GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2025-2026

Biodiversity of Plants s.L. (sensu Linnaeo) (C003481)

Course size *(nominal values; actual values may depend on programme)*

Credits 5.0 **Study time 138 h**

Course offerings and teaching methods in academic year 2025-2026

A (semester 1)	Dutch	Gent	practical
			lecture

Lecturers in academic year 2025-2026

Chatrou, Lars	WE11	lecturer-in-charge
Beeckman, Tom	WE09	co-lecturer
Verbeken, Annemieke	WE11	co-lecturer

Offered in the following programmes in 2025-2026	crdts	offering
Bachelor of Arts in Moral Sciences	5	A
Bachelor of Arts in Philosophy	5	A
Bachelor of Science in Biochemistry and Biotechnology	5	A

Teaching languages

Dutch

Keywords

Morphology, Anatomy, Biodiversity, Classification, Phylogeny, Angiosperms, Gymnosperms, Land plants, Bryophytes, Ferns

Position of the course

This basic course provides the student with a concise survey of the biodiversity of land plants (bryophytes, ferns, gymnosperms, and angiosperms), with more attention to some particular & important taxa in these groups. Also, the basic terminology of morphological and anatomical diversity is taught, as is phylogeny and classification of bryophytes and ferns. During the extensive practical exercises and excursions in the botanic garden many taxa are shown in reality and provide a hands-on experience with these plants.

Contents

1. Lectures

In this course, land plants are introduced, with their morphology and anatomy. The evolutionary history from the earliest land plants (liverworts) till the most recently evolved group (angiosperms) is shown.

- Morphology:
- Morphology root
- Morphology stem
- Morphology leaf
- Morphology inflorescence
- Morphology flower
- Morphology fruit
- Morphology seed

Anatomy:

- Histology (tissue types)
- Anatomy root
- Anatomy stem
- Anatomy leaf

Evolution & biodiversity of land plants:

- Liverworts, mosses and hornworts

- Lycophytes and ferns

Plants in context:
- Species and Species Formation
- Floral Biology
- Plants and Food

2. Practica
- Introductory practicum
- Practicum morphology flower
- Practicum morphology fruit & seed
- Identification practicum angiosperms
- Excursions in the botanic garden, showing morphological structures
- Practicum bryophytes and ferns
- Practicum anatomy root
- Practicum anatomy stem, primary & secundary
- Practicum anatomy leaf
- Practicum anatomy unidentified material
- Repetition practicum

Initial competences

No specific knowledge is needed. Basic knowledge of botany is of course a good start.

Final competences

1 Explaining the evolutionary history (evolutionary lineages and natural relationships) of land plants from bryophytes to angiosperms.
2 Describe the life cycle of various land plants.
3 Identify and explain the morphology of root, stem, leaf, inflorescence, flower, fruit and seed.
4 Recognize and discuss the tissue type (histology) and the anatomy of root, stem and leaf.
5 The final score for this course is calculated based on the exam (60%) and the practical (40%).
A minimum score of 9.5/20 applies to each of the two evaluation components. If a student scores less than 9.5/20 for one of the evaluation components, this will be considered a failing grade for that course. However, the result for the other evaluation component, for which at least 9.5/20 was achieved, will be retained if the student retakes the exam.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Lecture, Practical

Extra information on the teaching methods

Lectures
Practicums: (1) introduction lessons with multimedia demos and practice of preparation, observation and scientific view of morphological and anatomical structures of various land plants; (2) exercise of identifying Land plants (bryophytes, ferns, angiosperms); and (3) guided tours in the botanic garden to illustrate the course.

Study material

Type: Handbook

Name: Raven Biology of Plants
Indicative price: € 80
Optional: no
Language : English
Author : R.F. Evert & S.E. Eichhorn
ISBN : 978-1-46411-351-2
Number of Pages : 900
Oldest Usable Edition : 8e

Online Available : No
Available in the Library : No
Available through Student Association : Yes
Usability and Lifetime within the Course Unit : intensive
Usability and Lifetime within the Study Programme : one-time
Usability and Lifetime after the Study Programme : occasionally

Type: Syllabus

Name: Practicumnota's
Indicative price: € 7
Optional: no
Language : Dutch
Number of Pages : 85
Oldest Usable Edition : na
Available on Ufora : Yes
Online Available : No
Available in the Library : No
Available through Student Association : No

Type: Lab Material

Name: Loupe en scheermesjes
Indicative price: € 20
Optional: no
Available through Student Association : No
Usability and Lifetime within the Course Unit : intensive
Usability and Lifetime within the Study Programme : regularly
Usability and Lifetime after the Study Programme : not

References

Course content-related study coaching

During lectures and practicums, and on-line available: list of terminology, list with important parts of the course, examples of examinations.
The responsible teacher has one hour of consultation per week for questions, discussion and feedback.

Assessment moments

end-of-term and continuous assessment

Examination methods in case of periodic assessment during the first examination period

Written assessment with open-ended questions

Examination methods in case of periodic assessment during the second examination period

Written assessment with open-ended questions

Examination methods in case of permanent assessment

Written assessment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

Continuous assessment during the practical sessions (attendance required), and written exam at the end of the practicum series.
The exam consists of 1) a number of open questions, 2) a number of botanical terms to explain and to situate, 3) a number of blank plates to add the correct terminology, and 4) a selection of slides from the presentations to add comment.

Calculation of the examination mark

theoretical exam: 3/5 for the part of prof. Verbeken, 1/5 for the part of prof. Beeckman; practical exam: 1/5
The student has to pass for the three separate parts (theoretical part Verbeken, theoretical part Beeckman, practical exam) in order to pass for the complete exam.