

Memorial University of Newfoundland
Department of Physics

PHYSICS 3300 OUTLINE

Intermediate Physical Oceanography, *Winter 2019*

Prerequisite: Physics 2053 and Math 2000

INSTRUCTOR: Dr. Entcho Demirov, C-4051; email: entcho@mun.ca

LECTURES: Slot 20, Tuesday and Thursday, 3:30 pm - 4:45 pm, C2045

OFFICE HOURS: Contact instructor by email to request office time.

COURSE WEBSITE: D2L course page, (online.mun.ca)

TEXT:

Robert Stewart, 2015. Introduction to Physical Oceanography, 345p.

The book is available from

<https://open.umn.edu/opentextbooks/textbooks/introduction-to-physical-oceanography>

ADDITIONAL READINGS:

J.A. Knauss, and N. Garfield, 2017. Introduction to Physical Oceanography, Third Edition, Waveland Press, 310p.

J. Marshall, and R.A. Plumb, 2008, Atmosphere, ocean, and climate dynamics: An introductory course, Elsevier, 307p.

EVALUATION SCHEME

Term Tests (2)	30% (15% each)
In-class Assignments	5%
Assignments	25%
Final Exam	40%

No supplementary exam

ASSIGNMENTS (10 in total). Due approximately weekly starting mid of January.

Assignments should be submitted to d2l by start of class on the due date.

MID-TERM TESTS. Term tests are scheduled for *14 February, 2019 (Thursday)* and *14 March, 2019 (Thursday)* during class period. **Make-up tests will NOT be available.** In case where the test has been missed due to illness the weight of the missed test will be added to the final exam.

FINAL EXAM will be 180 minutes and will be scheduled later in the semester.

TENTATIVE OUTLINE

<i>Topics</i>
Introduction: the ocean and its role on weather and climate.
Methods of physical oceanography.
Ocean dynamics, heat, and freshwater transport.
Equations of motion, effects of Earth's rotation, and turbulence
The global ocean circulation, Ekman dynamics and wind-driven currents.
Ocean water masses and thermohaline circulation.
Equatorial currents. El Niño and Southern Oscillation.
The coastal ocean.
Tides.
Wind waves

Use of Recording Devices in Classrooms

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Important general information from the University.

It is the student's responsibility to acquaint themselves with these items. Please read.

1. Missed Work

Students who cannot complete assignments or midterm tests need to speak to the instructor and consult the University Calendar, University Regulations, Section 6.7.5: Exemptions from Parts of the Evaluation:

<http://www.mun.ca/regoff/calendar/sectionNo=REGS-0601#REGS-1949>

2. Student Code of Conduct.

<https://www.mun.ca/student/supports-and-resources/respectful-campus/student-code-of-conduct.php>

3. Exemptions From Final Examinations

<http://www.mun.ca/regoff/calendar/sectionNo=REGS-0628>

4. Academic Misconduct

<http://www.mun.ca/regoff/calendar/sectionNo=REGS-0748>

5. Accommodations for Students with Disabilities

<http://www.mun.ca/blundon/accommodations/>

6. Last day to drop a course without academic prejudice is Thursday, March 2, 2017. See University Diary <http://www.mun.ca/regoff/calendar/sectionNo=GENINFO-0086>