

## Housing of Domestic Animals and Biosecurity (G000860)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

<b>Course size</b>	<i>(nominal values; actual values may depend on programme)</i>		
<b>Credits</b> 3.0	<b>Study time</b> 90 h	<b>Contact hrs</b>	30.0 h

### Course offerings in academic year 2021-2022

A (semester 1)	Dutch	Gent
B (semester 2)	Dutch	Gent

### Lecturers in academic year 2021-2022

Van Immerseel, Filip	DIO5	lecturer-in-charge
Dewulf, Jeroen	DIO8	co-lecturer
Maes, Dominiek	DIO8	co-lecturer

### Offered in the following programmes in 2021-2022

<a href="#">Bachelor of Science in Veterinary Medicine</a>	<b>crdts</b>	<b>offering</b>
	3	A, B

### Teaching languages

Dutch

### Keywords

Housing, biosecurity, disinfection, cleaning, animal health, animal welfare

### Position of the course

The part **housing** of animals aims at making the students familiar with all general aspects of housing of different animal species, including aspects of climate control. The primary objective of the course **biosecurity** is for the student to understand the general principles of preventive hygiene and disinfection at the level of the individual animal, at the level of the epidemiological unit, as well as at the community level. Emphasis is put on critical assessment of risk factors and on the public health significance of hygienic measures. The objective of this course fits in with the objectives of the bachelor training in veterinary medicine, since it provides basic knowledge in biomedical science in a broad medical and social context.

### Contents

In the part **housing** the relation between animal and the environment is studied, in which the optimisation of animal health, productivity and welfare are taken into account, as well as economical, ethological, ergonomical and ecological aspects. In a first part, the physicochemical characteristics of air in the stables are discussed, the principles of heat and moisture exchange, natural and mechanical ventilation and regulation of ventilation. In a second part, it is discussed how the different animals (farm animals, pets) are housed, how feed and drinking water are provided, the critical items for animal health, welfare, production and public health, the relevant legislation and also how milk is produced and processed on dairy farms.

In the first part of the **biosecurity** course the different hygienic aspects of the environment in which the animals live are analyzed. This includes a critical review of contamination risks associated with air, water, soil, the concepts of hygienic measures for disease prevention and

quarantine. In the second part the general principles of cleaning and disinfection are discussed, including the general characteristics of different types of disinfectants, their application and health hazards potentially associated with the use of disinfectants. Attention is also paid to the problems of resistance to disinfectants and problems of environmental pollution by residues of disinfectants. The third part focuses on the control of rodents and insects. Finally the general principles and concepts which were discussed in the first 3 parts are being applied to different production sectors such as the pig, poultry and cattle production as well as the management of laboratory animals and the biosecurity principles in the animal hospital setting.

### **Initial competences**

Inclusion of this course in the student's curriculum must occur in agreement with the governing rules of the personalised learning track of the academic year in which the course is taken. For students with a credit contract, inclusion of the course will only be possible after completion of the end competences of Bachelor year 1.

### **Final competences**

- 1 Give advice to owners regarding how to prevent infectious disease by optimizing the stable climate, housing conditions and hygienic measures. ((Ba 1.10, 5.1, 5.5))
- 2 Critically judge the value and weaknesses of various changes in animal housing conditions, hygiene and disinfection programs and protocols (Ba 1.7, 1.10, 3.1, 3.2)
- 3 Be aware of the need of air quality, ventilation, preventive hygiene and good housing conditions in animal husbandry. (Ba 5.5, 5.6)
- 4 To master the basic principles of welfare and housing of the animal species that have been discussed, including the regulating authorities (Ba 1.7, 1.10).
- 5 To be aware of the ethical and societal implications of keeping, using, and interacting with animals, both in a national and international context (Ba 5.3).
- 6 To research scientific information independently, to critically synthesize and analyze it (Ba 2.1).
- 7 To independently and critically analyse a problem, to assess and solve it (Ba 3.1, 3.3).
- 8 To do scientific observations and to interpret them critically and creatively (Ba 2.2).

### **Conditions for credit contract**

Access to this course unit via a credit contract is determined after successful competences assessment

### **Conditions for exam contract**

This course unit cannot be taken via an exam contract

### **Teaching methods**

Lecture, PDE tutorial, seminar, online lecture

### **Extra information on the teaching methods**

Teaching is in the form of oral lectures. There are no practical exercises for this course. Students however are encouraged to apply the general principles of this course during their practical clinical training in the 3MA. A learning path is foreseen for Biosecurity.

### **Learning materials and price**

A printed syllabus and/or PowerPoint slides are available. Reference is made to textbooks and scientific papers. All PowerPoint presentations are available on Minerva.

For Biosecurity, one can use a selection of chapters derived from the following book, available through Acco (e-version as well): Biosecurity in animal production and veterinary medicine (Dewulf en Van Immerseel), ISBN 978-94-6344-378-4. A select and Learn syllabus if foreseen through Acco.

### **References**

### **Course content-related study coaching**

There is no formal tutoring for this course. Study problems are discussed and solved by direct personal contact with the lecturer.

### **Evaluation methods**

end-of-term evaluation and continuous assessment

### **Examination methods in case of periodic evaluation during the first examination period**

Written examination with open questions, written examination with multiple choice questions

### **Examination methods in case of periodic evaluation during the second examination period**

Written examination with open questions, written examination with multiple choice questions

### **Examination methods in case of permanent evaluation**

Assignment

### **Possibilities of retake in case of permanent evaluation**

examination during the second examination period is possible in modified form

### **Extra information on the examination methods**

**Housing.** Written. part is multiple choice (max. 20 questions, 4 answer options with 1 or 2 correct; 1 point per completely correct answer; 0 points for a wrong or incompletely correct answer), the exam content consists of the syllabus and topics discussed during the lectures.

**Biosecurity:** written examination consisting of open questions. Examination content consists of subjects mentioned during lectures

### **Calculation of the examination mark**

- The final score is calculated as weighed mean depending on the actual number of hours lectures per part (housing and biosecurity).
- If one does not take part in the examination of one of the two parts or one achieves less than 8 out of 20 for any of the parts, one cannot succeed for this course. Should the final score be a grade of 10 or more out of 20, this will then be reduced to the highest non-passing grade (9/20).