Plant Pathology (PLPA)

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Plant Pathology Department Website (http://plantpathology.uark.edu)

The Department of Entomology and Plant Pathology offers a minor in plant pathology, the study of interrelationships of plants with the abiotic and biotic agents that affect plant health and productivity. The goal of the discipline is to minimize the impact of plant diseases on agricultural production and human health. Scientific training within the department focuses on the nature, cause, and management of plant diseases.

Plant pathology is offered as a graduate degree program. Undergraduate students interested in plant pathology should pursue a minor in pest management or plant pathology. See Pest Management (http://catalog.uark.edu/undergraduatecatalog/collegesandschools/dae/andersoncollegeofagriculturalfoodandsciences/pestmanagementpmgt/) for degree requirements.

Minor in Plant Pathology (PLPA-M)

A student planning to minor in plant pathology should notify the Department of Entomology and Plant Pathology and consult an adviser. A minor in Plant Pathology consists of 19 hours to include the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>PLPA 3004</td>
<td>Principles of Plant Pathology</td>
<td>4</td>
</tr>
<tr>
<td>PLPA 400V</td>
<td>Research</td>
<td>3</td>
</tr>
<tr>
<td>Select one of the following:</td>
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<tr>
<td>PLPA 4223</td>
<td>Plant Disease Control</td>
<td>3</td>
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<tr>
<td>PLPA 4304</td>
<td>Applied Plant Disease Management</td>
<td>3</td>
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<td>Select three of the following:</td>
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<tr>
<td>BIOL 4233</td>
<td>Genomics and Bioinformatics</td>
<td>3</td>
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<tr>
<td>BIOL 4303</td>
<td>Plant Physiology</td>
<td>3</td>
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<tr>
<td>BIOL 4353</td>
<td>Ecological Genetics/Genomics</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4424</td>
<td>Mycology</td>
<td>3</td>
</tr>
<tr>
<td>BIOL 4753</td>
<td>General Virology</td>
<td>3</td>
</tr>
<tr>
<td>PLPA 4333</td>
<td>Biotechnology in Agriculture</td>
<td>3</td>
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<tr>
<td>Total Hours</td>
<td>19</td>
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Courses

PLPA 3004. Principles of Plant Pathology. 4 Hours.
Examination of the causes and symptoms of plant disease and the genetics of plant disease. Physiology, and ecology of host-pathogen interactions. Spread of disease and principles of disease control. Corequisite: Lab component. (Typically offered: Fall)

This course is cross-listed with BIOL 3004.

PLPA 400V. Research. 1-6 Hour.
Original investigations of assigned problems in plant pathology. Prerequisite: PLPA 3004. (Typically offered: Fall, Spring and Summer)

