Linnæus University

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Course syllabus

Faculty of Technology
Department of Mathematical Education

4PP704 Särskilt stöd i matematikutveckling IV, 5 högskolepoäng
Special support in mathematics development IV, 5 credits

Main field of study
Mathematics, Education

Subject Group
Mathematics

Level of classification
Second Level

Progression
A1F

Date of Ratification
Approved 2012-08-17
Revised 2015-09-24 by Faculty of Technology. Literature list and course evaluation are revised.
The course syllabus is valid from spring semester 2016

Prerequisites
Special support in mathematics development III 4PP703 or equivalent.

Objectives

The aim of the course is that the student should be able to critically and independently reflect upon various tools and procedures based on relevant research findings to support the learning process for students with mathematics difficulties. The student will also be able to observe and analyze situations on students in mathematics difficulties on individual, group - and the organizational level, in relation to their professional activities. Another objective is that students will be able to consider research and ethical principles of professional practice at the organizational, group and individual levels.

After the course the student should be able to:

- independently identify difficulties in mathematics
- observe and analyze the situation regarding students with mathematical difficulties on an individual, group and organizational level and to establish action programs
- critically and independently reflect upon various tools and methods to support the learning process for students with mathematics difficulties
- to analyze the obstacles and opportunities for student learning mathematics in collaboration with other professionals
- consider research and professional ethics in the profession, organization, group and individual levels.

Content
The course covers the following content:

- Analysis of mathematical difficulties and action programs
- What opportunities various tools and compensatory aid can provide for students who for various reasons, got into difficulties in mathematics.
- Collaboration between different professions
- Building measures in the learning process for students with mathematics difficulties, based on theoretical concepts and research perspectives by following the research and ethical principles

Type of Instruction
The teaching is provided in the form of lectures and seminars. Some of the teaching is done via distance learning tools.

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 course is examined through active participation in seminars and presentations, as well as through oral and written presentations of individual and group assignments. Some examinations are done through distance learning tools. To receive a passing grade the objectives has to be achieved.

Course Evaluation
During the course or in close connection to the course, a course evaluation is to be carried out. The result and analysis of the course evaluation are to be communicated to the students who have taken the course and to the students who are to participate in the course the next time it is offered. The course evaluation is carried out anonymously. The compiled report will be filed at the Faculty.

Other
Any additional costs related to the course is paid for by the individual student.

Required Reading and Additional Study Material
Required Reading
Asp-Onsjö, Lisa. Åtgärdsprogram i praktiken – Att arbeta med elevdokumentation i skolan. Studentlitteratur, 2008, 200 pages
Chinn, Stephen J. (2004). The trouble with maths: a practical guide to helping learners with numeracy difficulties. New York: Routledge 172 pages.
Ma, Liping (2010). *Knowing and teaching elementary mathematics: teachers' understanding of fundamental mathematics in China and the United States*. Anniversary ed. New York: Routledge (90) 182p.
McIntosh, Alistair, Förstå och använda tal – en handbok//, NCM, Göteborgs universitet, 2008. 200 pages.
Roos, Helena. (2015). Inclusion in mathematics in primary school – what can it be? Licentiate thesis in Mathematics Education. Linnaeus University, 2015. Växjö.
Vetenskapsrådet (2004). Codex. http://www.codex.vr.se/
Vetenskapsrådet (2007). Forskningsetiska principer inom humanistisk-samhällsvetenskaplig forskning. 17 pages.
Research Articles, current year. App. 100 pages.
Relevant literature from the courses special support in mathematic development I, II and III.