

1106-D5-1607 **Frode Rønning*** (frode.ronning@math.ntnu.no), Dept. of Mathematical Sciences, NTNU,
7491 Trondheim, Norway. *Teaching calculus to large and diverse groups of engineering students.*

The Norwegian University of Science and Technology enrolls more than 1600 new students each year to a wide range of study programmes in technology. These students are of the most highly qualified in Norway and for some of the study programmes top grades are required. In other programmes the requirements are less strict, making a diverse group of students. However, all students are subject to the same exam.

Comparing Calculus 1 to the courses required to take in school to get admitted one might infer that much of the content is the same. Still, the performance of the students is below what would be desired and perhaps also expected.

Recently a major research and development project has been launched to revise the teaching of the basic mathematics courses. The main aim of the project is to increase the learning outcome in the sense that students should develop a deeper understanding of mathematical concepts and processes. Important keywords for the projects are quality (e.g. in teacher-student interaction), accessibility and differentiation, by creating a variety of resources aiming at students with different interest and motivation.

The project is being research on in various ways, and this presentation will present both the project and some of the experiences. (Received September 14, 2014)