

## PLANT PATHOLOGY PLP

### Department of Plant Pathology College of Agriculture and Natural Resources

#### 101 Current Issues and Frontiers in Plant Pathology

Fall. 1(1-0)

Basic principles of plant disease and plant pathogens. Current topics and future opportunities in the discipline of plant pathology.

#### 105 Fundamentals of Applied Plant Pathology

Spring. 2(2-2) R: Open only to students in the Institute of Agricultural Technology. SA: CSS 055 Not open to students with credit in CSS 055 or PLP 405.

Diseases of major agronomic and horticultural plants. Disease management. Offered first ten weeks of the semester.

#### 205 Pests, Society and Environment

Fall, Spring. 3(3-0) Interdepartmental with Entomology. Administered by Entomology.

Nature of pests and their impact on society. Principles of integrated pest management in relation to environmental quality and sustainable development.

#### 362 Management of Turfgrass Pests

Fall. 4(3-2) Interdepartmental with Crop and Soil Sciences and Entomology. Administered by Crop and Soil Sciences. P:M: CSS 232

Chemical, biological, and cultural methods of managing weeds, diseases, and insect pests of turfgrass. Environmental considerations in pest management.

#### 402 Biology of Fungi

Fall. 3(2-3) Interdepartmental with Plant Biology. Administered by Plant Biology. P:M: BS 110 or BS 111 or PLB 105 or LBS 145 or LBS 148H or LBS 149H SA: BOT 402

Major groups of fungi: characteristics, habitats, and diversity. Significance of fungi in nature and their economic importance.

#### 405 Plant Pathology

Spring. 3(2-3) P:M: (BS 110 and BS 111) or (PLB 105 and PLB 106) or ((LBS 144 and LBS 145) and completion of Tier I writing requirement) SA: BOT 405 Not open to students with credit in BOT 407.

Plant diseases and the organisms that cause them. Principles of disease management including application of chemicals, plant breeding, biological control, and genetic engineering.

#### 407 Diseases and Insects of Forest and Shade Trees

Spring. 4(3-3) Interdepartmental with Entomology and Plant Biology. Administered by Plant Pathology. P:M: (PLB 105 or BS 110 or LBS 144 or LBS 148H) and ((PLB 218 or FOR 204 or HRT 211) and completion of Tier I writing requirement) SA: BOT 407

Diseases, insects, and environmental problems affecting trees in forests, parks, suburbs, and nurseries. Methods of control.

#### 490 Independent Study

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course.

Independent study of plant pathology on a laboratory, field or library research program of special interest to the student.

#### 491 Selected Topics in Plant Pathology

Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. P:M: PLP 405 or PLP 407

Selected topics in plant pathology of current interest and importance.

#### 492 Seminar

Spring. 2(2-0) P:M: (PLP 498) and completion of Tier I writing requirement RB: (PLP 405)

Capstone course. Experience in scientific writing, oral presentations, professional preparation, and current developments in plant pathology.

#### 493 Professional Internship in Plant Pathology

Fall, Spring, Summer. 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 6 credits for any or all of these courses: ABM 493, AEE 493, ANR 493, ANS 493, CSS 493, EEP 493, FIM 493, FSC 493, FW 493, HRT 493, PKG 493, PLP 493, PRR 493, and RD 493. R: Open only to juniors or seniors in the Plant Pathology major. Approval of department; application required.

Supervised professional experiences in agencies and businesses related to plant pathology.

#### 498 Undergraduate Research

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 12 credits in all enrollments for this course. P:M: Completion of Tier I writing requirement. R: Approval of department

Faculty supervised laboratory. Field research in plant pathology.

#### 810 Current Concepts in Plant Pathology

Spring. 3(3-0) RB: PLP 405 or PLB 414 or PLB 415 SA: BOT 810

Recent findings in mycology, plant virology, bacteriology, nematology, disease physiology and epidemiology.

#### 812 Epidemiology of Plant Diseases

Spring of odd years. 3(3-0) RB: PLP 810 SA: BOT 812

Populations of plant pathogens within populations of plant hosts as affected by the environment and humans.

#### 820 Plant Reproductive Biology and Polyploidy

Spring of odd years. 1(3-0) Interdepartmental with Crop and Soil Sciences and Forestry and Horticulture and Plant Biology. Administered by Horticulture. RB: Introductory Genetics and Plant Biology

Genetic processes underlying variations in plant reproductive biology and polyploidy. Utilization of these characteristics in plant breeding.

#### 821 Crop Evolution

Spring of odd years. 1 credit. Interdepartmental with Crop and Soil Sciences and Forestry and Horticulture and Plant Biology. Administered by Horticulture. RB: Introductory Genetics and Plant Biology

Cultural and biological aspects of the evolution of domestic plants.

#### 822 Historical Geography of Crop Plants

Spring of odd years. 1 credit. Interdepartmental with Crop and Soil Sciences and Forestry and Horticulture and Plant Biology. Administered by Horticulture. RB: Introductory Genetics and Plant Biology

Development and spread of the major crop species.

#### 847 Advanced Mycology

Spring of even years. 4(2-4) Interdepartmental with Plant Biology. Administered by Plant Pathology. RB: BOT 402 SA: BOT 847

Systematics, identification, physiology, genetics, and molecular biology of plant pathogenic fungi.

#### 880 Plant Virology

Fall of odd years. 4(2-4) RB: (BMB 462 and BOT 810) SA: BOT 880

Biology and molecular aspects of viruses causing plant disease.

#### 881 Molecular and Biochemical Plant Pathology

Spring of odd years. 3(2-2) RB: (BMB 462 and ZOL 341 and PLP 810) and (BOT 414 or BOT 415) SA: BOT 881

Biochemical and molecular bases of host-pathogen interactions. Mechanisms of pathogenicity and the nature of disease resistance.

#### 884 Prokaryotic Diseases of Plants

Fall of even years. 3(3-0) Interdepartmental with Plant Biology. Administered by Plant Pathology. RB: PLP 405 SA: BOT 884

Prokaryotic genera associated with plant diseases. Genetics and host-pathogen interactions. Prokaryotic disease control strategies.

#### 885 Plant Diseases in the Field

Summer of odd years. 2(1-3) RB: PLP 810 R: Open only to graduate students. SA: BOT 885

Diagnosis of plant diseases and disorders in a field setting. Field trips and independent study required.

#### 890 Independent Study

Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course. R: Open only to graduate students.

Individual study in laboratory, field or library research in plant pathology

#### 893 Selected Topics

Fall, Spring, Summer of odd years. 1 to 4 credits. A student may earn a maximum of 6 credits in all enrollments for this course.

Current topics in plant pathology.

#### 894 Seminar in Plant Pathology

Fall, Spring. 1(1-0) A student may earn a maximum of 6 credits in all enrollments for this course.

Review, organization, analysis and oral presentation of research.

#### 899 Master's Thesis Research

Fall, Spring, Summer. 1 to 12 credits. A student may earn a maximum of 99 credits in all enrollments for this course.

Master's thesis research.

## **Plant Pathology—PLP**

**999 Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 99 credits in all enrollments for this course.  
Doctoral dissertation research.