

3-årig emneevaluering

Emne : Mol213 /MOL913

Semester og år for gjennomført emneevaluering: Springsemesteret 2026

Navn på emneansvarlig(e): Fergal O'Farrell

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**Innhold 1. Beskriv og begrunn pedagogiske valg i emnet, reflekter over studentens læring som følge av disse valgene.**

**Bakgrunn. The course runs in Autumn and has repeat exam early spring. It is a theoretical course with no official lab element.** Based upon pedagogical teachings, mentioned below, the course has been mainly using flipped classroom approach with a digital format apart from 2025 when it adopted a hybrid of both digital and traditional transmissive lectures in parallel, from which students could choose the style that suited them best.

Comparing the grades of this course since I took over in 2020 to those pre-2020, I do not notice a change in distribution of the learning outcomes, despite modest increasing student numbers, arguing that no decrease in quality is associated to this change in structural/pedagogical technique.

One change was made in 2023 when the course became a "Heisemne" and received the PhD level course code MOL913. This report includes reference to that course and any eventual 3-year reporting on it. Apart from an additional exercise for PhD students where they must prepare a short lecture on a portion of the book not already covered by the course, and a separate exam code for an identical exam, the course is the same. 3 PhD students have so far taken this option.

**Flipped classroom approach used.**

The flipped classroom approach uses prerecorded lectures of high quality (high accuracy with low spoken error and robust reproducibility between years) received typically 1 week in advance of class time. Class time is used for feedback on lectures, anonymously in an online question form the day before allowing me to prepare short presentations to help clear up any "muddy" (unclear) issues. Followed by open discussion where spontaneous questions are welcomed. Remaining class time is used to either view the next lecture or take an organised lab tour (*Drosophila* and aquatic model organism labs are visited and work done there described, including viewing the animals) when that option is relevant. In 2025, following feedback from students, both this approach and traditional lecturing was used. If feedback was given highlighting areas requiring more attention, special attention is given to that topic during the lecture. Student feedback in 2025 indicates this approach was appreciated and will be continued.

The course had 11 double lectures during the last 3 years.

The course has 2 **colloquia**, timetable space dependent. I should note that via the official feedback form frequently, over the last the 3 years, students complain of time table clashes as a reason for not attending these. As this course is a valgemne and so not prioritized in the timetable system, no solution is in sight. This is likely to be non-MOL BSc students. In 2025 exam survey 6/19 responders cited scheduling issues during the year. Notably this was in response to asking how they perceived and used live lectures, not anything in particular to

attendance. This is surprising as the live lectures are scheduled weekly at the same time, compared to the colloquia which are different days. Going forward I will point this out to students during the orientation, so they at least know and can make educated decisions on which courses actually fit their timetables. I have had assistance from my PhD students with colloquia during two years after they themselves have taken the course. Due to lack of PhD students in the MOL group this is unlikely to continue. I have had the colloquia moved to latest possible time slots to ensure that course material is covered beforehand. The colloquia time is spent on exam relevant questions but very interactive. They only receive questions there, then they must work as groups discussing answers and provide answers to class. I (or PhD assistant) correct or complete answers verbally. This is the only way to receive colloquia answers encouraging them to turn up. This is not uniformly popular, and student feedback indicates they would prefer answers in advance since many cannot attend due to timetable clashes. It is not mandatory and attendance is low despite me emphasizing that the questions are extremely related to exam questions. I don't want recited word-perfect identical answers on the exam. To me that indicates very little was understood, rather only briefly memorized. Its particularly jarring when the memory fails and they mix topics incoherently. Ughh.

### Assessment and feedback

All elements of the course are voluntary except for the exam. The exam follows the MOL grading system. The exam takes advantage of the Inspira digital resources and is a mix of short essay style (with limited word count and very directed questions) and MQC and covers the entire course. Exam questions are drawn from a large bank of questions that has been developed over the past 6 years. This is added to year on year and can be drawn from to make each year's exam.

In the past students have asked that the course be run more similar to MOL200 (both in terms of multiple colloquia and test questions). From 2025 a new edition of the book (Wolpert) has been adopted which includes section specific self-test questions, very much akin to the ones used in MOL200. This fortunate addition is a solid type of regular formative feedback and has been promoted to the students enjoying this type of learning reinforcement.

The class average for this course during the last 3 years, compared with the previous 3 years, has been maintained consistently at a high C level. See Table 1.

