

## Programme of the Summer Course at Orientation Weeks of the Master ACT

At the opening of the course, all the Master ACT students attend a joint *Orientation Weeks session*.

One first objective of these Orientation Weeks is

- to introduce the ACT programme to the students,
- to inform them about the resources of the total consortium (beyond the 2 universities where they will study)
- and to start collective discussions between staff and students regarding their choice of optional modules.

The second objective of the Orientation Weeks is to give to the whole batch of students a common ground about climate change, wherever they go afterwards for their M1.

A summer course of 2 ECTS (30 h) is offered to the whole incoming cohort of students, organised under the academic responsibility of the Meteorological Institute at Boku.

### Climate diversity in the world

Objective and learning outcomes;	Content
<p>The students should understand the principal components and processes of the earth climate system.</p> <p>This includes the energy balance and the energy distribution via the global circulation, the resulting seasonal variability in the different regions of the earth and the physical impacts of the land/sea distribution or mountains on the climate.</p> <p>The students should understand the usefulness of different methods to classify the climate and how they could be used.</p> <p>Meteorological data are main source for climate analyses. To increase the capability of the students to work with climatological data own experiences in meteorological measurements, quality assurance and data analyses and interpretation will be done.</p>	<p>The climate system (concept of spheres, interactions and feedbacks)</p> <p>Energy balance and energy distribution of the earth</p> <p>Global circulation</p> <p>ITCZ and Monsoon</p> <p>Maritime versus Continental</p> <p>Mountain effects on climate</p> <p>Extreme events</p> <p>Climatological classifications</p> <p>Agro-meteorological measurements</p> <p>Data handling (quality control, gap filling, analyses)</p> <p>Climatological comparison of different locations</p>