

	Lecture/Discussion
	Self work
	Lectures together with Plant Pathology course
	Lab work/field trips in Uppsala

Ecology & Management of Diseases and Pests of Forest Trees

SG0225

Week	Monday	Tuesday	Wednesday	Thursday	Friday
35	29-Aug-2022	30-Aug-2022	31-Aug-2022	1-Sep-2022	2-Sep-2022
Time					
9:30-10:00	Introduction to the course (AM) <i>live via Zoom</i>	Introduction to top assignments (AM,JS)	Preparation for top assignments	Preparation for top assignments	Preparation for top assignments
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	General forest pathology lecture (JS) <i>live via Zoom</i>	General insect lecture (MKL,GN) <i>live via Zoom</i>	Climate change and pest insects (HB) <i>live via Zoom</i>	Climate change and pathogens (JS)	Preparation for top assignments
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Fungal Pathogens: Systematics of the fungal kingdom (DFJ)	Canker diseases (JS)		Introduction to plant viruses, plant virology (AK)	Preparation for top assignments
14:30-15:00	Break	Break		Break	Break
15:00-16:00	Fungal Pathogens: Systematics of the fungal kingdom (DFJ)	Fungal pathogens, disease cycles, survival and spread (BA)		Preparation for top assignments	Preparation for top assignments

Week	Monday	Tuesday	Wednesday	Thursday	Friday
36	5-Sep-2022	6-Sep-2022	7-Sep-2022	8-Sep-2022	9-Sep-2022
Time	<i>In Uppsala</i>	<i>In Uppsala</i>	<i>In Uppsala</i>	<i>In Uppsala</i>	<i>In Uppsala</i>
9:00-10:00	DNA work (KD) BÖL	Entomology field trip (MJ)	Forest pathology field trip (AM,JS)	Introduction to the Metabarcoding project (KC) Ulls hus	Diagnostics of tree diseases (AM, KD) BÖL
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	DNA work (KD) BÖL	Entomology field trip (MJ)	Forest pathology field trip (AM,JS)	Introduction to the Metabarcoding project (KC) Ulls hus	Diagnostics of tree diseases (AM, KD) BÖL
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	DNA work (KD) BÖL	Entomology field trip (MJ)	Forest pathology field trip (AM,JS)	Introduction to the Metabarcoding project (KC) Ulls hus	
14:30-15:00	Break	Break	Break	Break	
15:00-16:00	DNA work (KD) BÖL	Entomology field trip (MJ)	Forest pathology field trip (AM,JS)	Introduction to the Metabarcoding project (KC) Ulls hus	

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37	12-Sep-2022	13-Sep-2022	14-Sep-2022	15-Sep-2022	16-Sep-2022
Time					
9:00-10:00	Plant disease resistance (JY)	Fungal detection and monitoring (JS)	Preparation for top assignments	Preparation for top assignments	Work on the Metabarcoding project
10:00-10:30	Break	Break	Beak	Beak	Break
10:30-12:00	Introduction to the Gene for Gene hypothesis (BA)	Plant pathogenic bacteria Dr. Minna Pirhonen, Univ. of Helsinki	Preparation for top assignments	Preparation for top assignments	Work on the Metabarcoding project
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Preparation for top assignments	Molecular characterisation of fungal pathogens (MK)		Preparation for top assignments	Work on the Metabarcoding project
14:30-15:00	Break	Break		Beak	Break
15:00-16:00	Preparation for top assignments	Preparation for top assignments		Preparation for top assignments	Work on the Metabarcoding project

Week	Monday	Tuesday	Wednesday	Thursday	Friday
38	19-Sep-2022	20-Sep-2022	21-Sep-2022	22-Sep-2022	23-Sep-2022
Time					
9:00-10:00	Discussion: global change and pests & diseases (HB,JS) live via Zoom	Molecular basis of defence & resistance breeding (ME) live via Zoom	Introduction to case studies (AM,JS)	Preparation for top assignments	Work on the Metabarcoding project
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	How pathogens/insect attack plants; The molecular basis of plant defense (MD)	Plant pathogenic nematodes (MV)	Rust diseases (BS)	Moose damage (LE)	Work on the Metabarcoding project
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Molecular basis of conifer defence against pathogens (ME)	Preparation for top assignments		Preparation for top assignments	Work on the Metabarcoding project
14:30-15:00	Break	Break		Break	Break
15:00-16:00	Resistance breeding in trees (ME)	Preparation for top assignments		Preparation for top assignments	Work on the Metabarcoding project

