

Module title		Abbreviation
General Virology and Immunology		03-98-VIM-202-m01
Module coordinator		Module offered by
Institute of Virology and Immunobiology		Faculty of Biology
ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
Contents		
<p>Immunology: Learning the basics of immunology, including the components of the immune system and the classification of immune reactions, organs, cell types and important molecules. Understanding of basic principles such as immune cell migration or systemic communication via soluble factors. Knowledge of the innate immune system, such as complement, antimicrobial peptides, inflammation, the cell types and function of macrophages, granulocytes, natural killer cells and dendritic cells. Molecular components of pathogen recognition and antigen presentation to cells of the adaptive immune system. Overviews of the generation, activation and effector functions of B and T cells of the adaptive immune system, including anti-bodies. Learn how components of the immune system respond to various situations of immune tolerance and immune responses against viruses, bacteria and parasites. Basics of hyperreactivities, autoimmunity, transplantation, immune deficiency, tumor immunology, vaccinations and modern approaches to immune therapy.</p> <p>Virology: Learning the structure of viruses and understanding the basic principles of diagnostics, viral replication cycles, and transmission using the example of DNA viruses, RNA viruses and retroviruses. Furthermore, the basic features of tumor-associated viruses are elaborated. In particular, virion and genome structure, viral gene expression, assembly and release of viruses are explained. Furthermore, the basics of pathogenesis, antiviral vaccines and therapeutics are presented and discussed</p>		
Intended learning outcomes		
<p>Immunology: Understanding of the basics of immunology and knowledge of the components and functions of the immune system. Theoretical expertise in classifying the interaction of the components of the immune system in various diseases. Collection and classification of current research results in the field of immunology.</p> <p>Virology: Understanding of the basics of virology and knowledge of the molecular biological characteristics of different virus families. Theoretical expertise to work in molecular biology-oriented laboratories in the field of virology. Acquisition and classification of current research results in the field of virology.</p>		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + V (2)		
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)		
<p>Written examination (approx. 60 minutes)</p> <p>If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (20 to 30 minutes) or an oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate).</p>		
Allocation of places		
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Additional information		
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Workload		
150 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Bachelor' degree (1 major) Biomedicine (2020)