

Research Programmes Board, FUN

Medical Bioinformatics, Introduction MEFMBI1

1.5 credits

Third cycle

General information

The course is run full-time or part-time for doctoral students at the Faculty of Medicine and is intended for everyone who uses, or plans to use, bioinformatics in their research. Space permitting, other applicants affiliated with the faculty, such as researchers with a PhD, will be admitted. The course corresponds to one week of full-time study.

Language of instruction

English

Objective

The aim of the course is to provide participants with a basic understanding of bioinformatics concepts and methods.

Learning outcomes

On completion of the course, the participants shall be able to

- explain key concepts and terms in bioinformatics
- use bioinformatics tools to analyse, organise and interpret large-scale data
- identify resources for further learning in bioinformatics

Content

The course is to provide awareness, from theoretical as well as practical perspectives, of bioinformatics resources and tools available in the different phases of a study, from the planning phase to the analysis, interpretation and presentation of data. Through the presentation of key concepts/terms and examples of bioinformatics work processes, the course gives a broad introduction to bioinformatics. It highlights resources that can facilitate self-directed learning in bioinformatics and provides information about the local, national and international support available with regard to bioinformatics.

Design

The course consists of five whole days that are compulsory and based on the active participation of doctoral students. The teaching will be a mixture of different forms, including lectures, group exercises and individual practical exercises. Independent study of selected texts is also included. Participants are expected to have access to a laptop. Furthermore, the course includes one compulsory assignment, in which the doctoral student is to reflect on a research situation (from their own research, if possible) where bioinformatic analyses can be used, discuss it in a group discussion and finally propose in writing how bioinformatics can be used to enrich the previously described research situation.

Assessment

The assessment is based on a multiple choice questionnaire (MCQ). For a Pass on the course, participants must have actively participated in all course components and submitted the compulsory assignment.

Grades

The grades awarded are Pass or Fail.

Admission requirements

To be admitted to the course, applicants must have a degree in medicine, biomedicine, molecular biology or the equivalent, and be admitted to research studies at Lund University. Applicants admitted to research studies at the Faculty of Medicine in Lund take precedence.

Required reading

Research articles distributed before the start of the course.