

Organization of GBIO0009 Homework Assignments

Topics in Bioinformatics

- Form groups and select a “type of homework”, as instructed in class. The same group holds for all homework assignments!
- **Note that different rules and expectations apply for literature-based or programming-based assignments**

Type 1: Literature-based project

This involves choosing a paper from the literature that extends or provides additional background on the material of the course (chapter) and then summarizing the paper, its objectives, results while further browsing the internet for additional information or supporting material.

Do not copy the paper, but show you have understood the main ideas of the paper and “discuss” the paper. Such a discussion could include thoughts on what was the key idea, strengths or weaknesses of the methods/experiments, comments on the writing, ways to extend the work, flaws in the argument/data/experiments, etc. Anything is fine, as long as it demonstrates some real thought. Especially for review papers, make sure one subtopic is worked out in more detail, by following up on referenced work or by searching the internet.

A selection of papers will be provided, but if you have another interesting paper to discuss, please send your suggestion to the TA. The course instructors will then decide whether the paper is eligible or not.

All literature projects will be **presented** and discussed in class. No report is needed. Only slides will do.

Type 2: Computing project (with guiding questions)

You will be given a data and a real-life bioinformatics data problem. Using software that will be explained in class (TA), you will be asked to solve the problem. Guiding questions and supporting documents will be presented to you, to help you in achieving this goal. **Homeworks are handed in in the form of a report and an accessible link to your software code.**

Type 3: Classic style Q&A homework

Via representative questions, the idea is to further understand concepts provided in class. Occasionally, simulated or real-life data problems may be provided, that have been analyzed and for which the results require an interpretation. Use the material provided in class but be not afraid to consult the literature. As long as you can answer the given questions, everything is allowed. When you do use the literature, please provide references.

Please follow instructions in class, regarding how to draft your **report**.

Format and report

All homeworks are handed in in English.

In principle, only for Type 2/3 projects a report is needed. This report reflects the process you adopted in solving the problem that was presented to you and should be no more than the equivalent of 5 single-spaced typed pages of text, excluding figures, tables and bibliography. It should contain an abstract (e.g., description of the problem), a methods part (e.g., how did you solve the problem), a results part (e.g., what are your findings) and a discussion part (e.g., how other people in the scientific community solve such a problem). If citations are made to other papers, there should be a bibliography! Only one report per group is needed.

Evaluation

Homeworks count for 60% of your final score ... Opportunities will be created to discuss the homeworks (homework assignments) in class or in private.