

Introduction to Linux

Course Workload		Assessment form (examination/ graded test/ ungraded test)
ECTS	Hours	
3	108	Pass/fail assessment

The course is designed to master the skills of local and remote work with the GNU Linux operating system, as well as to get acquainted with the basic principles of operation of operating systems.

Course structure:

1. Introduction to operating systems

- 1.1. Basics of operating systems theory and introduction to GNU/Linux
- 1.2. Linux file system
- 1.3. Processes and threads
- 1.4. Package system

2. Work in terminal

- 2.1. Shell introduction
- 2.2. Basic bash commands
- 2.3. Bash scripting syntax
- 2.4. Streams and piping
- 2.5. Text editing, vim

3. Calculation workflow management

- 3.1. Process management, htop
- 3.2. Environment management and virtualisation
- 3.3. Conda and Snakemake for bioinformatics

4. Remote servers

- 4.1. SSH protocol
- 4.2. Tunneling
- 4.3. Terminal multiplexers