**PLANT PATHOLOGY (PLPT)**

### PLPT 801 Biology of Plant Pathogens
**Crosslisted with:** AGRO 801, HORT 801  
**Prerequisites:** PLPT 369 or equivalent.  
**Description:** Molecular and cellular approach to the study of plant pathological principles.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Grading Option:** Grade Pass/No Pass Option  
**Prerequisite for:** PLPT 866; PLPT 965, AGRO 965, HORT 965

### PLPT 802 Ecology and Management of Plant Pathogens
**Crosslisted with:** AGRO 802, HORT 802  
**Prerequisites:** PLPT 369 or equivalent; an introduction to biochemistry course  
**Description:** Principles of plant disease epidemiology and disease control through cultural, biological, chemical and host plant resistance strategies.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Grading Option:** Grade Pass/No Pass Option  
**Prerequisite for:** PLPT 866; PLPT 965, AGRO 965, HORT 965

### PLPT 813 Biological Control of Pests
**Crosslisted with:** ENTO 813  
**Prerequisites:** 12 hrs biological sciences and/or agricultural sciences  
**Description:** Principles and practices of using natural enemies and antagonists to manage the abundance of pests and reduce economic losses.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Grading Option:** Grade Pass/No Pass Option  
**Prerequisite for:** PLPT 866; PLPT 965, AGRO 965, HORT 965

### PLPT 814 Turfgrass Disease Management
**Crosslisted with:** AGRO 414, AGRO 814, HORT 414, HORT 814, PLPT 414, TLMT 414, TLMT 814  
**Prerequisites:** BIOS/PLPT 369 or one semester of introductory plant pathology  
**Description:** Pathogens, epidemiology, and control of diseases specific to turfgrass.  
**Credit Hours:** 1  
**Max credits per semester:** 1  
**Max credits per degree:** 1  
**Grading Option:** Grade Pass/No Pass Option  
**Prerequisite for:** PLPT 866; PLPT 965, AGRO 965, HORT 965

### PLPT 817 Plant Pathology Principles and Application
**Crosslisted with:** AGRO 817, HORT 817  
**Prerequisites:** 12 hours of prior coursework in the plant sciences  
**Description:** Introduction to the biology of plant pathogenic organisms; pathogen-plant interactions; environmental influences; cultural, resistance, and chemical strategies for plant disease management.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Grading Option:** Grade Pass/No Pass Option

### PLPT 818 Microbial Genetics & Genomics
**Crosslisted with:** PLPT 418  
**Prerequisites:** BIOS 206 or AGRO 215.  
**Notes:** BIOS 312 recommended.  
**Description:** Inheritance, exchange, and regulation of genes in prokaryotic microorganisms: gene structure and function; gene transfer and the elements (plasmids, phages, and transposons) involved; DNA mutations, repair, and genetic analysis; genome sequencing, microbial genome databases, and global gene expression analysis.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Grading Option:** Graded  
**Prerequisite for:** PLPT 866; PLPT 965, AGRO 965, HORT 965

### PLPT 866 Phytopathogenic Nematodes
**Prerequisites:** PLPT 801 or 802, and permission  
**Description:** Principles of nematode-induced disease of plants.  
**Credit Hours:** 3  
**Max credits per semester:** 3  
**Max credits per degree:** 3  
**Grading Option:** Graded  
**Prerequisite for:** PLPT 801 or 802; and permission

### PLPT 867 Plant Associated Microbes
**Prerequisites:** A course in general microbiology, bacteriology, or mycology. A course in general plant pathology is highly recommended.  
**Description:** Biology, ecology, and taxonomy of bacteria and fungi pathogenic or beneficial to plants. Microorganism isolation from plants and soil. Identification and plant inoculation.  
**Credit Hours:** 4  
**Max credits per semester:** 4  
**Max credits per degree:** 4  
**Grading Option:** Grade Pass/No Pass Option  
**Prerequisite for:** PLPT 866; PLPT 965, AGRO 965, HORT 965

### PLPT 891 Plant Disease Field Tour
**Description:** Diseases in Nebraska agricultural, urban, and wildland plant ecosystems; field diagnosis and management. One-week tours will be held in the summer prior to semester of enrollment.  
**Credit Hours:** 1-2  
**Min credits per semester:** 1  
**Max credits per semester:** 2  
**Max credits per degree:** 2  
**Grading Option:** Grade Pass/No Pass Option  
**Prerequisite for:** PLPT 866; PLPT 965, AGRO 965, HORT 965

### PLPT 892 Special Topics in Plant Pathology
**Prerequisites:** 12 hrs of microbiology, plant science or related fields  
**Notes:** Topics vary.  
**Credit Hours:** 1-4  
**Min credits per semester:** 1  
**Max credits per semester:** 4  
**Max credits per degree:** 12  
**Grading Option:** Graded  
**Prerequisite for:** PLPT 891; PLPT 892

### PLPT 899 Masters Thesis
**Prerequisites:** Admission to masters degree program and permission of major advisor.  
**Description:** Research and writing towards the master’s thesis.  
**Credit Hours:** 1-10  
**Min credits per semester:** 1  
**Max credits per semester:** 10  
**Max credits per degree:** 99  
**Grading Option:** Pass No-Pass
PLPT 963 Genetics of Host-Parasite Interaction
Crosslisted with: AGRO 963, HORT 963
Prerequisites: BIOS 820; and permission
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Graded

PLPT 965 Plant Virology
Crosslisted with: AGRO 965, HORT 965
Prerequisites: PLPT 801 or 802; and permission.
Notes: PLPT 865 is offered odd-numbered calendar years.
Description: Virus molecular biology; virosphere; virus-vector relationships; plant resistance to virus infection economic impact and control of plant diseases by viruses.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Grading Option: Grade Pass/No Pass Option
Offered: SPRING

PLPT 968 Seminar in Plant Pathology
Crosslisted with: AGRO 968, HORT 968
Prerequisites: Permission.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Grading Option: Grade Pass/No Pass Option
Offered: SPRING

PLPT 999 Doctoral Dissertation
Prerequisites: Admission to doctoral degree program and permission of supervisory committee chair
Description: Research and writing towards the PhD dissertation
Credit Hours: 1-24
Min credits per semester: 1
Max credits per semester: 24
Max credits per degree: 99
Grading Option: Pass No-Pass