BIP COURSE: Plant life along a climate gradient from boreal to arctic Lapland (6 ECTS)

This Blended Intensive Program (BIP) explores vegetation changes along a latitudinal gradient from the Northern boreal forest at the Arctic circle (66,5°) in Finland to the arctic tundra at the Northern Norwegian coast (72,0°). It will introduce students to these bioclimatic zones and the transition between them, addressing the current distribution of vegetation and the ongoing and expected impacts of climate warming on these ecosystems. This includes northwards and upslope shifts of vegetation belts, permafrost melting and changes in snow cover.

In this course, students will work in multinational teams to collect different types of ecological data along a large latitudinal gradient. Each team will study a particular aspect of the ecological changes along this gradient, for example focusing on a specific plant group (e.g. woody plants, bryophytes or lichens), and focusing on different variables such as species diversity and composition, functional traits, or population size/age structure. All groups will collaborate and the combined data will be used to gain a complete picture of the vegetation changes along the gradient and indications of ongoing changes, e.g. tree seedlings establishing outside the current species distribution range. In addition, we will visit special habitats like palsa mires with permafrost, treeline sites with an interplay between birches and pines, and sites with late snow melting, where we will discuss the particular climate-change threats to these ecosystems and the expected feedback to the climate system.

Target group: MSc- and PhD-level students (advanced BSc if space allows) in physical geography, biology and forestry (course language: English)

Course locations: Northern Finland and Norway (Rovaniemi, Kiilopää, Kevo & Kongsfjord)

Timing: Fieldwork: 23 August - 4 September 2026 (+travel days)

Online classes: May-July 2026: 5-6 sessions of 2 h (dates t.b.d.) & 2 sessions in Sept