

## Sensing Planet Earth - Chalmers' MOOCs on Earth observation

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An increasing number of universities around the globe produce and conduct Massive Open Online Courses (MOOCs). In the beginning of 2016, Chalmers University of Technology ran two MOOCs on the topic of Earth observations on the edX platform. Both four week long courses were at introductory level and covered topics related to solid Earth, atmosphere, biosphere, hydrosphere and cryosphere. It was discussed how one can measure and trace global change and use remote sensing tools for disaster monitoring. Research has attempted to assess the learners' motivations to participate in MOOCs, but there is a need for further case studies about motivations, opportunities and challenges for teachers engaging in MOOC development. In our presentation, we are going to report about the experiences gained from both the MOOC production and the actual course run from the instructors' perspective. After brief introduction to MOOCs in general and at Chalmers in particular, we share experiences and challenges of developing lecture and assessment material, the video production and coordination efforts between and within different actors involved in the production process. Further, we reflect upon the actual run of the course including course statistics and feedback from the learners. We discuss issues such as learner activation and engagement with the material, teacher-learner and student-student interaction as well as the scalability of different learning activities. Finally, we will present our lessons-learned and conclusions on the applicability of MOOCs in the field of Earth science teaching.