**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 or PLP 405. 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**

**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. SA: BOT 405. Not open to students with credit in BOT 405 or PLP 405.
Characteristics, habitats, and diversity of major groups of fungi. Ecologic and economic importance of fungi.

**405 Plant Pathology**
Spring. 3(2-3) P: (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: (PLB 105 or BS 110 or LBS 144 or LBS 148H) and ((PLB 216 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: PLP 405 or PLP 407.
Selected topics in plant pathology of current interest and importance.

**492 Seminar**
Spring. 2(2-0) P: (PLP 408) and completion of Tier I writing requirement RB: (PLP 405) or PLP 407.
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.

**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 even 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.

**892 Soilborne 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.

**893 Soilborne 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.
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.

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.

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.

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.