Plant Pathology (PLPA)

Courses

PLPA 5020V. Special Problems Research. 1-6 Hour.
Original investigations of assigned problems in plant pathology. Prerequisite: Graduate standing. (Typically offered: Fall, Spring and Summer) May be repeated for up to 6 hours of degree credit.

PLPA 5040V. 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. (Typically offered: Irregular) May be repeated for up to 18 hours of degree credit.

PLPA 51203. 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 20003 and BIOL 20001. (Typically offered: Spring Odd Years)
This course is cross-listed with BIOL 52273.

PLPA 52203. 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. Graduate degree credit will not be given for both PLPA 42203 and PLPA 52203. (Typically offered: Fall)

PLPA 53003. 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 30003 or equivalent and graduate standing. (Typically offered: Spring Odd Years)

PLPA 53103. 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 30003 and graduate standing. (Typically offered: Spring Even Years)

PLPA 53303. 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. Graduate degree credit will not be given for both PLPA 43303 and PLPA 53303. (Typically offered: Fall)

PLPA 54004. 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 30003. (Typically offered: Summer)

PLPA 56003. 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 30003 or graduate standing. (Typically offered: Fall Odd Years)

PLPA 6000V. Master's Thesis. 1-6 Hour.
Master's Thesis. Prerequisite: Graduate standing. (Typically offered: Fall, Spring and Summer) May be repeated for degree credit.

PLPA 62003. 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 58103 or CHEM 58403 or CHEM 68703 or consent of instructor. (Typically offered: Fall Even Years)