

Zoology: Morphology and Systematics (I700200)

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

Credits 4.0 **Study time 120 h**

Course offerings and teaching methods in academic year 2024-2025

A (semester 1)	Dutch	Gent	practical seminar lecture
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Lecturers in academic year 2024-2025

Ovyn, Anneke	LA22	staff member
Semmouri, Ilias	LA22	lecturer-in-charge
Van Hecke, Thomas	LA22	co-lecturer

Offered in the following programmes in 2024-2025

Bachelor of Science in Bioscience Engineering Technology	crdts	offering
	4	A

Teaching languages

Dutch

Keywords

Zoology, taxonomy, embryology, growth of animals, functions of animals, protozoa, invertebrates, vertebrates

Position of the course

Animals have diverse relations to humans, amongst them production of food, companion animals, plant pests, parasites for human and animal. The course focuses on gaining insights in the huge diversity of animal organisms and the importance of some organisms for the program. An elaborate knowledge of zoology, systematics of the animal kingdom and animal growth is indispensable in the bachelor program.

Contents

The learning content of the course consists of:

- Importance and principles of classification
- Concept of species
- Terms such as symmetrie, segmentation, polymorfism, direct and indirect development
- Embryology of the animal, pre- en postnatal growth and applications
- Regnum Protista, Subregnum Protozoa
- Regnum Animalia
 - Phylum Porifera (sponges)
 - Phylum Cnidaria (cnidarians)
 - Phylum Ctenophora (combjellies)
 - Phylum Plathelminthes (flatworms)
 - Phylum Nematoda (nematodes)
 - Phylum Rotifera (rotifers)
 - Phylum Mollusca (molluscs)
 - Phylum Annelida (annelids)
 - Phylum Onychophora
 - Phylum Arthropoda (arthropods)
 - Phylum Bryozoa (moss animals)
 - Phylum Echinodermata (echinoderms)

Phylum Hemichordata
Phylum Chordata (chordates)
Subfylum Urochordata or Tunicata (tunicates)
Subfylum Cephalochordata
Subfylum Euchordata (vertebrates)

A brief introduction a typical characteristics of the animal plan for each taxonomic group is given, and relevant examples with life cycles are addressed. Particular attention is directed to taxonomie of insect, birds and mammals.

Students are offered theoretical exercises via the electronic learning platform in order to process the lecture material and gain necessary insights. In the practical exercises exemplary organisms are studied, both morpholgy and anatomy.

Initial competences

Basic principles of zoology such as systematic, cell and tissue anatomy, physiology and biochemistry is recommended.

Final competences

1 He/she can situate the organisms of the animal kingdom in an independent way in the complex system of the animal kingdom and can indicate a number of important and relevant characteristics

2 Able to elaborate on the life cycles and importance of some exemplary organisms with high importance for production of plant and animal and human health

3 Capable of addressing morfological and anatomical characteristics of animals during dissection in relation to the diversity of animals

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

Seminar, Lecture, Practical

Extra information on the teaching methods

The theory classes are the basis for obtaining theoretical knowledge. Exercises on an electronic learning platform are offered to process the learning material in an active and critical manner and to test the extent of competence acquisition. The practicals must be prepared via short web lectures and other digital material, followed by a short test during the exercise.

Study material

Type: Syllabus

Name: Dierkunde: morfologie en systematiek

Indicative price: Free or paid by faculty

Optional: yes

Language : Dutch

Available on Ufora : Yes

Online Available : No

Available in the Library : No

Available through Student Association : No

Additional information: Optional

Type: Slides

Name: Dierkunde: morfologie en systematiek

Indicative price: Free or paid by faculty

Optional: no

Language : Dutch

Available on Ufora : Yes

Online Available : No

Available in the Library : No
Available through Student Association : No

References

Hickman C.P., Roberts L.S., Keen S.L., Eisenhour D.J., Larson A. & l'Anson H. (2017).
Integrated principles of zoology. 17th Ed., McGraw-Hill Education, USA, 913 p.
Dorit R.L., Walker W.F. & Barnes R.D. (1991). Zoology. Saunders College Publishing,
Philadelphia, USA, 1009 p.
URL references are included in the course notes.

Course content-related study coaching

Possibility to ask questions after appointment. One hour consultation on a predetermined moment in the week is scheduled.
Rehearsal lesson
Possibility to consult books and journals available at the department.

Assessment moments

end-of-term and continuous assessment

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

Written assessment with multiple-choice questions, Written assessment with open-ended questions

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

Written assessment with multiple-choice questions, Written assessment with open-ended questions

Examination methods in case of permanent assessment

Professional practice, Written assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is not possible

Extra information on the examination methods

Theory: written

Exercises: permanent evaluation by report and activity during exercise, intermittent and final testing

Calculation of the examination mark

Theory: 75%

Exercises: 25%

The student must participate in all practicals, seminars and exams in order to pass this course, with regard to both periodical and non-periodical evaluations. The assessment and determination of the final quotation is done via the mathematical average according to the assigned coefficients. If one does not participate in the evaluation of one or more components, or one obtains less than 8/20 (not completed) on one or more components, one can no longer pass the course. If the final score calculation were to be 10 (or more) out of 20, this will be reduced to 9/20.