



BOVA Intensive MSc Course
My first compost heap

30th March – 3rd April 2020

3 ECTS (pass/no pass)

Venue: Estonian University of Life Sciences, Tartu, Estonia

Please sign up [HERE](#) until 16.03.2020

Course description

Ecosystems rely upon the availability of carbon and nutrients. During composting, nutrients in biowaste become available for plants, and carbon is stabilised to improve soil structure. EU produces about 140 million tonnes of biowaste each year. Biowaste includes food and kitchen waste from households and from catering, garden and park waste and also some industrial organic residues. In overall, EU recycles just 25 %. This is not enough! Separate collection of biowaste will be mandatory by end of 2023. By year 2035 EU aims in achieving 65 % of recycling and recovery of municipal waste. Without biowaste these target values would not be possible. There is a need for new generation of composting professionals. That is the reason why we proposed the course 'our first compost heap'.

This particular practical course will provide the students with hands-in experience in getting knowledge and practical experience about composting. We will do it in cooperation with a waste company in Tartu.

The main outdoor activity will be setting up a full-scale windrow composting heap in a waste company in Tartu. Students will get a chance to witness and monitor the initial phase of biological degradation. We will determine impurities in biowaste; and performing cress test to understand the plant response and to determine the quality of the compost. Dress up for out-door stay, be prepared to meet waste! We will provide you with some safety measures.

Contact hours will include discussions principals of biowaste composting; technology of windrow composting; types, qualities and properties of biowaste; collection of biowaste; compost quality: chemistry and stability; end-of-waste for biowaste compost.

The course will finish by completing an individual assignment, mainly about the results of cress test.

Every student has to bring minimum two kilograms of compost. It has to be either from their own University (if its compost yard exists), from city where they study (contact the municipality of waste company), home, or from city where they live. We will use this compost for practical works. As prerequisite, one must be able to characterise his/her compost, mainly the content of input material, age of compost and composting technology. When travelling by plane, please note the luggage restrictions!

3 ECTS will be nominated to students after completion of the assignment.

BOVA Intensive MSc Course will consist of two parts:

1. Distance learning **19th to 29th March, 2020**;
2. Meeting in person **30th March to 3rd April, 2020**, will take place at campus of Estonian University of Life Sciences, Tartu. Some of the studies will take place at the composting site of Tartu

Learning outcome of the whole BOVA course will be comprehensive knowledge about setting up windrow composting, and understanding both the quality of input waste materials, as well as the quality of final compost product.

Financing: There is no participation fee. NOVA/BOVA students should contact their local NOVA/BOVA coordinators for funding options for travel and accommodation (Nordplus Express Mobility Grant).

Teaching team:

- Estonia: Dr Mait Kriipsalu; assoc. prof Kaja Orupõld; assoc. prof Merrit Shanskyi; Anu Kisand – Estonian University of Life Sciences (EMU):
- Switzerland: Jacques Fuchs, Research Institute of Organic Agriculture (FiBL) & Biophyt Ltd.
- Latvia: assoc. prof Inga Grinfelde – Latvia University of Life Sciences and Technologies (LLU).

Information: Dr Mait Kriipsalu, mait.kriipsalu@emu.ee

Programme**Sunday, March 29**

Arrival to Estonia via Tallinn or Riga airports, or Tallinn ferry terminal.

Arrival to Tartu by Bus.

Accommodation.

All days: 9.00–17.00

Venue: Kreutzwaldi 5, Room TBA.

Refreshments: available in lecture room.

Lunch: available in the same building, pick your lunch in buffet-style.

Monday, March 30

Introducing students and lecturers. Tour-de-Table.

Introduction to the study week – how do we work?

Introducing Estonia, Tartu, and Estonian University of Life Sciences.

Practical work: setting up a cress test with individual compost.

Cultural event

Tuesday, March 31

Visit to the composting site of Tartu (former landfill site).

Safety instructions.

Building up a full-scale compost heap. Mass balance. Monitoring equipment.

Wednesday, April 1

Visit to the composting site of Tartu

Biowaste audit: determining impurities.

Back to the University: reporting sorting results

Thursday, April 2

Lectures: theory of composting – collection of biowaste, composting methods, compost quality, end-of-waste and certification of compost, final use of compost

Friday, April 3

Result of individual cress test.

Assignment

End of the courses. Summary.

Saturday, April 6

Departure of all students and staff.