

# PLANT PATHOLOGY, B.S.

## REQUIREMENTS

### UNIVERSITY GENERAL EDUCATION REQUIREMENTS

All undergraduate students at the University of Wisconsin–Madison are required to fulfill a minimum set of common university general education requirements to ensure that every graduate acquires the essential core of an undergraduate education. This core establishes a foundation for living a productive life, being a citizen of the world, appreciating aesthetic values, and engaging in lifelong learning in a continually changing world. Various schools and colleges will have requirements in addition to the requirements listed below. Consult your advisor for assistance, as needed. For additional information, see the university Undergraduate General Education Requirements (<http://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext>) section of the *Guide*.

General Education	• Breadth–Humanities/Literature/Arts: 6 credits
	• Breadth–Natural Science: 4 to 6 credits, consisting of one 4- or 5-credit course with a laboratory component; or two courses providing a total of 6 credits
	• Breadth–Social Studies: 3 credits
	• Communication Part A & Part B *
	• Ethnic Studies *
	• Quantitative Reasoning Part A & Part B *

\* The mortarboard symbol appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

### COLLEGE OF AGRICULTURAL AND LIFE SCIENCES REQUIREMENTS

In addition to the University General Education Requirements, all undergraduate students in CALS must satisfy a set of college and major requirements. Courses may not double count within university requirements (General Education and Breadth) or within college requirements (First-Year Seminar, International Studies, Science, and Capstone), but courses counted toward university requirements may also be used to satisfy a college and/or a major requirement; similarly, courses counted toward college requirements may also be used to satisfy a university and/or a major requirement.

### COLLEGE REQUIREMENTS FOR ALL CALS B.S. DEGREE PROGRAMS

Code	Title	Credits
Quality of Work: Students must maintain a minimum cumulative grade point average of 2.000 to remain in good standing and be eligible for graduation.		

Residency: Students must complete 30 degree credits in residence at UW–Madison after earning 86 credits toward their undergraduate degree.

First Year Seminar ( <a href="http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSThirdYearSeminarCourses">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSThirdYearSeminarCourses</a> )	1
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International Studies ( <a href="http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSIInternationalStudiesCourses">http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSIInternationalStudiesCourses</a> )	3
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Physical Science Fundamentals	4-5
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CHEM 103	General Chemistry I
or CHEM 108	Chemistry in Our World
or CHEM 109	Advanced General Chemistry

Biological Science	5
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Additional Science (Biological, Physical, or Natural)	3
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Science Breadth (Biological, Physical, Natural, or Social)	3
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CALS Capstone Learning Experience: included in the requirements for each CALS major (see "Major Requirements") (<http://guide.wisc.edu/undergraduate/agricultural-life-sciences/#CALSCapstoneRequirement>)

### MAJOR REQUIREMENTS

Courses may not double count within the major (unless specifically noted otherwise), but courses counted toward the major requirements may also be used to satisfy a university requirement and/or a college requirement. A minimum of 15 credits must be completed in the major that are not used elsewhere.

Code	Title	Credits
<b>Core Mathematics</b>		
Select one of the following (or may be satisfied by placement exam):		5-6
MATH 112 & MATH 113	Algebra and Trigonometry	
MATH 114	Algebra and Trigonometry	
MATH 171	Calculus with Algebra and Trigonometry I	
<b>Core Chemistry</b>		
Select one of the following:		5-9
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	
CHEM 109	Advanced General Chemistry	
<b>Introductory Biology</b>		
Select one of the following options:		10
Option 1 (preferred):		
BIOLOGY/ BOTANY/ ZOOLOGY 151 & BIOLOGY/ BOTANY/ ZOOLOGY 152	Introductory Biology and Introductory Biology	
Option 2:		

ZOOLOGY/ BIOLOGY 101 & ZOOLOGY/ BIOLOGY 102 & BOTANY/ BIOLOGY 130	Animal Biology and Animal Biology Laboratory and General Botany
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## Option 3:

BIOCORE 381 & BIOCORE 382 & BIOCORE 383 & BIOCORE 384	Evolution, Ecology, and Genetics and Evolution, Ecology, and Genetics Laboratory and Cellular Biology and Cellular Biology Laboratory
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**Core Physics**

