

# PLANT PATHOLOGY (PLP)

## PLP 2143 Global Agricultural Biosecurity and Forensics

**Description:** Biosecurity vs. biosafety; bioterrorism vs. biocrimes; microbial forensics; globalization; international trade and emerging organisms; invasive species; quarantine; responses; surveillance; detection and diagnostics; risk analysis; the biosecurity system integrated to science and agricultural specialties, economics and defense. Same course as ENTO 2143.

**Credit hours:** 3

**Contact hours:** Lecture: 3 Contact: 3

**Levels:** Undergraduate

**Schedule types:** Lecture

**Department/School:** Entomology & Plant Pathology

## PLP 3343 Principles of Plant Pathology

**Prerequisites:** BOT 1404 or BOT 3463 or MICR 2125 or PLNT 2013.

**Description:** Introduction to basic principles and concepts of plant pathology, including the nature, cause and control of biotic and environmentally induced plant diseases, with emphasis on principles and methods of disease management. Offered in combination with PLP 5343. No credit for both PLP 3343 and PLP 5343. Previously offered as PLP 3344.

**Credit hours:** 3

**Contact hours:** Lecture: 2 Lab: 2 Contact: 4

**Levels:** Undergraduate

**Schedule types:** Lab, Lecture, Combined lecture and lab

**Department/School:** Entomology & Plant Pathology

## PLP 3553 Fungi: Myths and More

**Prerequisites:** BIOL 1114 or equivalent.

**Description:** Fungal biology covering environmental roles and impacts on the health and nutrition of plants, animals and humans. Ethnomycological and industrial uses of fungi in foods, medicines, and intoxicants, and associated folklore and myths. Microscopy, microbiological methods, mushroom cultivation, and identification of microfungi and wild mushrooms. Same course as BOT 3553 or PBIO 3553.

**Credit hours:** 3

**Contact hours:** Lecture: 2 Lab: 2 Contact: 4

**Levels:** Undergraduate

**Schedule types:** Lab, Lecture, Combined lecture and lab

**Department/School:** Entomology & Plant Pathology

## PLP 3663 Turfgrass Integrated Pest Management

**Prerequisites:** PLP 3343, ENTO 2993.

**Description:** The biology, ecology and identification of fungal, nematode and insect turfgrass pests. Contemporary concepts and applications of integrated control practices available for managing turfgrass pests presented along with decision-making tools for use in turfgrass pest management programs. Same course as ENTO 3663.

**Credit hours:** 3

**Contact hours:** Lecture: 2 Lab: 2 Contact: 4

**Levels:** Undergraduate

**Schedule types:** Lab, Lecture, Combined lecture and lab

**Department/School:** Entomology & Plant Pathology

## PLP 4400 Special Topics

**Prerequisites:** Consent of instructor.

**Description:** Special topics in Plant Pathology, Entomology or related fields. Same course as ENTO 4400. Offered for variable credit, 1-3 credit hours, maximum of 3 credit hours.

**Credit hours:** 1-3

**Contact hours:** Contact: 1-3 Other: 1-3

**Levels:** Undergraduate

**Schedule types:** Independent Study

**Department/School:** Entomology & Plant Pathology

## PLP 4923 Applications of Biotechnology in Pest Management

**Prerequisites:** BIOL 1114 and CHEM 1215 or equivalent.

**Description:** Applications of biotechnology in controlling arthropod pests of plants and animals, plant pathogens, and weeds. Introduction to underlying technology, products being developed and deployed, their effectiveness and associated problems or concerns resulting from their use. Same course as ENTO 4923 and PLNT 4923. Previously offered as PLP 4922. May not be used for Degree Credit with PLP 5923.

**Credit hours:** 3

**Contact hours:** Lecture: 3 Contact: 3

**Levels:** Undergraduate

**Schedule types:** Lecture

**Department/School:** Entomology & Plant Pathology

## PLP 5000 Research

**Description:** Research for the MS degree Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.

**Credit hours:** 1-6

**Contact hours:** Contact: 1-6 Other: 1-6

**Levels:** Graduate

**Schedule types:** Independent Study

**Department/School:** Entomology & Plant Pathology

## PLP 5003 Plant Nematology

**Prerequisites:** PLP 3343 or concurrent enrollment.

**Description:** General morphology, taxonomy and bionomics of nonparasitic and plant parasitic nematodes. Plant parasitic nematode assay techniques, subfamily identification, symptomology, pathogenicity and control. Previously offered as PLP 5004.

