

Course analysis (course evaluation)

Course code 4BI109	Course title Bioinformatics	Credits 7.5
Semester (VT/HT-yr) HT 2024	Dates 20241115-20241216	

Course Director Arne Lindqvist	Examiner Arne Lindqvist
Teachers in charge of different parts of the course Basic tools: Arne Lindqvist TBL CRISPR: Arne Lindqvist TBL DNAseq: Arne Lindqvist TBL RNAseq: Rickard Sandberg Ethics: Lena Ström	Other participating teachers Basic tools: Nico Dantuma, Niels Krämer, Michael Ratz, Zhiyu Hao, Anais Julien TBL CRISPR: Martin Hällberg, Michael Ratz TBL DNA seq: Nil Campama Sanz, Qirong Lin, Abishek Arora TBL RNA seq: Daniel Ramsköld, Juliane Mayr, Salome Hahne, Hao Yuan Extra view:, Benjamin Murrell, Avlant Nilsson, Karen Akopyan. Intro to R: Niels Krämer, Nil Campama Sanz, Qirong Lin, Evanthia iliopoulou

Number of registered students at the 3-week check 58	Number passed at final course day 54 (58 after re-exam)	Response frequency course valuation survey 26/58
Other methods for student influence (in addition to the final course valuation/survey) -Evaluation discussions as part of feedback at end of each TBL. -Course director encouraged feedback on course on several occasions, and had discussion with several students -Course council -Canvas discussion forum open throughout course for feedback on course improvement. Was not used.		
Feedback reporting of the course evaluation results to the students Through CANVAS		

Note that...

The analysis should (together with a summarising quantitative summary of the students' course evaluation) be communicated to the education committee at the department responsible for the course and for programme courses also to the programme coordinating committee.

The analysis was communicated to the education committee on the following date: 2025-02-03
The analysis was communicated to the programme coordinating committee on the following date: 2025-02-04

1. Description of any changes implemented since the previous course occasion based on the views of former students

-Streamlining the content.

-DNAseq TBL practical was updated and refocused. Dedicated extra server space was provided by Galaxy.

-New lecture – NGS applications. Materials moved from other parts of course.

2. Brief summary of the students' evaluation of the course

(Based on the students' quantitative responses to the course valuation and key views from free text responses. Quantitative summary and any graphs are attached.)

The student's answers in the course evaluation were very positive. The overall course rating was 4,8 out of 5. Among others, the TBLs and mystery DNA quest were mentioned as positive. Suggestions for improvement included modification to practical during RNAseq TBL, change of lecture room (including using small group rooms for TBL), as well as more detailed suggestions for individual lectures.

3. The Course Director's reflections on the implementation and results of the course

Strengths of the course:

- An introduction to bioinformatics involving both theoretical and practical approaches.
- The mix of learning activities.
- Basic tools module to provide a foundation
- TBL structures. Stimulating peer-learning and discussions between students of different levels.
- The mystery DNA quest, a practical assessment of the basic tools section that stimulated learning
- Feedback to students, both as separate aspects of each TBL and during practicals.
- Feedback from students, in particular in the structured form at end of TBLs allowed adaptation of the course while ongoing.
- The teams structure of teachers provided support and enabled discussions, feedback and coordination in planning and executing teaching. It was also very useful as a backup if one teacher could not make it.

Weaknesses of the course:

- The course is heavy, and although a majority did not, some students found the content overwhelming and/or too advanced.
- Schedule is compact with little room for catching up if falling behind.
- Some materials provided could be clearer.
- Some individual lectures could be improved.
- Uneven distribution among TBL groups for how well peer learning worked.

3. Other views

The adaptations that were implemented after last year were generally successful. The DNA seq practical worked much better. The workload and schedule was more balanced.

4. Course Director's conclusions and any suggestions for changes

(If changes are suggested, state who is responsible for implementing them and provide a schedule.)

This was the fourth occasion of the course. My opinion is that the course went very well and that most aspects worked as intended.

Changes include:

- Remove R from this course and implement before or in the preceeding Biostatistics course. Course director is responsible, communicating with Programme director.
- Dedicated small rooms for TBL applications. Course director is responsible, communicating with Programme director.
- Reshape the practical part of RNAseq TBLs to include more open challenges. Course director is responsible, implemented 2025.
- Introduce a quiz in the basic tools section for NGS and data formats. Course director is responsible, implemented 2025.
- Adapt some lectures and their materials with an aim to streamline content. Course director is responsible. Implemented 2025.

Appendices:

Course evaluation