

# BOTANY, BS

## REQUIREMENTS

### UNIVERSITY REQUIREMENTS

All undergraduate students must complete both the following Core General Education (Core GenEd) and University Degree and Quality of Work requirements. The requirements below apply to students whose first term at UW-Madison or whose earliest post-high school college attendance at any institution is Summer 2026 or later.

Students whose first term at UW-Madison or whose earliest post-high school college attendance at any institution occurred before Summer 2026 should refer to the archived Guide (<https://guide.wisc.edu/archive/>) for the requirements that apply to them.

### CORE GENERAL EDUCATION (CORE GENED) REQUIREMENTS

**Civics & Perspectives** 3 credits of Civics & Perspectives coursework.

**Communication & Literacy** 6 credits of Communication & Literacy coursework. This requirement may be partially satisfied by a qualifying placement test score. More information: <https://go.wisc.edu/qualifyingenglishplacement> (<https://go.wisc.edu/qualifyingenglishplacement/>)

**Humanities & Arts** 6 credits of Humanities & Arts coursework.

**Mathematics & Quantitative Reasoning** 6 credits of Mathematics & Quantitative Reasoning coursework. This requirement may be partially satisfied by a qualifying placement test score. More information: <https://go.wisc.edu/qualifyingmathplacement> (<https://go.wisc.edu/qualifyingmathplacement/>)

**Natural Science & Wellness** Complete both:

- 6 credits of Natural Science & Wellness or Natural Science & Wellness + Laboratory coursework.
- one course must be in Natural Science & Wellness + Laboratory coursework.

**Social & Behavioral Science** 3 credits of Social & Behavioral Science coursework.

**Total Credits** 30 credits.

For more information see the policy (<https://policy.wisc.edu/library/UW-1095/>).

### UNIVERSITY DEGREE AND QUALITY OF WORK REQUIREMENTS

All undergraduate degree recipients must complete the following minimum requirements. Requirements for some programs will exceed these requirements; see program requirements for additional information.

**Total Degree** 120 degree credits.

**Residency** Complete 30 credits in residence. A course is considered "in residence" if it is taken when in undergraduate degree-seeking status and:

- is offered by UW-Madison and completed on the UW-Madison campus or at an approved off-site location, or
- is offered by UW-Madison in an online or distance format, or is completed during participation in a UW-Madison study abroad/study away program.

**Quality of Work** Achieve at least the minimum grade point average specified by the school, college, and/or academic program.

**Math** Demonstrate minimal mathematics competence by:

- placing above MATH 96, or
- successfully completing MATH 96, or
- successfully completing a more advanced mathematics course such as MATH 112, MATH 113, MATH 114, MATH 141, MATH 211, or MATH 221.

**English Language** If required to take the UW-Madison English as a Second Language Assessment Test (MSN-ESLAT), demonstrate minimal English language competence by:

- earning credit for ESL 118, or
- achieving a qualifying MSN-ESLAT placement test score.

**Language** Complete one:

- 2 high school units of a single language other than English, or
- one course with the second semester Language designation.

**Major Declaration** Declare and complete the requirements for at least one major.

## COLLEGE OF LETTERS & SCIENCE DEGREE REQUIREMENTS: BACHELOR OF SCIENCE (BS)

Students pursuing a Bachelor of Science degree in the College of Letters & Science must complete all of the requirements below. Some courses satisfy more than one L&S degree requirement (visit College of Letters & Science: Requirements (<https://guide.wisc.edu/undergraduate/letters-science/#requirementstext>) for details).

This major can be paired with either the Bachelor of Arts or the Bachelor of Science degree requirements.

### BACHELOR OF SCIENCE DEGREE REQUIREMENTS

**Communication** Complete both:

- Part A: one course with the Communication A designation or eligible UW Placement Score; and
- Part B: one course with the Communication B designation

