

Modulhandbuch Affine Module – Institut für Biologie

Affines Modul – Institut für Biologie – Soil Ecology

Modul: Soil Ecology			
Qualifikationsziele:			
<p>The module gives the students a broad range of knowledge about the numbers, fate, activity and interactions of organisms present in soil; and how they are affected by their environment. It will be demonstrated how recent developments in the application of molecular biological techniques to ecological questions are revolutionizing this fascinating area of science. Upon completion of the module, the students are expected to have the required knowledge of principles of soil microbial ecology, updated and combined with insights obtained via the use of molecular techniques.</p>			
Inhalte:			
<p>Lecture "soil microbial ecology": The subject will be presented in its breadth divided in three parts: 1) concepts in soil ecology, picturing the soil and rhizosphere as habitats, discussing different biotic groups (e.g., bacteria, fungi, protozoa and nematodes), and processes and interactions; 2) the composition and activity of soil organisms, as determined by molecular techniques; 3) applied aspects of soil ecology (e.g., ecology of plant pathogenesis).</p> <p>Seminar "Modern Methodology and Approaches" The seminar will focus on current issues that have been addressed or that may be addressed in the future using molecular tools. These will include direct and indirect approaches to study soil biota, biomarkers, T-RFLP, DGGE and TGGE for studying microbial communities, combined classical and modern approaches etc. Classic and modern publications will be presented and discussed.</p>			
Lehr- und Lernformen	Präsenzstudium (Semesterwochenstunden = SWS)	Formen aktiver Teilnahme	Arbeitsaufwand (Stunden)
Vorlesung	2		Präsenzstudium: 60
Seminar	2		Vor- und Nachbereitung: 60
			Prüfungsvorbereitung und -bearbeitung: 30
Veranstaltungssprache: English			
Arbeitszeitaufwand in Stunden (h) insgesamt: 150 h			
Dauer des Moduls: Ein Semester			
Häufigkeit des Angebots: unregelmäßig			
Verwendbarkeit: -			

Modul: Soil Ecology		
Zugangsvoraussetzungen: Module: Grundlagen der Biologie, Botanik, Zoologie, Allgemeine Naturwissenschaftliche Grundlagen: Chemie		
Lehr- und Lernformen	Modulprüfung	Pflicht zu regelmäßiger Teilnahme
Vorlesung	Presentation of a research paper (50%) Klausur (Bearbeitungsdauer 90 Minuten) (50%)	wird empfohlen
Seminar		ja
Leistungspunkte: 5 LP		