Plant Pathology - PLPA

Courses


**PLPA 3000/3003 GENERAL PLANT PATHOLOGY (4)** LEC. 3. LAB. 2. Pr. BIOL 1030 or BIOL 1037. Survey of plant diseases common in Alabama, including symptom recognition, pathogen biology and management of plant diseases. Course credit will not be given for both PLPA 3000 and PLPA 3003/3004.

**PLPA 4960 SPECIAL PROBLEMS IN PLANT PATHOLOGY (1-3)** IND. Departmental approval. Supervised work on a project in plant pathology. Areas of study are: A. Mycology; B. Nematology; C. Virology; D. Bacteriology; E. Extension and Clinic Experience; F. Physiological and Molecular Approaches. Course may be repeated for a maximum of 3 credit hours.

**PLPA 4980 UNDERGRADUATE RESEARCH (2-4)** IND. Departmental approval. Directed research in the area of specialty within the department. Course may be repeated for a maximum of 4 credit hours.

**PLPA 4997 HONORS THESIS (1-3)** IND. Pr. Honors College. Departmental approval. Assigned readings on topics pertinent to plant pathology or individual student endeavor consisting of directed research and writing of honor’s thesis. Course may be repeated for a maximum of 6 credit hours.

**PLPA 5050 PLANT DISEASE DIAGNOSIS (3)** LEC. 1. LAB. 3. Pr. PLPA 3000 or PLPA 3003. Approaches, techniques, and practical experience in diagnosis of plant diseases. Credit will not be given for both PLPA 5050 and PLPA 6050. Summer.

**PLPA 5200/5203 MYCOLOGY (4)** LEC. 3. LAB. 2. Pr. BIOL 1030 or BIOL 1037. Biology of fungi with emphasis on taxonomy, morphology, physiology, genetics, reproduction, and how fungi interact with their ecosystems including plants, animals, and humans. Credit will only be given to one of the following: PLPA 5200, 5203, 6200, or 6206.

**PLPA 5300 PLANT-BACTERIAL INTERACTIONS (4)** LEC. 3. LAB. 2. Pr. BIOL 1030. Department approval. Comprehensive review of plant-bacterial interactions, including colonization, pathogenesis, symbiotic and associative nitrogen fixation, and transformation. May count PLPA 5300 or PLPA 6300 or PLPA 7300.

**PLPA 5330/5333 INTEGRATED PEST MANAGEMENT (3)** LEC. 3. Aspects of pest management as a broad-based approach that integrates practices for economic control of pests. May count either ENTM/HORT/PLPA 5330/5333/6330/6336.

**PLPA 5400 PLANT VIROLOGY (3)** LEC. 3. Pr. PLPA 3000 or PLPA 3003. Departmental approval. Introduction to plant viruses and the diseases they cause; virus particle structure and replication strategies; disease identification by symptoms and detection of pathogen; transmission, ecology, epidemiology and control.

**PLPA 5500/5503 PLANT NEMATOLOGY (4)** LEC. 2. LAB. 4. Pr. BIOL 1030 or BIOL 1037. Departmental approval. Presentation of nematodes in relation to plant diseases, identification of plant nematodes; nature of pathogenicity; principles and practices of management; recent advances in phytosystematics. May count either PLPA 5500 or PLPA 6500 or PLPA 7300.

**PLPA 5600 PHYSIOLOGY OF PLANT HEALTH AND DISEASE (3)** LEC. 3. Pr. BIOL 3000 or BIOL 3003. Comprehensive coverage of present advances in plant defense-related metabolic pathways: how to recognize pathogen infections, and activate/potentiate disease resistances. Introduces biochemical, molecular and cellular mechanisms by which plants defend/assimilate themselves towards diverse a/biotic stress stimuli.

**PLPA 5920 INTERNSHIP (3)** IND. 3. SU. Departmental approval. Practical professional experience under the supervision of internship faculty and a representative of a state, federal, or private agency.

**PLPA 6050 PLANT DISEASE DIAGNOSIS (3)** LEC. 1. LAB. 3. Graduate level standing in PLPA, ENTM, AGRO, HORT, AGEC or Department approval. Experience with plant disease diagnosis procedures and the diagnosis of many common plant diseases. Summer.
PLPA 6200/6206 MYCOLOGY (4) LEC. 3. LAB. 2. Graduate level standing in PLPA, ENTM, AGRO, HORT, AGEC or Department approval. Biology of fungi with emphasis on taxonomy, morphology, physiology, genetics, reproduction, and how fungi interact with their ecosystems including plants, animals, and humans. Credit will only be given to one of the following: PLPA 5200, PLPA 5203, PLPA 6200 or PLPA 6206.

PLPA 6250/6256 MEDICAL AND VETERINARY MYCOLOGY (2) LEC. 2. Pr. BIOL 3200 or prior approval of the instructor. A systematic survey of fungi and the diseases they cause on humans and animals.

PLPA 6300 PLANT-BACTERIAL INTERACTIONS (4) LEC. 3. LAB. 2. Comprehensive review of plant-bacterial interactions, including colonization, pathogenesis, symbiotic and associative nitrogen fixation, and transformation. May count either PLPA 5300 or PLPA 6300.

PLPA 6330/6336 INTEGRATED PEST MANAGEMENT (3) LEC. 3. Aspects of pest management as a broad-based approach that integrates practices for economic control of pests. May count either ENTM/HORT/PLPA 5330/5333/6330/6336.

PLPA 6400 PLANT VIROLOGY (3) LEC. 3. Introduction to plant viruses and the diseases they cause; virus particle structure and replication strategies; disease identification by symptoms and detection of pathogen; transmission, ecology, epidemiology and control.

