

1-The course book is:**Hillel, D 2004: Introduction to Environmental Soil Physics**

In the following you find a short summary of the chapters in the course book that are important for the course.

- **Chapters 1 – 5.** These chapters cover basic soil physical concepts. If you have not yet had any soil physics courses, or not recently, it is highly recommended to read them.
- **Chapters 6 and 7.** These chapters explain the basic principles of water in soil and saturated water flow. The concepts presented in these chapters will be needed over and over again in this course.
- **Chapters 8 and 9.** The major part of this course will be related to the more advanced hydrology of unsaturated soils and to solute transport.
- **Chapters 10 – 11.** These chapters discuss soil air and gas exchange. Background knowledge in these fields is desirable but these topics are not covered by this course.
- **Chapter 12.** Contains background information needed for one of the mini-projects.
- **Chapter 13.** This chapter explains soil mechanics, which is another important field in soil physics. Soil mechanics is however not included in this course.
- **Chapters 14 – 17.** These chapters give an introduction to water movement in soils under field conditions. The bigger picture for why the above introduced concepts are important.
- **Chapter 18-20.** These three chapters will familiarize you with evapotranspiration and the water balance of soils, which are topics that are central to this course.
- **Chapter 21** Contains important background information needed for one of the mini-projects.

2-The course compendium:**Soil Water Processes in Agro-Ecosystems (15 hp), MSc level (D), 2020**

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Will be available as PDF file on CANVAS (only registered students will have access)

This document contains all the instructions and description of student assignments for the course exercises (course modules 1 & 2), for the Mini-workshop (module 1) and for the mini-projects (course module 3). All student assignments are compulsory to pass the course.

3- Additional literature (optional)

'The nature and Properties of Soils' by Brady and Weil
A book recommended for students with little background in soil science
Available at the [Campus Library](#)