

Bachelor of Science in Agriculture
Major: Plant Pathology
Specialization: Plant Microbiology

*The study of plant diseases, plant -microbe interactions, and plant health management to enhance food security, global sustainability, and human welfare.
Students in this major will complete a minimum of 121 hours outlined as follows.*

General Education Requirements		
Requirement	Course Options	Hours
GE Launch Seminar	GENED 1201	1
Writing and Information Literacy	Student Choice	3
Math & Quantitative Reasoning/Data Analysis	Major requirement: MATH 1148 or MATH 1150 * (or Student Choice – see below)	4-5
Literary, Visual and Performing Arts	Student Choice	3
Historical & Cultural Studies	Student Choice	3
Natural Science	Major requirement: BIOLOGY 1101, BIOLOGY 1113, ENTMLGY 1101, HCS 2201, or HCS 2204&05 * (or Student Choice – see below)	4
Social & Behavioral Sciences	Major requirement: AEDECON 2001 or ECON 2001.01 * (or Student Choice – see below)	3
Race, Ethnic and Gender Diversity	Student Choice	3
Theme: Citizenship for a Diverse & Just World^a	Student Choice	4-6
Theme: Student Choice^a	Student Choice	4-6
GE Reflection	GENED 4001	1
General Education Credit Hours:		33-38

* Indicates a pre/corequisite course for this major that also satisfies this GE category. If a student makes an alternative selection in this GE category, **they must also complete this course.**

B.S. in Agriculture Degree Requirements		
Requirement	Course Options	Hours
College & Department Survey	FAES 1100 (0.5) & PLNTPTH/ENTMLGY 1100 (0.5)	1
Oral Expression	AGRCOMM 3130 or COMM 2110	3
Additional Science	BIOLOGY 1114, ENTMLGY 2101, HCS 2202, or MOLGEN 3300	3-4
Internship	FAES 3191 & PLNTPTH 4191	2
Minor or Equiv. ^b	Student Choice	12-15
Credit Hours:		21-25

^a Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours. Theme courses are identified with a ❖ symbol.

^b Students in this program must complete a minor. A minor should be declared by the time 60 credit hours are accumulated. A minor in Plant Pathology is not permitted.

Major-Supporting Coursework		
Course	Title	Hours
CHEM 1210 or 1910H	General Chemistry I	5
CHEM 1220 or 1920H	General Chemistry II	5
MOLGEN 4500	General Genetics	3
CHEM 2310	Introductory Organic Chemistry	4
Data Analysis: Select from HCS 2260, STAT 1450, ENR 2000, AEDECON 2005, COMLDR 3537, or ANIMSCI 2260		3
Credit Hours:		20

Major Coursework		
Course	Title	Hours
<i>Plant Pathology Core (13 hrs)</i>		
PLNTPTH 3001 & 3002	General Plant Pathology Lecture (3) & Lab (2)	5
PLNTPTH 5603	Plant Disease Management	3
PLNTPTH 5604	Capstone: Prob.-Based Studies in Plant Health	2
MOLGEN 3436	Introductory Plant Physiology	3
<i>Discipline Specific: Select one (2-4 cr):</i>		
PLNTPTH 5040 w/ or w/o 5041	Science of Fungi: Mycology Lecture (5040), with or without Lab (5041)	3-4
PLNTPTH 5010	Phytopathology	2
PLNTPTH 5020	Introductory Plant Virology	2
PLNTPTH 5030	Plant Nematology	2
<i>Discipline Specific: Select one (2-4 credits)</i>		
PLNTPTH 3333	Field and Woodland Fungi	2
PLNTPTH 5003	Princ. of Molecular Plant-Microbe Interactions	2
PLNTPTH 5004	Current Topics Mol. Plant Microbe Interactions	2
PLNTPTH 5005	Beneficial Plant-associated Microbiomes	2
PLNTPTH 5040, 5040+5041, 5010, 5020, 5030	If not taken above	2-4
PLNTPTH 5050	Plant Pathogenic Fungi	3
PLNTPTH 5060	Pract. Exp. in Plant Health: Insects & Diseases	2
PLNTPTH 5110	Eco. & Mgmt of Path. & Insects Affecting Trees	3
PLNTPTH 5120	Diseases of Ornamentals	2
PLNTPTH 5130	Turf Diseases & Integrated Turf Health Mgmt	4
PLNTPTH 5140	Diseases of Field Crops	2
PLNTPTH 5150	Fruit and Vegetable Diseases	2
PLNTPTH 5685	Plant Disease Diagnosis	2
<i>Major Electives: Select remaining credits from pg. 2 to complete 25 hours</i>		4-8
Credit Hours:		25

General Education	33-38
Degree Requirements & Minor	21-25
Major Supporting Courses	20
Major	25
Open Electives	13-22
Minimum Total Credit Hours	121

Major Elective Options

Note: Courses present as options elsewhere in the major may only be selected for credit in one area.

