oriented Majors	4
	PHYS 1311	General Physics Lab I	1	PHYS 1321	General Physics Lab II	1
		Intermediate Foreign Language	3		Humanities, upper-division, outside major (Gen. Ed.)	3
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>15</b>
<b>JUNIOR</b>	CHEM 3152	Organic Chemistry Laboratory: Biological Emphasis	2	PBIO 3113	Cell Biology ( or PBIO 3333 Genetics, or PBIO 4843 Molecular Bio )	3
	CHEM 3153	Organic Chemistry II: Biological Emphasis	3	PBIO 3673	Practical Bioinformatics	3
	MBIO 3812	Fundamentals of Microbiology Laboratory	2	PBIO 4534	Plant Systematics	4
	MBIO 3813	Fundamentals of Microbiology	3	HSTM 3333	Technology and Society in World History ( Core IV- Western Civ. )	3
		Non-Western Culture (Core IV)	3	P SC 1113	American Federal Government	3
		Social Science (Core III)	3			
	<b>CREDIT HOURS</b>		<b>16</b>	<b>CREDIT HOURS</b>		<b>16</b>
<b>SENIOR</b>	PBIO 3453	Principles of Plant Ecology	3	PBIO 4313	Biotechnology Applications	3
	PBIO 4114	Principles of Plant Physiology	4	PBIO 4983	Senior Capstone: Plant Biol	3
	CHEM 3653	Introduction to Biochemistry	3		Advisor-approved upper-division lab course in PBIO/ MBIO, or research	3
		Humanities, upper-division, outside major (Gen. Ed.)	3		Understanding Artistic Forms (Core IV)	3
					Free Elective, upper-division (3000-4000-level)	3
		<b>CREDIT HOURS</b>		<b>13</b>	<b>CREDIT HOURS</b>	