Select one of the following: 4-5

PHYSICS 103	General Physics
PHYSICS 201	General Physics
PHYSICS 207	General Physics

**Plant Pathology Core**

PL PATH 300	Introduction to Plant Pathology	4
PL PATH/BOTANY 332	Fungi	4

Another PI Path course above 300 <sup>1</sup> 3**Capstone**

PL PATH 590	Capstone in Plant Pathology	3
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**Track**

Select one of the following: 29-39

Plant-Microbe Biology Track
Plant Health and Industry Track

**Total Credits** 67-83

1

Not including PL PATH 375 Special Topics or independent study credits  
–PL PATH 299 Independent Study, PL PATH 399 Coordinative Internship/  
Cooperative Education, PL PATH 590 Capstone in Plant Pathology,  
PL PATH 681 Senior Honors Thesis, PL PATH 682 Senior Honors Thesis, or  
PL PATH 699 Special Problems.

## TRACKS

### PLANT-MICROBE BIOLOGY TRACK

Code	Title	Credits
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**Additional Mathematics and Statistics**

Select one of the following: 5

MATH 211	Calculus
MATH 217	Calculus with Algebra and Trigonometry II <sup>1</sup>
MATH 221	Calculus and Analytic Geometry 1

Select one of the following: 3-4

MATH 222	Calculus and Analytic Geometry 2 <sup>2</sup>
STAT 301	Introduction to Statistical Methods
STAT 371	Introductory Applied Statistics for the Life Sciences

**Additional Chemistry**

Select one of the following options: 4-8

CHEM 343 & CHEM 344 & CHEM 345	Organic Chemistry I and Introductory Organic Chemistry Laboratory and Organic Chemistry II
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CHEM 341 & CHEM 342	Elementary Organic Chemistry and Elementary Organic Chemistry Laboratory
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**Biology**

Select one of the following options: 5-8

## Option 1:

MICROBIO 303 & MICROBIO 304	Biology of Microorganisms and Biology of Microorganisms Laboratory
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GENETICS 466	Principles of Genetics
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## Option 2:

Select two of the following:

BIOCORE 485	Principles of Physiology
BIOCORE 486	Principles of Physiology Laboratory
BIOCORE 587	Biological Interactions

**Additional Physics**

Select one of the following: 4-5

PHYSICS 104	General Physics
PHYSICS 202	General Physics
PHYSICS 208	General Physics

**Plant Physiology**

BOTANY 500	Plant Physiology	3-4
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**Plant-Microbe Electives**

Select 5 credits from the following: 5

BIOCHEM 501	Introduction to Biochemistry
BOTANY 300	Plant Anatomy
BOTANY 400	Plant Systematics
or BOTANY 401	Vascular Flora of Wisconsin
BOTANY/ F&W ECOL/ ZOOLOGY 460	General Ecology
ENTOM/ ZOOLOGY 302	Introduction to Entomology

Any PL PATH course above 300

**Total Credits** 29-39

1

MATH 171 is a prerequisite for MATH 217.

2

MATH 221 Calculus and Analytic Geometry 1/MATH 217 Calculus with  
Algebra and Trigonometry II is a prerequisite for MATH 222 Calculus and  
Analytic Geometry 2

### PLANT HEALTH AND INDUSTRY TRACK

Code	Title	Credits
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**Biology**

GENETICS 466	Principles of Genetics	3
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**Core**

PL PATH 559 or BOTANY 500	Diseases of Economic Plants Plant Physiology	3-4
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*Plant Health and Industry Electives*

