Course Unit Descriptor

Study Programme: Veterinary medicine

Course Unit Title: Growing and care of bees

Course Unit Code: 7IVM8049

Name of Lecturer(s): Nada P. Plavša, Aleksandar Potkonjak

Type and Level of Studies: Undergraduate Academic Studies

Course Status (compulsory/elective): Mandatory

Semester (winter/summer): summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face to face

Number of ECTS Allocated: 5

Prerequisites: Growing and care of bees

Course Aims:

The case allows the student to acquire basic knowledge about the development of beekeeping through the history and role in the biodiversity of bees, on the biology of bees, apitechnics on basic methods in the cultivation of bees; of nectar plants and feeding of bees; about the art of good beekeeping practices and good hygiene practices; basic apitechnic actions concerning the formation of bee colonies and to provide good conditions of care and breeding of bees

Learning Outcomes:

Upon completion of the course of this course students should be able to: explain the bee community composition and basic biological principles of development and formation of the colony; to describe in detail the propagation of bees and bee colony life during the year; to master the basic apitechnic procedures of forming a society, elections bee pasture, works by month bee community; to describe in detail the ways of the bee and the basic principles regarding the development of bee colonies in terms of nutrition; to master the basic procedures regarding the selection of nuts, and the formation of new communities; to master the technology of production of bee products; to evaluate prevention programs and good practices in beekeeping beekeeping production; to improve fruit production and protect the environment

Syllabus:

theory

History of beekeeping and its economic importance. Composition of a bee colony (parent, worker bees, drone). Types and breeds of bees; Anatomical morphological structure of honeybee (organs and senses); Reproduction of bees; The life of a bee colony during the year; Genetics bees. Apitechnics (choice of sites for apiaries apiary and species); The first spring work in the hive; Spring revision of bee colonies; Bee food and its sources; Creep feeding and feeding of bees; Preparation of the colony to exploit pasture; Wheelbase plants and pollination; Protection of bees from pesticides; Grapple bees; The selection and execution of nuts; The selection and breeding of bees. Natural swarming; Artificial education swarms; Moving bees to pasture; Preparing for wintering bee colonies; Bee colonies over the winter; Bee products (honey, pollen, wax, propolis, royal jelly, bee larvae). *Practical lessons* Types of hives; Selec and stationary apiary; Artificial honeycomb and its use (dissolve wax,); Small beekeeping equipment and fixtures (with a field exercise); Mechanization in beekeeping (with a field exercise); Terms of nectar secretion; Bees teaching. Revocation and squeezing the wax and honey, pollen and royal jelly; Rearing queens; Adding nuts; Preparation and application of bee products bee products in medicine, cosmetics and food industry;.

Required Reading:

Dobrić Đorđe i sar.:(2010) Bolesti pčela, Fakultet veterinarske medicine, Beograd
Lolin M (1985), Bolesti pčela, Fakultet veterinarske medicine, Beograd
Morse R.and Flottum K.: (1997) Honey bee Pests, Predators and Diseases, Root Company, Medina, Ohio, USA

Weekly Contact Hours:	**Lectures: 3**	**Practical work: 2**

Teaching Methods:

Lectures, Practice/ Practical classes, Consultations, study, research work

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	30
Practical work	20	oral exam	30
Preliminary exam(s)	5	…….	
Seminar(s)	10		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.