YEAR	CLASS AVERAGE (%)
2020	71
2021	67
2022	71
2023	69
2024	70
2025	72.5

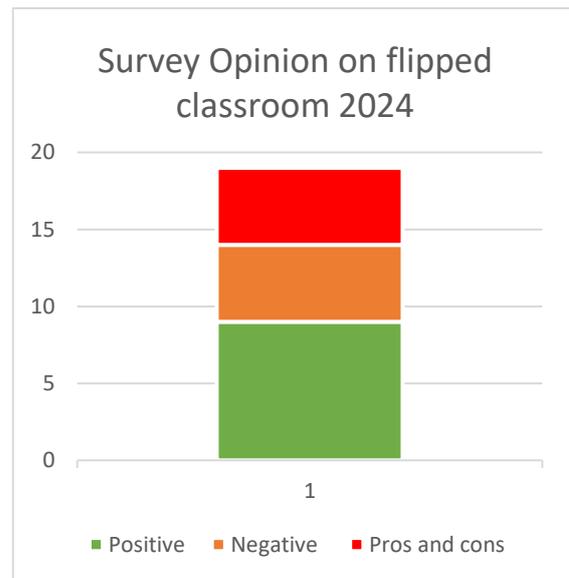
**Table 1.** Studentwebb indicates this data to be from 161 students over the last 6 years. Strykprosent during this time period is 0%.

In my opinion the current exam tests the whole course content and in general students seem satisfied with the exam, see Table 2.

YEAR	Student answered/asked	% feeling exam was FAIR	% not Answered
2023	19/23	83%	17%
2024	15/24 (18 answered)	83%	18%
2025	16/25 (20 answered)	80%	20%

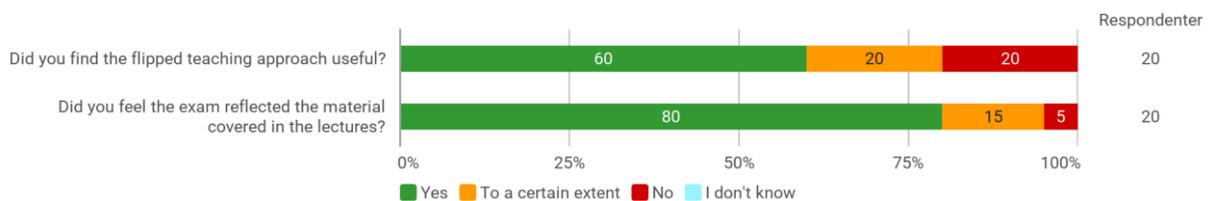
**Table 2.** Exam fairness over the past 3 years has been asked as part of the exam. It's rare that students are very negative to the exam (an exception was 2020 during home exam when a large number of questions was used to balance internet availability) but if a student has not answered "Fair" or "yes" when asked about their feelings towards the exam, this has not been counted as yes or no. If left blank it is % not Answered.

The students have been polled on teaching approaches every year, and while mostly positive to the flipped approach in 2024 the number requesting traditional teaching when surveyed had risen to 25% and quite vocal (although through official feedback satisfaction with flipped format was 60%, see [Student Feedback](#) below). In 2025 the course was run in hybrid form with both flipped and traditional teaching methods. This seemed very popular (not in terms of class attendance which was around 30% but by engagement in class) and 50% of responders liked having both options. 19/20 responders would pick flipped if they had to only have one form due to the flexibility it gave them. So the course will proceed with both forms in parallel for another year or so to determine if it has a positive outcome on grades and averages. Note the survey and official feedback values differ somewhat. In 2024 19 responded to survey while 10 responded to official feedback potentially accounting for differences.

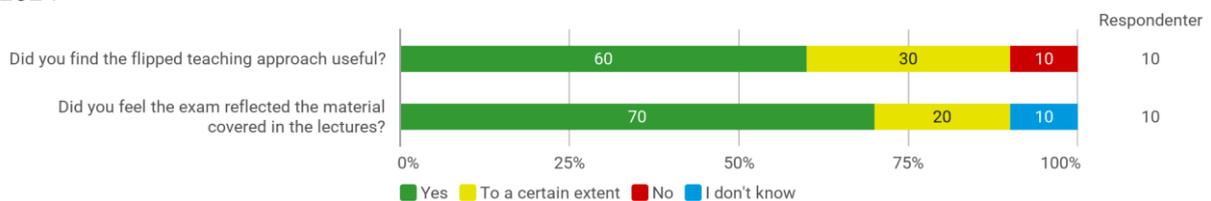


Student Feedback.

