

Time table

Practical and sustainable beekeeping

Estonian University of Life Sciences and Latvia University of Life Sciences and Technologies
Master and doctor level students

19.06.-07.07.2023

<i>date</i>		<i>activity</i>	<i>topic</i>	<i>Length in academic hours</i>
19-22 June	Independent work	Reading selected materials	Introductory reading, for pre- preparation to the course	15
26-30 June	Independent work	Preparation for student presentation	Selected individual materials	10
July 2nd	Arrival	Welcome meeting for early arriving participants		
July 3rd	9.00-12.00	Lectures	1) Introduction to bee diversity and pollination, interaction of honey bees with wild bees 2) Honey bee biology 3) Basics of beekeeping, yearly circle, stressors	3
	12.00-13.00	Lunch		
	13.00-16.00	Practical work	1) Safety instructions 2) Visit to bee-yard 3) Practical activity to introduce honey bee hive structure, bee behaviour	3
	16.00-18.00	Student presentations	Selected topics to broaden the learning area	2
July 4th	9.00-12.00	Lectures	Impact of bee diseases and parasites on beekeeping and control 1) Varroa mite 2) <i>Nosema apis</i> and <i>N. ceranae</i> 3) Asian hornet and small hive beetle 4) Other diseases	3
	12.00-13.00	Lunch		
	13.00-16.00	Practical work	5) Bee sampling from living hives 6) Samples preparation 7) Result assessment	3
	16.00-18.00	Student presentations	Selected topics to broaden the learning area	2

July 5th	9.00-12.00	Lectures	1) Beekeeping products 2) Innovative production strategies 3) The economic side of beekeeping	3
	12.00-13.00	Lunch		
	13.00-16.00	Practical work	Laboratory work with disease analyses Laboratory work – making queen cell and grafting larvae Laboratory work with innovative beekeeping products	3
	16.00-18.00	Student presentations	Selected topics to broaden the learning area	2
July 6th	9.00-12.00	Lectures	Precision beekeeping. Technical innovation in beekeeping, recording and understanding the noise in the hive and its importance in the bee colony and the possibilities in practical beekeeping	3
	12.00-13.00	Lunch		
	13.00-18.00	Excursion	Visit to a family beekeeping enterprise, beekeeping as lifestyle, innovation in bee products, techniques, development of rural economy	5
July 7th	9.00-12.00	Lectures	1) European honey directive (quality control) 2) Beekeeping regulations 3) National and international marketing of beekeeping products 4) Organic, biodynamic and wild beekeeping	3
	12.00-13.00	Lunch		
	13.00-16.00	Practical work	Group work – design of a beekeeping enterprise taking into aspect climate change, European Green Deal, sustainable rural economy, etc	3
	16.00-17.00	Student presentations	Presenting the group work outcome	1
	17.00-18.00	End of the course	Final discussions, feedback, assessments	1
				Total 65