



43513-01 Programming for life sciences

fall 2024

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Graduate Teaching Program Cycle E: Computational and Systems Biology

Wednesdays, 10:15 – 12h

Biozentrum Neubau, Seminarraum U1.197

Contents of the course:

The course will cover the life cycle of software development in the modern context of collaborative project development. It will include some lectures on Python constructs, workflow development, tooling, policies and paradigms required for developing tools in modern, collaborative environments. Practice of all of these concepts will be gained in a group programming project, where each student participates, providing various components of the code.

Aim of the course:

Students have internalized good coding practices and know how to apply them with confidence to design, implement, package and publish small coding projects or to contribute to existing collaborative coding projects of medium complexity.

Structure of the course:

An introductory session will give a high-level overview of the course contents and structure. Following a review of Python basics and an introduction of the group programming project, new topics related to collaborative coding are introduced, such as version control, testing or workflow development. Topics will be thoroughly discussed in class and then applied to the group project by the students outside of class. To ensure progress of the group project, sessions focusing on new topics will be interspersed with milestone reviews, where contributions and potential problems are discussed in depth. The state of the group project will be demonstrated in a wrap-up session.

Pass/Fail:

The grade (pass/fail) will be determined based on the (correctly executed) code written in the course, and on the overall participation in the project development.

Adam space:

https://adam.unibas.ch/goto_adam_crs_1738013.html

(or via ADAM start page: ADAM » Kurse mit **synchronisierter** Mitgliederverwaltung » Philosophisch-Naturwissenschaftliche Fakultät » Departement Biozentrum » Herbstsemester 2024 » 43513-01 Programming for life sciences

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