

## Immunology (I002622)

**Course size** *(nominal values; actual values may depend on programme)*

**Credits 5.0**                      **Study time 150 h**

**Course offerings in academic year 2024-2025**

A (semester 2)                      English                      Gent

**Lecturers in academic year 2024-2025**

Vanrompay, Daisy                      LA22                      lecturer-in-charge

**Offered in the following programmes in 2024-2025**

	<b>crdts</b>	<b>offering</b>
<a href="#">Master of Science in Bioscience Engineering: Cell and Gene Biotechnology</a>	5	A
<a href="#">Exchange Programme in Bioscience Engineering: Cell and Gene Biotechnology (master's level)</a>	5	A

**Teaching languages**

English

**Keywords**

Immunobiology, innate and adaptive immunity, inflammation, humoral and cellular immunity, infectious diseases

**Position of the course**

This course aims to give students an overview of the main aspects of immunology and its related techniques and applications

**Contents**

Antigens, innate immune cells, inflammation, the major histocompatibility complex, antigen presentation, tissues of the immune system, T cell mediated immunity, Immunoglobulins, antibody responses, cytokines, the complement system, pathogen recognition receptors and immune signaling pathways

**Initial competences**

Immunology builds on certain learning outcomes of course units Microbiology, Cell Biology; or the learning outcomes have been achieved differently.

**Final competences**

- 1 The student possesses a broad knowledge, at an advanced level, of immunobiology in health and disease.
- 2 The student gains a broad knowledge of ongoing immune mechanisms in health and disease
- 3 The student understands the principle of a variety of immunological laboratory techniques and is able to use these insights for designing and producing immunological diagnostics.
- 4 the student is able to interact with peers, immunologists and other persons active in the biomedical sector as well as with the general public, concerning personal research, immunological ideas and research proposals, both written and orally

**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, Practical, Independent work

**Extra information on the teaching methods**

Theory: lecture using power point presentations which will be made available via the electronic

learning platform and also movies on immune mechanisms.

Practicals: immunological assays to be performed by the student in the laboratory. Independent work.

### **Study material**

Type: Syllabus

Name: GENERAL IMMUNOLOGY

Indicative price: € 15

Optional: no

Language : English

Number of Pages : 162

Available on Ufora : No

Online Available : No

Available in the Library : No

Available through Student Association : No

Additional information: Available for sale during the first lecture.

Type: Slides

Name: GENERAL IMMUNOLOGY

Indicative price: Free or paid by faculty

Optional: no

Language : English

Number of Slides : 590

Available on Ufora : Yes

Online Available : No

Available in the Library : No

Available through Student Association : No

Additional information: Available on UFORA a few days before each lecture.

Type: Handouts

Name: GENERAL IMMUNOLOGY - Practical Protocols etc.

Indicative price: € 5

Optional: no

Language : English

Number of Pages : 28

Available on Ufora : Yes

Online Available : No

Available in the Library : No

Available through Student Association : No

Usability and Lifetime within the Course Unit : regularly

Usability and Lifetime within the Study Programme : one-time

Usability and Lifetime after the Study Programme : not

Additional information: Available for sale during the first lecture. The student is expected to bring the Protocol to the Practical.

### **References**

1) Immunobiology. Kenneth Murphy and Casey Weaver. 9th Edition, (2017). Garland Science Publishing. Book is also known as Janeway's Immunobiology.

2) Abul K. Abbas & Andrew H. Lichtman, S. Pillai (2017). Cellular and Molecular Immunology. 9th edition. Elsevier Science/Saunders, Philadelphia.

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

Teacher and assistant available for student counselling

### **Assessment moments**

end-of-term and continuous assessment

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

Written assessment, Assignment

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

Written assessment, Assignment

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

Participation, Written assessment, Assignment

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

examination during the second examination period is not possible

**Extra information on the examination methods**

Lectures: written examination

Practical: written assignment and participation

**Calculation of the examination mark**

Lectures: 90% and practical 10%

Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.