

**COURSE: PIP 511 Viruses and Virus Diseases of Plants. Spring 2009. 4 Credits**

13-Jan	General overview of the course; getting to know Who is Who; student questionnaire	H. Pappu
15-Jan	Historical perspectives	H. Pappu
20-Jan	Classification and taxonomy. Groups of plant viruses. Biochemical components. Morphology	H. Pappu
22-Jan	Types of plant virus diseases and symptomatology. Potato virus slide set.	H. Pappu
27-Jan	The structure of plant viruses. "...and the Oscar goes to..." Virology Film Festival	H. Pappu
29-Jan	Serology. The fundamentals of immunological methods	H. Pappu
3-Feb	Serological methods	H. Pappu
5-Feb	Epidemiology. The spread of plant viruses	H. Pappu
10-Feb	Ecology of plant viruses. Host-range and survival.	H. Pappu
12-Feb	Guest Lecture	H. Pappu
17-Feb	Virus transmission -seed, vegetative means	H. Pappu
20-Feb	Virus transmission -orthopods; mechanisms and accessory factors	H. Pappu
24-Feb	Virus transmission-other means	H. Pappu
26-Feb	Variability of plant viruses and strains	H. Pappu
3-Mar	Review for mid-term exam	H. Pappu
5-Mar	Mid-term exam	
10-Mar	Plant virus evolution	H. Pappu
12-Mar	Guest lecture	H. Pappu
17-Mar	Spring Break	
19-Mar	Spring Break	
24-Mar	Assembly of plant viruses. The infection process. How viruses enter host cells. The early events.	A. Karasev
26-Mar	Replication and translation of viruses: General overview of nucleic acid replication and translation strategies	A. Karasev
31-Mar	ss(+)-RNA viruses. Detailed examples: Tobamoviruses, Potyviruses	A. Karasev

2-Apr	Closteroviruses and plant picornaviruses	A. Karasev
7-Apr	Cucumo, ilar, bromoviruses - Dr. Ken Eastwell	A. Karasev
9-Apr	ssDNA and dsDNA viruses: Gemini, nano and caulimoviruses	A. Karasev
14-Apr	ds RNA and negative stranded-RNA viruses	A. Karasev
16-Apr	Control of plant virus diseases	A. Karasev
21-Apr	Biotechnology and Genetic Engineering	A. Karasev
23-Apr	Virus-induced gene silencing	A. Karasev
28-Apr	Review for the final exam	A. Karasev
30-Apr	Extra class, if needed	
4-May	Finals week	
12-May	Grades due	