Week	Monday	Tuesday	Wednesday	Thursday	Friday
39	26-Sep-2022	27-Sep-2022	28-Sep-2022	29-Sep-2022	30-Sep-2022
Time					
9:00-10:00	Epidemiology (AB)	Ash dieback in Europe (AM)	Invasive pathogens (JS)	Invasive pests (MS)	Work on the Metabarcoding project
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	Grammeniella disease (KD)	Damping off, root pathology and soil born pathogens (DFJ)	Predicting and forecasting forest diseases (JS)	Invasive species and new emerging diseases (JS)	Work on the Metabarcoding project
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Forest Phytophthoras (MR)	Root rot from practice to genomics and back again (ÅO)		Biological control of root-rot (AM)	Work on the Metabarcoding project
14:30-15:00	Break	Break		Break	Break
15:00-16:00	Dutch elm disease (AM)	Forest tree nursery problems (AM)		Diplodia disease (LB)	Work on the Metabarcoding project

Week	Monday	Tuesday	Wednesday	Thursday	Friday
40	3-Oct-2022	4-Oct-2022	5-Oct-2022	6-Oct-2022	7-Oct-2022
Time					
9:00-10:00	Introduction to Skogsskada exercise (JS)	Fungi-insect interactions (KD)	Work on case studies	Student presentation of top assignments <i>live via Zoom</i>	Student presentation of top assignments <i>live via Zoom</i>
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	Skogsskada exercise	Forecasting of plant disease epidemics and the need for pesticide spray (BA)	Work on case studies	Student presentation of top assignments <i>live via Zoom</i>	Student presentation of top assignments <i>live via Zoom</i>
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Skogsskada exercise	Mechanical damage and pathogen attack (RV)		Student presentation of top assignments <i>live via Zoom</i>	Student presentation of top assignments <i>live via Zoom</i>
14:30-15:00	Break	Break		Break	Break
15:00-16:00	Skogsskada exercise	Chemical disease control (BA)		Preparation for pathology text 1	Preparation for pathology text 1

Week	Monday	Tuesday	Wednesday	Thursday	Friday
41	10-Oct-2022	11-Oct-2022	12-Oct-2022	13-Oct-2022	14-Oct-2022
Time					
9:00-10:00	Discussion on Pathology text 1 (RL) <i>live via Zoom</i>	Preparation for entomology text 1	Discussion on Entomology text 1 (MKL) <i>live via Zoom</i>	Work on case studies	Preparation for pathology text 2
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	Biological disease control using microbial BCAs (DFJ)	Preparation for entomology text 1	Submitting metabarcoding project reports	Work on case studies	Preparation for pathology text 2
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Pathogens and Mycorrhiza (AD)	Preparation for entomology text 1		Work on case studies	Preparation for pathology text 2
14:30-15:00	Break	Break		Break	Break
15:00-16:00	Gender & equality aspects in forestry (AM)	Preparation for entomology text 1		Work on case studies	Preparation for pathology text 2

Week	Monday	Tuesday	Wednesday	Thursday	Friday
42	17-Oct-2022	18-Oct-2022	19-Oct-2022	20-Oct-2022	21-Oct-2022
Time					
9:00-10:00	Discussion on Pathology text 2 (RL) <i>live via Zoom</i>	Preparation for entomology text 2	Discussion on Entomology text 2 (MKL) <i>live via Zoom</i>	Pests and diseases in southern Europe (JS)	Work on case studies
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	Conflicts nature conservation-forest protection (MS)	Preparation for entomology text 2	Abiotic damages (AM)	Tree stress and complex diseases (JS)	Work on case studies
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Work on case studies	Preparation for entomology text 2		Work on case studies	Work on case studies
14:30-15:00	Break	Break		Break	Break
15:00-16:00	Work on case studies	Preparation for entomology text 2		Work on case studies	Work on case studies

Week	Monday	Tuesday	Wednesday	Thursday	Friday
43	24-Oct-2022	25-Oct-2022	26-Oct-2022	27-Oct-2022	28-Oct-2022
Time					
9:00-10:00	Student case study presentations <i>live via Zoom</i>	Student case study presentations <i>live via Zoom</i>	Work on exam questions	Work on exam questions	Work on exam questions
10:00-10:30	Break	Break	Break	Break	Break
10:30-12:00	Student case study presentations <i>live via Zoom</i>	Student case study presentations <i>live via Zoom</i>	Work on exam questions	Work on exam questions	Work on exam questions
12:00-13:00	Lunch	Lunch	Lunch	Lunch	Lunch
13:00-14:30	Student case study presentations <i>live via Zoom</i>	Student case study presentations <i>live via Zoom</i>		Work on exam questions	Work on exam questions
14:30-15:00	Break	Break		Break	Break
15:00-16:00	Work on case studies	Work on exam questions		Work on exam questions	Handing in exam

Note: smaller changes in the course schedule may still occur.

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