

HAS Training and Consultancy

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Advanced knowledge of Soil

# Advanced knowledge of Soil



## Scope

The soil is very important. It's the basis for life. Soil consists of several layers with all kinds of animals, but also water, air and minerals for plants. As humans, we live from and on the soil. But our soil is under pressure. Soil organisms are important to the soil's functioning. Which ones are present in our soils? What do they do? How are they under threat? Can we improve soil by improving soil life?

## About this course

This e-learning course, 'Advanced knowledge of soil' deals with the biology of the soil. It looks at which organisms are present in soil and their purpose. How are they (and, therefore, our soils) under threat, and what solutions are available? The focus is also on the interaction between participants and tutors regarding its content. This interaction enables participants to process and apply the

acquired knowledge more effectively.

## For who?

This course is intended for anyone with basic soil knowledge, who wants to gain greater insight into different topics related to 'soil biology', for study or work purposes.

## What you can expect

This English e-learning course consists of 10 modules, each with various learning tools such as videos, articles, assignments and discussions. You must complete a module before being able to start the next one. During the course you can submit photos and assignments to substantiate your answers. Together with your fellow students and tutors you can discuss the different topics covered and also submit additional questions for more in-depth knowledge. At the end of the course, you will have gained advanced knowledge related to the subject of 'soil'.

### 1. Introduction

- Working in an e-learning environment
- Introduction
- The importance of soil

### 2. Rhizosphere

- Microbiome
- Bacterial
- Fungi
- Protists
- Viruses

### 3. Plant soil feedback

- Principles
- Disease suppressive soils
- ISR/SAR
- PGPR
- Crosstalk

### 4. Soil treatments

- Biotic
- Abiotic

### 5. Assessing soil quality

- Soil passport
- Metagenomics
- Profile pits
- Condition scores

### 6. Suppressive soils

- Principles
- Micro organisms
- Effects on plants
- Crop rotation

### 7. Soil transplantations

- Opportunities

### 8. Biostimulants

- Categories of biostimulants
- Challenges

### 9. Breeding

### 10. Organic carbon

- Cover crops
- Compost

## Requirements

This course is at undergraduate bachelor level. Participants are expected to already have a basic knowledge of soil, e.g. from the HAS University of Applied Sciences e-learning course 'Basic knowledge of soil'.

## Course duration

The total course has 10 modules. The study load per module is approximately 3 hours.

## Price and data

For actual prices and start data, visit our website [www.has.nl/en/training](http://www.has.nl/en/training)

## Locations

Online

## Certification

After successfully completing all 10 modules, you will receive a certificate of participation for the e-learning course 'Advanced knowledge of soil' from HAS University of Applied Sciences.

EXPECTED STUDYLOAD: ONLINE  
DURATION: 5 modules  
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