Course	Title	Hours
BIOCHEM 2210	Elements of Biochemistry	4
ENR 3000	Soil Science Lecture	3
ENR 3001	Soil Science Laboratory	1
ENR 5270	Soil Fertility	3
ENTMLGY 4000	General Entomology	3
ENTMLGY 4600	Introduction to Insect Science	1
ENTMLGY 4601	General Insect Pest Management	2
ENTMLGY 4602	Urban Landscape and Greenhouse Entomology	2
ENTMLGY 4603	Agricultural Entomology	2
ENTMLGY 5150**	Pollinator Biology and Conservation	2
HCS 5325	Plant Genetics	3
HCS 5422**	Biology & Mgt of Weeds & Invasive Plants	3
HCS 5621**	Physiology of Cultivated Plants	3
HCS 5622**	Biochem. Processes in Cultivated Plants	3
MICROBIO 4000.01 -or- 4000.02	Basic and Practical Microbiology	4
MICRBIO 4100	General Microbiology	5
MICRBIO 4130	Microbial Genetics	3
MOLGEN 5643	Plant Anatomy	3
PLNTPTH 2001	Sick Plants and a Hungry World	2
PLNTPTH 3333	Field and Woodland Fungi	2
PLNTPTH 3920	Psychedelic Studies: Neurochemistry, Plants, Fungi, and Society	3
PLNTPTH 4597	Contemporary Issues: Pesticides, Genetic Engineering, and the Environment	3
PLNTPTH 4998	Undergraduate Research	1-2
PLNTH 4999 or 4999H	Research with Distinction / Honors Research with Distinction	1-2
PLNTPTH 5003	Principles of Molecular Plant-Microbe Interactions	2
PLNTPTH 5004	Current Topics Molecular Plant Microbe Interactions	2
PLNTPTH 5005	Beneficial Plant-associated Microbiomes	2
PLNTPTH 5010	Phylobacteriology	2
PLNTPTH 5020	Introductory Plant Virology	2
PLNTPTH 5030	Nematology	2
PLNTPTH 5040 w/ or w/o 5041	Science of Fungi: Mycology Lecture (5040), with or without Lab (5041)	3-4
PLNTPTH 5050	Pathogenic Fungi	3
PLNTPTH 5060	Practical Experiences in Plant Health: Insects & Diseases of Plants	2
PLNTPTH 5110	Ecology and Mgmt. of Pathogens and Insects Affecting Trees in Forest and Urban Envt.	3
PLNTPTH 5120	Diseases of Ornamentals	2
PLNTPTH 5130	Turf Diseases & Integrated Turf Health Mgmt.	4
PLNTPTH 5140	Diseases of Field Crops	2
PLNTPTH 5150	Fruit and Vegetable Diseases	2
PLNTPTH 5685	Plant Disease Diagnosis	2
Study Abroad	Study abroad at a foreign institution	varies

**Consult prerequisites

Policies and General Requirements for Degree

- A minimum of 121 total credit hours. Remedial coursework (English 1109; EDUTL 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1010; Mathematics 1040, 1050, 1073, 1074, 1075) do not count toward the 121-hour minimum requirement for the BS degree.
- A minimum of 30 semester hours of credit earned through regular course enrollment at this University, and regular course enrollment in the last semester in the College of Food, Agricultural, and Environmental Sciences.
- A cumulative point-hour ratio of at least 2.00 on all coursework completed at The Ohio State University as well as at least a 2.00 in the major.
- If a major-required course or major elective is a GE Theme course, two 3-4 cr courses (no more than one per theme area) is permitted to double count in the GE and major hours. GE Theme courses are indicated with a ❖ symbol.
- Students are encouraged to participate in education abroad opportunities. Consult with your advisor for how education abroad credit applies to your degree, or consider the CFAES Global Option.
- Students must complete a minimum of 40 hours in major/major supporting coursework with at least 12 hours taken from the academic unit(s) offering the major at OSU in the baccalaureate program.
- Courses required in the major (including major-supporting courses and major electives) may **not** be taken pass/non-pass.
- Coursework taken as open electives may include a maximum of 4 credit hours of physical activity courses (all 1139-1197 courses), and a maximum of 4 credit hours of campus music organizations.
- A college maximum of six hours of individual studies courses (x193) can be applied toward graduation; some majors may have a lower maximum.
- Students pursuing a B.S. in Agriculture must complete an internship of 1-2 hours as a requirement for degree. Any additional internship credit hours may count towards major hours (consult with your advisor). A college maximum of six hours of internship credit can be applied toward graduation; some majors may have a lower maximum.
- A maximum of three credits of 3488 can be applied toward graduation although some majors may have a lower maximum. A cumulative point-hour ratio of 2.0 is required to register for 3488 credit.
- Credit hours for 4999 ("with Research Distinction") and 4999H ("with Honors Research Distinction") are repeatable to maximum of six hours.
- **An application for degree must be submitted online at least two semesters prior to the intended graduation term. Application found at: <https://students.cfaes.ohio-state.edu/academics/undergraduate/graduation>**

Policies and General Requirements for Minors/Minor Equivalent

- The minor/minor equivalent must contain a minimum of 12 credit hours distinct from the major and/or additional minors (i.e., if a minor requires more than 12 credit hours, a student is permitted to overlap those hours beyond 12 with the major or with another minor).
- A 2.00 cumulative point-hour ratio is required in the minor/minor equivalent with a minimum C- grade for any course to be listed in the minor or minor equivalent (includes transfer credit).
- For programs requiring a minor: minors should be declared by the time students complete 60 hours.
- A student is permitted to count up to 6 credit-hours of transfer and/or EM credit in the minor or minor equivalent.
- Coursework graded Pass/Non-Pass cannot count in the minor. No more than 3 credit-hours of course work graded S/U may count toward the minor. Maximum of 3 credit-hours of xx93 are allowed to count in the minor.

