Course analysis template

After the course has ended, the course leader fills in this template. This is an important part of the quality assurance of the programme. The programme director decides whether the template should be supplemented with further information/questions.

Course code	Course title	Credits
4BP044	Product Development in Life Sciences	11
Semester	**Period**	
Spring	19th January – 23th March 2026	

Course leader	Examiner
Caroline Dahl	Madelen Lek
Other participating teachers	**Other participating teachers**

Number of registered students	Number passed after regular session	Response rate for course survey (%)
32	Component 1 = 11 Component 2 = 10	78.12%

Methods for student influence other than course survey

- 30 minute Drop-in Q&A each week
- Meetings with individual Project teams in order to resolve issues and respond to team queries in a close-knit setting
- 1h scheduled Mid-Course Counsel
- Individual students chose which need to focus on and were grouped into teams accordingly
- Student teams chose their final need definition depending on the team's own interest, background, economic outlook and stakeholder interviews
- Students chose to enter Report teams (as long as people on their own Project team were excluded) and together as a class they chose the life science product that they wanted to investigate.
- Email correspondence with individual students as well as teams

Note that…

This analysis shall (together with a summary of the quantitative results of the students course survey) be submitted to the LIME educational committee.

This analysis have been submitted to the LIME educational committee on this date: 260508

1. Description of any implemented changes since the previous course based on previous students' comments

2025 Proposals for changes and their status of implementation

Implemented changes in 2026:

- **Suggestion: Remove *Ethics* or *Reimbursement*** as not all topics can be tackled if teaching depth is to be allowed elsewhere, e.g. IP and Regulatory.
- **Result:** While ethics was tackled by the 2026 Report, it wasn't the emphasis of the Report but rather offered as a way for students to reflect on Report results.

2. A brief summary of the students' evaluations of the course

(Based on the students' quantitative answers to the course evaluation and comments. Quantitative compilation and possible graphs attached.)

The overall mean show that students strongly appreciate the course. Marks were high across all questions posed, averaging at 4.9 out of a possible maximum score of 6.0. Question means ranged between 4.5 and 5.3. The high score of 5.3 was awarded to the question:

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).

Other highly graded aspects of the course were its abundance of opportunities for active learning, as well as it's foundations in scientific research.

The comparably lowest average score, 4.5 out of 6.0, was given to the course's sustainability and ethics inclusion. This is logical as these topics were reduced compared to previous years after deliberation in Programme Councils, to give space for depth to the product development process.

For mean score per question, see Table 1, below. Note that all survey questions were altered in 2026 so comparison to previous years' results is hard.

Table 1. Quantitative Student responses to survey questions.

Question	Mean
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, practical exercises, laboratory work, workplace-based learning, etc.	5,2
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).	5,3

The course as a whole was good.	4,6
I was given the opportunity to reflect on what I have learned during the course.	4,6
The examination(s) assessed both knowledge and skills relevant to the course.	4,8
The course content was clearly based on scientific research.	5,2
I was given the opportunity to learn about sustainability and ethics of product development.	4,5

Marks have been high also in previous years and suggest a good track record for the course.

When asked **What part of the course was most valuable to you**, students particularly enjoy developing their Projects alongside lectures where key technology development concepts are sequentially introduced in order to be applied and incorporated into their own teamwork. Student comments mention valuable elements from all over the course, as well as the process itself, as their personal favourite parts, so there is a good span and variety in order for individuals to locate parts of Product Development that resonate with them. Students that explicitly say they are not interested in pursuing product development for their future careers still find law and regulatory rewarding as these fields are central to other processes as well, which is fruitful. Students also enjoy the interactivity of workshops. Feedback from professional field experts was highly appreciated – a trend across many years of this course.

Things that students mentioned **could be improved**:
Some students questioned the exact timing of the Expert council, which is a recurrent student request and the course director has experimented with the scheduling. Earlier versions of this course received many comments from students saying it was a stressful experience because of all topics covered in a relatively brief time. This year, after the course reduction implemented in 2024-2025, few students made this remark, which shows progress in the right direction. Some students commented on the Report, and how they were given too much freedom in terms of e.g. topic choice and approach. While the highest course grade was given to inclusion and respect during the course, a few students commented on how the course had more conventional student-teacher dynamic than other program courses. This could reflect complex Product Development course contents heavy on law, regulatory and methodology where there is less of a grey area than previous courses (e.g. you either abide by laws set by the European Commission or not). Group work dynamics can be taxing regardless of course, and solutions were suggested. The TimeEdit schedule required changes multiple times since it contained errors. Also related to scheduling, online classes before lunch and physical classes after lunch left little time to transit. This was the first year that the written individual exam was digital, and question marks regarding the exam format and inconsistencies across program courses made a few students uneasy.

3. The course-responsible reflection on the course implementation and results

Students are generally positive about the course. Students enjoyed the contents and realism that come with working with real clinical needs and being encouraged to resolve those needs. Guest lecturers are highly appreciated, bringing life science industry professionals into the classroom. The most frequent negative comment in previous years was that the course could be stressful at times – this comment was rarely encountered in this year's course survey, suggesting that the course amendments done to bring the course within budget has also had a positive impact on course pace for students.

