

Module title		Abbreviation
Basics of Biology I		07-DM-FWBIO-1-152-m01
Module coordinator		Module offered by
head of group Didactics of Biology		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>A lecture on the biology-specific contents of the curriculum for <i>Grundschule</i> or <i>Mittelschule</i> will equip students with essential knowledge in the areas of cytology, histology, anatomy and physiology. The following topics will be discussed: biological macromolecules, plant and animal cells, distinctive features of plant cells, organelles of the cell and their specific functions, fundamental principles of genetics, organs of the human body and their functions and performance, nervous systems, human sensory organs and how to keep them healthy, human ontogeny, health education, substance abuse prevention, viruses and bacteria as pathogens, fundamental principles of plant physiology (focus: photosynthesis), organs of vascular plants and their variations, tissues of vascular plants and their cellular structures. The exercises on cytology and anatomy will provide students with an insight into the internal anatomy of selected animals and plants. Students will examine plant organs, cutting cross and longitudinal sections. They will work with microscopes and binoculars and will develop experience with typical techniques in biology such as observation and examination. Students will also make drawings of the preparations.</p>		
Intended learning outcomes		
<p>The cell: the smallest building block of living organisms. Knowledge of organisms as living systems that need control and regulation. Recognising the DNA as the carrier of genetic information. Familiarity with the relationship between the structure and the function of organs. The most important parts of plants and their functions: terminology. Knowledge of the internal anatomy of selected animals. Ability to mount organisms and prepare microscopic preparations. Practical skills using microscopes/binoculars, the most important tools for the investigation of fundamental problems in biology. Ability to make scientific drawings.</p>		
Courses (type, number of weekly contact hours, language — if other than German)		
V (2) + Ü (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)		
written examination (approx. 60 minutes) creditable for bonus		
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)		
§ 38 I Nr. 1		
Module appears in		
First state examination for the teaching degree Sonderpädagogik Didactics in Biology (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Biology (Middle School) (2015)		

First state examination for the teaching degree Sonderpädagogik Didactics in Biology (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Mittelschule Didactics in Biology (Middle School) (2020 (Prüfungsordnungsversion 2015))