



# LT2031 Teaching and Learning in Technology and Engineering, Part 2 5.0 credits

Ämnesdidaktik - lärande och undervisning i teknik, del 2

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

## Establishment

Course syllabus for LT2031 valid from Spring 2019

## Grading scale

A, B, C, D, E, FX, F

## Education cycle

Second cycle

## Main field of study

Technology and Learning

## Specific prerequisites

Pass grade (minimum E or U) in the two courses listed on the Swedish course plan and Placement 1 (or equivalent knowledge).

## Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

Having passed the course the student is expected to be able to:

“ show advanced knowledge of formative and summative assessment in technical subjects.

- account for current research about teaching and learning technology in a determined field and discuss its relevance for the teaching in primary and/or upper-secondary school.

- discuss and evaluate exploratory working methods in the teaching of technical subjects.

- plan teaching for a longer period in accordance with current policy documents with reasonable progression and with regard to other school subjects and pupils' different interests.

“ problematise and critically review the use of different teaching and learning resources (including but not restricted to digital resources) in teaching.

- contrast technical knowledge and skills against other skills and, based on this, discuss the place of the technical subjects in the education system

## Course contents

In the advanced course, knowledge from the introductory course is deepened. The special character of technical knowledge and the consequent complex situations for grading are highlighted. During the course the students may choose to study current research chosen in consultation with the teacher.

## Disposition

The course is largely a distance course. Some days of teaching with compulsory attendance is included, but the rest can be carried out from home with ICT support.

## Course literature

Reading list is published no later than three weeks before the start of the course.

A considerable part of the reading list consists of research articles in English about teaching STEM (Science, Technology, Engineering and Mathematics) subjects.

## Examination

- INL1 - Written Assignments, 3.5 credits, grading scale: A, B, C, D, E, FX, F

- SEM1 - Seminars etcetera, 1.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Written assignments.

Active participation in seminars and other compulsory teaching.

## **Ethical approach**

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.