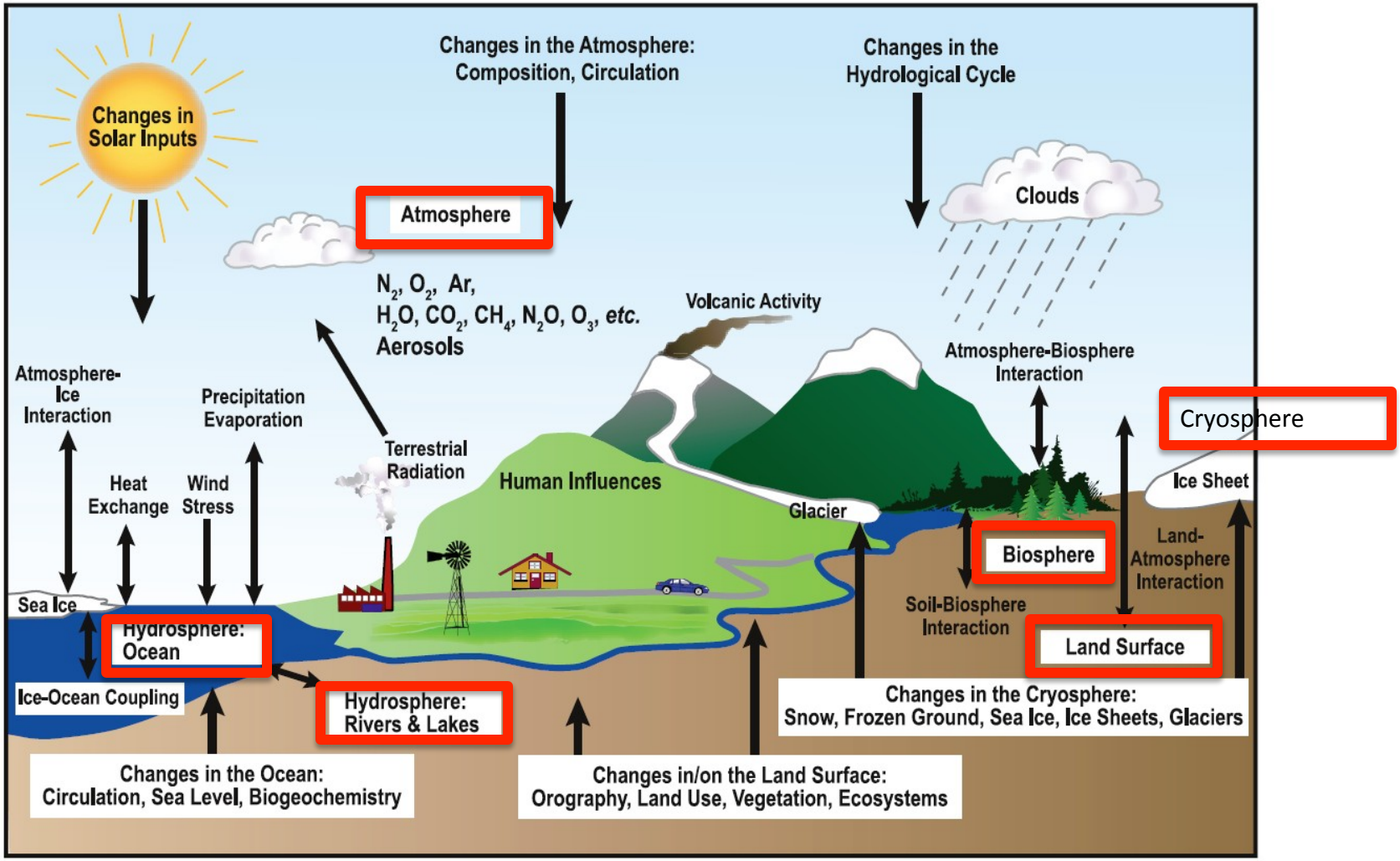
GEF1100
Klimasystemet



FAQ 1.2, Figure 1. *Schematic view of the components of the climate system, their processes and interactions.*

GEF1100
Klimasystemet

- The global energy balance, energy transport in the atmosphere and ocean. Air currents and ocean currents , El Niño phenomenon.
- Solar radiation , heat radiation , importance of gases and clouds, the greenhouse effect. Bakkens energy balance, water cycle .

- The course will provide a basic understanding of the physical processes governing the climate on Earth

Meteorologi/Oseanografi

- Atmosphere and ocean structure and properties.
  This includes air and ocean currents, their causes and significance of weather, climate.

- Physical processes such as radiation in the atmosphere
  and the ocean, cloud formation and precipitation, in addition to chemical processes.

- Phenomena such as low pressure, high pressure, tides, ocean waves, lightning and thunder storms and storm surges.

- The atmosphere and the ocean is a key component of the climate system .

- Natural and anthropogenic climate change is reviewed, with emphasis on the understanding of the physical mechanisms that influence climate and can change it.

As a master degree or PhD student can participate in research on the Earth's climate and future climate change

Kursets hjemmesider

- http://www.uio.no/studier/emner/matnat/geofag/GEF1100/h15/index.html

It is mandatory attendance at the first lecture. Students who do not meet, is considered to have withdrawn from the course unless they have previously reported absence from study administration by email studieinfo@geo.uio.no (study administration for waver)

http://www.uio.no/studier/emner/matnat/geofag/GEF1100/h15/beskjeder/obligatorisk-oppmote-forste-forelesning.html

Undervisning

Forelesere

Barbara Scarnato, Terje Berntsen, Kirstine Krüger, Joe LaCasce,

Wolfram Michael Kürschner

Gruppelærere (exercises not handed in – not colpusory, oral feedback):

Inger Helene H. Karset, Hans Brenna, Barbara Scarnato

Oblig ansvarlig: Sara Blichner

Studenter

FAM, studieretning meteorologi og oseanografi
GEO, studieretning geografi og hydrologi
GEO, studieretning geologi og geofysikk

Undervisning

- Lectures, 3h/week . Colloquium / groups , 2h/ week .