**Credit hours:** 3

**Contact hours:** Lecture: 2 Lab: 2 Contact: 4

**Levels:** Graduate

**Schedule types:** Lab, Lecture, Combined lecture and lab

**Department/School:** Entomology & Plant Pathology

## PLP 5014 Plant Virology

**Prerequisites:** PLP 3343 or MICR 2125 or PLNT 2013 or instructor permission.

**Description:** Plant viruses as causal agents of plant diseases. Taxonomy, biological, chemical, and physiological properties; transmission; host-virus and vector-virus relationships; replication; molecular virology; detection, diagnosis; ecology, biosecurity. Lab; primer design for RT-PCR and isothermal methods; serology. Previously offered as PLP 5013. May not be used for degree credit with MICR 5123.

**Credit hours:** 4

**Contact hours:** Lecture: 3 Lab: 2 Contact: 5

**Levels:** Graduate

**Schedule types:** Lab, Lecture, Combined lecture and lab

**Department/School:** Entomology & Plant Pathology

**PLP 5104 Mycology****Prerequisites:** Graduate standing.**Description:** A systematic study of the fungi, with emphasis on taxonomy, comparative morphology and fungal biology. Same course as BOT 5104 or P BIO 5104.**Credit hours:** 4**Contact hours:** Lecture: 3 Lab: 2 Contact: 5**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology**PLP 5304 Phytobacteriology****Prerequisites:** PLP 3343.**Description:** Bacteria as plant pathogens, with examination of the taxonomy, genetics, ecology, physiology, host-parasite interaction, and control of phytobacteria.**Credit hours:** 4**Contact hours:** Lecture: 2 Lab: 4 Contact: 6**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology**PLP 5343 Principles of Plant Pathology****Prerequisites:** BOT 1404 or BOT 3463 or MICR 2125 or PLNT 2013.**Description:** Introduction to basic principles and concepts of plant pathology, including the nature, cause and control of biotic and environmentally induced plant diseases. Offered in combination with PLP 3343. No credit for both PLP 3343 and PLP 5343. Graduate students will be expected to complete extra assignments. Previously offered as PLP 5043.**Credit hours:** 3**Contact hours:** Lecture: 2 Lab: 2 Contact: 4**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology**PLP 5413 Plant Disease Epidemiology****Prerequisites:** PLP 3343 or PLP 5043.**Description:** Introduction to methodology and technical equipment used in epidemiological research and application of epidemiological principles in plant disease control.**Credit hours:** 3**Contact hours:** Lecture: 3 Contact: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Entomology & Plant Pathology**PLP 5524 Integrated Management of Insect Pests and Pathogens****Prerequisites:** PLP 3343, ENTO 2993 or equivalent or consent of instructor.**Description:** Modern theory and practices for management of insect pests and pathogens in plant production systems, emphasizing an ecologically-based, integrated approach. Basic concepts of pest management, decision-making, cost/benefit analysis, and risk/benefit analysis. Same course as ENTO 5524. Previously offered as PLP 5523.**Credit hours:** 4**Contact hours:** Lecture: 2 Lab: 4 Contact: 6**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology**PLP 5560 Problems in Plant Pathology****Prerequisites:** Consent of instructor.**Description:** Offered for variable credit, 1-5 credit hours, maximum of 10 credit hours.**Credit hours:** 1-5**Contact hours:** Contact: 1-5 Other: 1-5**Levels:** Graduate**Schedule types:** Independent Study**Department/School:** Entomology & Plant Pathology**PLP 5613 Host Plant Resistance****Prerequisites:** ENTO 3343 and ENTO 2993 or equivalent and a general genetics course; or consent of instructor.**Description:** Interactions of plants and the herbivorous insects and pathogenic micro-organisms that attack them. Development and deployment of multiple-pest resistant cultivars in crop management systems. Same course as ENTO 5613.**Credit hours:** 3**Contact hours:** Lecture: 2 Lab: 2 Contact: 4**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology**PLP 5623 Advanced Biotechnology Methods****Prerequisites:** BIOC 3653, BIOL 3023 or equivalent or consent of instructor.**Description:** Principles of biotechnology and laboratory experience with basic techniques used in biochemical and molecular biological research. Same course as ENTO 5623. Previously offered as FOR 5623.**Credit hours:** 3**Contact hours:** Lecture: 1 Lab: 4 Contact: 5**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology**PLP 5700 Teaching Practicum in Plant Pathology****Prerequisites:** Graduate student standing.**Description:** Variable credit offering for graduate students who wish to develop skills in teaching, assessment and course development working in conjunction with a primary instructor. Offered for variable credit, 1-6 credit hours, maximum of 6 credit hours.**Credit hours:** 1-6**Contact hours:** Contact: 1-6 Other: 1-6**Levels:** Graduate**Schedule types:** Discussion**Department/School:** Entomology & Plant Pathology**PLP 5724 Physiology of Host-Pathogen Interactions****Prerequisites:** PLP 3343 and BIOC 3653.**Description:** Physiology of the interactions between plants and pathogens. Mechanisms by which pathogens infect and by which plants resist infection.**Credit hours:** 4**Contact hours:** Lecture: 4 Lab: 0 Contact: 4**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology

