

Pedagogical master's theses at the Faculty of Biological and Environmental Sciences

Subject-teacher students admitted to the master's programmes of the Faculty of Biological and Environmental Sciences can write a pedagogical master's thesis complying with the Faculty's general instructions for master's theses as well as the discipline-specific instructions of degree programmes. With sufficient justification, the structure of a pedagogical master's thesis can differ slightly from that outlined in the discipline-specific instructions.

A pedagogical master's thesis must include a dataset which is analysed using research-based methods. The dataset may relate, for example, to pupils, general upper secondary students, teachers, higher education students or participants in science education and academic outreach. The research may also focus on the learning of higher education students or adults or on teaching in higher education. In addition, a pedagogical master's thesis may examine, for example, the production and testing of teaching material or a teaching method in a school, in university studies or in science education and academic outreach. The thesis may also consist of a content analysis of curricula or school textbooks which are investigated through research-based methods. A pedagogical master's thesis must be relevant to the student's field of study.

A master's thesis on school education should concentrate on the secondary or general upper secondary school because subject teacher education provides the qualifications required for teaching at these levels. If investigating comprehensive school education or pupils, part of the research can also relate to primary school education. In a master's thesis related to science education and academic outreach, the target group can be children, adolescents or adults.

It is recommended that a pedagogical master's thesis have two supervising teachers, of whom one should be from the student's own degree programme or faculty and the other a specialist in the pedagogical sector.

If planning to apply for postgraduate education after completing your previous degree, please note the following: You must complete a master's degree to be eligible for postgraduate education. If you have completed a pedagogical master's thesis, it may reduce the number of discipline-specific studies required by certain doctoral programmes. If planning to pursue postgraduate studies related to biology teaching or learning, you should complete a pedagogical master's thesis, whereas if planning to pursue postgraduate studies in the natural sciences, you should complete a natural scientific master's thesis. A pedagogical master's thesis may be an asset when applying to work as a school teacher.

Examples of topics of pedagogical master's theses:

- Learning in a specific area
- Teaching ideas, teaching materials and their research-based development
- The effect of teaching on learning
- Curricula
- Pupils' or teachers' perceptions of learning or teaching
- Research on teachers or pupils: e.g., attitudes, self-efficacy, beliefs, subject skills, preconceptions, misconceptions and learning strategies
- Popularisation of science and research in the school context

Examples of studies:

- Research on existing data (e.g., matriculation examinations, textbooks, curricula)
- A questionnaire or survey study
- An interview study
- A specific area of development research (theoretical analysis, data analysis and related testing)
- A topic related to science education and academic outreach

(Instructions updated by the degree programme committee in January 2022)