

Apiology

Obligatory module or Selective module	Apiology	PNH 4237
Semester	Even semester	
Module level	Undergraduate	
Module Coordinator	Dr. Suputa	
Lecturer(s)	Dr. Suputa	
Type of Module	Lecture: 1 hours 40 minutes Laboratory work: 2 hours	
Status	E (elective courses)	
Exam	Written and practical assignment	
Number of participants	3-5	
Credit Points:	2/1 (5.02 ECTS)	
Description:	<p>In this lecture, we will discuss the biological and ecological aspects of honeybee comprehensively, the factors that influence the development of honeybee colonies. Maintenance techniques and benefits of honeybees for agriculture and human health. The material in this lecture stimulates/builds student competence in the field of beekeeping and stimulates the spirit of entrepreneurship. After passing this course, students are able to explain various types of honeybees. Understand correctly the characteristics and behavior of life. Students will be able to see clearly and consciously the importance of honey bees for human life, including helping pollination of agricultural crops, understanding the benefits of bee products such as honey, bee pollen, royal jelly, venom and propolis which are closely related to human health. Bee wax = beeswax = night which is widely used in the pharmaceutical, cosmetic and batik industries. Students also understand and skilled how to maintain the ideal bee with a variety of requirements and how to overcome if there is interference. So that it will stimulate the entrepreneurial spirit (entrepreneur).</p>	
Academic goal (competency):	<p>Students know and can explain the various types of honeybees and their importance to human life Students will be able to understand and explain: the honey bee morphology and the functions of honeybee organs Students will be able to understand and explain: bee life and proper treatment methods. Students understand and explain the relationship of intra and extracellular cell metabolites. Students can understand and explain: various factors that suppress the life of honeybee colonies Students can understand and explain: how to collect bee products Students can understand and explain: the benefits of honeybees for the world of agriculture, welfare, and human health</p>	

Course outcomes:

CO1= Understanding the importance of honey bees in natural habitats

CO2= Understanding the role of honey bee in agricultural systems as a pollinator

CO3= Understanding and implementing the apiculture techniques including make a new honey bee queen and create new colony

CO4= Able to become a beekeeping entrepreneur

Contents:

Discussion of the bioecology aspects of honeybees and the factors that influence the development of honeybee colonies. The importance of honey bees in natural habitats, honey bees as pollinators in agriculture, honey bee cultivation techniques for *Apis* spp. and *Trigona* spp., farming analysis and marketing capabilities of bee products.

Which previous course required? Basic Entomology

Literature:

Gullan, P.J. and P.S. Cranston. 2005. The Insects: an outline of entomology. Blackwell Publishing. pp. 304-312.

Suputa & A.T. Arminudin, 2013. Beternak Lebah. 2nd Edition. PT Citra Aji Parama Publisher. Yogyakarta. ISBN 978-979-3483-94-8.

Materials provided: Hand out of weekly materials

Requirements for exam: 75% attendance set by the Faculty of Agriculture

Teaching method(s)

Classes

Special assignment related to the subject matters

Apiculture practicum

Workload (hrs).

Theoretical of course: 12 times

Lab work: 7 times

Home studies: independent work of making queen bees