

PLANT PATHOLOGY

Degree Requirements

Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (<http://gradschool.psu.edu/graduate-education-policies/>)

The Master of Science degree program in Plant Pathology leads students either to the development of special proficiencies in Plant Pathology, which will allow the individual to directly enter a professional career, or to the development of a basic knowledge of the discipline, allowing for advancement to the Ph.D. degree. M.S. degree students will be introduced to the broad aspects of the field of plant pathology, including:

- exposure to the various causal agents of plant disease and the diseases they incite;
- diseases of current and classical importance affecting a wide range of crop plants;
- a variety of techniques used to isolate, characterize, and identify causal agents of plant disease; and
- an appreciation for the relationship between plant pathology and other biological and physical sciences.

A minimum of 31 credits at the 400, 500, 600, or 800 level is required, with at least 18 credits in the 500 and 600 series combined.

Code	Title	Credits
Required Courses		
PPEM 405	Microbe-Plant Interactions: Plant Disease and Biological Control	3
PPEM 416	Plant Virology: Molecules to Populations	3
PPEM 417W	Mechanisms of Bacterial Pathogenesis in Plants	3
PPEM 425	Biology of Fungi	4
PPATH 502	Plant Disease Diagnosis	3
PPATH 522	Professional Development & Ethics in Plant Pathology	1
PPATH 590	Colloquium ¹	2
Electives		
Select 6 additional credits at the 500-level in Plant Pathology from a list provided by the department.		6
Culminating Experience		
PPATH 600	Thesis Research	6
or PPATH 610	Thesis Research Off Campus	
Total Credits		31

¹ All students are required to register for and participate in PPATH 590 (1 credit Pass/Fail) for all semesters enrolled. No more than two (2) credits of PPATH 590 may count towards the Master's degree.

Students may complete additional course work at other levels as required and/or approved by their committee.

All Master degree students must write a thesis. The thesis must be accepted by the adviser(s), committee members, the head of the graduate program, and the Graduate School. The student must present and pass a thesis defense.

Doctor of Philosophy (ph.D.)

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Students in the Ph.D. degree program in Plant Pathology are required to have an M.S. in plant pathology or a closely related field, or equivalent educational background. In addition, all students must enroll in PPATH 505 and other courses tailored to the individual by the student's Ph.D. committee. Ph.D. students must prepare a dissertation and present seminars in the departmental PPATH 590, which will evaluate English communication skills. During their studies, Ph.D. students will have an opportunity to assist in teaching a disciplinary subject.

All doctoral students must pass a qualifying examination, a comprehensive written and oral examination, and a final oral examination (the dissertation defense). To earn the Ph.D. degree, doctoral students must also write a dissertation that is accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School.