

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

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

Module Courses			
Course Type	Course Name	Compul- sory/Optional	SWS
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
Prerequisites for Admission to the Examination(s)			
Regular attendance of Internship course are necessary.			

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

Course Content
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
Learning Outcome
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.
Reading List
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
Additional Information
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	-