Example template – Course analysis (course evaluation)

Course code	Course title	Credits
1BI048	Molecular Medicine – Cardiometabolic and Infectious Diseases	15
Semester	**Period**	
HT2025	2025-11-03 – 2025-01-16	

Course coordinator	Examiner
Hanna Björck (Course Director) Christopher Sundling (Deputy Course Director) Mari Liljefors (Course Administrator)	Rachel Fisher
Teacher in charge of component Hanna Björck (Cardiometabolic diseases) Christopher Sundling (Infectious diseases) Sherwin Chan and Xiao-wei Zheng (Research application) Magdalena Paolino (Lab – Methods in Molecular Biology)	**Other participating teachers** A range of teachers, both from within and outside the Department of Medicine (Solna), including both clinicians and researchers (from KI and/or KS).

Number of registered students during the three week check	Number approved on the last course date	Response frequency course evaluation survey
50	36	42.0 %

Other methods for student influence (in addition to concluding course evaluation)

The course had two course councils. One was held three weeks after the start of the course (Nov 24) with course representative, and the second was held on the last day of the course, after the mandatory research application presentations (Jan 13). The last course council/course evaluation was open for all students to attend. In total, approximately 10 students participated in the second course evaluation.

Students were encouraged to give continuous feedback throughout the course, either directly to the course leaders or to the class representatives.

Feedback reporting of the course evaluation results to the students

The short summary of the course survey was published on the open course website (drupal) upon survey closure. The course analysis will be made vailable on the same site. A link to the survey will also be placed on the HT25 Canvas syllabus page. Specific issues brought up by the students in the course evaluation were commented on in the course analysis.

Results from the HT24 course evaluation were presented during the introductory lecture for HT25, discussing strengths and weaknesses that were brought up by previous students. Changes in content and structure made to were presented and explained in the context of the survey results. The importance of student feedback for developing and improving the course was highlighted.

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 and also the programme coordinating committee.

The analysis was communicated to the education committee on the following date: 2026-06-16

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

1) Lectures: We introduced an introductory immunology block at the beginning of the course to ensure all students have foundational knowledge needed for subsequent infection-related lectures. Lectures on advanced methodology and model organisms were kept for inspiring students in their writing of the research application and later degree project. Some lectures were removed to improve coherence and structure of the course.

2) Journal clubs: We introduced smaller student groups to promote active participation and discussion.

3) Research application: Presentations of the research application was kept to after the course. Presentations will be held in parallall sessions in half-class as a suggested by students.

4) Examination: A preparatory seminar was introduced, during which we reviewed a previous exam. The purpose of this session was to clarify the expectations required to achieve full marks on a question.

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

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

Below is the summary statistics for each question compared to previous years. In general, the course scores marginally poorer as compared with previous year, but it should be noted that response rate was lower (42% vs 64%). The constructive alignment between the final written examination and learning outcomes remains an area of improvement, as well as the overall structure and organization (scheduling, alignment, navigating the materials, workload) of main topics, cardiometabolic vs. infectious diseases.

	Mean						Median							
Questions	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2020-2024**	
In my view, I have developed valuable expertise/skills during the course	2,7	3,1	3,3	3,7	3,9		3	3	3,5	4	4		1	Very poor
In my view, I have achieved all the intended learning outcomes of the course	3,1	3,3	3,5	3,7	3,8		3	3	4	4	4		2	Poor
In my view, there was a common theme running throughout the course – from learning outcomes to examinations	2,1	2,6	3,2	2,4	3		2	3	3	3	3		3	OK
In my view, the course has promoted a scientific way of thinking and reasoning	3,2	4	4,1	4	4,2		3	4	4	4	4		4	Good
In my view, during the course, the teachers have been open to ideas and opinions about the course's structure and content	2,4	2,9	3,8	3,2	3,6		3	3	4	3	4		5	Very good
do you feel that the workload during the course was reasonable in relation to the extent of the course/number of credits awarded	2,6	2,9	3,5	3	3,5	4,5	3	3	4	3	4	5		
course structure and methods used were relevant in relation to the learning outcomes	2,7	3,3	3,4	3,3	3,7	4,5	3	3,5	3,5	4	4	4		
examination was relevant in relation to the learning outcomes	2,6	2,9	3,1	2,6	3,1	3	3	3	3	3	3	3		
I took responsibility for my own learning during this course	4,1	4,3	4,1	4	4,1	5	4	4	4	4	4	5	**From 2025**	
When/if I had questions or problems with the course content, I felt that I could turn to my teacher/supervisor for guidance	2,9	3,5	3,8	3,7	4,1	4,7	3	3,5	4	4	4	5	1	Totally disagree
The feedback that I have received has been important for my development and learning	2,7	3,6	3,6	3,6	3,9	5,3	3	4	3,5	4	4	5	2	
What is your overall opinion of the course	**2,4**	**2,8**	**3,4**	**3**	**3,4**	**3,3**	**2**	**3**	**3,5**	**3**	**3,5**	**3**	**3**	
I have developed my ability to critically appraise the work of others	3	3,2	3,5	3,7	4	4,4	3	3	4	4	4	4	4	
I have received critical appraisal of my own work	3	3,6	3,7	4	4,2	4,4	3	4	4	4	4	4	5	
The course provided me with opportunities to learn about relationships between cadiometabolic and infectious diseases	2,9	3,4	3,6	3,8	3,7	3,8	3	4	3,5	4	4	4	6	Totally agree
The digital learning environment such as Canvas, Zoom etc. was adequate.	3	3,4	4	3,8	4,1	3,9	3	4	4	4	4	4		
Sum	45,4	52,8	57,6	55,5	60,3		47	55	59,5	59	61,5			
Overall average	2,84	3,3	3,6	3,47	3,77		2,94	3,44	3,72	3,69	3,844			
Survey numbers														
Responses	21	24	22	27	30	21								
Students	41	50	47	53	46	50								
Percent	51%	48%	47%	51%	65%	42%								
	Mean						**Median**							
New Questions 2025->						**2025**						**2025**		
The course was designed in a way that provided me with opportunities for active learning. For example: seminars with discussions, group work, projects, student presentations, role play, peer learning,exercises, laboratory work, workplace-based learning, etc. practical						5						5		
I felt included and respected during the course. For example: I was comfortable collaborating with other students, speaking in front of the group, answering teachers' questions, and I was listened to (not interrupted, ridiculed, or similar).						5,2						5,5		
The course as a whole was good						3,8						4		