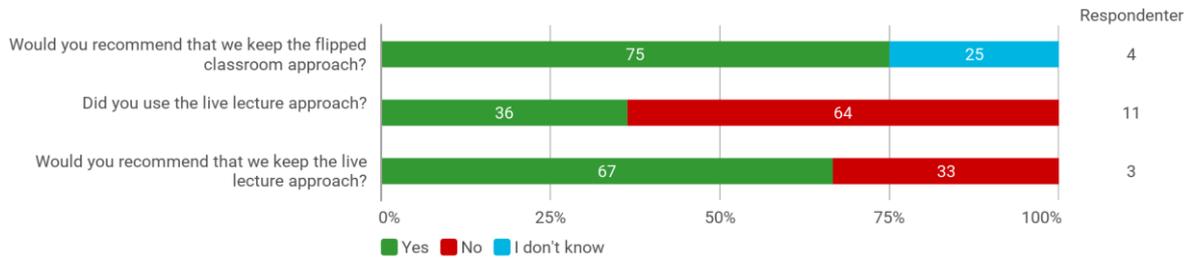
Did you find the flipped teaching approach useful?  
2023



2024



2025



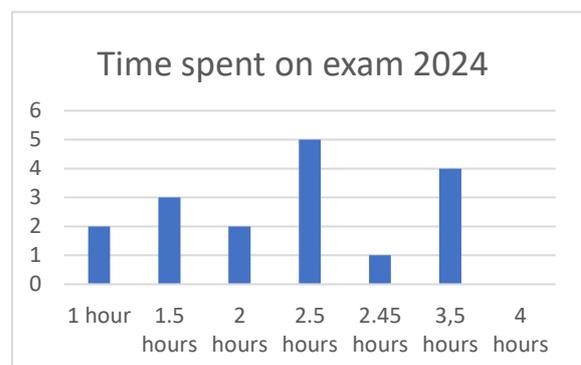
Further reflection on student learning comes in later sections on feedback and assessment/pass rates.

## Conclusion

The course continues to evolve structurally to accommodate the majority of students wants. For example, the introduction of self-test questions, the possibility to follow the course either through live on-site lectures or completely digital. In addition, year on year minor improvements or updates are made to the material taught. For example, reworking of slides, introduction of new clarifying examples of core concepts.

An important note or reflection is that prerecorded material dictates the content of the live lectures and has an inflexibility to it that I personally do not enjoy. However, it makes the material covered almost identical year to year and comparison of grades between years (and by that evaluation of teaching adjustments) more relevant. Bearing this in mind, one can conclude that since student performance has been very stable, minor improvements or adjustments have little impact on grades, although somewhat on satisfaction. Which is ok as long as the students are doing well and enjoying the course. Which for many (not all) seems to be the case here.

**2. Oppfølging av tidligere evalueringer** Feedback both in class and final student feedback report is taken into account and adjustments are made both short term and long term where a good logic is presented. For example, year on year the exam had become shorter and now most students use 2 ½ hours (average) to complete the exam. Next section includes some feedback and tracks progress year to year. Notably, more or less time used does not seem to correlate with grade.



## 3. Studentevaluering og andre evalueringer som er relevante for emnet

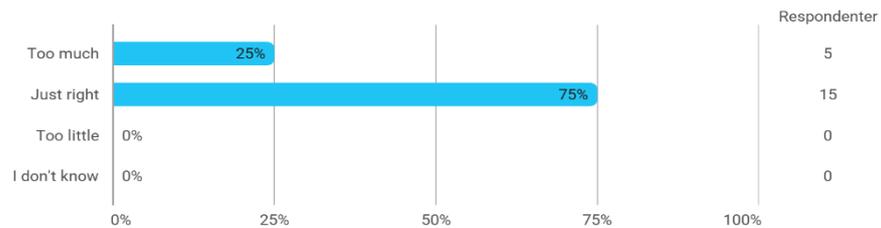
In addition to the official student feedback distributed and collected by the studieadmin I include short questionnaire at the end of exam to ask their impression of exam fairness and the amount of time it took them individually as well as leave a space for comments. This helps me track exam size suitability and student impressions of questions and overall fairness. It welcomes critique. These comments have been helpful in noting and changing/removing

unclear questions. Often feedback from students both here and in the official form are positive and/or constructive.

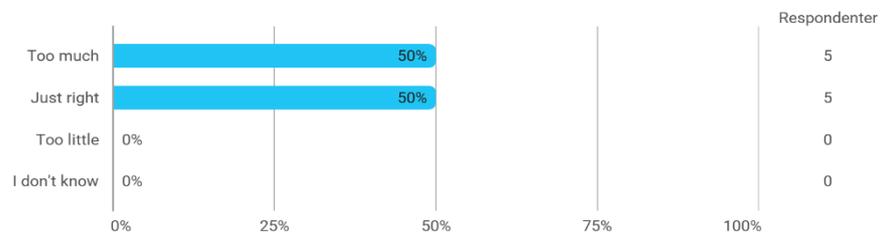
There follows a summary of official student feedback to key questions, comparing progress year on year.

