Affines Modul – Institut für Biologie – Biology and Ecology of Symbiosis

Modul: Biology and Ecology of Symbiosis

Qualifikationsziele:

The module gives the students a broad range of knowledge about the biology, ecology and evolution of symbiosis with an emphasis on those that occur between microbes and plants. It will be demonstrated how recent developments in the application of molecular biological techniques are leading to an increasingly recognition that symbiosis is an important selective force behind evolution, with many species having a long history of interdependent co-evolution. Furthermore, it will be explained how certain symbiosis influence ecosystem processes. Upon completion of the module, the students are expected to have the specific knowledge of symbiosis amidst the broader area of microbial ecology, updated and combined with insights obtained via the use of molecular techniques.

Inhalte:

Lecture "Biology and Ecology of Symbiosis": The subject will be presented divided in three parts: 1) concepts in soil ecology, picturing the soil and rhizosphere as habitats, discussing who are the different symbiotic groups, 2) the activity of symbiotic soil microbial communities and how have symbioses evolved and are maintained and 3) applied aspects of soil ecology.

Seminar: The seminar will focus on past, current and potentially future issues that may be addressed about symbiosis. Scientific papers will be presented and discussed. Methods to analyse ecological data, including those generated through the use of molecular approaches will be explained and discussed.

Lehr- und Lernformen	**Präsenz-studium** (Semesterwochenstunden = SWS)	**Formen aktiver Teilnahme**	**Arbeitsaufwand** (Stunden)	
Vorlesung	2		Präsenzstudium:	60
Seminar	2	Präsentation / Referat	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: -

<table>
<tr><td colspan="3">Modul: Biology and Ecology of Symbiosis</td></tr>
<tr><td colspan="3">Zugangsvoraussetzungen: Module: Grundlagen der Biologie, Botanik, Zoologie, Allgemeine Naturwissenschaftliche Grundlagen: Chemie</td></tr>
<tr><th>Lehr- und Lernformen</th><th>Modulprüfung</th><th>Pflicht zu regelmäßiger Teilnahme</th></tr>
<tr><td>Vorlesung</td><td rowspan="3">Seminar presentations 25%
Research paper half-way through the semester (25%)
Klausur (Bearbeitungsdauer 90 Minuten) (50%)</td><td>wird empfohlen</td></tr>
<tr><td>Seminar</td><td>ja</td></tr>
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<tr><td colspan="3">Leistungspunkte: 5 LP</td></tr>
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