Similar to previous years, students described the course as particularly valuable for the development of critical thinking, which is a key goal of the course, and that they felt more prepared for the coming project work. Practical modules such as journal clubs, labs, assignments and the research application were highly appreciated. The two labs were repeatedly described as well-designed, engaging and creative since they included both planning, individual execution, analysis and presentation/writing. Particularly highly scored this year was the feedback received from teachers and peers.

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

Strengths of the course:

Overall, the course contains several different learning activities that aim to promote a high level of student engagement and "real-world" exercises and experience. These are usually also appriciated by the students and include:

- A **research application** that encourages independent thinking and gives the students practice not only in designing an appropriate experimental setup but also in working together as a group. Students are also practising peer reviewing, which is known to enhance students learning.
- **The two main labs** cover important methodologies for molecular studies and disease diagnosis. Especially the first lab takes the students through the whole process from set up and design of experiments, acquiring and analyzing data, interpretation of results, as well as presentation and communication of conclusions. The second lab now also includes a more student-driven experimental design and decision process to increase engagement. The methodology is largely overlapping between the lab, but the students usually do not think this is a problem as the approach/questions are different. Peer-rewieving, which is incorporated in the first lab, further enhances students' leaning.
- **Assignments**, which include a complex research-based problem, provide a forum for discussion, and are highly appreciated by students. The discussion enables misunderstandings to be clarified and the student to achieve a better understanding of how different areas of biology are interconnected.
- **Journal club seminars** provide training in scientific reading, analysing and critically discussing published articles, which promote the development of critical thinking and presentation skills. Students wish to have more journal clubs.

Weaknesses of the course:

The course's objectives and learning outcomes have been improved over the past few years, however, there are still issues with the perceived constructive alignment of the course and we need to work to improve the coherence between learning outcomes, learning activities and lectures, and the final written examination. This thus our main goal forthcoming years. Other weaknessess include,

- **Lack of a course textbook** (maiking it difficult for the students to know exactly what they should learn for the exam).
- **Distribution of deadlines**. While the overall workload was acceptable, deadlines were poorly distributed, creating periods of peak stress.
- **Overlap** in topics to previous courses in the program. During the course introduction, we emphasize that some previous course content may re-appear during the course but deepened and in a disease context rather than from a physiological perspective. We believe this was well appreciated this year and not as big of an issue compared with previous years.

3. Other views

Based on the two course councils, the student had an overall good impression of the course and many even had a very good impression. It was therefore a bit surpriding to us that the course evaluation came back with rather poor results.

Students commonly bring up multiple deadlines, making it difficult to plan and peak stress periods. This comes largely from the many different learning activities of the course, which are all important parts of the course (and highly appreciated). However, since this is recurrent, we need to think further on how we can organize the activities so that they contribute to learning rather than stress. Another issue that often comes up is the Christmas study period and the potential possibility to only schedule zoom-based activities to accommodate student travels. This is sometimes also an issue during term time, since the course has many mandatory activities requiring on-site participation.

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

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

Student feedback indicates that topics related to experimental and study design, scientific approach and critical thinking are valuable and could be expanded further. For instance, students suggested to add additional journal clubs and assignments. New lecture topics included *Genetic predisposition of insulin resistance, Sex aspects* and *Modulation of immune responses (T and B cells).*

To further improve the course alignment and structure, students suggested to have thematic blocks rather than integrating cardiometabolic and infectious lectures. The two course leaders, Hanna Björck and Christopher Sundling will lead the work improving these weaknesses and implementing changes. We will consider the course layout and build-up of lectures into blocks, as well as visualize learning outcomes in relation to teaching activities.

An improved Canvas organization and more evenly distributed deadlines was also requested, which will be addresses for HT2026. We will continue with the preparatory exam walk through, possibly as a minor mock exam with oral review of answers. The course leaders will during 2025 also start to develop a strategy for implementing a new examination setup.

Appendices: