MSc course Microbial horticulture schedule 2021 /hybrid course

	Monday	Tuesday		Wednesday	Thursday	Friday
Week 3	**Jan 18**	**Jan 19**		**Jan 20**	**Jan 21**	**Jan 22**
8.15 – 9.00		*Own work*			*Own work*	*Own work*
9.15 – 10.00	**Course introduction** (BA) Room: Art?, Articum			**WS/G1 Digging into the portfolios (BA) (mandatory)** Zoom	Quiz 1 Lab driving licence	**L1.5 Microbial growth and growth control** (**SK**, MK) Zoom
		Group 1	*Group 2*			
10.15 – 11.00	**L1.1 GLP, biosafety in the lab** (BA) Room: Art?, Articum	*Ex1.1A Pipetting (**JD**, SK)* Room: Chemistry lab, Articum	*Ex1.1A Basic plate pouring (**SK**, JD)* Room: Chemistry lab, sterile room Articum	**L3.1 Involvement of microorganisms in horticultural production network** (BA) Zoom	**L1.4 Microbial morphology** (**SK**, MK), Zoom	
11.15 – 12.00	**L1.2 Lab driving license, lab report** (BA) Room: Art?, Articum	*Ex1.1A Basic plate pouring (**SK**, JD)* Room: Chemistry lab, sterile room Articum	*Ex1.1A Pipetting (**JD**, SK)* Room: Chemistry lab, Articum	**L1.3 The microbial world taxonomy** (**SK**, MK), Zoom	*Own work*	*Own work*
12.15 – 1.00	Lunch					
1.15 – 2.00	*Own work*	*Own work*		*Own work*	*Own work*	*Own work*
2.15 – 3.00						
3.15 – 4.00						
4.15 – 5.00						

	Monday		Tuesday	Wednesday	Thursday		Friday	
Week 4	**Jan 25**		**Jan 26**	**Jan 27**	**Jan 28**		**Jan 29**	
8.15 – 9.00	*Own work*		*Own work*	Quiz 2 Microbial growth	*Own work*		*Own work*	
9.15 – 10.00	Introduction to Ex 2 (**MK**, JD) Zoom		*Ex 1F Growth curve exercise (**JD,** SK)* Zoom	*Own work*				
	Group 1	*Group 2*			*Group 1*	*Group 2*	*Group 1*	*Group 2*
10.15 – 11.00	*Ex 2: Extraction of bacteria from sprouts (**JD,** MK)*	*Own work*		**WS3.3 Biofilms and horticulture** (**MK**, JD) CASE Zoom	*Ex 2B: Pure culture I (2 isolates) (**JD,** SK) Chemistry lab, Sterile room Articum*	Ex 2A Read viable counts sprouts (SK, MK) *Chemistry lab, Articum*	*Ex 2B: Pure culture II (**JD,** SK) Chemistry lab, Articum*	
11.15 – 12.00			**L3.2 Microorganisms associated with plants** (**AKR**, JD) Zoom	*Own work*	Ex 2A Read viable counts sprouts (SK, MK) *Chemistry lab, Articum*	*Ex 2B: Pure culture I (2 isolates) (**JD,** SK) Chemistry lab, Sterile room Articum*		*Ex 2B: Pure culture II (**JD,** SK) Chemistry lab, Articum*
12.15 – 1.00	Lunch							
1.15 – 2.00	*Own work*	*Ex 2: Extraction of bacteria from sprouts (**JD,** MK)*	*Own work*	*Own work*	*Own work*		*Own work*	
2.15 – 3.00								
3.15 – 4.00	*Own work*							
4.15 – 5.00								

	Monday		Tuesday	Wednesday	Thursday	Friday
Week 5	**Feb 1**		**Feb 2**	**Feb 3**	**Feb 4**	**Feb 5**
8.15 – 9.00	Quiz 3 soil microbiology		*Own work*	*Own work*	*Own work*	*Own work*
9.15 – 10.00	*Own work*			**NB! 9.40-10** L4.2 N-fixation (GC) short lecture *Zoom*	**WS4.4 (Compost)** CASE (**BA**, AKR) *Zoom*	
	Group 1	Group 2				
10.15 – 11.00	*Transfer to cryo culture (Video AKR)*	*Ex 2C: Pure culture III (**JD**, SK); Chemistry lab, Articum*	**S4.1 Soil microbiology** (AKR) *Zoom CASE*	**L5.1 Fertilization** (AKR) *Zoom*	**WS/G2 Journal club in breakout groups** (**AKR**, SK) *Zoom in breakout groups*	
11.15 – 12.00	*Ex 2C: Pure culture III (**JD**, SK) Chemistry lab, Articum*	*Transfer to cryo culture (Video AKR)*		**NB! 11.15-11.35** L4.3 Mycorrhiza (SC) short lecture *Zoom*	**WS/G3 Digging into the lab reports** **(AKR, SK, MK)** *Zoom*	
12.00 – 1.00	Lunch					
1.15 – 2.00	*Own work*		*Own work*	*Own work*	*Own work*	*Own work* Quiz 4 DNA based methods
2.15 – 3.00						
3.15 – 4.00						
4.15 – 5.00						

	Monday	Tuesday		Wednesday		Thursday	Friday
Week 6	**Feb 8**	**Feb 9**		**Feb 10**		**Feb 11**	**Feb 12**
				Group 1	*Group 2*		
8.15 – 9.00	***Own work***	***Own work***		*Ex 2F: DNA extraction of the pure culture (**JD**, MK) Room: Chemistry lab, Articum*	*Read Ex 6A (**BA**) Room: Art4, Articum*	***Own work***	***Own work***
9.15 – 10.00				*Reading Ex 6A (**BA**) Room: Art4, Articum*	*Ex 6B: Phage lab (**MK**, JD) Room: Art4, Articum*	**S7.1: Horticultural water** (BA) Case *Zoom*	
10.15 – 11.00	**L2.2 Introduction to DNA based methods (MK,** AKR) *Zoom*			*Ex 6B: Phage lab (**MK**, JD) Room: Art4, Articum*	*Ex 2F: DNA extraction of the pure culture (**JD**, MK) Room: Chemistry lab, Articum*	***Own work***	
11.15 – 12.00							
12.00 – 1.00	Lunch						
	Own work	*Group 1*	*Group 2*	***Own work***		***Own work***	***Own work***
1.15 – 2.00		*Ex 2F: DNA extraction pure culture; start (**JD**, MK)*	*Ex 6A: Water quality lab (**BA**) (Art 4, Articum)*				
2.15 – 3.00		*Ex 6A: Water quality lab (**BA**) (Art 4, Articum)*	*Ex 6B: Start phage lab (**MK**, JD) Chemistry lab, Articum*				
3.15 – 4.00		*Ex 6B: Start phage lab (**MK**, JD) Chemistry lab, Articum*	*Ex 2F: DNA extraction pure culture; start (**JD**, MK)*				
4.15 – 5.00							

	Monday		Tuesday		Wednesday		Thursday	Friday
Week 7	**Feb 15**		**Feb 16**		**Feb 17**		**Feb 18**	**Feb 19**
8.15 – 9.00				*Own work*	*Own work*		*Own work*	
	Group 1	*Group 2*	*Group 1*	*Group 2*	*Group 1*	*Group 2*		
9.15 – 10.00	*Ex 3: saw cress (**JD**, AKR) Greenhouse, Vegetum)*	*Ex 2E: Inoculum preparation (**SK**, JD) Room: Chemistry lab, Articum*	*Ex 2E: Physiological tests (**JD**, SK), Chemistry lab, Articum*	*Own work*	*Own work*	*Own work*		***WS Ex2E: Summary workshop*** *phys tests* (**SK**, JD) *Zoom*
10.15 – 11.00	*Ex 2E: Inoculum preparation (**SK**, JD) Room: Chemistry lab, Articum*	*Ex 3: saw cress (**JD**, AKR) Greenhouse, Vegetum)*			*Read Ex 2E* (**JD**, SK) *Chemistry lab, Articum*			***WS Ex2F:Sequencing workshop*** *(**JD**, MK)* *Zoom*
11.15 – 12.00	*Own work*		*Own work*		*Own work*	*Read Ex 2E* (**JD**, SK) *Chemistry lab, Articum*		
12.00 – 1.00	Lunch							
			Group 1	*Group 2*	*Own work*			
1.15 – 2.00	*Own work*		*Own work*	*Ex 2E: Physiological tests* (**JD**, SK), *Chemistry lab, Articum*			*Own work*	*Own work*
2.15 – 3.00								
3.15 – 4.00				*Own work*				
4.15 – 5.00								

	Monday		Tuesday	Wednesday	Thursday	Friday
Week 8	**Feb 22**		**Feb 23**	**Feb 24**	**Feb 25**	**Feb 26**
8.15 – 9.00	Excursion (Norrvidinge) (**AKR**, JD)		*Own work*	General exam event – repeat attempt	*Own work*	*Own work*
9.15 – 10.00					**WS/G4: Portfolio 2 discussion in breakout rooms (BA**, SK) *Zoom*	*Own work /Extra time*
10.15 – 11.00						
11.15 – 12.00					Mid-term evaluation (**BA**, AKR) *Zoom*	*Own work*
12.00 – 1.00	Lunch					
	Group 1	*Group 2*				
1.15 – 2.00		*Ex 3: spraying (**JD**, AKR) Greenhouse, Vegetum*	*Own work*		*Own work*	*Own work* Quiz bioremediation
2.15 – 3.00	*Ex 3: spraying (**JD**, AKR) Greenhouse, Vegetum*					
3.15 – 4.00						
4.15 – 5.00						

