Exchange programme Vrije Universiteit Amsterdam

Vrije Universiteit Amsterdam - Exchange programme Vrije Universiteit Amsterdam - 2024-2025

Exchange

Vrije Universiteit Amsterdam offers many English-taught courses in a variety of subjects, ranging from arts & culture and social sciences, neurosciences and computer science, to economics and business administration.

The International Office is responsible for course approval and course registration for exchange students. For details about course registration, requirements, credits, semesters and so on, please visit the exchange programmes webpages.

Extended Research Questions in Bioinformatics

Course Code	XB_0074
Credits	6
Period	P1+2
Course Level	300
Language Of Tuition	Language_
Faculty	Faculty of Science
Course Coordinator	dr. H. Mouhib
Examiner	dr. H. Mouhib
Teaching Staff	dr. ir. K.A. Feenstra, dr. Q. Peng MSc
Teaching method(s)	Study Group, Computer lab, Lecture

Course Objective

This course is the follow-up to Research Questions in Bioinformatics. You may choose one of the research topics of the Bioinformatics group to study. In the process, you will get a chance to interview a researcher about a scientific publication. You will be introduced to how research is conducted in the Bioinformatics section. Finally, you will explain the chosen topic to your fellow students in a visual representation and in a presentation.

After following this course the student;

- Knows a specific example of research in the Bioinformatics field. [Knowledge and understanding]
- Understands the knowledge the research is built upon and what the long term goal of this line of research is. [Knowledge and understanding]
- Is able to ask relevant questions about a research paper or a presentation. [Communication]
- Is able to give a clear presentation of a bioinformatics method and its results. [Communication]
- Is able to describe the contents of a bioinformatics scientific publication in their own words. [Communication]
- Can write purposeful feedback on a written assignment of a peer. [Making judgements]

Course Content

Research within Bioinformatics focuses on developing (computational) methods to understand biological experiments, and to predict biological function. During this project, you will discover why Bioinformatics is of great importance for (medical) research.

Additional Information Teaching Methods

In this course, you'll engage in four parts related to your chosen subject, each taking approximately one week:

1. Research Insight: Select a recent paper from our group members to gain an understanding of our ongoing research. The focus is on comprehending the research question rather than conducting the work itself.
2. Comprehensive Exploration: Delve deeper into the subject by analyzing two or three additional papers. Compare how different researchers approach the research question presented in these papers.
3. Visual representation: Craft a visual representation of your subject (infographic/ poster/ concept map) where you provide context for the research and break down the research question in an accessible manner.
4. Peer Review and Presentation: Engage in peer review by evaluating and providing feedback on fellow students' work. Additionally, present your findings to the student group.

Method of Assessment

- [~50%] Scientific review article in 1000 words, containing the research question, briefly formulated, a review of the consulted literature, and three figures: schematic summary of research method and at least one with results / graph.
- [pass/fail] assessment of articles of the other students (peer review).
- [~50%] presentation (15 minutes) of your poster, with discussion and questions (15 minutes).

More detailed grading and compensation rules will be posted on Canvas.

In case of a failing grade for the popular scientific article this can be redone after the course.

Literature

• Course material on Canvas
• Selected articles for study and presentation.

Additional Information Target Audience

This course is only open to (pre-master / bachelor) students in the minor Bioinformatics and Systems Biology

Additional Information

This course runs in periods 1 and 2. The final presentations will be given in week 5 of Period 2.