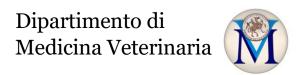


General information			
Academic subject	Beekeeping sector Hygiene and Safety Control		
Degree course	Veterinary Medicine		
Academic Year	2021/2022		
European Credit Transfer and Accumulation System (ECTS) 2			
Language	Italian		
Academic calendar (starting and e	ending date)   I Bimester		
Attendance	Mandatory		

Professor/ Lecturer			
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Department and address	Veterinary Medicine Campus – Valenzano (BA)		
Virtual headquarters	Department of Veterinary Medicine Sector "Food Safety"		
Tutoring (time and day)	Tuesday: 13.00-14.00 hours Thursday: 13.00-14.00 hours		
	(upon request by email)		

Syllabus	
Learning Objectives	To provide the theoretical-practical basis necessary for the sanitary control of the apiary, in order to contrast the adversities that threaten the bee heritage; to know the beehive pathologies; to know the legal and illegal use of drugs and phytopharmaceuticals in the apiary, to know the nutritional and health quality of the beehive products (honey, propolis, royal jelly, poison); to learn the honey control techniques foreseen by the regulations; to apply the self-control and the HACCP system to the beekeeping chain.
Course prerequisites	The student must be familiar with EC Reg. 852/04 on production hygiene and have acquired the principles of the HACCP system; he/she must have acquired knowledge of food microbiology and environmental toxicology.
Contents	Area: Food Safety and Quality and professional Training - Systematics of the superfamily Apoidea. Species and subspecies of the genus Apis Organisation of bee society. Notes on the morphology, anatomy and physiology of the bee Hive as a super-organism: functions of worker bees, drones and queens Mechanisms of bee colony development; - Beekeeping equipment and production hygiene - Honey production methods and quality; - Chemical, biological and physical hazards in honey production - Labelling of hive products - Hive diseases; - Role in the ecosystem played by bees and pollinating insects - Health and commercial frauds in the beekeeping sector - European and national regulations
Books and bibliography	- A. Contessi - Le api. Biologia, allevamento, prodotti Edagricole, BO, Ed 2017





	- G. Lombardi – Malattie delle api - Edagricole BO - G.L. Marcazzan, L. Bortolotti – I prodotti dell'aveare - Edagricole (2017)	
Additional materials	Lesson Notes and slides projected in class.	

Work schedule				
Total	Lectures		Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours				
50	13		25	12
ECTS				
2	13		25	
Teaching strategy	1			
		projector guidance The exerc	retical part of the course takes place in a classroom ed and internet connection. Slides will be projected. Dur is given on the use of thematic portals and websites. cises are carried out at the Department's experimenta traction laboratory. Educational visits to local beekeep	ing the course,
Expected learning	outcomes	promise		
Knowledge and u			know the mechanisms of bee colony developmen know how honey is produced and its quality recognise hive pathologies know the role of bees in the ecosystem know the regulations of the sector	t;
Applying knowled understanding or		(	evaluate apiary health management know the aetiology and pathogenesis of hive dises control the hygienic-sanitary management of th compliance with the sector's regulations monitor the production of beekeeping products is sector's legislation	e beekeeping farm in
Soft skills		• Capa	Organise the audit system for controlling the beel To know the official methods for the control of be Evaluate commercial and sanitary frauds for hive municating knowledge and understanding carrying out group exercise activities to combine and learning to communicate in appropriate language Interacting and communicating with beekeen technicians  Organising presentations in power point communication systems using language properties cities to continue learning  To develop a desire for competence, beyond the a motivational factor for success in the profession To deepen the learning topics indicated  To develop the manual skills necessary for surve in the apiary.	eehive products. products  e theory and practice uage pers and laboratory  or other media s  didactics provided, as



## Dipartimento di Medicina Veterinaria

Assessment and feedback				
Methods of assessment	The knowledge acquired is tested by means of a practical test in an apiary, together with an inspection assessment of the health status, and an oral test on contents of the programme course.			
Evaluation criteria	<ul> <li>Knowledge and understanding</li> <li>The student must be able to recognise pollinating insects, with particular reference to the different European bee species.</li> <li>The student must know the nutritional and nutraceutical qualities of hive products</li> <li>The student should know how to inspect in case of hive pathologies</li> <li>The student should know the regulations on the use of plant protection products in the apiary.</li> <li>Applying knowledge and understanding</li> <li>The student must know how to carry out the health check of the superorganism</li> <li>The student must know the stages of honey extraction and good hygienic practices</li> <li>The student must know how to sample bees, honey in combs, wax, etc.</li> <li>Autonomy of judgment</li> <li>The student must be able to orientate himself/herself in the application of the sectoral regulations.</li> <li>Communicating knowledge and understanding</li> <li>The student must demonstrate language skills</li> <li>The student must demonstrate legislative orientation</li> <li>Communication skills</li> <li>Capacities to continue learning</li> <li>The student demonstrates an ability to learn and an interest in the discipline with in-depth scientific studies of topics not specifically included in the teaching programme.</li> </ul>			
Criteria for assessment and attribution of the final mark	The examination is considered passed when the mark is greater than or equal to 18. The final assessment will be based on:  Objective tests: well-tailored to the objectives to be checked and make the judgement absolutely independent of the subjectivity of the teacher. independent of the subjectivity of the teacher. The objectivity consists in the possibility of predetermining the "accuracy" of the answers.			
	Non-objective tests: they provide open-ended stimuli and answers and allow the evaluation of complex mental processes, such as the ability to communicate one's own thoughts, the ability to construct a logical discourse and to grasp the essential elements of an argument, the critical sense and the ability to find original solutions.			
Additional information				