Polar oceanography GEOF338
Reading list spring 2018, Geophysical Institute, UiB

Course responsible: Professor Lars H. Smedsrud
Still awaiting teaching assistant for spring 2018

Book:

Sea Ice (edited by: Thomas, D.N. - Third edition, Wiley ISBN: 978-1118778388)

- Chapters 1 – 8
- There are a number of section that are 'overview' only:
  1.3 Desalination and pore microstructure,
  1.4.3 Optical properties - 1.4.5 Macroscopic properties
  3.3 General characteristics …. + 3.4 Temporal evolution of the snow pack
  4.2 Radiative Transfer + 4.3 Inherent Optical Properties Theory
  6.3 Vertical structure of the atmosphere

Compendium:

Ice formation and convection – a one dimensional model
(Darelius et al, 2016) 9 pages + manual and exercises

Dense Overflows and Plume Dynamics (Darelius 2008)

- 11 pages + exercises

Articles:

Toward quantifying the increasing role of oceanic heat … in the new Arctic
(Carmack et al, 2015)

Thermohaline Circulation in the Arctic Mediterranean Seas, (Aagaard et al. 1985)

The large-scale freshwater cycle of the Arctic (Serreze et al. 2006)

Dense water formation and circulation in the Barents Sea (Årthun et al. 2010)

Retreat of the cold halocline layer in the Arctic Ocean (Steele and Boyd 1998)

Ice-ocean processes …. in the Weddell Sea, Antarctica, (Nicholls et al. 2009)

Marginal thermobaric stability in the ice-covered upper ocean over Maud Rise
(McPhee 2000) + Figures/discussion from (Akitomo 1999)

The Amundsen Sea and the Antarctic Ice Sheet, (Jakobs et al, 2012)

Closure of the meridional overturning by Southern Ocean upwelling,
(Marshall & Speer 2012)