Faculty of Science

BIOR72, Biology: Plant Systematics and Diversity, 10 credits

Biologi:Växters systematik och diversitet, 10 högskolepoäng

Second Cycle / Avancerad nivå

Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2013-01-21 to be valid from 2013-01-21, spring semester 2013.

General Information

The course is a part of a Nordic Master's programme in Biodiversity and Systematics (organised by Nordic Academy of Biodiversity and Systematics Studies ? NABIS). The course is also an optional second-cycle course for a degree of Bachelor or Master of Science in Biology. The course is offered as a single subject course. The language of instruction is English.

Main field of studies	*Depth of study relative to the degree requirements*
Biology	A1F, Second cycle, has second-cycle course/s as entry requirements

Learning outcomes

On completion of the course the student shall be able to:

- account for the biodiversity of vascular plants (ferns, gymnosperms and angiosperms) from a phylogenetic and biogeographic perspective
- identify the most important plant families and position them in the phylogenetic tree of plants
- name important cultural plants and account for their origin

- apply scientific botanical terminology including flower diagrams
- search and analyse taxonomic information from internet-based scientific databases
- compare different species concepts and their applicability for plants

- interpret and evaluate alternative phylogenetic hypotheses for plants
- assess the application of skills in systematic botany for science and society

Course content

The aim of the course is to provide a broad knowledge about plant diversity and the methods and principles used in plant systematics.

The course contains:

1. Background

A general introduction that includes history of science, evolutionary processes, and species concepts from a plant perspective. Application of the phylogenetic system of angiosperms (APG).

1. Terminology

A comprehensive overview of scientific terminology that is used to describe plants. The use of flower diagrams for display of floral structures.

1. Phylogeny and major taxonomic groups.

An overview of the major taxonomic groups of vascular plants. Various plant families are treated with focus on phylogeny, diagnostic traits, biogeography and cultural plants. Alternative phylogenetic hypotheses are highlighted for groups with uncertain position.

On completion of the course the students shall, apart from obtaining an increased knowledge of the biodiversity of plants, be able to apply their knowledge in research, conservation biology, as well as in other societal occupations. These skills are trained by practical assignments that connect the three subject areas mentioned above.

Course design

The course is divided into teaching modules, each corresponding to approximately one week of studies. Each module treats one major taxonomic group and/or terminology as well as basic background knowledge. Each module contains study instructions, lectures, exercises and a written assignment. The written assignments are examined, approved and graded.

Assessment

The final grade is decided through a weighing of the results of all written assignments.

Subcourses that are part of this course can be found in an appendix at the end of this document.

Grades

Marking scale: Fail, Pass, Pass with distinction.
To pass the entire course, approved written assignments as well as participation in at least 80% of all compulsory parts are required. The final grade is decided through a joining of the results on examinations where the written assignments are given equally weight.

Students who have not passed the regular assignments are given the possibility to complete those after the course has ended.

Entry requirements

For admission to the course 90 credits of scientific studies including knowledge corresponding to BIOR54 Plant Evolution and Diversity 15 credits, or BIOR25 Molecular Ecology and Evolution 15 credits, are required. For students at NABIS, knowledge corresponding to BIO401 Alphataxonomical Principles 5 credits (University of Gothenburg), and 1BG393 Fundamental and Molecular Systematics 10 credits (Uppsala University), is required. English B/English 6

Further information

The course may not be included in a degree together with BIOR43 Plant Systematics 7.5 credits. For students with an education for professions in biology, alternative entry requirements can give admission to the course.

Subcourses in BIOR72, Biology: Plant Systematics and Diversity

Applies from V13

1301 Plant Systematics and Diversity, 10,0 hp
Grading scale: Fail, Pass, Pass with distinction