



SCIENCE AND
EDUCATION
**FOR
SUSTAINABLE
LIFE**

BI1044

SLU's ADVANCED PLANT PATHOLOGY MASTER COURSE

FALL SEMESTER 2022 COURSE SCHEDULE

Version June 28, 2022

Department of Forest Mycology and Plant Pathology.
Swedish University of Agricultural Sciences.
Almas Allé 5, 75007. Uppsala. Sweden.

COURSE LEADER

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Week 35 _ August 29 – September 2			
	Monday 29 Aug.	Tuesday 30 Aug.	Wednesday 31 Aug.
9:00 10:15		#Lecture [AK] - Introduction to plant virology. ZOOM	#Lecture [SB] Diagnostics and identification of plant diseases: Symptomatology, Koch postulates. BioC-C216
Break			
10:30 12:00		#Lecture [AK] - Transmission of plant viruses. ZOOM	#Lecture [SB] Diagnostics and identification of plant diseases: Symptomatology, Koch postulates. BioC-C216
Break			
13:00 14:15	#Lecture [SB] Course Introduction BioC-C216	# Field Work [AK] - Survey of Plant Viruses at Uppsala Botanical Garden.	
Break			
14:30 16:00	#Lecture [SB] Principles of Plant Pathology BioC-C216	# Field Work [AK] - Survey of Plant Viruses at Uppsala Botanical Garden.	
	Thursday 1 Sep.	Friday 2 Sep.	Remarks
9:00 10:15	#Field Work [SB/BA] - Survey of plant diseases How to perform and report field observations. Campus Ultuna	#Lab Work [AB/BA] updated content - Diagnostics of Plant Diseases [Microscopy Practical] BÖL 2	
Break			
10:30 12:00	#Field Work [SB/BA] - Survey of plant diseases. How to perform and report field observations. Campus Ultuna	#Lab Work [AB/BA] updated content - Diagnostics of Plant Diseases [Microscopy Practical] BÖL 2	
Break			
13:00 14:15	#Lab Work [SB/BA] - Diagnostics and isolation of plant pathogens. Microscopy Lab. Microbiology Lab. BÖL 2		
Break			
14:30 16:00	#Lab Work [SB/BA] - Diagnostics and isolation of plant pathogens. Microscopy Lab. Microbiology Lab. BÖL 2		

Week 36 _ September 5 – September 9			
	Monday 5 Sep.	Tuesday 6 Sep.	Wednesday 7 Sep.
9:00 10:15	#Lecture [AL] - Plant Protection Extension (Swedish Board of Agriculture) BioC-C216	#Lab Work [SB/EV] - Molecular diagnostics of plant pathobiomes [DNA extraction] BÖL 2	#Lab Work [SB/EV] - Molecular diagnostics of plant pathobiomes [Gel electrophoresis] BÖL 2
Break			
10:30 12:00	#Lecture [AL] - Plant Protection Extension (Swedish Board of Agriculture) BioC-C216	#Lab Work [SB/EV] - Molecular diagnostics of plant pathobiomes [DNA extraction] BÖL 2	#Lab Work [SB/EV] - Molecular diagnostics of plant pathobiomes [Gel electrophoresis] BÖL 2
Break	TEX1 [MK/EP]: Phylogeny of plant pathogenic fungi. Uploaded on canvas.		
13:00 14:15	#Lecture [MK] - Systematics of the fungal kingdom {room: tba}	#Lab Work [SB/EV] - Molecular diagnostics of plant pathobiomes [PCR detection] BÖL 2	
Break			
14:30 16:00	#Lecture [MK] - Systematics of the fungal kingdom {room: tba}	#Lab Work [SB/EV] - Molecular diagnostics of plant pathobiomes [PCR detection] BÖL 2	
	Thursday 8 Sep.	Friday 9 Sep.	Remarks
9:00 10:15		#Lecture [MK] - Molecular Characterization of Fungal Pathogens Computer Datorsal 1 and 2	
Break			
10:30 12:00		#TEX1 Computer Exercise [MK/EP] - Phylogeny of Plant Pathogenic Fungi Computer Datorsal 1 and 2	
Break			
13:00 14:15	#TEX1 Group Study [MK] - Phylogeny of Plant Pathogenic Fungi ZOOM		
Break			
14:30 16:00	#TEX1 Group Study [MK] - Phylogeny of Plant Pathogenic Fungi ZOOM		

