

## Host-Parasite Interactions (C002714)

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.

Course size (nominal values; actual values may depend on programme)  
Credits 3.0 Study time 80 h Contact hrs 25.0 h

### Course offerings and teaching methods in academic year 2020-2021

A (semester 1)	English	Gent	excursion	10.0 h
			lecture	15.0 h
			online lecture	0.0 h

### Lecturers in academic year 2020-2021

de Graaf, Dirk WE10 lecturer-in-charge

### Offered in the following programmes in 2020-2021

	crdts	offering
<a href="#">Master of Science in Teaching in Science and Technology (main subject Biochemistry and Biotechnology)</a>	3	A
<a href="#">Master of Science in Biochemistry and Biotechnology</a>	3	A
<a href="#">Exchange programme in Biochemistry and Biotechnology (master's level)</a>	3	A

### Teaching languages

English

### Keywords

Parasite, host, parasitic adaptations

### Position of the course

Acquire knowledge on 1/ the parasitism or the parasitic lifestyle: more in particularly the adaptations (morphology, biochemistry and gene-organisation) of parasitic organisms that allow them to live a short or long time in or on their host; 2/ the recent developments in the parasitological research (genome projects, molecular tools, vaccine development).

### Contents

The course will deal with the interactions between parasites and their hosts. How do they get access to the tissues/cells of the host? How can they survive in the sometimes hostile environment? How can they evade the host immune response? Are parasites primitive creatures or rather well adapted to their particular lifestyle? On these and other questions we will try to give an answer. The course will be restricted to parasites sensu strictum: fungi (microsporidia), protozoa (apicomplexa, kinetoplastidea), helminths (trematoda, cestoda, nematode) and arthropods. For each of this taxonomic entity we will discuss the specific adaptations for this parasitic lifestyle from a morphological, molecular, biochemical and genetic point of view. We will mention modern laboratory techniques know in this research field. Also genome projects of parasitic species or host species and the new discoveries they allowed will be summarized. If applicable, we will mention progress in vaccine development. During the academic year we will have two plant visits at famous institutes for parasitological research (for instance the Institute for Tropical Medicine in Antwerp).

### Initial competences

Bachelor BB

Basic background knowledge microbiology, biochemistry, molecular biology

### Final competences

- 1 To have knowledge of the interactions between parasites and their hosts, and this for a limited number of taxonomic entities.
- 2 Being aware of the modern laboratory techniques applied in the field of molecular

parasitological research.

3 To evaluate research on its relevance and scientific value.

#### 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

Excursion, lecture, online lecture

#### Extra information on the teaching methods

Plant visits

#### Learning materials and price

PowerPoint presentations can be consulted on Ufora.

#### References

Parasitology in Focus, Ed. H. Mehlhorn (ISBN 0-387-1738-4)

Microbiology and Microbial Infections, Volume 5: Parasitology, Eds. L. Collier, A. Balows, M. Sussman (0-340-663200)

#### Course content-related study coaching

Personally: by electronic appointment

#### Evaluation methods

end-of-term evaluation

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

Written examination with open questions, oral examination

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

Written examination with open questions, oral examination

#### Examination methods in case of permanent evaluation

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

not applicable

#### Calculation of the examination mark