Plant Pathology

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.

362 Management of Turfgrass Pests
Fall. 4(3-2) Interdepartmental with Crop and Soil Sciences and Entomology. Administered by Crop and Soil Sciences. P: 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 of odd years. 3(2-3) Interdepartmental with Plant Biology. Administered by Plant Biology. P: BS 110 or BS 111 or PLB 105 or LB 145 or BS 148H or BS 149H 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 110 and BS 111) or (PLB 105 and PLB 106) or ((LBS 144 and LBS 145) and completion ofTier 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 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.

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
Summer of even years. 3(3-3) Interdepartmental with Entomology. Administered by Entomology and 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
Biological, 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
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 stu-
   dent 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 re-
   search 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.