PHY 434: Atmospheric Dynamics  2 Units

Department of PHYSICS

Covenant University
1. PHY434
1.1. PHY 434: Atmospheric Dynamics 2 Units

Viscosity and thermal conductivity and their importance in meteorology, types and characteristics of atmospheric stability, and types of clouds and their classification; scales of motion in atmosphere, pressure gradient and Coriolis force; atmospheric motion: Geostrophic gradient and thermal wind; air masses and source regions, air masses affecting tropical temperate regions, ITD and ITCS. The polar front and fronted slopes, life cycles of frontal depressions; frontal cross-sections; introduction to divergence and vorticity; atmospheric optics with applications to rainbow, halo and other optical phenomena, transparency of atmosphere and visual range. The Universe: galaxies, stars and sun. The solar system: gravitation; the planets, solar flares, solar wind, solar radiation and the earths atmosphere.