



## **Syllabus for BIOR72, Plant Systematics and Diversity, 10,0 credits**

### **1. Course details**

Approved by the Education Committee of the Faculty of Science 2013-01-21. The syllabus is valid from 2013-01-21. The course is at the Second cycle (A1F).

### **2. General information**

The course is part of the main field of study in Biology at the Faculty of Science. The course is a part of a Nordic Masters' programme in Biodiversity and Systematics (organised by Nordic Academy of Biodiversity and Systematics Studies – NABIS). The course is optional in a Bachelor's or Master's degree in Science, major Biology. The course is also offered as a single subject course. The language of instruction is English. The course is net based and requires full time studies.

### **3. Learning outcomes**

On completion of the course, the student is expected to be able to:

Knowledge and Understanding

- 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
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Skills and Abilities

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

Judgement and Approach

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

### **4. Course content**

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

The course content is divided into three subject 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 detailed account for the scientific terminology that is used for plant description. The use of flower diagrams for display of floral structures.
3. Phylogeny and major groups.  
Overview of the major taxonomic groups of vascular plants. The various plant families are treated with special focus on phylogeny, diagnostic characteristics, biogeography and cultural plants.

Participants are after the course expected to be able to apply their knowledge in scientific systematic biology, in conservation biology and in other societal occupations. These skills are trained by exercises that connects to the abovementioned three subject areas.

## **5. Teaching and och examination**

The course is divided into modules that each corresponds to approximately one week of studies. Each module treats one major taxonomic group and may also include elements of terminology and basic background knowledge. Each module contains instructions for textbook studies, lectures, exercises and a written assignment that is turned in by students. The assignments are individually examined, approved and graded by teachers. The final examination is accomplished by an overall assessment of the assignments.

Students that have failed to get assignments approved during the regular course period have the opportunity to deliver assignments at close proximity after the regular course termination.

## **6. Grades**

Students are awarded one of the following grades: Distinction, Pass or Fail. To be awarded a Pass on the whole course the student shall have all assignments approved and shall have participated in 80% of compulsory course elements. Each assignment is given equal weight in the final examination.

## **7. Admission requirements**

To be eligible for the course applicants must have 90 higher education credits in Science subjects, including courses equivalent to BIOR54 Plant evolution and diversity, 15 higher education credits, or BIOR25 Molecular ecology and evolution, 15 higher education credits. For students enrolled in NABIS to be eligible is required courses equivalent to NMP411 Alpha taxonomical principles, 5 higher education credits (Oslo university), and 1BG393 Fundamental and molecular systematics, 10 higher education credits (Uppsala university).

## **8. Literature**

According to a list determined by the department, available at least five weeks before start of the course, see the web page for Undergraduate Studies in Biology, <http://www.biol.lu.se/courses>

## **9. Further informations**

The course can not be credited as a part of a degree along with BIOR43 Plant systematics 7,5 higher education credits.