

Annual Academic Assessment Report

(Ph.D. / AFLS – Plant Pathology)
University of Arkansas
Academic Year 2021-2022

Contact

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ENPL Mission

The mission of the Plant Pathology Program within the department is to educate students and the public about plant diseases and to conduct basic and problem-solving research that results in new knowledge to minimize crop losses, ensure sustainable agricultural productivity and enhance the stewardship of our natural resources and environment.

Program Goals

1. Graduates have the discipline-specific knowledge in plant pathology required to perform successfully in appropriate-level private, government, or academic positions.
2. Graduates are able to design original research and interpret research results through statistical inference appropriate for post-graduate continuation of education or professional endeavors.
3. Graduates are able to prepare and synthesize information to effectively communicate, both orally and in writing, with technical or scientific and non-technical audiences.
4. Doctoral Graduates will contribute to the advancement of science through creation of original and independent ideas and research.
5. Graduates demonstrate leadership and teamwork through service to the department, outreach to the public or service in professional societies.

Learning Outcomes

1. Students will demonstrate the ability to critically evaluate situations or scenarios to arrive at well thought out and supported decisions and outcomes.
2. Students will demonstrate the ability to work through and solve complex, multidisciplinary problems.
3. Students will demonstrate the appropriate depth and breadth of discipline specific knowledge required to function as expert plant pathology professionals.
4. Communication Skills
 - a. Students will demonstrate the skills required to effectively communicate technical/scientific information in oral platforms to general and professional audiences.

- b. Students will demonstrate the ability to integrate, organize, and effectively present written reports of technical/scientific information to general and professional audiences.
5. Students will contribute to the advancement of science by acquiring skills (e.g. conceptual, statistics, laboratory or field skills, etc.) to fulfill project requirements to generate original and independent research data.
 6. Students will demonstrate leadership and teamwork abilities presentations and outreach activities presented in professional and public venues.

- **Results of analysis of assessment of Student Learning Outcome**

Student Learning Outcome 5. Write scientifically sound research manuscripts and proposals. Students will contribute to the advancement of science by acquiring skills (e.g. conceptual, statistics, laboratory or field skills, etc.) to fulfill project requirements to generate original and independent research data.

Assessment Measures

- All students will write a research proposal that outlines their research and plans to conduct the research, and/or write a thesis/dissertation detailing their research and its findings. The graduate advisory committee is responsible for evaluating student outcomes and reporting the data to departmental office administration.
- Direct measure: In addition to evaluating the scientific content of the proposal, the student's graduate advisory committee will also evaluate the student's ability to organize a scientific paper, follow rules of grammar and syntax, and present a clear, concise, and accurate description of their research plan. For thesis or dissertations, in addition to evaluating the scientific content of the presentation, the committee will also evaluate the student's scientific writing abilities, as described above for the research proposal. The committee provide oral and written feedback.

Student Learning Outcome Data:

- In 2021, one AFLSPH-Plant Pathology degree were granted. Each such degree represents a successful defense of the written dissertation to the graduate advisory committee.
- All program graduates performed at a level above 3.0 on the rubrics included in our assessment plan.
- AFLSPH-Plant Pathology students served as lead- or co-authors on eight peer-reviewed publications in 2021-22 academic year, and several more have been submitted for

review. Such publications are strong validation of written communication skills and sound experimental performance.

- **Any changes to degree/certificate planned or made on the basis of the assessment and analysis**

No changes have been made to the degree plan based on assessment data. The assessment results suggest we are preparing students well. However, there is always room for growth and changes are planned to further enhance the degree programs offered to students to best prepare them for careers.

- **Any changes to the assessment process made or planned.**

There have been no formal changes to our assessment plan. Since the formation of the relatively new department of Entomology and Plant Pathology, there is a renewed commitment to standardizing our process to complete and collect assessment data.