

Study program: Organic crop and livestock production
Type and level of study: Bachelor academic studies
Course Title: ORGANIC BEEKEEPING
Professors: Dr. Sladan Rašić, Assistant Professor
Status: Compulsory, semester VI
ECTS 6
Prerequisite: None
<p>The goal of the course</p> <p>The course should enable student to acquire knowledge about the anatomy of honeybee and its characteristics under the influence of environmental factors, principles of reproduction and development, the importance of bees as pollinators, technologies for production of bee products and rehabilitation abnormalities in brood and bees. Also, the course involves methods of obtaining quality queen bees, selection and breeding of honey bees, and basic principles of genetics and breeding of bees.</p> <p>Particular attention is paid to the process and time of conversion from conventional organic beekeeping, production of organic honey, organic royal jelly, organic pollen, organic propolis and especially organic wax. Also, the objective is to draw attention to the existing legal provisions related to the production of beekeeping, the risks and challenges that accompany the introduction of organic beekeeping production, particularly to adequate food of bees, purchase of organic wax, organic sugar, adequate protective resources, ecological preparations, etc.</p>
<p>The outcome of the course</p> <p>The students should demonstrate knowledge, understanding and recognition of the place and role of honey bees in the ecosystem, the knowledge about the structure of honey bee, bee breeding and obtaining bee products, the most important diseases and pests of bees and brood, use of bees in the pollination of cultivated plants, maintenance of the apiary and the use of modern equipment and materials in beekeeping; also, students should master all methods of breeding high quality queen bees and swarms, the methods of organic production of honey, royal jelly, pollen, propolis and wax, bee breeding which allows the introduction of organic beekeeping and the speedy transition from conventional to organic beekeeping.</p>
<p>Syllabus</p> <p><i>Theoretical study</i> – The course is divided into several sections: Systematic types and places, breeds and ecotypes of bees; Biological properties of bee nests; Life colony: the division of labor and bee breeding; Genetics, selection and refining honey bee. Bee breeding: beehives with mobile and immobile honeycombs, equipment and supplies, work in the apiary, breeding queen, natural and artificial swarming, moving bees; Hygiene and sanitation in beekeeping: non-communicable and infectious diseases, pests of bees; The main industrial frequency constant and promising honey and pollination of plants and dressing, harvesting honey plants, composition and quantity of nectar; the difference between conventional and organic bee products, the use of organic protection means against bee diseases, the legal provisions related to organic production in beekeeping, organic beekeeping specificity compared to other organic livestock production, special measures in extraordinary conditions of organic beekeeping.</p> <p>Field work: introduction to beekeeping technology in various types of apiaries. Introduction to technology of obtaining bee products in terms of organic production.</p> <p><i>Practical lessons</i> – Study research work. Introduction to technology and use of beekeeping equipment and tools in beekeeping. Field work: introduction to beekeeping technology in various types of apiaries (organic and conventional).</p>
<p>Literature</p> <p>Rinderer T. (1986): Bee genetics and breedings, Academic Press, USA</p> <p>Conrad, R. (2007): Natural Beekeeping: Organic Approaches to Modern Apiculture, Acres U.S.A.</p> <p>Wang An and Peng Wen Jun (2011): Books ecological beekeeping ecological farming techniques, China Agricultural Pub</p> <p>Mader, E., Spivak, M., Evans, E. (2010): Managing Alternative Pollinators, Ithaka, NewYork.</p>

Number of lectures: 4				Other Lessons
Lectures: 2	Practices: 2	Other forms of teaching:	Student research work:	
Teaching methods: Theoretical and practical lessons combined with interactive teaching will be held in all areas. During the lessons testing of knowledge is carried out, and finally practical training (exercise) is tested.				
Score (maximum 100 points)				
Pre-commitments	Points	The final exam		Points
Activity during lectures	10	Written exam		
Practical lessons	10	Oral examination		40
Preliminary exams	3 x 10 = 30			
Seminars	10			
<i>Total</i>	60			40