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 9	**Mar 1**	**Mar 2**	**Mar 3**	**Mar 4**	**Mar 5**
8.15 – 9.00			*Own work*	*Own work*	*Own work*
9.15 – 10.00			Quiz Biocontrol		
10.15 – 11.00	**L6.1 Bioremediation** (SK) *Zoom*	**L9.1 Mushroom production** (MHg) *Zoom*		**L8.1 Biocontrol** (**AKR**, SK) *Zoom*	
11.15 – 12.00		*WS/G5 Journal club in breakout groups* (**MK**, SK) *Zoom*		L8.2 Light interactions (**MK,** BA) (short lecture) (CASE) *Zoom*	
12.00 – 1.00	Lunch				
1.15 – 2.00	*Own work*	*Own work*		*Own work*	*Own work*
2.15 – 3.00					
3.15 – 4.00					
4.15 – 5.00					

	Monday		Tuesday	Wednesday	Thursday	Friday
Week 10	**Mar 8**		**Mar 9**	**Mar 10**	**Mar 11**	**Mar 12**
	Group 1	*Group 2*				
8.15 – 9.00	Ex 4: FDA analysis (*JD*, AKR) *Chemistry lab, Articum*		***Own work***	***Own work***	***Own work***	***Own work***
9.15 – 10.00	***Own work***	*Ex 4: FDA analysis* (**JD**, AKR) *Chemistry lab, Articum*	**WS10.1 Harvest and postharvest handling** (**BA**, AKR) Case Zoom	**L11.1 Food safety** (**BA**) Zoom	**L3.4 Consumer demands and quality of horticultural produce from a microbial perspective** (**LM, FF**)	
10.15 – 11.00	***WS Ex: Workshop critical reflection on obtained laboratory results (part A)*** (**AKR**, SK)		***Own work***	***Own work***	**NB! 10.15-10.35** L3.5 Macrobiota: the food-consumer interface **NB! 10.40-11** L9.2 Probiotics (ÅH) Zoom	**L11.2 Risk assessment** (IV) Zoom
11.15 – 12.00	*Ex 3: Assessment emergence* (AKR) Greenhouse, Vegetum				***Own work***	
12.00 – 1.00	Lunch					
	Group 1	*Group 2*	***Own work***	***Own work***		
1.15 – 2.00	*Ex 4: FDA analysis* (**JD**, AKR) *Chemistry lab, Articum*	***WS Ex: Workshop critical reflection, synthesis (Part B) 2 Group Room:***			***Own work*** Quiz Risk assessment	*Ex 8: Calculation of risks (IV),* Zoom
2.15 – 3.00						
3.15 – 4.00	***WS Ex: Workshop critical reflection, synthesis (Part B) 2 Group Room:***	*Ex 4: FDA analysis* (**JD**, AKR) *Chemistry lab, Articum*				***Own work***
4.15 – 5.00						

	Monday	Tuesday	Wednesday	Thursday	Friday
Week 11	**Mar 15**	**Mar 16**	**Mar 17**	**Mar 18**	**Mar 19**
8.15 – 9.00	**Preparations final exam**				
9.15 – 10.00					
10.15 – 11.00	**Preparations final exam**	**Preparations final exam**	*Follow up Ex 2 report* (MK, AKR, SK) Room: Art1, Articum	**Preparations final exam**	Cleaning up Portfolio discussion (BA) Course evaluation (BA) Greenhouse, Vegetum
11.15 – 12.00			*Follow up Ex 3+4 report* (AKR) Room: Art1, Articum		
12.00 – 1.00	Lunch				
1.15 – 2.00	**Preparations final exam**	**Preparations final exam**	***Own work***	**Preparations final exam**	**Preparations final exam**
2.15 – 3.00					
3.15 – 4.00					
4.15 – 5.00					

	Monday	Tuesday			
Week 12	**Mar 22**	**Mar 23**			
8.15 – 9.00	**Oral exam**	**Oral exam**			
9.15 – 10.00					
10.15 – 11.00					
11.15 – 12.00					
12.00 – 1.00	Lunch	Lunch			
1.15 – 2.00	**Oral exam**	**Oral exam**			
2.15 – 3.00					
3.15 – 4.00					
4.15 – 5.00					

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