

Syllabus

BI1390.1 Biochemistry and intermediary metabolism, 15.0 credits

Biokemi och intermediär ämnesomsättning

The course is given Animal Science and Sustainability (BSc)

Version 1 in Slukurs. Corresponds to version 1 in Ladok

Syllabus approved

12 November 2020

The version applies to students admitted from spring 2021

The version is not a module version

Subjects

Biology

Education cycle

First cycle

Modules

Title	Code	Credits
Biochemistry – Basic chemistry	0102	4.0
Biochemistry – Exercises and laboratory work	0103	3.0
Biochemistry – Intermediate metabolism	0104	8.0

Advanced study in the main field

First cycle, entry requirements only from upper secondary school (G1N)

Grading scale

5:Pass with Distinction, 4:Pass with Credit, 3:Pass, U:Fail

The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

Swedish

Prior knowledge

- Biology 2, Biology B
- Chemistry 2, Chemistry B
- Mathematics 3, Mathematics C

Objectives

The course intends to give basic knowledge, and laboratory training in chemistry, biochemistry and molecular cell biology.

On completion of the course, the student should be able to:

- account for basic concepts and carry out calculations within stoichiometry, chemical equilibrium and basic thermodynamics,
- account for structure and function of DNA, RNA and the flow of genetic information,
- identify and account for the cell most important biomolecules regarding structure and function,
- use and explain certain biochemical methods and account for experimental results,
- account for the cell structure with its anabolic and catabolic processes
- account for metabolic interaction in different nutritional conditions,
- perform basic laboratory components with safety and precision.

Content

The course intends to give basic chemical and biochemical concepts and processes such as various types of chemical binding, stoichiometry, acid/base equilibrium and thermodynamics, structure and function of the molecules of life and enzymatic catalysis and kinetics. The structure of the cell, the function of organelles, membrane and transport of different subjects through membrane. The metabolism and bioenergetics from a nutritional perspective of the cell and the body.

In the course, lectures, laboratory work, seminars and group exercises according to student-activating teaching are included. Compulsory components occur within e.g. exercises, seminar, group exercises and laboratory sessions.

Following general skills are trained in the course: written and oral communication, formulate laboratory reports, analysis, problem-solving and critical thinking.

Formats and requirements for examination

Passed written and oral examination. Approved participation in compulsory components.

- If the student fails a test, the examiner may give the student a supplementary assignment, provided this is possible and there is reason to do so.
- If the student has been granted special educational support because of a disability, the examiner has the right to offer the student an adapted test, or provide an alternative assessment.
- If changes are made to this course syllabus, or if the course is closed, SLU shall decide on transitional rules for examination of students admitted under this syllabus but who have not yet passed the course.
- For the examination of a degree project (independent project), the examiner may also allow the student to add supplemental information after the deadline. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Additional information

Some lectures may be performed in English.

- The right to take part in teaching and/or supervision only applies to the course date to which the student has been admitted and registered on.
- If there are special reasons, the student may take part in course components that require compulsory attendance at a later date. For more information on this, please refer to the regulations for education at Bachelor's and Master's level.

Responsible department

Department of Animal Nutrition and Management

Cooperating departments:

Department of Molecular Sciences

Department of Anatomy, Physiology and Biochemistry

Supplementary Information

Finalized by: Programnämnden för utbildning inom veterinärmedicin och husdjur (PN - VH)

Biology Area: Molecular Biology

Replacement course: Ersätter: HV0120