Quantitative Reasoning	Complete both: <ul style="list-style-type: none"> <li>Part A: one course with the Quantitative Reasoning A designation or eligible UW Placement Score; and</li> <li>Part B: one course with the Quantitative Reasoning B designation</li> </ul>
Ethnic Studies	one 3+ credit course with the Ethnic Studies designation
Language	the third unit of a language other than English
Mathematics	Complete two courses of 3+ credits at the Intermediate or Advanced level in MATH, COMP SCI, or STAT subjects. A maximum of one course in each of COMP SCI and STAT subjects counts toward this requirement.
L&S Breadth: Humanities	Complete 12 credits with the Humanities or Literature designation, which must include at least 6 credits with the Literature designation.
L&S Breadth: Social Sciences	Complete 12 credits with the Social Science designation.
L&S Breadth: Natural Sciences	Complete 12 credits, which must include both: <ul style="list-style-type: none"> <li>6 credits with the Biological Science designation, and</li> <li>6 credits with the Physical Science designation.</li> </ul>
Liberal Arts and Science (LAS) Coursework	at least 108 credits
Depth of Intermediate/Advanced Coursework	at least 60 credits at the Intermediate or Advanced level
Major	Declare and complete at least one major.
Total Credits	at least 120 credits
UW-Madison Experience	<ul style="list-style-type: none"> <li>30 credits in residence, overall, and</li> <li>30 credits in residence after the 86th credit</li> </ul>
Quality of Work	<ul style="list-style-type: none"> <li>2.000 in all coursework at UW-Madison</li> <li>2.000 in Intermediate/Advanced level coursework at UW-Madison</li> </ul>

## NON-L&S STUDENTS PURSUING AN L&S MAJOR

Non-L&S students who have permission from their School/College to pursue an additional major within L&S only need to fulfill the major requirements. They do not need to complete the L&S Degree Requirements above.

## REQUIREMENTS FOR THE MAJOR MATH, CHEMISTRY, AND PHYSICS

Code	Title	Credits
<b>Statistics/Mathematics (One course from the following):<sup>1</sup></b>		
STAT 301	Introduction to Statistical Methods	3
STAT 324	Introduction to Statistics for Science and Engineering	
STAT 371	Introductory Applied Statistics for the Life Sciences	

<b>General Chemistry (One of the following):</b>		<b>5-9</b>
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
CHEM 115 & CHEM 116	Chemical Principles I and Chemical Principles II	
CHEM 109	Advanced General Chemistry	
<b>Organic Chemistry (One course from the following):<sup>2</sup></b>		<b>3</b>
CHEM 341 or CHEM 343	Elementary Organic Chemistry or Organic Chemistry I	
<b>Physics (One course from the following):<sup>3</sup></b>		
PHYSICS 115	Energy and Climate (preferred)	
PHYSICS 103	General Physics	
PHYSICS 104	General Physics	
PHYSICS 201	General Physics	
PHYSICS 202	General Physics	
PHYSICS 207	General Physics	
PHYSICS 208	General Physics	
PHYSICS 247	A Modern Introduction to Physics	
PHYSICS 248	A Modern Introduction to Physics	
PHYSICS 249	A Modern Introduction to Physics	
<b>Total Credits</b>		<b>14-20</b>

## BIOLOGY AND BOTANY REQUIREMENTS

30 credits from:

Code	Title	Credits	
<b>Introductory Biology (Complete one option):</b>			
<i>Option A, Recommended</i>			
BOTANY/ BIOLOGY 130	General Botany <sup>4</sup>	5-10	
<i>Option B: Introductory Biology</i>			
BOTANY/ BIOLOGY/ ZOOLOGY 151	Introductory Biology		
BOTANY/ BIOLOGY/ ZOOLOGY 152	Introductory Biology		
<i>Option C: BIOCORE</i>			
BIOCORE 381	Evolution, Ecology, and Genetics		
BIOCORE 382	Evolution, Ecology, and Genetics Laboratory		
BIOCORE 383	Cellular Biology		
BIOCORE 384	Cellular Biology Laboratory		
BIOCORE 485	Principles of Physiology		

Code	Title	Credits
<b>Botany Distribution - Five courses, to include at least one course in these areas:</b>		
<i>Cell, Molecular, Physiology (1 course required):</i>		
BOTANY 300 or BOTANY 500	Plant Anatomy or Plant Physiology	
<i>Ecology (1 course required):</i>		
BOTANY 455 or BOTANY/ ZOOLOGY 460	The Vegetation of Wisconsin or General Ecology	

