

<b>Module Name</b>	<b>Module Code</b>
Role of the Microbiome for Soil Fertility and Plant Growth	agrarAEF875-01a
<b>Module Coordinator</b>	
Prof. Dr. Baharsadat Razavidezfuly	
<b>Organizer</b>	
Institut für Phytopathologie - Boden- und Pflanzenmikrobiom	
<b>Faculty</b>	
Faculty of Agricultural and Nutritional Sciences	
<b>Examination Office</b>	
Faculty of Agricultural and Nutritional Sciences - Examination Office	

<b>ECTS Credits</b>	6
<b>Evaluation</b>	Graded
<b>Duration</b>	one semester
<b>Frequency</b>	Only takes place during summer semesters
<b>Workload per ECTS Credit</b>	30 hours
<b>Total Workload</b>	180 hours
<b>Contact Time</b>	60 hours
<b>Independent Study</b>	120 hours
<b>Teaching Language</b>	English

<b>Module Courses</b>			
<b>Course Type</b>	<b>Course Name</b>	<b>Compul- sory/Optional</b>	<b>SWS</b>
Lecture	Role of the Microbiome for soil fertility and plant growth	Compulsory	2
Internship	Lab practicum Role of the Microbiome for soil fertility	Compulsory	2
<b>Prerequisites for Admission to the Examination(s)</b>			
Regular attendance of Internship course are necessary.			

<b>Examination(s)</b>				
<b>Examination Name</b>	<b>Type of Examination</b>	<b>Evaluation</b>	<b>Compulsory / Optional</b>	<b>Weighting</b>
Oral Examination: Role of the Microbiome for Soil Fertility and Plant Growth	Oral Examination	Graded	Compulsory	100
<b>Further Information on the Examination(s)</b>				
1.+2. period in summersemester 1. period in wintersemester				
QIS:70600 with number of examination: 70610				

<b>Course Content</b>
Soil microbiome diversity, activity and functions. Role of microbiome in ecosystem scale. Introduction to proteomics: principles and applications. Beneficial soil microbes which promote plant performance and soil fertility (directly and indirectly). Advanced novel approaches for plant-soil microbiome interactions studies
<b>Learning Outcome</b>
Advanced knowledge in importance of soil microorganisms in agro-ecosystem which includes Plant Growth Promoting Rhizo-bacteria, Fungi, Symbiotic and Bioremediation. Knowledge in proteomics and its applications in agricultural science.
<b>Reading List</b>
Printed content outlines, lecture-related review articles and textbooks. Course materials are available online. Two textbooks: 1) Soil microbiology, ecology and biochemistry, 4th Edition. (2014) Edited by E.A. Paul
<b>Additional Information</b>
This course has limited capacities: 20 students Enrolment by OLAT within workdays Monday through Friday in the 1st week of the 2. audit period of the preceding semester. last name first name striven degree study program stu-Email The allocation of the places takes place in the 2nd week of the 2. audit period of the preceding semester. Acceptance of the place by students only through participation at the first day of the course. Students without a place can get a place at the first day of the course by move-up procedure.

Use	Compulsory / Optional	Semester
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Dairy Science, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Food Science, (Version 2013)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2017)	Optional	-