

The course report is an important instrument for the development of courses and programmes, as well as for guaranteeing student influence. The structure for course evaluation is described in *Riktlinjer för kursutvärderingsprocessen* (LED 1.3-2018/123) and in *Rutiner för kursvärderingar och kursrapporter för hälsa och samhälle* (LED 1.3-2016/187). The course report shall contain background information/key indicators, a summary of the students' course evaluations, as well as an analysis and action plan.

The course report is compiled after each completed (full) course

Course administrator

Name	Date
Marie Enberg	200513

Background information (to be completed by the course administrator)

Course name		
BIOLOGICAL INTERFACES IN MOLECULAR BIOLOGY AND NANOTECHNOLOGY		
Course code	Scope (credits)	Semester in which the course is completed
BM822E	15Hp	2
Specify a single subject course or contract education (if the course has been completed within a programme, specify the programme name)		
Biomedical Surface Science, Master's Programme		
Course coordinator		Number of registered students
Sebastian Björklund		10 (9 active)

Student's perspective (to be completed if possible by the course administrator, in other cases by the course coordinator)

Formative course evaluation type of course evaluation (oral or questionnaire) and when it was completed	
Formative course evaluations were performed approximately every second week in conjunction with seminars	
Number of students who answered the formative course evaluation	Percentage response rate
Between 6-9	Not applicable (formative evaluations were conducted orally)
Summative course evaluation (oral or questionnaire) and when it was completed	
2020-03-26 - 2020-04-03	
Number of students who responded to summative course evaluation	Percentage response rate

8

80% (89% of the active students)

Feedback to students: how (via email, canvas, dialogue in the classroom) and when the feedback was implemented

Due to Covid-19 and social distancing, feedback to the students was given via Canvas on May 29, 2020.

Teacher's perspective (to be completed by the course coordinator)

Results: Comments on the course implementation and the results based on an assessment of the students' actual learning outcomes in relation to the course's intended learning outcomes are summarised here (incl. information regarding the result of the examination). Both success factors and problems are identified

This year's course was updated, based on previous evaluations of the course and program meetings, with the aim reach the learning outcomes by implementing additional, and updated, laboratory exercises and replacing some of the lectures with recorded video lectures. The general course design followed a three-stage process for each topic (i.e., laboratory exercise) with a theoretical introduction as the first part, a hands-on laboratory exercise as the second part, and a final seminar with student presentations and discussions as the third part. Finally, the students should hand in written laboratory reports from the laboratory exercises. The topic "ethical issues in nanotechnology" was initially meant to be treated in a written assignment, while a written final examination was replacing the previous take-home exam. The students expressed that the general course design was good. However, during the formative evaluations, it was expressed that the workload was too challenging due to lack of time to reflect on the learning material. To make ends meet, some laboratory exercises were modified to decrease the workload, while the assignment in "ethical issues in nanotechnology" was addressed during the final examination. Further, to face the Covid-19 situation, where Malmö University switched to online teaching during the last 2 weeks of the course, it was necessary to replace some laboratory exercises with online based alternatives. These actions reduced the overall workload for the students, as expressed by the students. However, in the final course evaluation, some students still expressed that the workload was too high, which influenced the overall understanding of the learning material in a negative way. Therefore, additional changes in the course implementation are proposed to reduce the workload and improve the likelihood for the students to reach the learning outcomes in the future. It was proposed that the lab report instructions should be improved to avoid unnecessary misunderstandings and to make sure that the end goal of the laboratory exercise, and its report, is clear. In addition, the final written examination was suggested to be improved by adding information on each question's weight to the total score.

On the positive side, the students expressed that the course offered a great deal of practical knowledge when it comes to the use of various methods of synthesizing nanoparticles and different techniques to characterize them. The students liked the design with introduction before the laboratory exercises and a seminar right after the laboratory work, before writing the report, and concluded that this is an effective process to reach the learning outcomes. The online lectures were useful as it allowed the students to visit the lectures to review them again. The study questions and the quizzes uploaded on Canvas were effective and helped the students to keep track of what they have learned so far in the course work.

Analysis: Analysis based on a summary of the students' individual course evaluations – both formative as summative. Produced in collaboration with the teachers involved in the course; alternatively, the views of participating teachers are taken into account.

The workload of the course was too challenging, in particular as several of the concepts and topics covered in the course may be completely new to the students. Therefore, more time is needed to process and reflect upon the learning material. The fact that the students expressed appreciatively that the course was implemented in an overall good manner implies that the course does not need other changes except for reducing the number of laboratory exercises to decrease the workload. Finally, it should be noted that the teachers during the laboratory work were said to be very helpful when it comes to questions about the principles of the techniques.

Action plan: Changes to be made in the short and long term are stated here, as well as the timetable for when the actions will be implemented, as well as the person responsible for the implementation. If identified problems are left without action, this must be justified. Follow-up of proposed measures according to the previous course report(s), is presented here.

Next year, the course will be modified in accordance to above by reducing the number of laboratory exercises or modifying the content of the exercises so that the students have more time to reflect on the material while still keeping the overall learning outcomes intact. The instructions for the laboratory reports and the final written examination will be improved in accordance to the propositions above.

To be completed by the course administrator

Publication of course report: where and when publication was completed