

## Kursanalys (kursutvärdering)

<b>Kurskod</b> 4BI124	<b>Kurstitel</b> Avancerad biomedicin: Forskningsprojekt 2	<b>Högskolepoäng</b> 15 hp
<b>Termin (vt/ht-år)</b> HT2024	<b>Tidsperiod</b> 2024-11-11—2025-01-19	

<b>Kursansvarig</b> Juan Du	<b>Examinator</b> Ute Römling
<b>Momentansvariga lärare</b> 53 supervisors	<b>Övriga medverkande lärare</b> 30 examining teachers

<b>Antal registrerade studenter vid treveckorskontrollen</b> 53	<b>Antal godkända vid sista kursdatum</b> 53	<b>Svarsfrekvens kursvärderingsenkät</b> 57,41%
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### Övriga metoder för studentinflytande (utöver avslutande kursvärdering)

We conducted a research project-based course based on individual research project freely self-chosen by the Biomedicine students and to be conducted in a research laboratory of their choice. During the preparation period where the students were looking for research projects, we sent out questionnaires to follow up on students' engagement and success to acquire a project before the project started.

We also arranged two online lectures to inform in detail about the course rules and implementation and to answer in detail questions from the students. In addition, the students were educated on how to prepare posters in a specific lecture.

Regular email communication was maintained during course preparation and course duration in case any questions arose.

### Återkoppling av kursvärderingsresultat till studenterna

Via Canvas

### Observera att...

Analysen ska (tillsammans med sammanfattande kvantitativ sammanställning av studenternas kursvärdering) delges utbildningsnämnd vid kursgivande institution samt för programkurser även programansvarig nämnd.

Analysen har delgivits utbildningsnämnd följande datum: 2025-02-11

Analysen har delgivits programansvarig nämnd följande datum: 2025-02-11

### 1. Beskrivning av eventuellt genomförda förändringar sedan föregående kurstillfälle baserat på tidigare studenters synpunkter

This course, 4BI124, provides students with opportunities to perform research projects of their choice in different research groups both within KI, nationally and internationally and in the

different sectors academia, industry and governmental agencies. The examination format was essentially the same as for last year's course, aligned with the expected development of representation skills during the master's program in Biomedicine. After discussions and application to the program, a slightly modified evaluation form was implemented. We more specifically defined the written examination format by providing more specific formatting guidelines for the report and abstract as requested by the students. Information about the course organization was communicated to students twice: once in March and again on the first day of the second week, during an online kickoff seminar. Throughout the spring and summer, we sent out questionnaires multiple times to track students' progress in finding research groups and preparing project descriptions. We also arranged one lecture from Matthew Kirkham on how to prepare poster around the end of the project time, which is appreciated by many students. A major change this year was the almost doubling of participating students, which made finding potential research groups, examining teachers and arranging the oral examinations more challenging and time-consuming. The exam was conducted in the form of a workshop with poster presentations held in five locations at Biomedicum, KI. One student joined via Zoom, as she was already abroad for the master's thesis (special arrangements regarding the examination timing were discussed). All students were required to attend the entire examination day and actively participate in the project discussions. Written examinations (abstract, poster, and laboratory report) were submitted one week before the oral examination for assessment by the examining teachers.

## 2. Kortfattad sammanfattning av studenternas värderingar av kursen

*(Baserad på studenternas kvantitativa svar på kursvärderingen och centrala synpunkter ur fritextsvar. Kvantitativ sammanställning och ev. grafer bifogas.)*

Students generally had a positive experience with the course, appreciating the opportunity to engage in hands-on lab work and develop practical skills. They valued the flexibility and independence the course offered, as well as the chance to choose research projects based on their interests. The course was seen as effective in promoting scientific thinking and reasoning, with many students reporting significant development in their analytical and critical thinking abilities. The feedback received was considered important for their development and learning. Students also highlighted the clear instructions and good communication from the instructors, as well as the interactive and enjoyable experiences of the poster session/mini conference. The course was praised for building upon prior knowledge and being well-organized, with all necessary information easily accessible.

