

**Ph.D. in Plant Pathology
Academic Assessment Plan
2013-14**

College of Agricultural and Life Sciences
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Office of the Provost

*University of
Florida*

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Assessment*

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Enhancement*

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2013-14 Academic Assessment Plan for Ph.D. in Plant Pathology

College of Agricultural and Life Sciences

A. Mission

The Department of Plant Pathology strives to be the premier source of fundamental and applied knowledge of diseases on many crops including citrus, ornamentals, vegetable crops, turf grass, temperate field crops, sugar cane and tropical crops. The research is focused on endemic and exotic plant pathogens, their epidemiology, plant-microbe interactions, and development of disease control strategies including those that are environmentally sustainable. This vision will be realized through our mission to develop and implement creative, cutting-edge and integrated research programs; a comprehensive curriculum at the BS, MS and PhD levels; a training program for MS and PhD students in modern scientific concepts and technologies relating to plant pathology; and highly effective extension, outreach, and public service programs.

The mission of the Department of Plant Pathology contributes to the missions of the college and the university by developing scientific knowledge in agriculture and the life sciences, enhancing the quality of life by making this information accessible, and providing undergraduate and graduate students with a high-quality education that results in knowledge and abilities for gainful employment and additional education, productive citizenship, and lifelong learning in the areas of food, agriculture, natural resources and life sciences as they relate to human resources, the environment, individual communities, and a global society.

Our unique role within IFAS comes from our contributions of fundamental knowledge to the plant and microbial sciences and our integration of that knowledge into studies of plant pathogens. A key element of plant pathology (and our mission within IFAS) is our capacity to integrate knowledge from our own and other disciplines into a holistic approach toward the diagnosis and management of plant diseases, and disseminate this knowledge to the clientele interested in solving practical plant disease problems.

B. Student Learning Outcomes and Assessment Measures

SLO	Student Learning Outcome	Assessment Method	Degree Delivery
Knowledge #1	Describe and explain the literature, theories and ideas of plant pathology.	1) Student performance in courses is reviewed semiannually by the faculty adviser and Supervisory Committee. The Supervisory Committee assesses the student's ability to evaluate the primary literature using a faculty-developed rubric. 2) Assessment during the proposal seminar, qualifying exam and dissertation defense by the Supervisory Committee using a faculty-developed rubric.	Campus
Skills #2	Utilize the scientific method to conduct experimental research.	Semiannual evaluation by the Supervisory Committee using a faculty-developed rubric.	Campus
Skills #3	Communicate effectively skills in oral and written form.	Assessment of written and oral communication in research proposals, departmental seminars, research presentations, publications, committee meetings and thesis defense using a faculty-developed rubric.	Campus
Skills #4	Develop, organization and deliver instruction.	1) Evaluation of performance as a teaching assistant by the faculty instructor included in the semiannual evaluation using a faculty-developed rubric.	Campus
Professional Behavior #5	Exhibit professional behavior and ethical practices in the conduct of research and scholarship.	1) Adherence to the UF Honor Code throughout the degree program; 2) Observations of professional behavior by faculty and reported to the Supervisory Committee and reviewed at the semiannual evaluation.	Campus

C. Research

The **Plant Pathology Department at the University of Florida** is an exciting place to study all aspects of plant disease and plant-microbe interactions! We conduct research on a broad range of subjects including plant defense responses, plant and microbial genetic engineering, disease management, microbial evolution, ecology, epidemiology, systematics, and functional genomics. Many faculty members participate in the [Plant Molecular and Cellular Biology](#) graduate program, the [Emerging Pathogens Institute](#), and the [Doctor of Plant Medicine Program](#) in addition to the [Plant Pathology Graduate Program](#).

The principal goal of the Plant Pathology Graduate Program is to prepare students for careers in science by providing broad based training in plant pathology and in allied disciplines essential to the individual student's area of specialization. Because specialization within plant pathology draws increasingly on advances in the underlying biological and physical sciences, students are encouraged to include courses in supporting disciplines, offered by other campus Departments. However, for the MS degree, the fundamentals are laid for broad knowledge and understanding of plant pathology. Therefore, the course requirements for the MS degree are less flexible than those for the PhD degree. Many students completing a Master's Degree continues with a Ph.D. program at UF or elsewhere, whereas others find technical positions, often in industry or agricultural extension programs.

The expectations for Ph.D. research are: (1) to obtain basic training in working with the main pathogen groups (fungi, bacteria and viruses); (2) to obtain basic training in experimental design and statistical analysis; (3) to conceptualize and complete an original research project under the guidance of the supervisory committee; (4) to present a research proposal in a colloquium series and the research results in a seminar; and (5) to submit a Ph.D. dissertation to the Graduate School.