**4-Year Course Plan
 B.S. in Agriculture
 Major: Plant Pathology
 Specialization: Plant Microbiology**

This model plan of study is presented as a suggested path to graduate in four years. It is intended to be a useful guide; however, each student is unique and should review the Degree Requirements for their catalog year and work with their advisor to develop an individualized course plan that best fits their personal academic background and goals.

NOTE: This sheet should not be used in isolation. To graduate in a timely manner, students must consult their academic advisor on a regular basis.

Freshman Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Complete Math requirement -Complete at least one science -Complete GE: WIL	FAES 1100	College Survey	.5	CHEM 1210	General Chemistry I	5
	PLNTPH 1100	Dept Survey	.5	GE Lit, Vis and Perf Arts		3
	GE Math: MATH 1148 ^a	College Algebra	4	GE WIL		3
	GE Natural Science	See options	4-5	Additional Science	See options	3-4
	Open Elective		3	GENED 1201	GE Launch Seminar	1
	Major/Open Elective		2-3			
Hours: 30		Total:	15		Total:	15
Sophomore Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Declare minor -Complete three science courses by the end of this year -Begin to consider an internship location	CHEM 1220	General Chemistry II	5	GE Theme Choice #1 ^b		3
	Data Analysis	See options	3	MOLGEN 4500	General Genetics	3
	GE Hist. & Cultural Studies		3	GE R.E. & G. Diversity		3
	GE SBS: AEDECON 2001 ^a	Prin. of Food & Res. Econ.	3	AGRCOMM 3130 ^a	Oral Expression	3
				Open Elective		3
Hours: 60		Total:	14		Total:	16
Junior Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Apply to graduate -Complete internship by end of the summer -Half of major hours to be completed by the end of the year	MOLGEN 3436	Intro Plant Physiology	3	PLNTPH 4191 & FAES 3191	Internship	2
	Major/Open Elective	See options for Major Electives	2-4	CHEM 2310	Intro Organic Chemistry	4
	GE Citizenship #1 ^b		3	PLNTPH 5603	Plant Disease Management	2-3
	PLNTPH 3001 & 3002	General Plant Pathology Lecture (3) and Lab (2)	5	Minor Course		3-4
				GE Citizenship #2 ^b		3
Hours: 90		Total:	13-15		Total:	14-18
Senior Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement	Course Name	Hours	Course/Requirement	Course Name	Hours
-Meet graduation requirements -Meet with a Career Services Advisor	GE Theme Choice #2 ^b		3	Major/Open Elective		3-4
	Major/Open Elective		2-4	PLNTPH 5604	Capstone	2
	Discipline Specific #1	See options	2-4	Discipline Specific #2	See options	3-4
	GENED 4001	GE Reflection	1	Minor Course		3-4
	Minor Course		2-3			
	Minor Course		2-3			
Hours: 90		Total:	12-18		Total:	12-14

Total credit hours for Bachelor of Science Degree: 121

^a One possible course from approved GE list or major requirement that has multiple options, as outlined in corresponding Degree Requirements document.

^b Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours. Theme courses are identified with a ❖ symbol.

4-Year Completion Checklist

Freshman Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement		✓	Course/Requirement		✓
<input type="checkbox"/> Complete Math requirement	FAES 1100					
	PLNTPH 1100					
<input type="checkbox"/> Complete at least one science						
<input type="checkbox"/> Complete GE: WIL						
Hours: _____	Notes:			Notes:		
Sophomore Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement		✓	Course/Requirement		✓
<input type="checkbox"/> Declare minor						
<input type="checkbox"/> Complete three science courses by the end of this year						
<input type="checkbox"/> Begin to consider an internship location						
Hours: _____	Notes:			Notes:		
Junior Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement		✓	Course/Requirement		✓
<input type="checkbox"/> Apply to graduate						
<input type="checkbox"/> Complete internship by end of the summer						
<input type="checkbox"/> Half of major hours to be completed by the end of the year						
Hours: _____	Notes:			Notes:		
Senior Year	Autumn Semester			Spring Semester		
Benchmarks	Course/Requirement		✓	Course/Requirement		✓
<input type="checkbox"/> Meet graduation requirements						
<input type="checkbox"/> Meet with a Career Services Advisor						
Hours: _____	Notes:			Notes:		

Total credit hours for Bachelor of Science Degree: 121
