

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Interactive Presentations (IP)

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USING PROJECT BASED COURSES AS A “FIRST CONTACT” BETWEEN STUDENTS AND
SPACE TECHNOLOGY**Abstract**

In this paper, the benefit of multi-disciplinary space related educational project is discussed. In Norway, there is no specialised education within aerospace leading up to a Bachelor or Masters’ degree. However, several universities offer space related courses as part of a physics degree, or as part of an engineering degree. Only a few students are able to get a first-hand experience of working with space technology during their studies. The space industry in Norway is fairly unknown both to students as well as to the general public, even if it has a quite substantial turnover of more than 640 M EUR / year. As a result, space related employment opportunities, both nationally and internationally, are not well known. With an increased interest for this field of study amongst students, the universities are in need of a viable option to bridge the gap between the space industry and the current educational system.

At NTNU, project classes such as the multi-disciplinary group work course Experts in Team (EiT) in addition to more long term group projects, such as the NTNU test satellite (NUTS) project, are used as a “first contact” between students, space technology and space industry. The course and the project provides the students with hands-on experiences with space technology. Through participation in these activities, students get to learn about the existing space related industry opportunities as well as laying the grounds for participation at relevant international conferences. Products created in such projects can contribute to increase awareness of space technology amongst the general public as well. Having a physical object to talk about has proven to be very useful when communicating space technology to the general public.

The students engaged in Experts in team (30 students pr. year) have worked with projects spanning from creating a “Mars lab” on Earth to working as part of an international project investigating how to better track satellites during the initial launch phase. The NUTS CubeSat project has in total produced more than 90 master- and project theses in its 5 operational years. A total of 25 contributions have been presented at various conferences as a result of this initiation. So far, around one in ten students graduated from the NUTS project have continued their careers in space related industry.