**PLP 5860 Colloquium****Prerequisites:** PLP 3343.**Description:** Concepts and principles of plant pathology through discussions of pertinent literature. Offered for fixed credit, 2 credits, maximum of 2 credit hours.**Credit hours:** 2**Contact hours:** Contact: 3 Other: 3**Levels:** Graduate**Schedule types:** Independent Study**Department/School:** Entomology & Plant Pathology**PLP 5870 Scientific Presentations****Prerequisites:** Consent of instructor.**Description:** Preparation and delivery of scientific presentations, including 50-minute seminars, 10-minute talks, and posters. Same course as ENTO 5870. Offered for 1 credit, max 5 credit hours.**Credit hours:** 1**Contact hours:** Contact: 1 Other: 1**Levels:** Graduate**Schedule types:** Independent Study**Department/School:** Entomology & Plant Pathology**PLP 5923 Applications of Biotechnology in Pest Management****Prerequisites:** BIOL 1114 and CHEM 1215 or equivalents.**Description:** Applications of biotechnology in managing arthropod pests of plants, animals, plant pathogens, and weeds. Introduction to underlying technology, products being developed and deployed, effectiveness and associated problems or concerns resulting from their use. May not be used for degree credit with PLP 4923.**Credit hours:** 3**Contact hours:** Lecture: 3 Contact: 3**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Entomology & Plant Pathology**PLP 5992 Career Skills and Professionalism for Scientists****Prerequisites:** Graduate standing.**Description:** For graduate students majoring in science-based fields, especially those nearing graduation. Skills needed for effective job application and interviewing, career development and advancement, communication with professional colleagues and the public, and personal professional development. Same course as ENTO 5992.**Credit hours:** 2**Contact hours:** Lecture: 2 Contact: 2**Levels:** Graduate**Schedule types:** Lecture**Department/School:** Entomology & Plant Pathology**PLP 6000 Research****Description:** Research for the PhD degree. Offered for variable credit, 1-12 credit hours, maximum of 36 credit hours.**Credit hours:** 1-12**Contact hours:** Contact: 1-12 Other: 1-12**Levels:** Graduate**Schedule types:** Independent Study**Department/School:** Entomology & Plant Pathology**PLP 6303 Soilborne Diseases of Plants****Prerequisites:** PLP 3343.**Description:** Soilborne diseases, their reception and importance, the pathogens involved, rhizoplane and rhizosphere influences, inoculum potential, specialization of pathogens, suppressive soil effects, and disease management. Lecture and discussion sessions will emphasize in-depth understanding of problems and complexities associated with studies of soilborne pathogens.**Credit hours:** 3**Contact hours:** Lecture: 2 Lab: 2 Contact: 4**Levels:** Graduate**Schedule types:** Lab, Lecture, Combined lecture and lab**Department/School:** Entomology & Plant Pathology