



Faculty of Health, Science and Technology  
Biology

# Syllabus

## Biology Preparatory A

<b>Course Code:</b>	BIBX13
<b>Course Title:</b>	Biology Preparatory A <i>Biologi Bas A</i>
<b>Credits:</b>	7.5
<b>Degree Level:</b>	Preparatory
<b>Progressive Specialisation:</b>	()

**Major Field of Study:**

### Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2019-09-02, and is valid from the Spring semester 2020 at Karlstad University.

### Prerequisites

General admission requirements plus upper secondary level Mathematics B/2a/2b/2c, or equivalent

### Learning Outcomes

Upon completion of the course, students should be able to:

1. describe scientific theories on the origin and development of life, give an account of and apply basic concepts and processes in ecology and evolution, and describe the principles for classifying organisms and their main categories,
2. give an account of the structure of prokaryotic and eukaryotic cells and give an account of basic genetics, as well as reflect upon it in terms of uses, possibilities, and risks, and
3. conduct experimental biological investigations, and compile and analyse the results.

### Content

Instruction is in the form of lectures, exercises, and laboratory sessions.

The course offers knowledge of biology required for study at the university level. The course comprises ecology, evolution, organisms, and cell biology with genetics, and describes the structures and mechanisms of ecosystems, the mechanisms of evolution underlying the categorisation of organisms, and the development of biological diversity. Human impact on biological diversity is described and discussed. The structure and general function of different cell types are described and compared. The structure and function of genes, the laws and mechanisms of heredity, and genetic expressions are also treated. Epigenetics is explained and discussed, as well as the application areas of genetics in society.

In laboratory sessions and exercises, students apply the course content.

### **Reading List**

See separate document.

### **Examination**

Learning outcomes 1-2 are assessed based on an individual written exam.

Learning outcome 3 is assessed based on laboratory work and a written report.

If students have a decision from Karlstad University entitling them to special pedagogical support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

### **Grades**

One of the grades Fail (U) or Pass (G) is awarded in the examination of the course. (Dnr C2018/824)

### **Quality Assurance**

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

### **Course Certificate**

A course certificate will be provided upon request.

### **Additional information**

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.

The course corresponds to the main content of Biology 1 in the upper secondary science and technology programmes.