

**P03 Ecological soil microbiology**

<b>Module</b>	<b>Ecological soil microbiology</b>							
<b>Code</b>	<b>P03</b>							
<b>Coordinator</b>	<b>Dr. M. Schenck</b>							
Language	English							
Stud. workload	180h (60h contact time)							
Credits	6 ECTS							
Frequenz (WS/SS)	WS							
Instructors	Dr. M. Schenck , Prof. Dr. R.G. Jörgensen							
Contents	Introduction to and application of important up-to-date methods in soil-microbiology to determine the activity, biomass and community structure of soil- microorganisms. The complete operational sequence of a research project is simulated: (1) sampling, (2) sample preparation, (3) measurements and data collection (application of methods), (4) data processing, (5) statistics and (6) drafting a manuscript. Up-to-date literature is presented and discussed by the students.							
Objectives	Students learn to use microbiological methods and to interpret the obtained data. Students develop a consciousness for the complexity of soil fertility and soil quality and see the difficulties in diagnosing it.							
Literature	Coyne, M.S. 1999: Soil microbiology: an exploratory approach. Thomson Press; Paul, E.A., Clark, F.E. 1996: Soil microbiology and biochemistry. 2nd ed. New York Academic Press; papers to be presented in the course are provided.							
Study system usability	Economy		Organic		Tropical			
	-		M		E			
Entrance requirements	Basic knowledge in biology, chemistry, and soil sciences. To do an experimental Master's thesis in soil sciences or plant nutrition this module is compulsory.							
Instruction type	Lecture		Seminar	Excursion	Practice	Tutorial	Project	
Duration [contact h]	8		8	4	40			
Examination type	Oral test	Written test	Homework	Sem. speech	Protocol	Work report	Proj. report	Proj. pres.
						x		x
Grade composition	100% written work report (prerequisite: successful project presentation)							