  

Nordic vegetation under changing climate

SLU PhD-level course, 5-7 academic credits / **12-17 June 2023**

Course level. 5 to 7 points PhD level course / kurs på avancerad nivå, 7 HP

Background and rationale. Vegetation of the Northern Europe features a fascinating post-glacial history, shaped by complex and spatially and temporally non-homogeneous environmental controls. Apart from climate variability at multiple scales, humans have become an increasingly important factor in changing the Nordic vegetation over the last centuries. Along with direct impact of climate upon vegetation cover, variability in disturbance regimes had a critical role in contributing to this dynamics. Disturbances cause perturbations in the energy and nutrient flows in ecosystems have been the principal drivers of vegetation dynamics, species and biome distribution. The ongoing climate change impacts properties of disturbance regimes. Linking ecosystem dynamics with their disturbance histories, and more generally - past and modern environmental variability, is done through various reconstruction and modelling techniques. This research helps model and ultimately predict ecosystem responses to external triggers.

Course goal. The course will provide a possibility for the students to immerse into the topics of ongoing research focused on understanding historical development, current state and future projections for hemi-boreal and boreal environments of the Northern Hemisphere. The course will give a theoretical overview of the modern paleo- and dendrochronological methods to reconstruct dynamics of boreal and temperate vegetation and related data modelling approaches. After the course completion, students will acquire knowledge to understand and critically analyze results obtained by different methods and evaluate applicability of these methods in their own research programs.

Target group and required competence (behörighet). The course is intended primarily for PhD students with interest in the following areas: plant ecology, paleo- and dendrochronology, quaternary ecology, forestry, vegetation modelling, boreal and temperate forest ecology, and climate change issues. The potential applicants should be active PhD students at SLU or other Swedish or European universities, and have Master degree completed in one of the above-mentioned and adjacent areas.

Grading system: Pass/Fail.

Course language. The course will be give in English.

Responsible institution. Southern Swedish Forest Research Centre, SLU Alnarp.

Logistics and dates. The maximum number of students is 18.
The course will be given on 12-17 June 2023.

Course venue. SLU Alnarp and locations in Southern Sweden. The course is arranged in cooperation with GDRI Cold forests research network (http://gdricoldforest.org/).

Contact. Please contact Igor Drobyshev (Igor.Drobyshev@slu.se) for further information and registration.