Linnæus University

Course syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

4MD336 Metodkurs i matematikdidaktik, 7,5 högskolepoäng
Course in methods of research in mathematics education, 7.5 credits

Main field of study
Mathematics

Subject Group
Mathematics

Level of classification
Second Level

Progression
A1N

Date of Ratification
Approved by the Board of the School of Computer Science, Physics and Mathematics 2009-12-15

Revised 2010-08-04. Revision of prerequisites and course evaluation.

The course syllabus is valid from spring semester 2011

Prerequisites
Basic eligibility for second level studies of at least 180 credits, whereof 60 credits concern courses in mathematics or mathematics education.

Expected learning outcomes

Having completed the course the students should be able to:

- describe and interpret central definitions and concepts of methods of research in social science
- give an account of different research designs, of relevance for research studies in mathematics education
- reflect on the role of theory in research
- describe and understand qualitative and quantitative research strategies
- choose and argue for relevant methods for collecting data on the basis of differnt research designs and research strategies,
- give an account of differnt methods of analysis,
- choose, argue for and apply relevant scientific method according to the research question and adopted theoretical approach of a research study
- be able to deal with ethical considerations and the deliberations involved in academic work.

Content

The course covers the following items:

- central definitions and concepts in methods of research in social science
- research of design in social science
- the role of theories in scientific studies
- qualitative and quantitative research strategies
- methods of data collection
- methods of analysis
- research ethics.

Type of Instruction

Seminar, self-tuition and exchange of experiences. Discussions and seminars can occur on a web-based learning plattform.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).
On request, students may have their credits translated to ECTS-marks. Such a request must be sent to the examiner before the grading process starts.

The students are assessed through written presentations and/or oral presentations at seminars.

Course Evaluation

A course evaluation will be carried out at the end of the course in accordance with the guidelines of the University. The result of the course evaluation will be filed at the department.

Required Reading and Additional Study Material

Required reading

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

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

Scientific articles in research of mathematics education.

Reference Literature

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.