<i>Genetics, Evolution (1 course required):</i> <sup>5</sup>	
BOTANY/ ANTHRO/ ZOOLOGY 410	Evolutionary Biology
GENETICS 466	Principles of Genetics <sup>2</sup>
PLANTSCI 338	Plant Breeding and Biotechnology
GENETICS 467	General Genetics 1
GENETICS 468	General Genetics 2
<i>Diversity (1 course required)</i>	
BOTANY 305	Plant Morphology and Evolution
BOTANY 330	Algae
BOTANY/ PL PATH 332	Fungi
BOTANY 400	Plant Systematics
BOTANY 401	Vascular Flora of Wisconsin
<i>Optionally, 1 of the 5 required courses may come from this list, or students may take a second course from any area listed above:</i>	
BOTANY/ GEOG 338	Environmental Biogeography
BOTANY/ F&W ECOL 402	Dendrology: Woody Plant Identification and Ecology
BOTANY 403	Field Collections and Identification
BOTANY 422	Plant Geography
BOTANY/ ZOOLOGY 450	Midwestern Ecological Issues: A Case Study Approach
BOTANY/ ENTOM/ ZOOLOGY 473	Plant-Insect Interactions
BOTANY/ AMER IND/ ANTHRO 474	Ethnobotany
BOTANY/ ENTOM/ PL PATH 505	Plant-Microbe Interactions: Molecular and Ecological Aspects
BOTANY/ ENVIR ST/ F&W ECOL/ ZOOLOGY 516	Conservation Biology
BOTANY/ PL PATH 563	Phylogenetic Analysis of Molecular Data
BOTANY/ BIOCHEM 621	Plant Biochemistry
AGROECOL 370	Grassland Ecology
BIOCHEM 501	Introduction to Biochemistry
BIOCORE 486	Principles of Physiology Laboratory
BIOCORE 587	Biological Interactions
MICROBIO 303	Biology of Microorganisms
ZOOLOGY 570	Cell Biology

Code	Title	Credits
<b>Independent Research Experience—choose one:</b> <sup>6</sup>		<b>3-6</b>
BOTANY 691 & BOTANY 692	Senior Thesis and Senior Thesis	4

BOTANY 681 & BOTANY 682	Senior Honors Thesis and Senior Honors Thesis	6
BOTANY 699	Directed Study	3-4

## RESIDENCE AND QUALITY OF WORK

- 2.000 GPA in all BOTANY and major courses
- 2.000 GPA on 15 upper-level major credits, taken in residence<sup>7</sup>
- 15 credits in BOTANY, taken on the UW–Madison campus

## HONORS IN THE MAJOR

Students may declare Honors in the Botany Major in consultation with the Botany undergraduate advisor.

### HONORS IN THE MAJOR IN BOTANY: REQUIREMENTS

To earn Honors in the Major in Botany, students must satisfy the requirements for the major (above) and the following additional requirements:

- 3.300 University GPA
- 3.400 GPA in all BOTANY and major courses
- Complete 12 Honors credits from coursework listed in the "Botany Distribution" requirements<sup>8</sup> or from Intermediate/Advanced Honors coursework in Biocore
- Conduct Senior Honors Thesis research in BOTANY 681 & BOTANY 682 for a total of 6 credits

## FOOTNOTES

- <sup>1</sup> STAT 371 and MATH 221 are strongly recommended for students preparing for graduate school, as these usually are required for entry into post-undergraduate programs.
- <sup>2</sup> CHEM 341 is the best option for organic chemistry if only one course is to be taken. However, for students who are preparing for graduate school, the three-course organic chemistry sequence (CHEM 343, CHEM 344, & CHEM 345) is strongly recommended instead of CHEM 341, as some graduate programs may require a sequence of organic chemistry courses.
- <sup>3</sup> PHYSICS 115 is the best choice if one course is to be taken. It is recommended that two semesters of PHYSICS be taken (PHYSICS 103-PHYSICS 104 or PHYSICS 201-PHYSICS 202 or PHYSICS 207-PHYSICS 208).
- <sup>4</sup> In addition to BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101 and/or ZOOLOGY/BIOLOGY 102 will count towards 30 credits of Botany major.
- <sup>5</sup> Completion of the BIOCORE sequence also satisfies the Genetics, Evolution area (BIOCORE 381 & BIOCORE 382 & BIOCORE 383 & BIOCORE 384 & BIOCORE 486).
- <sup>6</sup> Students nearing completion of the major should seek out research opportunities with their advisor or faculty supervisor, and register for their project at the end of the junior year.
- <sup>7</sup> BOTANY 300–BOTANY 699 are considered upper-level in the major.
- <sup>8</sup> Excluding BOTANY 681 and BOTANY 682.