Zurich-Basel Plant Science Center

PhD Program in Plant Sciences:
Introduction to UNIX/Linux and Bash Scripting (BIO609)

Lecturer: Dr. Deepak Tanwar (UZH)
Location: University of Zurich, tbd
Dates: 05.11.2024
Time: 9:00 – 18:00
Credit Points: **0 ECTS (1-day preparatory course for BIO610)!**

Course Description:
Fast advances in Next-Generation Sequencing (NGS) technologies are opening fascinating opportunities in life science research. The analysis of the large amounts of data produced requires knowledge of NGS methods as well as practical skills in computing. Most bioinformatics software is running in the Linux/Unix environment without a graphical interface, and some knowledge of the command line is required to run bioinformatics software, automatize tasks and also to interact with high-performance servers. The aim of this course is to introduce students to the Linux/Unix command line and shell scripting by taking a hands-on approach.

Course Objectives:
Short lectures will present an overview of the Linux/Unix command line focusing on commands for working with files/directories and text files. Students will also practice how to install and run software. In the second half we will teach how to write simple shell scripts as they are often used to automate repetitive tasks and to build software pipelines. We will also discuss recommendations for reproducible research such as good coding practices. The course is composed of lectures and guided computer exercises. Students will spend most of the time solving computer exercises.

Number of Participants: 8 out of 18. For Master & PhD students. Priority will be given to the PhD programs of Evolutionary Biology and Plant Science.

Individual Performance and Assessment: Attendance at lectures and active participation in the hands-on exercises are required.

Special Note: BIO609 "Introduction to UNIX/Linux and Bash scripting" is a prerequisite to participate in BIO610 “Next-Generation Sequencing and its Application using Machine Learning”