PLANT BIOLOGY: CELL BIOLOGY AND MOLECULAR GENETICS, BS

Degree Requirements

Requirements for Students Matriculating in or before Academic Year 2022-2023. 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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General Education Requirements</td>
<td></td>
</tr>
<tr>
<td>ENGL</td>
<td>Composition I</td>
<td>3</td>
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<tr>
<td>or ENGL</td>
<td>Composition II</td>
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<tr>
<td>or ENGL</td>
<td>Critical Analysis and Writing I</td>
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<tr>
<td>HIST</td>
<td>Survey of American History</td>
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<tr>
<td>or HIST</td>
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<tr>
<td>or HIST</td>
<td>American History Since 1865 (DH)</td>
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<tr>
<td>POLS</td>
<td>American Government</td>
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<tr>
<td>MATH</td>
<td>Preparation for Calculus (A or higher)1</td>
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<tr>
<td>or MATH</td>
<td>Trigonometry (A)</td>
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<tr>
<td>or STAT</td>
<td>Statistical Methods I (A)1</td>
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<tr>
<td>or STAT</td>
<td>Elementary Statistics (A)</td>
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<td></td>
<td>Humanities (H)</td>
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<tr>
<td></td>
<td>Courses designated (H)</td>
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</tr>
<tr>
<td></td>
<td>Natural Sciences (N)</td>
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<tr>
<td></td>
<td>Must include one Laboratory Science (L)</td>
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<tr>
<td>Select</td>
<td>four hours from the following:</td>
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<tr>
<td>BIOL</td>
<td>Introductory Biology (N)</td>
<td></td>
</tr>
<tr>
<td>&amp; BIOL</td>
<td>and Introductory Biology Laboratory (LN)1</td>
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<tr>
<td>BIOL</td>
<td>Introductory Biology (LN)1</td>
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<tr>
<td>PHYS</td>
<td>College Physics I (LN)1</td>
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<td></td>
<td>Social &amp; Behavioral Sciences (S)</td>
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<tr>
<td></td>
<td>Courses designated (S)</td>
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<td></td>
<td>Additional General Education</td>
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<tr>
<td></td>
<td>Courses designated (A), (H), (N), or (S)</td>
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<tr>
<td></td>
<td>Hours Subtotal</td>
<td>41</td>
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College/Departmental Requirements

First Year Seminar
(Transfer students with 15 hours exempt) 1
Arts & Humanities
See note 2.a. 3
Natural & Mathematical Sciences
CHEM 1314 Chemistry I (LN) 4
CHEM 1515 Chemistry II (LN) 5
Foreign Language
See note 3 0-6 hours
Upper-Division General Education
Select 6 hours outside major department
See note 2.c.

Hours Subtotal 13

Major Requirements

Core Courses
BIOL 3023 General Genetics 3
BIOL 4133 Evolution 3
PBIO 1404 Plant Biology (LN) 4
PBIO 2403 Introduction to Plant Molecular Biology 3
PBIO 4233 Plant Anatomy 3
PBIO 4400 Undergraduate Research 1
PBIO 4463 Plant Physiology 3
PBIO 4654 Plant Secondary Metabolism 4
7 additional hours of PBIO courses 7
Select one of the following: 5-8
CHEM 3013 & CHEM 3012 Survey of Organic Chemistry and Survey of Organic Chemistry Laboratory
CHEM 3053 Organic Chemistry I and Organic Chemistry Laboratory
& CHEM 3112 & CHEM 3153 Organic Chemistry II
MICR 2123 Introduction to Microbiology 3
or MICR 3033 Cell and Molecular Biology

Related Courses
Minimum of 10-13 hours of upper-division coursework (no more than 3 hours of general education courses) from the following: 10-13
BIOC; BIOL; CHEM; CS; ENTO; ENVR; GEOG; GEOL; HORT; MATH; MICR; NREM; PBIO; PHYS; PLNT; PLP; SOIL; or STAT.

Hours Subtotal 52

Electives
Select 14 hours 14
May need to include 6 hours of a foreign language (see note 3)
May need to include 6 hours upper-division general education outside major department (see note 2.c.)

