

P01 Ecology and Agroecosystems

Module	Ecology and Agroecosystems									
Code	P01									
Coordinator	Prof. Dr. A. Bürkert									
Language	English									
Stud. Workload	180h (60h contact time)									
Credits	6 ECTS									
Frequency (WS/SS)	SS									
Instructors	Prof. Dr. A. Bürkert, Dr. J. Gebauer, Dr. U. Niggli									
Contents	Case-study based analysis and discussion of ecological framework conditions (limitations) in different arid and sub-humid agro-ecosystems of tropical and temperate zones with a particular focus on marginal soils and/or difficult infrastructural conditions where effective nutrient cycling, integration of cropping and animal husbandry systems as well as the use of biodiversity for income generation at the farm level is of particular importance. The potential/role of organic agriculture will be discussed and a more general discussion of the potential of organic agriculture to strengthen the resilience of agro-ecosystems will be presented.									
Objectives	Students are able to define site-specific conditions of sustainability, identify key constraints to the productivity and sustainable use of agro-ecosystems, assess the scope of human (management) interventions, determine the causes of productivity decline and chose approaches to strengthen sustainability									
Literature	Altieri, M. 1987: Agroecology: the scientific basis of alternative agriculture. Westview Press, Boulder, Colorado, USA; Gliessman, S.R. 1998: Agroecology: ecological processes in sustainable agriculture. Ann Arbor Press, Michigan, USA.									
Study system usability	Economy			Organic			Tropical			
	-			M			M			
Entrance requirements	Basic knowledge in plant, soil and animal science, willingness to analyse agro-ecosystems quantitatively									
Instruction type	Lecture		Seminar		Excursion		Practice		Tutorial	Project
Duration [contact h]	50		10							
Examination type	Oral test	Written test	Homework	Sem. speech	Protocol	Work report	Proj.report	Proj.pres.		
	x			x						
Grade composition	60% oral test, 40% oral presentation									