Faculty

Bateman, Nick, Ph.D. (Mississippi State University), B.S. (University of Arkansas-Monticello), Assistant Professor, 2016.
Bluhm, Burt H., Ph.D., M.S. (Purdue University), B.S. (University of Oklahoma), Associate Professor, 2008.
Cartwright, Richard D., Ph.D. (University of California at Davis), M.S., B.S. (University of Arkansas), Extension Professor, 1993.
Correll, Jim, Ph.D., M.S. (University of California-Berkeley), B.S. (Pennsylvania State University), Distinguished Professor, 1989.
Dowling, Ashley Patrick Gregg, Ph.D. (University of Michigan-Ann Arbor), B.S. (University of Arizona), Associate Professor, 2008.
Egan, Martin J., Ph.D., B.S. (University of Exeter, United Kingdom), Assistant Professor, 2016.
Faske, Travis, Ph.D. (Texas A&M University), M.S. (Oklahoma State University), B.S. (Tarleton State University), Associate Professor, 2015.
Goggin, Fiona, Ph.D. (University of California-Davis), B.S. (Cornell University), Professor, 2001.
Hopkins, John D., Ph.D. (University of Arkansas), M.S., B.S. (Clemson), Associate Professor, 2002.
Johnson, Donn T., Ph.D., M.S. (Michigan State University), B.S. (University of Minnesota, Duluth), Professor, 1978.
Joshi, Neelendra, Ph.D. (Pennsylvania State University), Assistant Professor, 2015.
Kirkpatrick, Terry, Ph.D. (North Carolina State University), M.S., B.S. (University of Arkansas), Professor, 1984.
Korth, Ken L., Ph.D. (North Carolina State University), B.S. (University of Nebraska), Professor, 1999.
Loftin, Kelly M., Ph.D. (New Mexico State University), M.S. (University of Arkansas), B.S. (Arkansas Tech), Associate Professor, 2002.
Lorenz, Gus M., Ph.D., B.S.A., M.S. (University of Arkansas), Distinguished Professor, 1997.
Robbins, Robert Thomas, Ph.D. (North Carolina State University), M.S., B.S. (Kansas State University), University Professor, 1979.
Rojas, Clemencia, Ph.D. (Cornell University), M.S. (Purdue University), B.S. (Universidad de Los Andes, Colombia), Assistant Professor, 2015.
Rojas, Alejandro, Ph.D., M.S. (Michigan State University), M.S., B.S. (Los Andes University), Assistant Professor, 2018.
Rupe, John C., Ph.D., M.S. (University of Kentucky), B.S. (Colorado State University), Professor, 1984.
Spradley, J. Ples, M.S. (University of Arkansas), B.S. (Hendrix College), Extension Associate Professor, 1984.
Spurlock, Terry, Ph.D. (University of Arkansas), Extension Assistant Professor, 2015.
Steinkraus, Donald C., Ph.D. (Cornell University), M.S. (University of Connecticut), B.A. (Cornell University), Professor, 1989.
Stephen, Fred M., Ph.D. (University of California-Berkeley), B.S. (San Jose State University), University Professor, 1974.
Studebaker, Glenn, Ph.D., M.S. (University of Arkansas), B.S. (Missouri Southern State University), Associate Professor, 1993.
Szalanski, Allen Lawrence, Ph.D. (University of Nebraska-Lincoln), M.S. (Kansas State University), B.S. (University of Manitoba), Professor, 2001.
Thrash, Ben., Assistant Professor, 2018.
Tzanetakis, Ioannis E., Ph.D. (Oregon State University), M.S., B.S. (Agricultural University of Athens, Greece), Professor, 2008.
Wamishe, Yeshi Andenow, Ph.D. (University of Arkansas) M.S., B.S. (Addis Ababa University, Ethiopia), Associate Professor, 2011.
Wiedemann, Robert N., Ph.D., B.S. (Purdue University), Professor, 2005.
PLPA 4123. Bacterial Lifestyles. 3 Hours.
The course will introduce students to bacteria as prokaryotic organisms, different from eukaryotes such as plants and animals. Model microbial systems will be studied in more detail to identify unique strategies that bacteria employ to thrive in their respective environment, whether they are causing diseases or establishing beneficial interactions with animal or plants or coexisting with other microorganisms in diverse ecological environments. The course will also cover special adaptations that bacteria have evolved to adapt to harsh environments and how these adaptations can be harnessed to control pollution. Prerequisite: (BIOL 2013 and BIOL 2011L) or BIOL 3123. (Typically offered: Spring Odd Years)
This course is cross-listed with BIOL 4223.

PLPA 4223. Plant Disease Control. 3 Hours.
Principles, methods and mechanics of plant disease control. Emphasis is given to the integration of control measures and epidemiology of plant diseases. Lecture 3 hours per week. Prerequisite: PLPA 3004. (Typically offered: Fall)
This course is cross-listed with BIOL 4133.

PLPA 4304. Applied Plant Disease Management. 4 Hours.
A plant pathology course emphasizing practical understanding of the concepts and principles of agronomic and horticultural crop disease management, including disease diagnosis, monitoring, and using models to forecast disease events. Prerequisite: PLPA 3004 or instructor consent. (Typically offered: Irregular)

PLPA 4333. Biotechnology in Agriculture. 3 Hours.
Discussion of the techniques, applications, and issues of biotechnology as it is being used in modern agriculture. Coverage includes the basics of molecular biology, production of transgenic plants and animals, and new applications in the agricultural, food, and medical marketplace. Lecture and discussion, 3 hours per week. (Typically offered: Fall)
This course is cross-listed with BIOL 4333.

PLPA 462V. Internship. 1-6 Hour.
Supervised practical work experience in pest management to develop and demonstrate professional competence. A maximum of 6 hours credit per semester or summer session is permitted. Faculty approval of projects proposal prior to enrollment, and written or oral reports are required. (Typically offered: Irregular) May be repeated for up to 9 hours of degree credit.