

Field Methods in Hydrology (3 credits)

Prerequisites:

- 1.. Groundwater Hydrology or another basic course in Hydrology of Groundwater
- 2.. Introduction to Vadose Zone Hydrology

Lectures	Exercise	Laboratory	Field Trip
2			4

The main objective of this class is to expose the students to a variety of field methods in hydrology as well as various instruments, techniques, and tools needed to carry out research in the field. In the unsaturated zone, we will learn how to run infiltration tests, how to measure water content and salinity of a soil profile, how to use TDR probes and tensiometers, and how to use data logger to collect all data electronically. We will also analyze the data and try to understand its meaning. In the saturated zone, we will learn how to use a variety of pumps and other sampling methods, how to make basic analysis of groundwater chemistry in the field, how to use a flow through cell, and how to carry out pumping tests and analyze their data. The students will learn how to decide about methods and equipment needed to carry out a specific research, how to use the web, and what information is needed before initiating a new field project in hydrology.

Assignments and grading: Each student will present once or twice during the class methods and instruments in hydrology. Reports of field days including data analysis and interpretation will be prepared and graded, final exam.

Keywords:

Hydrology, Wells, Groundwater, Vadose zone, Contaminant Hydrology, Monitoring, Pumping test, Sampling.

Lecturers: N. Weisbrod and O. Dahan

Recommended reading: Provide during the course.