

Course announcement and syllabus

Climate Dynamics
(Master-Pflicht-Modul P4)

- Instructor: J. Mülmenstädt
- Location: Seminarraum, vor dem Hospitaltore (Lecture)
CIP-Pool (Exercises)
- Zeit: Tuesdays, 15:15—16:45 (Lecture)
Thursdays, 11:45—13:00 (Exercises)
- Start date: Tuesday, 14 April 2015
- Themes: Dynamics of oceans and atmosphere; budgets of energy and momentum; energy cycles; general circulation of the oceans and atmosphere; modes of internal variability; forcing and feedbacks; anthropogenic climate change
- Exam: Oral (30 min.) in July, by appointment
- Textbooks: Peixoto and Oort (1991): Physics of Climate
Hartmann (1994): Global Physical Climatology
Stewart (2005): [Introduction to Physical Oceanography \(open-source textbook\)](#)

Syllabus

- 14 April Introduction
- 21 April Atmosphere
- 28 April Ocean I
- 5 May Ocean II
- 12 May Land, biosphere, cryosphere
- 19 May Radiation
- 26 May General circulation

- 2 June Internal variability; ENSO; tropical dynamics
- 9 June Feedbacks
- 18 June Robust projections of climate change
- 23 June Attribution of climate change to anthropogenic forcing
- 30 June Uncertainties in climate projections due to clouds and aerosol
- 7 July Social aspects of climate change
- 14 July Review