From the course director's point of view, students were inquisitive, interested and well invested in the healthcare needs presented to them. This year's edition of the Report assignment resulted in student work that is in part shared with the Swedish reimbursement institution TLV – that is real impact and a monument to students' dedication and hard work. The assignment itself will be restructured in time for next year, taking good student feedback into account.

Course strengths:

Programme course inter-linkage

Creating links to Market Analysis – both in terms of teams and topics – has been vital for students to develop the in-depth knowledge needed to pursue sustainable and relevant solutions. Product Development projects are also pursued in subsequent economics classes, which has been a success. Programme course linkage is continuously explored in MBE teachers' meetings.

The course schedule structure where theory is learnt one week and this knowledge is applied to the Project the week after (thus allowing for immediate applied and deep learning) has been a success. The exact scheduling has been tweaked over five years' time to optimise it according to external pressures and student feedback, and individual class times are actively optimised.

Projects beyond theory. Sustainable solutions are sought to big health needs with global applications. In concrete terms, need-relevant clinical expertise was sought by students, IP strategy was tackled and scrutinized down to competing claim level, students were encouraged to take course solutions forward professionally, industry professionals gave custom, in-person advice to team solutions with regards to IP, business, reimbursement as well as regulatory.

Healthcare equality. Health needs that primarily affect women were part of the clinical needs addressed by 2026 teams. The added focus on the global SDGs and ethics related to student solutions also help promote a broader perspective.

Communication. The course offers numerous ways to counter course issues and knowledge gaps: publicly in the classroom, in smaller student groups all the way down to communication on an individual basis. Support is offered in person, online and in writing.

Many modes of learning available. Students have access to live lectures, reading materials, slide decks, workshops, project assignments that apply learnt materials, as well as expert in-person custom feedback and advice.

Relevant guest lecturers. Government bodies, Life Science industry and SMEs all lectured to students, the majority of which were on-site for students to meet them face-to-face. Students appreciate this element of the course.

Course weaknesses:
Much course material is covered over a relatively short period of time. More course time would improve the scheduling and allow students to delve deeper into product development topics and to develop more sustainable life science solutions to real-life healthcare issues, integrating product/service life-cycle sustainability aspects. This is unfortunately not possible at the moment.

Student assignment co-creation. This year's Report assignment was co-created by students. Students would have liked more firm rules, guidelines and scope, and this will be brought forward to future years.

First time digital exam. This year students wrote their individual written exam digitally, for the first time in course history. While exam contents were set, it was not known whether it would be possible to do the exam digitally at all, or what limitations the digital format had, until just days before the exam. This understandably unnerved students, and will of course be remedied in subsequent years when the digital setup is given from the start.

Exam contents not standardised across program courses. This years' students remarked that non-mandatory lectures on previous courses were not part of those courses' written exam, as opposed to Product Development. Whether a lecture or workshop is mandatory or not does not necessarily reflect the unit's importance, but rather how hard it would be for a student to acquire the unit's associated knowledge and/or work by some other means but by physically being present. Other Program courses treat exam contents differently, and it might be relevant to align courses on this point, or at the very least make it impossible for students to misinterpret this.

4. Other comments

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5. The course-responsible conclusions and any proposals for changes

(If any changes are proposed, please specify who is responsible for implementing these and a time schedule.)

The course is appreciated by students, covering a lot of ground in a format that has evolved over five years' time, building on the globally renowned Stanford BioDesign process.

Students tackle real-life healthcare needs and are supported in the process by relevant industry, government bodies, SMEs and product development experts, clinical experts and researchers. Students have opportunity to influence the course both during and after the course ended, and are offered help and tuition both on- and offline, in lectures, workshops and during weekly regular Q&A sessions.

Proposals for changes

- Increase the time allowed for lunch and transit between morning Zoom lectures and afternoon on-site units.
- Digital exams become the standard for the final individual written exam, and students are notified of this format on the introduction day.
- The Report assignment is re-worked for improved structure.
- Information in multiple formats that non-mandatory lecture contents are examinable as part of the individual written exam.
- The course director will look over students' suggestions for how team work may be improved if a team member(s) does not contribute on par with other team members.
- The allotted TimeEdit schedule should equal the schedule requested by the course director from the start.

The focus on fitting the course into the allocated MBE program budget continues into proposed changes for 2027. Related proposed changes include:

- **Remove more external lecturers.** Content related to course aims and set examination modules must have priority over inspirational lectures.
- **Remove more *Ethics* or *Reimbursement*** as not all topics can be tackled if teaching depth is to be allowed elsewhere in e.g. IP and Regulatory. Reimbursement could possibly be tackled in subsequent Economics classes on the program.

Other longer-term course suggestions:

- **Look into alternative, sustainable business plans to allow for more diverse, yet economically viable solutions**. Economically sustainable alternatives are needed that allow a full range of student solutions to prosper.
- **Possibility to use Industry need(s)** alongside clinical needs. This would add a sustainability dimension to Product Development since an Industry partner might consider implementing team solutions if they are sufficiently good.