OCEAN DYNAMICS

Academic Year 2017/2018

1. Fundamentals: Geostrophy, Thermal Wind and Hydrostasy
2. Ekman Dynamics: the introduction to Friction I
3. Ekman Dynamics: the introduction to Friction II
4. Wind-Driven Gyres I: Sverdrup Flow
5. Wind-Driven Gyres II: Stommel Model
6. Wind-Driven Gyres II: Munk Model
7. Wind-Driven Gyres III: Topographic Effects
8. Thermocline Dynamics
9. Meridional Overturning Circulation: Buoyancy-driven Overturning
10. Meridional Overturning Circulation: Wind-driven Overturning
11. Introduction to the role of the ocean in the Global Carbon Cycle (GCC)
12. The ocean dynamics and GCC: principles and key processes
13. Ocean transport processes of passive tracers
14. Mesoscale and upper layer dynamics and effects on GCC