

Introduction To Vadose Zone Hydrology 206-13771

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Syllabus

This course will include fundamental principles of soil physics, in both equilibrium and flow conditions. Percolation and transport in the unsaturated zone will be studied concentrating on the special conditions of the three-phase (solid-liquid-gas) system. Topics to be covered: Capillary forces, potential, surface tension and contact angles, retention hysteresis, measures and significance of dampness, hydraulic characteristics of soils, evaporation processes, preferred flow, significance of the colloid phase; chemical and physical processes on surfaces; the contact between the saturated and unsaturated zone, and salinization and pollution processes.

Bibliography

Environmental Soil Physics, Hillel, 1998

Course Requirements

Prerequisites: Introduction to Hydrology