This is supported by the fact that most of the mean scores from the evaluation are the same as or higher than last year. In addition, except for one student, all others selected 'to a large extent' or 'to a very large extent' in terms of developing valuable expertise during the course and achieving all the intended learning outcomes.

## 3. Kursansvarigs reflektioner kring kursens genomförande och resultat

**Kursens styrkor:** The course provided valuable hands-on experimental experience, allowing students to engage in real research projects and develop practical skills. Students appreciated the ability to choose projects based on their interests and work independently, which contributed to their motivation and engagement. The course effectively promoted scientific thinking and reasoning skills, such as analytical and critical thinking. The poster session and mini conference were seen as enjoyable and interactive experiences, providing a unique opportunity for students to present their work in a format that closely resembled real scientific conferences. The course was well-organized, with clear instructions and good communication from instructors, making it easier for students to navigate the course smoothly and understand expectations.

**Kursens svagheter:** The course's overlap with the Christmas and New Year holidays shortened the project duration significantly, even though this period is considered self-study time. However, this course being based on laboratory work and supervisors and

laboratory personal taking time off/working from home during Christmas and New Year's times, the student in most cases do not have the opportunity to continue the practical work for quite a while. This made it difficult for students to complete all assignments within the given timeframe, which was highlighted as the major disadvantage by nearly all the students. Many students suggested shifting this hands-on project time to an earlier time point during the term and shift courses with online lectures later in the autumn term, allowing for 10 weeks of laboratory time. Some students felt that the workload was high, especially with multiple assignments due within a short timeframe, which added to stress and made course management difficult. There were concerns about unclear communication regarding holiday expectations and inconsistencies in instructions, leading to confusion among students. Some students also questioned the consistency of grading standards across different examiners, fearing potential unfairness. Additionally, limited laboratory availability and supervision during the holidays made it challenging to access resources and receive timely feedback from supervisors but also challenging for the course personal to give adequate advice.

### 3. Övriga synpunkter

Of the 54 students who were invited to fill in the web survey, 31 answers counted (57.4%). Majority (93.6%) think there was a large to very large extent a common theme throughout the course. 95% of the students has promoted a scientific way of thinking and reasoning. 96.8% of the student think this course to a large and very large extent has promoted scientific thinking. Workload during the course was reasonable in relation to the course of credits award, to small extent (16.1%), to some extent (12.9%), to a large extent (41.9%) or to a very large extent (29%). Majority consider the methods used were relevant in relation to the learning outcomes, to some extent (16.1%), to a large extent (41.9%) or to a very large extent (38.7%).

Majority of students thought they could turn to the supervisor for guidance (19.4% to some extent and, 32.3% to a large extent, 45.2% to a very large extent). All students considered to have gotten enough information about the course at least to some extent.

In the feedback, students expressed appreciation for the overall quality of the course. Their recommendations varied, with the main suggestions being to adjust the project timeline and reduce the examination workload.

### 4. Kursansvarigs slutsatser och eventuella förslag till förändringar

*(Om förändringar föreslås, ange vem som är ansvarig för att genomföra dessa och en tidsplan. )*

Conclusions:

Student feedback indicates that while the course effectively developed practical skills and promoted scientific thinking, while its timing and workload posed significant challenges. The overlap with holidays shortened the project duration and limited lab access, hindering students' ability to produce high-quality work and fully benefit from the course.

Proposals for Changes:

We propose adjusting the RP2 timing to an earlier time point during the term to avoid overlap with holidays. Additionally, we will discuss reducing the workload by streamlining assignments to focus on key deliverables, such as a poster and a brief report, with a word limit instead of a page limit. We will also improve communication by providing clear guidelines on holiday expectations and ensuring consistent instructions. Lastly, we will consider improving standardized grading to ensure fairness. Implementing these changes would enhance the course's effectiveness, reduce student stress, and improve the overall learning experience.

*Bilagor:* 4BI124 Research project 2 HT2024 Course evaluation