**Titel / Title**
Rockfall and landslides: differences and similarities

**Beskrivning / Description**
Both rock and soil slopes are potentially in danger of collapse, depending on the material properties. When it comes to rockfall, large blocks of rock separated themselves from the rock mass and fall. When it comes to landslides or soil slope failure, small particles are set in motion, behaving often as a fluid. For the two types of failure the mechanism, the safety measures and the prediction tools are different. The differences arise from the cohesion of the material and the size of the particles that are set in motion. Discrete element simulations can be used to assess these differences. An example of a case study is a wall that is impacted by such a slide or rockfall. Examples of questions that can be investigated are:
- What are the differences and similarities when it comes to safety measures.
- What is the limit of particle size that determines which methods should be used.
- How is the energy that needs to be absorbed influenced by the size of the particles and the cohesion between them.

**Målgrupp av studenter / Target group of students**
Civil Engineering

**Gruppstorlek / Group size**
minimum 3 studenter/students, maximum 6 studenter / students
3-6

**Litteratutförslag / Litterature proposal**
J.A. Hudson, J.P. Harrisson: Engineering Rock Mechanics, an introduction to the principles

**Speciella förkunskapskrav / Special prerequisites**
t ex profil (se mer i bilaga), kurs, verktyg: CAD, BIM, mjukvara / e.g. profile (see appendix), course, tools: CAD, BIM, software
none

**Handledare / Supervisor**
Eleni Gerolymatou, Alexandros Petalas

**Examinator /Examiner**
Ej samma person som handledare / Cannot be the same person as supervisor
Minna Karstunnen

**Kan projektet dubbleras? / Can the project be doubled? JA / NEJ**
dvs. kan det vara flera grupper som jobbar med samma tema / e.g. can several groups work on the same subject
Ja

**Studenter med förtur till projektet / Students with priority to the project**
Gäller endast om studenter har föreslagit projektet / Applies only if the project has been suggested by the students
none