



Faculties of Humanities and Theology

## ÄMAM02, Mathematics: Master Thesis for Subject Teachers, Upper Secondary School, 30 credits

*Matematik: Självständigt arbete (examensarbete) för ämneslärare,  
GY, 30 högskolepoäng*  
Second Cycle / Avancerad nivå

---

### Details of approval

The syllabus was approved by Study programmes board, Faculty of Science on 2020-07-07 to be valid from 2020-07-07, spring semester 2021.

### General Information

The course is a component of the teacher education programme with a specialisation in the subject of mathematics in upper-secondary school at Lund University.

*Language of instruction:* Swedish

*Main field of studies*

-

*Depth of study relative to the degree requirements*

AXX, Second cycle, in-depth level of the course cannot be classified

### Learning outcomes

The course comprises the final degree project in the teacher education programme with a specialisation in the subject of mathematics. The aim of the course is to provide students with specialised understanding of the didactic issues and professionally related problems that are specific to the subject of mathematics.

### Knowledge and understanding

On completion of the course, the students shall be able to

- identify an issue of relevance to the profession and subject
- provide a specialised and broadened account of the chosen issue based on its theoretical, methodological and empirical context
- demonstrate advanced knowledge and an understanding of current research and development in the chosen area

- account for research methodology and methodological procedures of relevance to the subject

### **Competence and skills**

On completion of the course, the students shall be able to

- search, identify, formulate, process and analyse an independently chosen issue within teaching methodology
- assess, select and use relevant methods and approaches to collect, process and analyse data in a scholarly manner
- report on the completed project in speech and in writing and communicate the knowledge it has generated, and defend their findings at a public seminar
- carry out assignments within given time frames

### **Judgement and approach**

On completion of the course, the students shall be able to

- critically review relevant didactic research based on a disciplinary foundation and use a critical approach to discuss it with constructive comments
- account for current principles of research ethics and where appropriate carry out research in accordance with these
- identify their need for additional knowledge and take responsibility for their own professional development in the subject of mathematics and in teaching.

### **Course content**

The course consists of an independent project in the subject of mathematics with a specialisation in teaching methodology and of clear relevance to the future profession as a teacher, as well as a defence of the independent project. The aim of the course is to provide students with a specialised understanding of the didactic issues and professionally related issues that are specific to the subject of mathematics, and a specialised ability to execute a research study, the implementation and results of which shall provide the student with an understanding of the professional tradition of the subject and its theoretical and methodological aspects.

In connection with the degree project, the student is to seek, identify and select relevant literature, when necessary in consultation with the supervisor.

### **Course design**

The course consists of the student's independent execution of a degree project with the support of a supervisor. There are also a number of compulsory components in the form of teaching sessions and seminars that cover scientific and popular science writing, academic integrity, use of library resources, theory of knowledge for student teachers and research methods in the teaching of mathematics.

During the course, the independent project will be discussed at individual supervision sessions. The student is expected to participate actively in all supervision activities and seminars that are organised. Supervision is limited to thirty hours in the semester in which the student is first enrolled in the course, unless special circumstances apply.

The work is presented in the form of a project report in English or Swedish, with a popular science description in Swedish or English. The work is also presented orally at a public seminar for discussion, review and analysis. Prior to the presentation,

students should reflect on their work based on the intended learning outcomes in this course syllabus and/or the qualifications for a teaching degree in the Higher Education Act.

## Assessment

The following components are included in the assessment:

- participation in all compulsory components
- a scientific, written report on the project
- an oral presentation of the project to an examining committee consisting of examiner and supervisor
- a popular science description of the project
- a brief description of the execution of the project and reflection on their own learning.

The written report has to be submitted to the examiner, in a version that admits examination, at least two weeks before the seminar. Before that, the report has to be checked by the supervisor. The department is responsible for making copies of the report. After final approval, the student is responsible for archiving the report in the system supplied by the university.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

*Subcourses that are part of this course can be found in an appendix at the end of this document.*

## Grades

Marking scale: Fail, Pass, Pass with distinction.

For a Pass on the course, students must have been awarded a Pass on the written report and seminar and have participated in all compulsory components.

The final grade is determined by combining the results from the different parts of the assessment.

The examiner decides on the grade in consultation with the supervisor. If the examiner assesses that the degree project can not be approved, the student shall be given possibility to supplement the project for renewed assessment within approximately half a semester. If the degree project does not satisfy the learning outcomes for the course after this renewed assessment, the examiner can decide to fail it. This can imply that a new project is required, so that all learning outcomes can be fulfilled.

## Entry requirements

To be admitted to the course, students must have successfully completed 90 credits in the subject of mathematics with didactics and have successfully completed UVK 8, or equivalent.

**Further information**

The course cannot be included in a degree together with ÄMAM92 Mathematics:  
Master Thesis for Subject Teachers, Upper Secondary School, GY, 30 credits.

## Subcourses in ÄMAM02, Mathematics: Master Thesis for Subject Teachers, Upper Secondary School

Applies from V21

2101 Master Thesis for Subject Teachers, 30,0 hp  
Grading scale: Fail, Pass, Pass with distinction