Sveriges lantbruksuniversitet
Swedish University of Agricultural Sciences

SLUkurs

Syllabus

PFG0076 Boreal Peatland Biogeochemistry, 3.5 credits

Syllabus approved

2020-11-20

Subjects

Soil Science

Education cycle

Third cycle

Grading scale

Pass / Failed
The requirements for attaining different grades are described in the course assessment criteria which are contained in a supplement to the course syllabus. Current information on assessment criteria shall be made available at the start of the course.

Language

English

Prior knowledge

None

Objective, including learning outcomes

The objective of this course is that students develop a process-based understanding of peatland biogeochemistry and recognize the role of peatlands in the global carbon cycle and climate system.

Content

The course content covers:
- The peatland carbon balance and its feedbacks with the global climate system
- Sources, variations and drivers of individual peatland CO2 fluxes
- Methanogenesis, methane oxidation and methane emission pathways
- Peatland biogeochemistry
- The radiative forcing of peatlands at present and in the Holocene
- Peatland management impacts

The course will be reading-based using key literature on aspects related to the various topics. Weekly discussion meetings (as mandatory course element) will be held to further deepen the students' understanding of the course reading material.

The weekly meetings will two-hourly with the first hour for the students to discuss on their own and the second hour together with a scholar. A final assignment including written report and oral presentation will create a reflective momentum and provide the basis for student evaluation.

Requirements for examination

Final written report and oral presentation with group discussion will provide the basis for examination

Additional information

Depending on the development of the COVID-19 situation, these weekly meetings will be held either on-campus or via distance (e.g. Zoom).

The course will include student assignments to reflect on/examine selected topics. Results from these assignments will be presented and jointly discussed at the end of the course.

Responsible department

Department of Forest Ecology and Management