

ATOC 312. ROTATING FLUID DYNAMICS.

Credits: 3

Offered by: Atmospheric & Oceanic Sciences (Faculty of Science)

This course is not offered this catalogue year.

Description

Fundamentals of fluid motion on a rotating sphere: Rotating coordinate systems, the Lagrangian time derivative, and equations of motion. The geostrophic approximation and thermal wind balance; departures from geostrophy, such as frictional Ekman layers, inertial oscillations, and the gradient wind balance. The shallow water equations, including potential vorticity conservation, quasigeostrophy, and simple wave solutions.

- Fall
- Prerequisites: MATH 314
- Not open to students who have taken ATOC 512.

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