Select 24 credits from at least two different departments from the following: 24

AGRONOMY 100	Principles and Practices in Crop Production
AGRONOMY 300	Cropping Systems
AGRONOMY 302	Forage Management and Utilization
BOTANY/ ENVIR ST/ ZOOLOGY 260	Introductory Ecology
BOTANY 300	Plant Anatomy
BOTANY/ F&W ECOL/ ZOOLOGY 460	General Ecology
BOTANY 500	Plant Physiology
BIOCHEM 501	Introduction to Biochemistry
C&E SOC/ SOC 140	Introduction to Community and Environmental Sociology
C&E SOC/ SOC 222	Food, Culture, and Society
C&E SOC/ HIST SCI 230	Agriculture and Social Change in Western History
C&E SOC/ AMER IND/ SOC 578	Poverty and Place
C&E SOC/ SOC 650	Sociology of Agriculture
ENTOM/ ENVIR ST 201	Insects and Human Culture—a Survey Course in Entomology
ENTOM/ ZOOLOGY 302	Introduction to Entomology
F&W ECOL/ ENVIR ST 100	Forests of the World
F&W ECOL/ ZOOLOGY 335	Human/Animal Relationships: Biological and Philosophical Issues
F&W ECOL/ ENVIR ST/ ZOOLOGY 360	Extinction of Species
F&W ECOL/ BOTANY 455	The Vegetation of Wisconsin
F&W ECOL/ BOTANY/ ZOOLOGY 460	General Ecology
F&W ECOL 550	Forest Ecology
HORT 120	Survey of Horticulture
HORT/ PL PATH 261	Sustainable Turfgrass Use and Management
HORT/ LAND ARC 263	Landscape Plants I
HORT 320	Environment of Horticultural Plants
HORT 345	Fruit Crop Production
MICROBIO 101	General Microbiology
MICROBIO 102	General Microbiology Laboratory
MICROBIO 303	Biology of Microorganisms
MICROBIO 304	Biology of Microorganisms Laboratory
NUTR SCI 132	Nutrition Today

NUTR SCI/ AN SCI/ DY SCI 311	Comparative Animal Nutrition
NUTR SCI 332	Human Nutritional Needs
NUTR SCI/A A E/ AGRONOMY 350	World Hunger and Malnutrition
NUTR SCI/ BIOCHEM 510	Nutritional Biochemistry and Metabolism
NUTR SCI 540	Community Nutrition and Health Equity
PL PATH any course above 300 not already taken for another category	
SOIL SCI/ ATM OCN 132	Earth's Water: Natural Science and Human Use
SOIL SCI/ ENVIR ST/ GEOG 230	Soil: Ecosystem and Resource
SOIL SCI 301	General Soil Science
SOIL SCI 322	Physical Principles of Soil and Water Management
SOIL SCI/ ENVIR ST 324	Soils and Environmental Quality
SOIL SCI 325	Soils and Landscapes
SOIL SCI/ AGRONOMY/ HORT 326	Plant Nutrition Management

#### Business

Select 6 credits from the following: 6

ACCT I S 100	Introductory Financial Accounting
ACCT I S 211	Introductory Managerial Accounting
ACCT I S 300	Accounting Principles
ACCT I S 301	Financial Reporting I
ACCT I S 302	Financial Reporting II
ACCT I S/ LAW 329	Taxation: Concepts for Business and Personal Planning
A A E 215	Introduction to Agricultural and Applied Economics
A A E 320	Agricultural Systems Management
A A E 322	Commodity Markets
A A E 323	Cooperatives and Alternative Forms of Enterprise Ownership
A A E 419	Agricultural Finance
A A E/ECON 421	Economic Decision Analysis
A A E/ECON 474	Economic Problems of Developing Areas
ECON 101	Principles of Microeconomics
ECON 102	Principles of Macroeconomics
LSC 270	Marketing Communication for the Sciences
M H R 300	Managing Organizations
M H R 305	Human Resource Management

**Total Credits**

**36-37**

## UNIVERSITY DEGREE REQUIREMENTS

**Total Degree** To receive a bachelor's degree from UW–Madison, students must earn a minimum of 120 degree credits. The requirements for some programs may exceed 120 degree credits. Students should consult with their college or department advisor for information on specific credit requirements.

**Residency** Degree candidates are required to earn a minimum of 30 credits in residence at UW–Madison. "In residence" means on the UW–Madison campus with an undergraduate degree classification. "In residence" credit also includes UW–Madison courses offered in distance or online formats and credits earned in UW–Madison Study Abroad/Study Away programs.

**Quality of Work** Undergraduate students must maintain the minimum grade point average specified by the school, college, or academic program to remain in good academic standing. Students whose academic performance drops below these minimum thresholds will be placed on academic probation.