

Modelling Course

Introduction to geo-environmental simulations and application for design of mine site reclamation

Luleå University of Technology (LTU) and the SUN program have the pleasure to invite you to a course about numerical simulations of geo-environmental processes on mine sites (total: 18 hours). Course teacher will be Prof. Thomas Pabst (Polytechnique Montreal, Canada) currently visiting LTU. (<https://www.ltu.se/research/Framtidsomraden/SUN/Gastforskare/Thomas-Pabst-1.208571>).

Course is open to all and do not require any specific previous knowledge about numerical simulations. Basic knowledge about water flow (e.g., Darcy's law) and basic soil properties (e.g., porosity, density) are required. The course aims mostly at mine site reclamation but can be useful to a wide range of geo-environmental applications and soil-atmosphere interaction engineering problems such as slope stability, landfills, water management, among others.

COURSE CONTENT	DATE*	TIME
Numerical simulations in mine site reclamation design <i>followed by Introduction to mine site reclamation techniques</i> <i>Note: The first hour of this class will be part of seminar series organized by LTU and SUN.</i> <i>More information here: https://www.ltu.se/research/Framtidsomraden/SUN/Modelleringskurs-och-en-serie-modelleringsseminarier-1.209939</i>	2021-08-31	13.00 – 16.00
Introduction to Seep/W and the GeoStudio Suite (GeoSlope)	2021-09-02	08.30 – 11.30
Simulations of a tailings impoundment <i>incl. water flow, oxygen diffusion, and climatic conditions</i>	2021-09-06	08.30 – 11.30
Simulations of the performance of cover systems Part 1: Elevated water table coupled with monolayer cover	2021-09-09	08.30 – 11.30
Simulations of the performance of cover systems Part 2: Covers with capillary barrier effect (CCBE)	2021-09-20	08.30 – 11.30
Tutoring session on individual projects	2021-09-22	08.30 – 11.30

*Course schedule may change depending on students' availability

Location: Room T3109

Course attendees will need their own PC and a connexion to LTU's network. Simulations will be conducted using the code Seep/W (GeoSlope int.). A procedure will be sent to all attendees to install the program on their PC beforehand.

For more information and to register, contact Prof. **Christian Maurice** (Christian.maurice@ltu.se).

This course is made possible thanks to the support of the SUN program:
<https://www.ltu.se/research/Framtidsomraden/SUN/Om-framtidsomradet>