

## **Title: Designing of climate change education in the CLIMCOMP-project**

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### **Text Abstract**

Climate expertise is needed in the society to efficiently mitigate and adapt to climate change. Climate University is a network of several universities in Finland, coordinated by the Institute for Atmospheric and Earth System Research of the University of Helsinki (UH-INAR), developing and organizing climate change and sustainability teaching in higher education. Climate University provides nine online courses freely available through the internet <https://climateuniversity.fi/>. These courses introduce, e.g., the basics of climate system, its change and effects of the change, how to mitigate and adapt to changing climate, circular economy, climate communication, sustainability, and statistical tools for climate and atmospheric science. The course levels vary mostly from bachelor to master, and there is also one course for high school students about the basics of climate change. Of the nine Climate University courses, four are available in both Finnish and English, four in English only and the course for high school students is in Finnish only. The courses are in use in 25 Climate University partner institutions, with more than 40 active course codes. Cross-study agreements allow all students of these institutions to take the course for free from each others' curricula.

To further respond to the needs in climate education, a new academic course “Living with the risks and benefits of weather and changing climate” is co-designed as a part of the “Learning of the competencies of effective climate change mitigation and adaptation in the education system” (ClimComp)-project. The ClimComp-project is funded by the Academy of Finland and carried out by UH-INAR, Department of Educational Sciences at the University of Helsinki and the Finnish Meteorological Institute (FMI). The new course is co-designed utilizing knowledge gained from lecturing in various courses and seminars and the feedback gained in consultancy projects with enterprises by FMI. This course introduces and teaches how to use, e.g., open-source weather and climate data, weather forecasts, seasonal outlooks and climate projections in decision making. The course is going to be as part of the Climate University courses and will offer update on climate change, climate change modelling and projections, and weather and seasonal forecasts.

As a part of the ClimComp-project, [www.climateguide.fi](http://www.climateguide.fi) (in Finnish [www.ilmasto-opas.fi](http://www.ilmasto-opas.fi)) portal is updated and additions are developed. These websites provide climate change information in collaboration with FMI, Finnish Environment Institute, Natural Resources Institute Finland, The Ministry of Transport and Communications, The Ministry of Agriculture and Forestry, Ministry of Economic Affairs and Employment of Finland, Ministry of Environment, Aalto University, University of Helsinki, University of Turku, and VTT Technical Research Centre of Finland.