- It requires the submission of two compulsory tasks. To be allowed to sit the final exam they must be approved .
  - Matlab –based obligatory (CSE) with oral feedback
    First obligatory presumably week ?????

- Excursion on the fjord with the research vessel Trygve Braarud (week 37, optional)
  - By uke 35 how many? Will be provided forms - emergency contacts.
  - 2 Time slots am/pm: 9am – 12pm and 12pm – 3pm
    - 12 students each group

Eksamen

- Midterm exam 8 October.
  - Written (3h) counts about 1/3 of the final grade.
- Final exam December 10
  - Written (4 hours) counts 2/3 of the final grade.

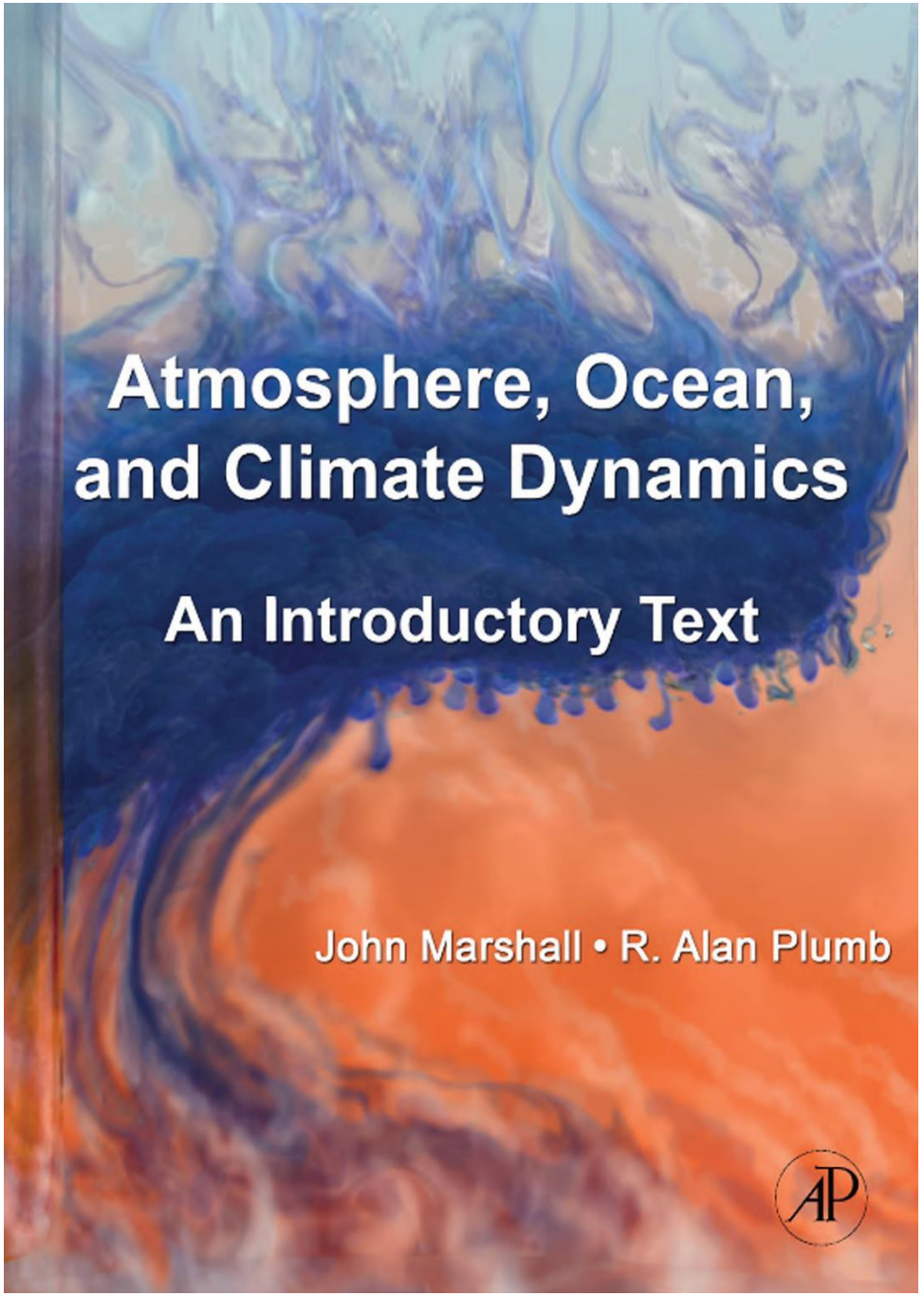
The final grade is an overall evaluation of the two exam parts.

http://www.uio.no/studier/emner/matnat/geofag/GEF1100/h15/eksamen/index.html

Lærebok

Few plots from

Meteorology, 2nd edition, including CD and website, by E. Danielson, J. Levin and E. Abrambs, 2003. Abbreviation: DLA

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INTERGOVERNMENTAL PANEL ON climate change
CLIMATE CHANGE 2013
The Physical Science Basis
WG I
WORKING GROUP I CONTRIBUTION TO THE
FIFTH ASSESSMENT REPORT OF THE
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE
WMO
UNEP
G THE RISKS OF EXTREME
D DISASTERS TO ADVANCE
E CHANGE ADAPTATION
REPORT OF THE
N MENTAL PANEL
LIMATE CHANGE
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