Module title			Abbreviation
Plant Adaptations			07-MS31PLA-242-m01

Module coordinator	Module offered by
holder of the Chair of Ecophysiology (Botany II)	Faculty of Biology

ECTS	Method of grading	Only after succ. compl. of module(s)
10	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	graduate	--

Contents

The module encompasses four sections with different foci. Students actively take part in all four sections.

I) Kick-off meeting and Intro: In this meeting the seminar topics (see section IV), the dates for two excursions (see section III), and the exam will be scheduled. In the following two lectures, we will introduce general concepts of plant ecology.

II) The second section introduces molecular aspects of plant ecology. For example, we outline the
- genetic basis of natural variation,
- physico-chemical basis of plant surface interactions with the environment,
- physiological aspects of plant interactions with fungi and bacteria,
- molecular regulation of plant root endosymbiosis,
- genetic and physiological basis of nitrogen acquisition.

III) The third section comprises lectures about the relationships between climate, soil, and vegetation. In addition, two excursions will introduce selected plant communities in the field.
IV) In the fourth section, each student will present a scientific publication in a literature seminar (20 min. talk). All students are expected to actively participate in the associated discussions.

Intended learning outcomes

Students should acquire a deep understanding of the relationship between molecular regulation of adaptive capacity in plants, and its importance for the biotic and abiotic interactions of plants with environmental factors. They should acquire competence to identify plant adaptive strategies on a molecular as well as macroscopic level, and to interpret and critically discuss the relevance of plant adaptations, also with respect to the current climate change, in the context of the scientific state of knowledge.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + S (1)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (30 to 60 minutes, including multiple choice questions) or
c) oral examination of one candidate each (30 to 60 minutes) or
d) oral examination in groups of up to 3 candidates (30 to 60 minutes)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Workload

300 h

Teaching cycle

Teaching cycle: summer semester

Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in
Master's degree (1 major) Biosciences (2024)