



Course syllabus

Faculty of Technology

Department of Physics and Electrical Engineering

1GN023 Teknik för undervisning i förskoleklass och årskurs 1-3, 7,5
högskolepoäng

Technology for Teaching in Primary School, Years F-3, 7.5 credits

Main field of study

Technology

Subject Group

Educational Sciences/Theoretical Subjects

Level of classification

First Level

Progression

G1N

Date of Ratification

Approved 2012-03-30

Revised 2013-01-24 by Department of Physics and Electrical Engineering. Prerequisites are revised and literature.

The course syllabus is valid from autumn semester 2013

Prerequisites

General entry requirements and English B, Mathematics B, Natural Science A, Civics

A. or: Mathematics 2a/2b/2c, Natural Science 1b/1a1+1a2, Civics 1b/1a1 + 1a2

Objectives

Having completed the course the students should:

- be able to show they have acquired both knowledge of the subject and its didactics and an insight into current research and development required to be able to carry out the work
- be able to demonstrate the ability, both independently and with others, to plan and carry out teaching aimed at stimulating and assessing each child/pupil's learning of and development in technology
- be able to identify technical solutions in existing constructions and use them in their own work
- be able to identify and describe technology from a systems perspective
- be able to communicate basic technological solutions through speech, writing, pictures and models
- be able to present the important events and developments in the history of technology and what impact this has and has had on peoples lives and the development of society.

Content

Throughout the course technology is closely related to the pupils by using examples from society and everyday life. The technological content is related to different didactical approaches and working methods as well as the content described in Lgr11.

The course content comprises four main strands that together encompass the central aspects of the course:

Technological Solutions

This course includes sections where the pupils make constructions in different materials or deconstruct and analyse existing technology. Principally the artefacts and systems focus on mechanical solutions as well as how ordinary solid and stable constructions are built.

Working methods for the development of technological solutions

The course highlights different phases in technological development work as well as linking this to the documentation of technology and the different ways of communicating technological knowledge and solutions.

The course also includes the handling and maintenance of the equipment usually used in the school course.

Technology, People, Society and the Environment

The course also examines the history of technology i.e. how people have defined, observed and dealt with technology throughout history. The needs, driving forces and conditions that lie behind technological development, how technology, man, society and nature affect each other and what consequences these have had and will have are important aspects of the course.

The Didactics of Technology

The course deals with the central questions concerning the didactics of technology. Assessment of current policy documents characterizes the entire course.

Type of Instruction

Various instruction methods are used during the course such as lectures, seminars, workshops and information retrieval. Field study days may also be included.

Participation in laboratory work, group exercises and seminars is obligatory as are the surveys and presentations associated with these activities.

Examination

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

The students' achievements are assessed through written and oral examinations, the presentation of obligatory assignments as well as the participation in practical exercises and seminars. The assessment criteria to pass the course may be seen above in Objectives. A second examination will be offered within six weeks during the regular semester periods.

Course Evaluation

After completion of the course a written course evaluation is compiled with feedback from the students. The evaluation is presented to the appropriate organ of the Institution and the course advisor concerned as well as being filed by those responsible for the course.

Required Reading and Additional Study Material

Required Reading

Sundin, Bosse (2006). *Den kupade handen – människan och tekniken*, Carlssons bokförlag. Pages 354 (362). ISBN 91-7331-015-8

Teaching materials for compulsory schools and other relevant literature is chosen in

consultation with the course examiner. Pages 50 (approx).

IFE, Copied material, Linnæus University, current year. Pages 50 (approx).

Didactic literature

Bjurulf, Veronica. (2011). *Teknikdidaktik*, Norstedts. ISBN 978-91-1-302843-9. 210 p.

Björkholm, Eva. (2010). *Technology Education in Elementary School: Boys' and Girls' Interests and Attitudes*. NorDiNa 1/10. 11 p.

www.naturfagsenteret.no/binfil/download.php?did=6915

Skogh, Inga-Britt. (2001). "*Teknik - då tänker jag på något spännade som man kommit på*". *Flickor i de yngre åldern talar om teknik*. 8 p.

www.buv.su.se/pub/jsp/polopoly.jsp?d=8244

Skogh, Inga-Britt. (2004). *Hur tänker flickor och kvinnor om teknik?* 3 p.

www.liu.se/cetis/nyhetsbrev/ny_brev_2005_2_hur_tanker_flickor.shtml

Reference Literature

Persson, Hans. (2011). *Teknikgrytan*. Hands on science. 160 p.

ISBN 978-91-86917-00-5

CETIS. (2008-2011). *Teknik tillsammans*. (Teknik tillsammans är ett webbaserat undervisningsmaterial i teknik för barn i förskola till skolår 5.)

www.liu.se/cetis/tekniktillsammans/

Skolverket, *Läroplan för det obligatoriska skolväsendet*, 19 p.

www.skolverket.se/sb/d/4166/a/23894.

Skolverket, *Kursplan och betygskriterier för ämnet Teknik*, 7 p.

www.skolverket.se/kursplaner_och_betyg/1.154086/2.802/2.2574/laroplaner-for-grundskolan-1.128837

Skolverket, *Kommentarmaterial till kursplanen i Teknik*, 27 p.

www.skolverket.se/sb/d/4371/a/23585.

Skolverket, *Bedömningsstöd i teknik* Utkommer våren 2012

www.skolverket.se/sb/d/2927/a/16559

Teaching materials for compulsory schools.