Faculty of Science

BIOR96, 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 2023-06-08 to be valid from 2023-06-08, spring semester 2024.

General Information

The course is a part of a Nordic Master's program in Biodiversity and Systematics (organized by the 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.

Language of instruction: 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

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

Knowledge and understanding

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

Competence and skills

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

- 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

Judgement and approach

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

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

Course content

The course covers the following three areas:

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)

2. Terminology

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

3. 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 during the course.

Course design

The course is divided into work packages, each corresponding to approximately one week of studies. Each work package treats one major taxonomic group and/or terminology as well as basic background knowledge. Each work package contains lectures, exercises and a written assignment. Compulsory participation is required in exercises assignments and associated elements.

Assessment

The assessment is based on the written assignments during the course and through compulsory components. Students who do not pass an assessment will be offered another opportunity for assessment soon thereafter.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

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 the written assignments, where these are given equal weight.

Entry requirements

For admission to the course 90 credits of scientific studies including knowledge corresponding to BIOR77 Plant Evolution and Diversity 15 credits, or BIOR25 Molecular Ecology and Evolution 15 credits, are required.

Alternatively, for students within the NABIS-program, knowledge corresponding to BIO401 Alphataxonomical Principles 5 credits (University of Gothenburg), and 1BG393 Fundamental and Molecular Systematics 10 credits (Uppsala University), is required. English 5.

Further information

The course may not be included in a degree together with BIOR72 Plant Systematics and Diversity 10 credits.

The course is given by the Department of Biology, Lund University.

Subcourses in BIOR96, Biology: Plant Systematics and Diversity

Applies from V24

2401 Hand ins, Work package 1-3, 4,0 hp
Grading scale: Fail, Pass, Pass with distinction
2402 Hand ins, Work package 4-7, 6,0 hp
Grading scale: Fail, Pass, Pass with distinction