Week 37 _ September 12 – September 16			
	Monday 12 Sep.	Tuesday 13 Sep.	Wednesday 14 Sep.
9:00 10:15		# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	#Lecture [JZ] - Principles of plant disease epidemiology BioC-C212
Break			
10:30 12:00		# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	#Lecture [JZ] - Principles of plant disease epidemiology: statistical models. BioC-C212
Break	TEX2 [MK]: Biological control of plant pathogens. Uploaded on Canvas.		
13:00 14:15	# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	
Break			
14:30 16:00	# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	
	Thursday 15 Sep.	Friday 16 Sep.	Remarks
9:00 10:15	#Lecture [BA] - Life cycle and epidemiology of airborne pathogens. BioC-C213	#Lecture [MK] - Biological disease control BioC-C213	
Break			
10:30 12:00	#Lecture [MK] - Life cycle and epidemiology of soilborne pathogens. BioC-C213	#TEX2 Discussion [MK] - Biological control of plant pathogens. BioC-C213	
Break			
13:00 14:15	#Lecture [HF] - Suppressive soils BioC-C213		
Break			
14:30 16:00			

Week 38 _ September 19 – September 23			
	Monday 19 Sep.	Tuesday 20 Sep.	Wednesday 21 Sep.
9:00 10:15		#Lecture [BA] - Chemical disease control BioC-C213	#Lecture [SB] - Mechanisms of adaptation of pathogens to new hosts: adapted pathogens. BioC-C213
Break			
10:30 12:00		#Lecture [BA] - Surveillance and forecasting of plant diseases BioC-C213	#Lecture [SB] - Mechanisms of adaptation of pathogens to new hosts: non-adapted pathogens. BioC-C213
Break	TEX3 [AB]: Population genetics of plant pathogens. Uploaded on Canvas.		
13:00 14:15	#Lecture [MK] - Life cycle and epidemiology of post-harvest diseases. BioC-C216	#Computer Exercise [BA/JG] - Disease forecast BioC-C213	
Break			
14:30 16:00	#Lecture [HF] - Fungal mycotoxins. BioC-C216	#Computer Exercise [BA/JG] - Disease forecast BioC-C213	
	Thursday 22 Sep.	Friday 23 Sep.	Remarks
9:00 10:15	#Lecture [BA] - Fungicide resistance. BioC-C213	#Lecture [AB] - Population genetics of plant pathogens. BioC-C213	
Break			
10:30 12:00	#Lecture [MV] - Plant pathogenic nematodes BioC-C213	#TEX3 Discussion [AB] - Population genetics of plant pathogens. BioC-C213	
Break			
13:00 14:15	#Lab work [MV] - Plant Pathogenic Nematodes. BÖL 2		
Break			
14:30 16:00	#Lab work [MV] - Plant Pathogenic Nematodes. BÖL 2		

Week 39 _ September 26 – September 30			
	Monday 26 Sep.	Tuesday 27 Sep.	Wednesday 28 Sep.
9:00 10:15		#Lecture [MD] - How pathogens attack plants. BioC-C212	
Break			
10:30 12:00		#Lecture [MD] - How pathogens attack plants. BioC-C212	
Break	TEX4 [SB]: Durable plant immunity. Uploaded on Canvas.		
13:00 14:15	#Lecture [SB] - Principles of plant immunity: genetic basis. BioC-C216	#Lecture [GT] - How plants defend against pathogens. BioC-C212	
Break			
14:30 16:00	#Lecture [SB] - Principles of plant immunity: molecular basis. BioC-C216	#Lecture [GT] - How plants defend against pathogens. BioC-C212	
	Thursday 29 Sep.	Friday 30 Sep.	Remarks
9:00 10:15	#Lecture [SB] - Durable plant immunity BioC-C213	# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	
Break			
10:30 12:00	#TEX4 Discussion [SB] - Durable plant immunity BioC-C213	# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	
Break			
13:00 14:15		# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	
Break			
14:30 16:00		# Lab Work [MD] - Biological Control of Plant Diseases BÖL 2	