The Plant Pathology Graduate Program offers graduate courses in 'General Plant Pathology', 'Plant Virology', 'Bacterial Plant Pathogens', 'Fungal Plant Pathogens', 'Mycology', 'Host-parasite Interactions', 'Epidemiology of Plant Disease', 'Applied Population Genetic Analysis of Microbes', 'Theory and Practice of Plant Disease Control', 'Professional Internship in Plant Disease Clinic' and 'Citrus Pathology'. The first four courses are required for Ph.D. students. In addition, Ph.D. students need to take a colloquium series and attend the departmental seminar every semester (4 in total). The colloquium series is focused successively on 'Oral Presentations', 'Grant Writing', 'Critical Reading and Writing', and 'Methods Selection and Critique'. This last topic is specifically focused on experimental design and statistical analysis. Through this colloquium series, all graduate students are trained in the basics of the conduct of research.

D. Assessment Timeline

Ph.D. in Plant Pathology

College of Agricultural and Life Sciences

Assessment SLOs	Proposal, & Thesis Defense	Communication Review Evaluation	Graduate Student Progress Evaluation	Teaching Evaluations (Faculty & Student)
Knowledge				
#1	X		X	
Skills				
#2			X	
#3		X		
#4			X	X
Professional Behavior				
#5			X	

E. Assessment Cycle

Assessment Cycle for:

Ph.D. in Plant Pathology

College of Agricultural and Life Sciences

Analysis and Interpretation:

May – June, annually

Program Modifications:

Completed by July 1 of each year

Dissemination:

Completed by September 1 of each year

SLOs	Year	12-13	13-14	14-15	15-16
Content Knowledge					
#1		X	X	X	X
Skills					
#2		X	X	X	X
#3		X	X	X	X
#4		X	X	X	X
Professional Behavior					
#5		X	X	X	X

F. Measurement Tools

The Department of Plant Pathology has a PLANT PATHOLOGY GRADUATE STUDENT PROGRESS EVALUATION form (rubric) for the graduate advisor to fill out twice a year regarding the graduate student assessment for the past 6 months. It covers academic performance in courses, research productivity including competence, work ethic, and various other factors including complying with deadlines. (Please see Figure 1 at the end of the document).

G. Assessment Oversight

Name	Department Affiliation	Email Address	Phone Number
Jeffrey B. Jones, Graduate Coordinator	Plant Pathology	jbjones@ufl.edu	352- 273-4673
Ariena Van Bruggen, Graduate Faculty	Plant Pathology	ahcvanbruggen@ufl.edu	352-273-9396

Figure 1: Plant Pathology Graduate Student Progress Evaluation
Evaluation form for Plant Pathology Graduate Students at the University of Florida

Student Form (to be completed by the student prior to evaluation meeting)

Student Name:	Date:					
Major Professor:	Co-Supervisor:					
Start date: Date of PhD Candidacy (if applicable):	Evaluation period:					
Evaluation Scale:	1 (weak)	2 (needs improvement)	3 (satisfactory)	4 (strong)	5 (exceptional)	
Area under review	Score					
	1	2	3	4	5	n/a
1. Planning, management, and organization of research activities						
2. Involvement in lab group & interactions with peers						
3. Initiative and independence						
4. Problem solving skills						
5. Intellectual engagement (reading & discussion)						
6. Ability to analyse data and synthesize concepts						
7. Productivity (papers, posters, presentations)						
8. Teaching/Training (including formal & informal activities)						
9. Communication						
10. Professionalism (decorum, respect, ethics)						

List courses and grades for this review period:

List research activities for this research period:

List goals for next review period:

Evaluation form for Plant Pathology Graduate Students at the University of Florida

Advisor Form (to be completed by the major advisor prior to evaluation meeting)

Student Name:	Date:					
Major Professor:	Co-Supervisor:					
Start date: Date of PhD Candidacy (if applicable):	Evaluation period:					
Evaluation Scale:	1 (weak)	2 (needs improvement)	3 (satisfactory)	4 (strong)	5 (exceptional)	
Area under review	Score					
	1	2	3	4	5	n/a
1. Planning, management, and organization of research activities						
2. Involvement in lab group & interactions with peers						
3. Initiative and independence						
4. Problem solving skills						
5. Intellectual engagement (reading & discussion)						
6. Ability to analyse data and synthesize concepts						
7. Productivity (papers, posters, presentations)						
8. Teaching/Training (including formal & informal activities)						
9. Communication						
10. Professionalism (decorum, respect, ethics)						

Advisor Comments:
Research Progress:
Professional Progress:
Goals and Expectations for the next review period:
Additional Comments and Meeting Notes:

Function	Name	Date	Signature
Major Advisor			
Student*			

*Signature does not necessarily imply agreement