

Abstract

Teaching Mathematics to engineering students in Norway is a challenge. High failure rate, teaching large student-groups, short semesters, large curriculum and “pressure” from stakeholders and students are always mentioned in discussions about the way we teach. On engineering bachelor programs in Norway, mathematics is generally taught as 2 courses in the first two semesters. The length of the semesters varies from 12-14 weeks of actual teaching and often all disciplines are taught at the same time. How do/can a lecturer provide/teach the students what the National framework says about Mathematics for engineering.

The Norwegian National Framework says that teaching should contain:

- Varied forms of teaching and assessment.
- Computational Mathematics
- Connection between Mathematics and engineering.
- Mathematical modelling to solve engineering problems, and use relevant math-tool for their discipline. Problem based learning using computers.
- Evaluation and grading through exams, tests and project work.

How can all of this be done within the scheduled timetable? Many of engineering students are not motivated for mathematics, they are there because they need to be there. Lecturers face several challenges dealing with large student groups and limited time with students. I will try to give some insights to this by also using the SEFI’s report “A Framework for Mathematics Curricula in Engineering Education” as a reference for discussion. I do not have a solution to these questions, but I will try to give examples from my experience with changing the Bachelor program of electronics to give room for some the bullet points stated above. And give a few insights that might be helpful to others.