



Board of Teacher Education  
Mathematics

## Syllabus

### Mathematics and Mathematics Teaching IV

<b>Course Code:</b>	MAAL14
<b>Course Title:</b>	Mathematics and Mathematics Teaching IV <i>Matematik IV med didaktisk inriktning</i>
<b>Credits:</b>	7.5
<b>Degree Level:</b>	Master's level
<b>Progressive Specialisation:</b>	Second cycle, has only first-cycle course/s as entry requirements (A1N)

**Major Field of Study:**  
MAA (Mathematics)

#### Course Approval

The syllabus was approved by the Board of Teacher Education 2018-02-12, and is valid from the Autumn semester 2018 at Karlstad University.

#### Prerequisites

MAGL13 with at least 20 ECTS credits completed, or equivalent

#### Learning Outcomes

The aim of the course is that students further develop and deepen relevant knowledge in the field of mathematics education.

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

1. give an account of and discuss different theories and current research in mathematics education,
2. analyse teaching situations in relation to relevant research studies in mathematics education,
3. plan and present a sequence of lessons in mathematics for upper or lower secondary education in which content and teaching design are analysed in terms of both subject knowledge and subject-specific education.

#### Content

The course provides in-depth insights into learning and teaching mathematics. Theories in the field of mathematics education are studied and compared. A lesson sequence in mathematics is planned, discussed and analysed using knowledge from both courses in mathematics and courses in mathematics education. Aspects treated are alignment to the central content of the curriculum and the different abilities and competences to be developed, individualisation, variation in instruction methods, assessment, using digital tools and pupil meta perspectives.

#### Reading List

See separate document.

**Examination**

Assessment is based on

1. Literature seminar (learning outcomes 1 and 2)
2. Construction of discussion issues on the basis of research articles and seminar (learning outcome 1)
3. Oral presentation of planning and analysis of lesson sequence (learning outcomes 2 and 3)
4. Individual written report on planning and analysis of lesson sequence (learning outcomes 2 and 3).

**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.

Teacher Education: Secondary schools