



Faculty of Health, Science and Technology  
Biology

# Syllabus

## Master thesis in biology

<b>Course Code:</b>	BIAD20
<b>Course Title:</b>	Master thesis in biology <i>Masteruppsats i biologi</i>
<b>Credits:</b>	60
<b>Degree Level:</b>	Master's level
<b>Progressive Specialisation:</b>	Second cycle, contains degree project for Master of Arts/Master of Science (120 credits) (A2E)

**Major Field of Study:**  
BIA (Biology)

### Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2024-01-24, and is valid from the Autumn semester 2024 at Karlstad University.

### Prerequisites

A first-cycle qualification in Biology equivalent to 180 ECTS credits, including 15 ECTS credits in Ecology, and 30 ECTS credits in Biology at the second-cycle level, or equivalent

### Learning Outcomes

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

- critically and independently identify and formulate research questions, and critically evaluate and specify adequate methodological choices for biological investigations,
- carry out literature searches and data collection and analyse data using appropriate statistical methods,
- reflect upon and assess ethical aspects related to research questions and research projects in biology,
- describe and explain methods, results, analyses, and conclusions in a written thesis and evaluate this work, and

- orally present and defend their own thesis, and perform an independent critical review of another student's thesis in biology.

### **Content**

The course comprises an individual research project, which students select in consultation with the examiner, and an introductory component in which students complete a detailed project plan and list of references with support from their supervisor. The project plan must include a detailed description and justification of the selected research design and relevant scientific methods, precise research questions or hypotheses, and a description of the planned statistical analyses and ethical aspects of the study. The thesis builds on and constitutes a specialisation in relation to the students' previous studies in biology. While working on the individual research project, students also carry out literature studies.

Instruction is in the form of supervision and a number of seminars on experimental design, statistics, and research ethics.

### **Reading List**

See separate document.

### **Examination**

Assessment is based on a seminar presentation on experimental design, statistics, and research ethics (3 ECTS cr), a detailed project plan (7 ECTS cr), an independently written thesis, including an oral presentation and defence of the thesis and performance as a peer reviewer of another student's Master thesis (45 ECTS cr), as well as a written hand-in assignment based on at least five scientific seminars, including critical reflection and aspects of research ethics (5 ECTS cr).

The presentation, including peer review, takes place at Karlstad University.

If students have a decision from Karlstad University entitling them to Targeted Study 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 Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course.

### **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.