General Biology for students of biochemistry

Module coordinator
Dean of Studies Biologie (Biology)

Module offered by
Faculty of Biology

ECTS
5

Method of grading
Numerical grade

Duration
1 semester

Module level
Undergraduate

Contents
The first part of the course will acquaint students with the elementary building blocks of life as well as biological categories. Building on this knowledge, the course will then discuss the cell, the smallest unit of life, starting with its macroscopic structure before moving on to its microscopic structure. The course will point out differences and similarities between prokaryotic cells (bacteria, archaeabacteria) and eukaryotic cells (animals, plants). The second part will address one of the central issues of biology: evolution. Fundamental mechanisms and hypotheses will be discussed and students will be introduced to major phylogenetic reconstruction methods. Using the examples of plants and animals, the subsequent module components will introduce students to the phylogenetic diversity of eukaryotes. At the level of groups in the plant and animal kingdoms, students will acquire the fundamental knowledge necessary to understand the forms and functions of animal and plant organisms, with morphology and cytology being discussed in an evolutionary and ecological context. The contents of the module are relevant for biological disciplines at all levels of biological organisation.

Intended learning outcomes
- Knowledge of the structures of prokaryotic and eukaryotic cells and their (biological) macromolecules.
- Knowledge of the specific characteristics of the intracellular and extracellular structures of prokaryotes as well as animal and plant cells.
- Ability to recognise evolution as the driving force behind the phylogeny of species.
- Familiarity with the concepts of phylogenetic relationships between plants/animals.
- Familiarity with the distinguishing characteristics and major representatives of groups in the plant and animal kingdoms.
- Ability to select those plant and animal organisms that are most suitable for particular scientific issues.
- Familiarity with the components and functioning of microscopes.

Courses
V + V + V + V (no information on SWS (weekly contact hours) and course language available)

Method of assessment
4 written examinations (3 examinations: 60 minutes each; 1 examination: 30 minutes; including multiple choice questions), weighted 3:3:3:1

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module appears in
Bachelor’s degree (1 major) Biochemistry (2011)
Bachelor’s degree (1 major) Biochemistry (2009)