Week 40 _ October 3 – October 7			
	Monday 3 Oct.	Tuesday 4 Oct.	Wednesday 5 Oct.
9:00 10:15		#Future plant health {tba} BioC-C213	
Break			
10:30 12:00		#Future plant health {tba} BioC-C213	
Break			
13:00 14:15		#Future plant health {tba} BioC-C213	
Break			
14:30 16:00		#Future plant health {tba} BioC-C213	
	Thursday 6 Oct.	Friday 7 Oct.	Remarks
9:00 10:15	#IPM Workshop - Group work ZOOM	#IPM Workshop - Group presentations Lecture hall R	
Break			
10:30 12:00	#IPM Workshop - Group work ZOOM	#IPM Workshop - Group presentations Lecture hall R	
Break			
13:00 14:15	#IPM Workshop - Group work ZOOM	#IPM Workshop - Group presentations Lecture hall R	
Break			
14:30 16:00	#IPM Workshop - Group work ZOOM	#IPM Workshop - Group presentations Lecture hall R	

Week 41 _ October 10 – October 14			
	Monday 10 Oct.	Tuesday 11 Oct.	Wednesday 12 Oct.
9:00 10:15		#Future plant health {tba} BioC-C213	
Break			
10:30 12:00		#Future plant health {tba} BioC-C213	
Break			
13:00 14:15		#Future plant health {tba} BioC-C213	
Break			
14:30 16:00		#Future plant health {tba} BioC-C213	
	Thursday 13 Oct.	Friday 14 Oct.	Remarks
9:00 10:15	#One Health Workshop - Group work ZOOM	#One Health Workshop - Group presentations Lecture-hall BioC-A241	
Break			
10:30 12:00	#One Health Workshop - Group work ZOOM	#One Health Workshop - Group presentations Lecture-hall BioC-A241	
Break			
13:00 14:15	#One Health Workshop - Group work ZOOM	#One Health Workshop - Group presentations Lecture-hall BioC-A241	
Break			
14:30 16:00	#One Health Workshop - Group work ZOOM	#One Health Workshop - Group presentations Lecture-hall BioC-A241	

Week 42 _ October 17 – October 21			
	Monday 17 Oct.	Tuesday 18 Oct.	Wednesday 19 Oct.
9:00 10:15	#Finalize case study report	#Finalize case study report	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam
Break			
10:30 12:00	#Finalize case study report	#Submit case study report before 12:00 on Canvas.	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam
Break			
13:00 14:15	#Finalize case study report	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam
Break			
14:30 16:00	#Finalize case study report	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam
	Thursday 20 Oct.	Friday 21 Oct.	Remarks
9:00 10:15	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	
Break			
10:30 12:00	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	
Break			
13:00 14:15	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	
Break			
14:30 16:00	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	#Read case study reports of others #Prepare your case study presentations #Prepare for the exam	

Week 43 _ October 24 – October 28			
<i>Final exams</i>			
	Monday 24 Oct.	Tuesday 25 Oct.	Wednesday 26 Oct.
9:00 10:15	#Case-Study Presentation Lecture-hall BioC-Lennart Kennes	#Prepare for the final exam	#Prepare for the final exam
Break			
10:30 12:00	#Case-Study Presentation Lecture-hall BioC-Lennart Kennes	#Prepare for the final exam	#Prepare for the final exam
Break			
13:00 14:15	#Case-Study Presentation Lecture-hall BioC-Lennart Kennes	#Prepare for the final exam	#Prepare for the final exam
Break			
14:30 16:00	#Case-Study Presentation Lecture-hall BioC-Lennart Kennes	#Prepare for the final exam	#Prepare for the final exam
	Thursday 27 Oct.	Friday 28 Oct.	Remarks
9:00 10:15	#Final Exam BioC. Room A332 BioC. Room A336		
Break			
10:30 12:00	#Final Exam BioC. Room A332 BioC. Room A336		
Break			
13:00 14:15	#Final Exam BioC. Room A332 BioC. Room A336		
Break			
14:30 16:00	#Final Exam BioC. Room A332 BioC. Room A336		