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.

104 Applied Plant Pathology for Ornamentals and Turf
Fall of odd years. 3(2-2) Fall: W. K. Kellogg Biological Station and All CHM communities and Grand Rapids. R: Open to agricultural technology students in the College of Agriculture and Natural Resources. Not open to students with credit in PLP 105 or PLP 405 or PLP 407.
Diseases of woody ornamentals and turf grasses.

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.

200 Plant Diseases and Their Pathogens
Fall of even years. 3(2-2) Fall: All CHM communities and Traverse City. R: Open to agricultural technology students in the College of Agriculture and Natural Resources. Not open to students with credit in PLP 405 or PLP 407.
Plant diseases. Biology of pathogens that cause disease. Disease management, with focus on Northern Michigan.

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.

366 Turf Pathology
Fall. 3(2-2) SA: CSS 362
Turf pathogens and turf diseases. Cultural, biological and chemical methods for turf disease management.

402 Biology of Fungi
Fall of odd years. 3(2-3) Interdepartmental with Plant Biology. Administered by Plant Biology. P: BS 162 or BS 161 or PLB 105 or LB 145 or BS 182H or BS 181H SA: BOT 402
Characteristics, habitats, and diversity of major groups of fungi. Ecologic and economic importance of fungi.

405 Plant Pathology
Spring. 3(2-3) P: (BS 161 and BS 162) or (PLB 105 and PLB 106) or ((LB 144 and LB 145) and completion of Tier I writing requirement) SA: BOT 405
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: (PLB 105 or BS 162 or LB 144) 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: PLP 405 or PLP 407
Selected topics in plant pathology of current interest and importance.

492 Seminar
Spring. 2(2-0) P: (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, CMP 493, CSS 493, EEP 493, ESA 493, FIM 493, FSC 493, FW 493, HRT 493, PKG 493, PLP 493, and PRR 493. R: 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: Completion of Tier I writing requirement. R: Approval of department
Faculty supervised laboratory. Field research in plant pathology.

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.

870 Nematode Management in Crop Systems
Summer of even years. 3(2-3) Interdepartmental with Entomology. Administered by Entomology. RB: PLP 405 SA: BOT 870
Biology, host parasite relationships and management by farming and cropping systems of selected nematode diseases of economic plants.

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.

882 Soilborne Pathogens and Diseases
Fall of even years. 3(2-2) RB: PLP 405
Diseases caused by soilborne pathogens. Epidemiology, disease management, techniques for study of soilborne pathogens and diseases. Pathogen identification and detection.

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.

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.