Hours Subtotal 14
Total Hours 120

1
College and Departmental Requirements that may be used to meet General Education Requirements.
Other Requirements

- See the College of Arts and Sciences Requirements.
- Minimum GPA of 2.00 in all PBIO courses.
- Upper-Division Credit: Total hours must include at least 40 hours in courses numbered 3000 or above.
- Hours in One Department: For B.A. and B.S. degrees, no more than 54 hours in one department may be applied to degree requirements.

College of Arts and Sciences Requirements

1. General Education Requirements
   No more than two courses (or eight hours) from the major department (http://catalog.okstate.edu/college-arts-sciences-major-departments/) may be used to meet General Education and College and Departmental Requirements. The General Education required English Composition, required U.S. History, required American Government, one required MATH or STAT course, and required foreign language for B.A. degrees do not count against the two-course maximum.

2. A&S College/Departmental Requirements
   a. Arts and Humanities are defined as any course carrying an (H) designation or courses from AMST, ART, DANC, ENGL (except ENGL 3323 Technical Writing) HIST, MUSI, PHIL (except PHIL 1313 Logic and Critical Thinking (A), PHIL 3003 Symbolic Logic (A) and PHIL 4003 Mathematical Logic and Computability), REL, TH, and foreign languages.
   b. Natural and Mathematical Sciences are defined as any course from the following prefixes: ASTR, BIOL, CHEM, CS (except CS 4883 Social Issues in Computing), GEOG, MATH, MCR, PBIO, PHYS, and STAT, or courses from other departments that carry an (A) or (N) general education designation.
   c. The required six hours of upper-division General Education may not include courses from the student’s major department. This requirement may be satisfied by courses also used to satisfy any part of a student’s degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).
   d. Non-Western Studies Requirement for B.A. and B.F.A.; One 3-hour course in Non-Western Studies (N.W.). This requirement may be satisfied by courses also used to satisfy any part of a student’s degree program (i.e., in General Education, College Departmental Requirements, Major Requirements or Electives).
   e. The College of Arts & Sciences requires a minimum 2.0 GPA in all major requirements and a minimum 2.0 GPA in all major-prefix courses applied to the degree.

3. Foreign Language Proficiency
   a. The foreign language requirement for the B.A. may be satisfied by 9 hours college credit in the same language, which must include 3 hours at the 2000-level, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.). Computer Science courses may not be used to satisfy this requirement. Currently Arabic and Mvskoke are not offered at the 2000-level at OSU.
   b. The foreign language requirement for the B.S., B.M. and B.F.A. may be satisfied by presenting a high school transcript which demonstrates two years of study of a single foreign language (passing grades at second-year level of study). It may also be satisfied by 6 hours college credit in the same language, which must include language courses 1713 and 1813, or equivalent proficiency (e.g., passing an advanced standing examination; TOEFL exam; presenting a high school transcript which demonstrates the high school was primarily conducted in a language other than English; etc.). Computer Science courses may not be used to satisfy this requirement.
   c. In addition to a. and b., students pursuing teacher certification must meet novice-high foreign language proficiency by presenting a high school transcript which demonstrates two years of study of a single foreign language with no grade below B. Or, students may complete 3 hours college credit in a single language with no grade below C (or pass an advanced standing examination, College Level Examination Program (CLEP) exam, or Oral Proficiency Interview developed by the American Council on the Teaching of Foreign Languages, equivalent to 3 hours of college credit.) Or, students may meet the requirement by transfer of documentation of meeting the foreign language competency from one of the teacher education programs in the State of Oklahoma approved by the Oklahoma State Regents for Higher Education.

4. Exclusions
   a. Courses used to satisfy the General Education English Composition, U.S. History, American Government, and Mathematics or Statistics requirements will not count toward the 54-hour maximum allowed from one department.
   b. Courses with ATHL or LEIS prefixes and leisure activity courses may not be used for degree credit.

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.
- Degrees that follow this plan must be completed by the end of Summer 2028.