

# **Version Control with Git**

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# Welcome

This book serves as the handout and written version of a course about integrating version control with git into the research workflow that was created for the members of the CRC 135 and their co-workers as part of the NOWA project.

## Contents

The course is divided into two sessions:

### 0.0.1. Concepts of version control and basic workflows

In this session, the participants familiarize themselves with version control as a working method and get the opportunity to practice the basic Git workflows. They will be able to:

- Explore existing Git repositories, browse the version history, compare versions, extract data from older versions
- Edit data in a repo and add new versions,, make use of Git's features for parallel working contexts
- Decide if Git is suitable for their needs

### 0.0.2. Project customization and Gitlab

In this session, the scope extends to collaboration on Gitlab projects. These topics are covered:

- Connecting Git repos with Gitlab and uploading work for backup
- Customizing Git repos for the project content
- Sharing Gitlab projects with co-workers for review
- Collaborating with co-workers on a shared Gitlab project

## **Part I.**

# **Concepts and basic workflows**

# 1. Organization

## 1.1. Agenda

**14:00** Talk: Welcome, strengths and weaknesses of version control, software

**14:20** Practice: Software setup

**14:30** Talk: Git repositories and their decentralized nature

**14:45** Practice: Cloning repositories, authentication with Gitlab

**15:00** Talk: Understanding the Git versioning structure (commits, tags, and branches)

**15:30** Practice: Browsing the Git history, answering questions

**16:00** Talk: The basic editing workflow

**16:30** Practice: Working and versioning, answering questions

## **Part II.**

# **Project customization and collaboration**

## **2. Organization**

### **2.1. Agenda**

## References



# Bibliography

Chacon, S., & Straub, B. (2014). *Pro git* (2nd ed.). Springer Nature.