Excursions and participation from companies in a weekly 5 ECTS course - DTU Orbit
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A major factor when choosing the teaching methods in a new weekly 5 ECTS course was to enhance the student’s engagement and responsibility for own learning by setting a frame enabling them to visualize themselves as civil engineers. The course is “Materials Durability and Repair” and it is offered to civil engineering students (both at bachelor and master level) as an advanced and elective course. A maximum number of students in the course is set to 25 for practical reasons. Excursions to relevant sites with structures suffering from decay or where repair actions take place was one important teaching method. The excursions took place preferably as introduction to a new part-topic so the students had a common knowledge platform from where the more theoretical teaching could set off. The teachers experienced higher motivation from the students when the excursions were before the lectures on the connected topic than vice versa, probably because the ability to relate the theory to the real life made the topic seem more relevant to them. At the excursions the students took samples which they analysed in the laboratory at the university to enhance the active learning. As these samples are from real sites, they also reflect the huge variability at such sites and sometimes the results did not support the theory. The frustration of not knowing all upfront places the student in a situation well known to working engineers and formed background for relevant discussions. Experts from companies took part in planning of some of the excursions and gave lectures on “real life cases” during the course. This involvement from companies introduced the students to the engineering community which they will join in the future. The companies engagement was important both to the training of scientific engineering skills and professional skills. Also important to the training of professional skills was the deliverables from the students, which was dissemination of own work in articles and a poster presentation performed in groups of 5 students. Student evaluations of the course were positive and currently the course is running for the third time. It is oversubscribed and has a waiting list, underlining the need for such a course.

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