

Module title		Abbreviation
Advanced Microbiology - GMR		07-GMR-MIBI-152-m01
Module coordinator		Module offered by
holder of the Chair of Microbiology		Faculty of Biology
ECTS	Method of grading	Only after succ. compl. of module(s)
4	numerical grade	--
Duration	Module level	Other prerequisites
1 semester	undergraduate	--
Contents		
<p>This module will provide students with an opportunity to deepen their knowledge and skills related to aspects covered in <i>Die prokaryotische Zelle (The Prokaryotic Cell)</i> during their first semester. Students will become familiar with the fundamental principles of the metabolic physiology of bacteria and will learn how to differentiate bacteria according to their respective metabolic performance. They will consolidate their knowledge related to the classification of bacteria into archaeobacteria and eubacteria based on their respective characters. In addition, the module will discuss the use of microorganisms in industry and technology as well as the pathogenic properties of some species of microorganisms and the diseases caused by these.</p>		
Intended learning outcomes		
<ul style="list-style-type: none"> • Familiarity with methods typically used in microbiology labs and ability to use these. • Knowledge of the difference between gram-negative and gram-positive bacteria. • Ability to name the different divisions of the bacterial kingdom as well as some important representatives. • Ability to name metabolic performances of bacteria. • Familiarity with methods for the differentiation of bacteria according to their metabolic performance. • Familiarity with the role bacteria play in nutrient cycles in nature. • Familiarity with industrial processes involving microorganisms and products of these. • Ability to evaluate the pathogenic potential of bacteria. 		
Courses (type, number of weekly contact hours, language – if other than German)		
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		
120 h		
Teaching cycle		
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Referred to in LPO I (examination regulations for teaching-degree programmes)		
§ 41 I Nr. 2 (2 ECTS credits), § 41 I Nr. 3 (2 ECTS credits)		
Module appears in		
<p>First state examination for the teaching degree Grundschule Biology (2015) First state examination for the teaching degree Realschule Biology (2015) First state examination for the teaching degree Mittelschule Biology (2015) First state examination for the teaching degree Mittelschule Biology (2020 (Prüfungsordnungsversion 2015))</p>		

