

Plant Pathology (PLPA)

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.

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.

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.

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.

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.

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. May be repeated for up to 9 hours of degree credit.

PLPA 5001. Seminar. 1 Hour.

Review of scientific literature and oral reports on current research in plant pathology. Prerequisite: Graduate standing. May be repeated for up to 4 hours of degree credit.

PLPA 502V. Special Problems Research. 1-6 Hour.

Original investigations of assigned problems in plant pathology. Prerequisite: Graduate standing.

PLPA 504V. Special Topics. 1-18 Hour.

Lecture topics of current interest not covered in other courses in plant pathology or other related areas. Prerequisite: Graduate standing. May be repeated for up to 18 hours of degree credit.

PLPA 5223. Plant Disease Control. 3 Hours.

(Formerly PLPA 4223.) 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. Graduate degree credit will not be given for both PLPA 4223 and PLPA 5223.

PLPA 5303. Advanced Plant Pathology: Host-Pathogen Interactions. 3 Hours.

Presentation of important contemporary concepts relative to disease resistance and the physiology, biochemistry, and molecular biology of plant-pathogen interactions. Lecture 3 hours per week. Prerequisite: PLPA 3004 or equivalent and graduate standing.

PLPA 5313. Advanced Plant Pathology: Ecology and Epidemiology. 3 Hours.

Presentation of important contemporary concepts relative to the ecology and epidemiology of foliar and soil-borne plant pathogens. Lecture 3 hours per week. Prerequisite: PLPA 3004 and graduate standing.

PLPA 5324. Applied Plant Disease Management. 4 Hours.

(Formerly PLPA 4304.) 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. Graduate degree credit will not be given for both PLPA 4304 and PLPA 5324.

PLPA 5333. Biotechnology in Agriculture. 3 Hours.

(Formerly PLPA 4333.) 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. Graduate degree credit will not be given for both PLPA 4333 and PLPA 5333.

PLPA 5404. Diseases of Economic Crops. 4 Hours.

Diagnosis and management of important diseases of cotton, fruits, rice, trees, soybeans, wheat, and vegetables will be covered in a lecture, laboratory, and field format. Lecture 2 hours, laboratory 4 hours per week. Four 1-day field trips will be involved. Corequisite: Lab component. Prerequisite: PLPA 3004.

PLPA 5603. Plant Pathogenic Fungi. 3 Hours.

Plant Pathogenic Fungi is structured as an integrated lecture/laboratory class designed for students that are interested in developing an understanding and appreciation for taxonomy, biology, and ecology of plant pathogenic fungi and related saprophytic fungi. Corequisite: Lab component. Prerequisite: PLPA 3004 or BIOL 4424 or graduate standing.

PLPA 600V. Master's Thesis. 1-6 Hour.

Master's Thesis. Prerequisite: Graduate standing. May be repeated for degree credit.

PLPA 6203. Plant Virology. 3 Hours.

Lecture emphasizing discussion of recent advances in plant virology. Laboratory concerned with techniques and equipment used in plant virus studies, including transmission of viruses, characterization utilizing ultracentrifugation, spectrophotometry, electrophoresis, electron microscopy, and serology. Lecture 2 hours, laboratory 3 hours per week. Corequisite: Lab component. Prerequisite: CHEM 5813 or CHEM 5843 or CHEM 6873 or consent of instructor.

PLPA 6303. Plant Nematology. 3 Hours.

Nematodes and their relationship to plant diseases, with consideration of identification, morphology, biology, distribution, association with disease complexes and control. Lecture 2 hours, laboratory 2 hours per week. Corequisite: Lab component. Prerequisite: Graduate standing.

PLPA 6503. Plant Bacteriology. 3 Hours.

Current concepts and techniques in plant bacteriology, including taxonomic, ecological and molecular aspects of plant pathogenic bacteria and their interactions with hosts. Lecture 2 hours, laboratory 2 hours per weeks. Corequisite: Lab component. Prerequisite: BIOL 2013 and BIOL 2011L. May be repeated for up to 3 hours of degree credit.