

## **SIO 171: Introduction to Physical Oceanography**

Fall 2020

Lectures: T/Th 2:00-3:20

Section: T 3:30-4:20

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All course material on Canvas.

Zoom password: SIO\_171

Oct 1	Lecture 1. Introduction: Time and length scales for fluids on a rotating Earth.
Oct 6	Lecture 2. Physical properties of seawater, part 1.
Oct 8	Lecture 3. Physical properties of seawater, part 2.
Oct 13	Lecture 4. Typical distributions of water properties, part 1.
Oct 15	Lecture 5. Typical distributions of water properties, part 2.
Oct 20	Lecture 6. Ocean instruments and data.
Oct 22	Lecture 7. Transports and budgets.
Oct 27	Lecture 8. Conservation laws for physical oceanography.
Oct 29	Lecture 9. Diffusion and mixing.
Nov 3	Review for midterm.
Nov 5	Midterm.
Nov 10	Lecture 10. Conservation of momentum.
Nov 12	Lecture 11. Geostrophy.
Nov 17	Lecture 12. External forcing by the atmosphere.
Nov 19	Lecture 13. Potential vorticity.
Nov 24	Lecture 14. Eastern boundary current systems.
Nov 26	Thanksgiving
Dec 1	Lecture 15. Waves.
Dec 3	Lecture 16. Tides.
Dec 8	Lecture 17. Pacific equatorial circulation and El Niño.
Dec 10	Review for final.
Dec 17	Final, 3-6 pm.

### Course requirements (grading)

4 Homeworks (10% each)

Midterm (20%)

Final (40%)