



Course syllabus

Board of Education Science

School of Computer Science, Physics and Mathematics

4PP705 Självständigt arbete (examensarbete) inom speciallärarprogrammet specialisering mot matematikutveckling, 15 högskolepoäng

Degree project in special education teacher training program with focus on Mathematics development, 15 credits

Main field of study

Mathematics

Subject Group

Educational Sciences/Theoretical Subjects

Level of classification

Second Level

Progression

A1F

Date of Ratification

Approved by the Board of the School of Computer Science, Physics and Mathematics
2012-08-17

The course syllabus is valid from spring semester 2013

Prerequisites

4PP704 Special support in mathematics development IV, 5 hp or equivalent.

Objectives

The aim of the course is that students should be able to produce an independent work of scientific nature in mathematics education from a special educational perspective. Another purpose is that students should deepen their ability to independently and scientifically pursue development and process of change in future employment. The aim is also that the student after the course have a thorough knowledge of mathematics education problem areas in relation to special education. After completing the course the student should be able to:

- formulate research questions relevant to professional activities
- independently plan and carry out an empirical study
- argue for the choice of methodology and instruments
- search, obtain, collate, evaluate and critically review for the study relevant literature and information
- analyze its own empirical work based on selected theories and draw conclusions, and discuss the credibility and validity of the interpretations made and conclusions drawn.
- show ethical awareness in the planning and implementation of the independent

work.

- verbally and in writing be able to present and defend a scientific study
- critically review and on a scientific base constructively discuss scientific texts.

Content

The course consists of a scientifically independent work, where the student with guidance, select, process and present an educational problem.

The following topics are included:

- mathematics education from different research perspectives
- application of different theoretical perspectives
- applied research methodology
- processing and analysis of research
- application of ethical principles
- communication of research results both orally and in writing.
- critical and constructive review of others' scientific independent projects

Mandatory elements are shown in the study guide.

Type of Instruction

To support the independent work theoretical and research methodological seminars are given. Students write their own independent work under supervision. Supervision can be made in collaboration between the departments involved, depending on the student's choice of subject.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

Course content is assessed through the degree project, presented and defended at the end of the course, the project is examined at a public seminar with a designated opponent. In cases where two students have made a joint project, the individual efforts need to be distinguished and individually assessed.

When the supervisor in consultation with the examiner believes that we are but for extensive changes will be approved given consent for the final examination.

Course Evaluation

On completion of the course a course evaluation is compiled and written feedback is sent out to the students. The compilation is reported for current institutions and for the relevant program committee, and preserved by the main institution.

Other

Any additional costs associated with the independent project is funded by the student.

Required Reading and Additional Study Material

Required Reading

The student, together with the supervisor and examiner, will select relevant literature for the of the thesis.

Reference Literature

Strömquist, S. *Skrivboken. Skrivprocess, skrivråd och skrivstrategier*. Malmö: Gleerups, 2000: 195-227, 32 pages.

Bryman, A. *Samhällsvetenskapliga metoder*. Malmö: Liber ekonomi, 2000. 498 (498) pages.

Johansson, B. & Svedner, P.-O. *Examensarbetet i lärarutbildningen*. Uppsala: Kunskapsföretaget, 2001. 136 (136) pages.

Schoenfeld, A. H. *Purposes and Methods of Research in Mathematics Education*. Notices of the AMS, Vol. 47, Nr6, 641-649, 2000. 8 (8) pages.

Suter, L. E. & Frechtling, J. *Guiding Principles for Mathematics and Science Education Research Methods: Report of a Workshop*, NSF, 2000. 30 pages.

Jarrick, A. & Josephson, O. *Från tanke till text. En språkhandbok för uppsatsskrivande studenter*. Lund: Studentlitteratur, 1996. 129 pages.

Patel, R. & Davidsson, B. *Forskningsmetodikens grunder*. Lund: Studentlitteratur, 2003. 124 pages.

Patton, M. Q. *Qualitative Research & Evaluation methods (3. ed.)*. Thousand Oaks, California: Sage Publications Inc, 2002. 598 pages.

Kvale, S. *Den kvalitativa forskningsintervjun*. Lund: Studentlitteratur, 1997. 306 pages.

Merriam, S. B. *Fallstudien som forskningsmetod*. Lund: Studentlitteratur, 1994. 228 pages.