PLPA 6500/6506 PLANT NEMATOLOGY (4) LEC. 2. LAB. 4. Presentation of nematodes in relation to plant diseases, identification of plant nematodes; nature of pathogenicity; principles and practices of management; recent advances in phytonematology. May count either PLPA 5500 or PLPA 6500.

PLPA 6600 PHYSIOLOGY OF PLANT HEALTH AND DISEASE (3) LEC. 3. Pr. BIOL 3000 or BIOL 3003 or Departmental approval. Comprehensive coverage of present advances in plant defense-related metabolic pathways; how to recognize pathogen infections, and activate/potentiate disease resistances, biochemical, molecular and cellular mechanism by which plants defend/assimilate themselves towards diverse abiotic stress stimuli. May count either PLPA 5600 or PLPA 6600.

PLPA 6920 INTERNSHIP (3) IND. 3. SU. Departmental approval. Practical professional experience under the supervision of internship faculty and a representative of a state, federal, or private agency.

PLPA 7080 FIELD SURVEY OF PLANT PATHOLOGY (3) LEC. 1. LAB. 6. Practical aspects of plant diseases under field conditions, on-site visits via field trips; discussion of experimental design for field research. Summer.

PLPA 7820 RESEARCH PROPOSAL WRITING (4) LEC. 3. Graduate level standing or Department approval. Experience in all aspects of writing and reviewing competitive research proposals through a workshop-format culminating in each student writing a proposal on research topics of their choosing. Fall.

PLPA 7865/7860 PLANT DISEASE EPIDEMIOLOGY (3) LEC. 3. Aspects of plant disease epidemiology including disease assessment and temporal progress, pathogen spread, and yield loss determination.

PLPA 7861 PLANT DISEASE EPIDEMIOLOGY LABORATORY (2) LAB. 4. Coreq. PLPA 7860. Quantitative aspects of plant disease epidemiology including spatial and temporal modeling, and disease system simulation.


PLPA 7900 DIRECTED STUDIES IN PLANT PATHOLOGY (1-5) LEC. SU. Discussion groups on specific topics, assigned reading on laboratory problems or field research.

PLPA 7910 TEACHING PRACTICUM (1) LAB. 2. SU. Graduate level standing in PLPA or ENTM or Departmental approval. The teaching practicum will address the practical and heretical issues of laboratory learning and facilitating the skills of pedagogy. Course may be repeated for a maximum of 3 credit hours.

PLPA 7930 JOURNAL REVIEW FOR ENTOMOLOGY AND PLANT PATHOLOGY (1) LEC. 1. Graduate level standing in PLPA, ENTM, AGRO, HORT, AGEC or Department approval. Discussion of recent scientific publications on basic aspects of research in entomology and plant pathology. Course may be repeated for a maximum of 2 credit hours.

PLPA 7950 SEMINAR IN PLANT PATHOLOGY (1) SEM. 1. SU. Departmental approval. Seminar presentations on current departmental research and current issues in plant pathology and related disciplines. Fall, Spring. Course may be repeated for a maximum of 2 credit hours.
PLPA 7966/7960 SPECIAL PROBLEMS IN PLANT PATHOLOGY (1-5) IND. Departmental approval. Credit to be arranged. Specialized project or research on a specific topic in plant pathology to be conducted under faculty supervision. Course may be repeated for a maximum of 5 credit hours.

PLPA 7970/7976 SPECIAL TOPICS IN PLANT PATHOLOGY (1-5) ST1. Advanced topics related to plant pathology. Course may be repeated for a maximum of 5 credit hours.

PLPA 7990 RESEARCH AND THESIS (1-10) MST. Departmental approval. Research and thesis on problems in plant pathology. Course may be repeated with change in topics.

PLPA 8880 MOLECULAR PLANT PATHOLOGY (3) LEC. 2. LAB. 2. Pr. PLPA 6200 or PLPA 6206. Graduate level standing in PLPA, ENTM, AGRO, HORT, AGEC or Department approval. Comprehensive coverage of the molecular biology of plant-pathogen interactions.

PLPA 8900 DIRECTED STUDIES IN PLANT PATHOLOGY (1-5) LEC. SU. Discussion groups on specific topics, assigned reading on laboratory problems or field research. Course may be repeated for a maximum of 5 credit hours.

PLPA 8910 TEACHING PRACTICUM (1-3) LAB. 2. SU. Departmental approval. Practical and theoretical issues of laboratory learning, and pedagogical facilitation. Required of all PhD students. Course may be repeated for a maximum of 3 credit hours.

PLPA 8930 JOURNAL REVIEW FOR ENTOMOLOGY AND PLANT PATHOLOGY (1) LEC. 1. Graduate level standing in PLPA, ENTM, AGRO, HORT, AGEC or Department approval. Discussion of recent scientific publications on basic aspects of research in entomology and plant pathology. Course may be repeated for a maximum of 3 credit hours.

PLPA 8950 SEMINAR (1) SEM. 1. SU. Departmental approval. Presentations and discussion of scientific literature or dissertation research findings. Required for all Ph.D. candidates. Fall, Spring. Course may be repeated for a maximum of 2 credit hours.

PLPA 8960 SPECIAL PROBLEMS IN PLANT PATHOLOGY (1-5) IND. Departmental approval. Credit to be arranged. Specialized project or research on a specific topic in plant pathology to be conducted under faculty supervision. Course may be repeated for a maximum of 5 credit hours.

PLPA 8990 RESEARCH AND DISSERTATION (1-10) DSR. Departmental approval. Research and dissertation on problems in plant pathology. Course may be repeated with change in topics.