Computational Proteomics and Metabolomics
BIOINF4352 (6 ECTS credits)

Summer 2019

Tue, 14-16, A104

Instructor: Prof. Oliver Kohlbacher
Phone: 29-70458
Office: C317, Sand 14
Office Hours: Wed, 9-10

E-Mail: cpm-ss19@informatik.uni-tuebingen.de

Overview

The course provides an introduction to computational proteomics and metabolomics. The concepts covered by the lecture will be exercised and tested through weekly electronic assignments via ILIAS. The topics include basic statistics, chromatography, mass spectrometry, identification and quantification of metabolites and peptides as well as workflow construction for high-throughput data analysis.

Learning Goals

- Key concepts of computational proteomics and metabolomics.
- Construction of workflows for high-throughput data analysis using OpenMS and KNIME.

Requirements

- Regularly and actively participate in the weekly problem sessions.
- Assignments have to be completed alone.
- Final (Oral) exam, covering the contents of the lecture and the assignments (30 min). Scheduled at the end of the semester.

Evaluation

- We will check for duplicate assignment solutions and reserve the right to distribute points across all identical solutions. Students caught copying solutions can be excluded from the course.
- 50% of the achievable points in the assignments are required for admission to the final exam.
- Points achieved in excess of 50% in assignments will serve as a bonus to improve the final exam grade up to a maximum of 10%.

Materials & Assignments

Slides will be handed out at the beginning of each lecture. All materials will be made available within the ILIAS course pages.

Communication

Group sessions with tutors to discuss assignments and contents of the lecture will be once per week. Communication via a forum is available 24/7 (Ilias).

Key Dates

April 16

Introduction/First Lecture

July 29 – August 09

Oral Exams