

<b>Title of the module</b>	<b>Food microbiology</b>		
<b>Term/semester</b>	Winter term / 1		
<b>VAK-Number</b>	Will be assigned centrally		
<b>Credit points</b>	3 ECTS		
<b>Compulsory/ elective course</b>	Compulsory course for Microbial Systems students		
<b>Teaching methods</b>	Method	SWS	CP
	Lecture Practical course	1 (14h) 1.5 (21h)	1.5 1.5
<b>Self studies</b>	protocols	35 h	
	learning for the exam	20 h	
<b>Module representative</b>	Prof. M. Nagel		
<b>Instructor</b>	Prof. M. Nagel		
<b>Examiner</b>	Prof. M. Nagel		
<b>Objectives</b>	Basic theoretical and practical knowledge on the application of microbiological and biochemical tools for the examination and preparation of food. This also includes legislative regulations, manuals of methods, and laboratory documentation.		
<b>Content of teaching</b>	The course is focused on the application of microbiological and biochemical tools for the examination and preparation of foodstuffs. Lecture: Introduction to food microbiology and legislation, spoilage and preservation, pathogenic and toxinogenic microorganisms, alternative methods for examination of food, disinfection and hygiene monitoring. Practical course: Lab safety, sample preparation and calculation of colony counts, detection of <i>Salmonella</i> spp. and <i>Listeria monocytogenes</i> in different foodstuffs, natural fermentation of sauerkraut, confirmation of bacteria by commercially available identification kits and immunological assays, examination of different foodstuffs for the relevant microbiological parameters, documentation and presentation of results according to international standards.		
<b>Educational objectives</b>	<ul style="list-style-type: none"> <li>• Ability to understand principles of the topics mentioned previously</li> <li>• Basic ability to prepare and examine different food samples according to respective guidelines or directives</li> <li>• Ability to use international manuals of methods.</li> </ul>		
<b>Evaluation of the learning progress</b>	Protocols		
<b>Assessment</b>	Written multiple-choice exam (100 %)		
<b>Frequency</b>	once a year		
<b>Usage in other degree programmes</b>	In BMB only profile "Microbial Systems"		
<b>Requirements</b>	Admission to the master course "Biochemistry and Molecular Biology"		