Working schedule for GEO2320
Fall 2021

The dates below give an estimate of the progression of lectures, assignments, cruise and exams during the semester. Lecturers are Kai H. Christensen (KHC) and Pål E. Isachsen (PEI).

Final mark breakdown: mid-term (30%) + final exam (70%). To be able to take final exam, 3 homework assignments + report from cruise must be handed in and accepted.

24/8 Introduction + The stratified ocean (PEI)
25/8 The stratified ocean (continued) (KHC)
31/8 Fluxes of heat, freshwater and momentum across the ocean surface (PEI)
1/9 Basic conservation laws (PEI)
7/9 Basic conservation laws (continued) (PEI)
8/9 The Coriolis 'force' (PEI)
14/9 Turbulent mixing and Reynolds fluxes (PEI)
15/9 Coastal and estuarine flows (PEI)
21/9 Observing the ocean (KHC)
22/9 Numerical ocean models (KHC)
24/9 **(1st assignment due)**
27/9 **Cruise in the Oslofjord** (PEI)
28/9 Operational oceanography at MET (KHC)
29/9 Geophysical flows and the hydrostatic approximation (KHC)
5/10 Large-scale flows: geostrophy and thermal wind (PEI)
6/10 Large-scale flows: vorticity dynamics (PEI)
12/10 No class (Mid-term week)
13/10 No class (Mid-term week)
14/10 **Midterm exam**
19/10 Wind-driven Ekman transport and upwelling/downwelling (PEI)
20/10 Large-scale wind-driven circulation in mid-latitudes (PEI)
24/10 **(Cruise report due)**
26/10 Wind-driven circulation in equatorial and high-latitude regions (PEI)
27/10 Wind-driven circulation in equatorial and high-latitude regions (continued) (PEI)
2/11 The global-scale buoyancy-driven or "thermohaline" overturning circulation (PEI)
3/11 Wave kinematics (PEI)
9/11 Surface gravity waves (KHC)
10/11 Waves influenced by Earth's rotation (KHC) **(2nd assignment due)**
16/11 Tides (KHC)
17/11 Rossby waves (PEI)
23/11 Oceanography in practice: a study of non-linear transport by tides (PEI)
24/11 Exam preparation (PEI/KHC) **(3rd assignment due)**

4/12 **Final exam** (Written home exam using Inspera)