**Official feedback**

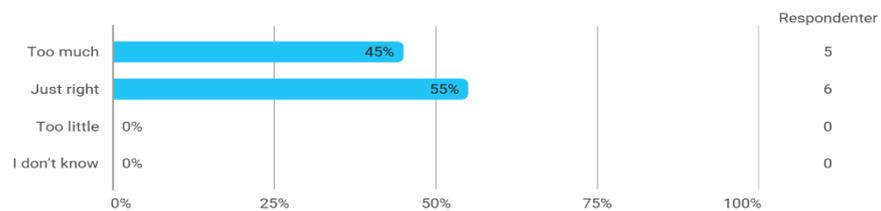
**How would you consider the work load of MOL213?  
2023**



**2024**

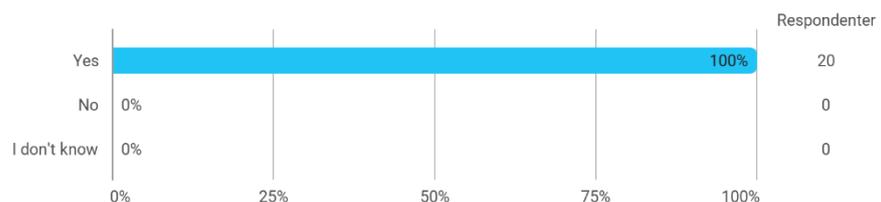


**2025**

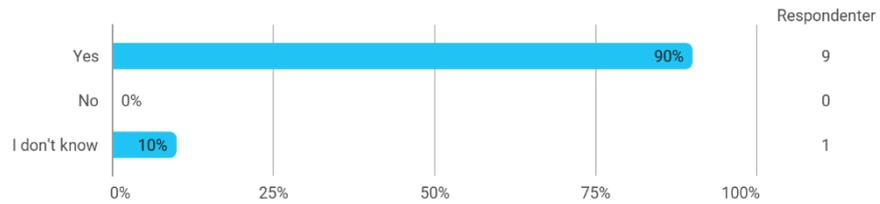


**Comment:** From 2023 on the course was reduced from 14 to 11 double lectures (at least 20% of curriculum was cut, no compaction). It is interesting to note that following this cut the numbers of students saying the workload was “too much” has increased from 20% 2021, 14% 2022 to up to 50%. The topic is complex and detailed, which I believe, rather than the workload, is part of the issue here. 11 double lectures for a 10 point course is very little in my opinion. I warn students of this feedback at our first meeting, and Master students, taking MOL300 in the same term, now that we have a lighter option for points with MOL220, actively discourage from taking this course for this reason. Some to their credit are particularly interested and accept this combination will be very demanding.

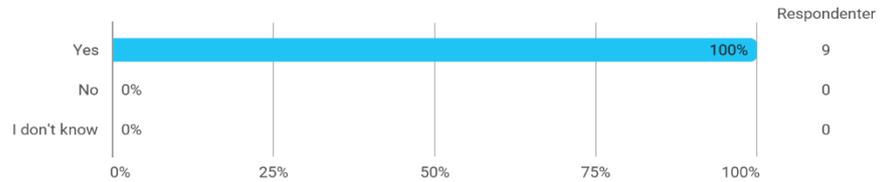
**Did you receive enough and correct information throughout the semester?  
2023**



2024



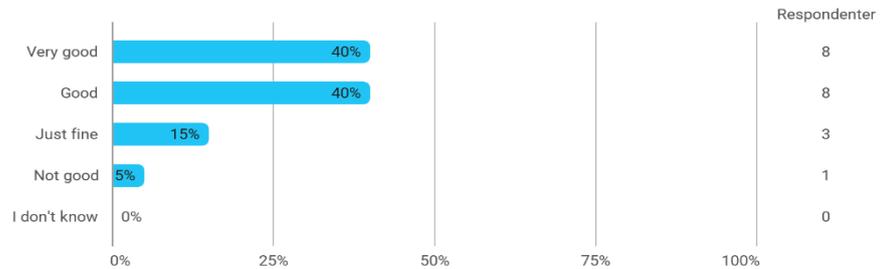
2025



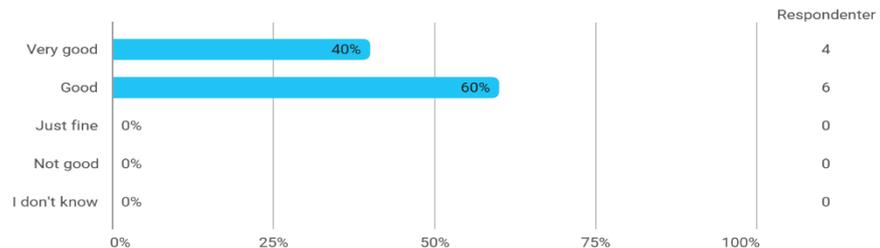
**Comment:** The structure and information flow of the course works well.

How would you characterize the course all together?

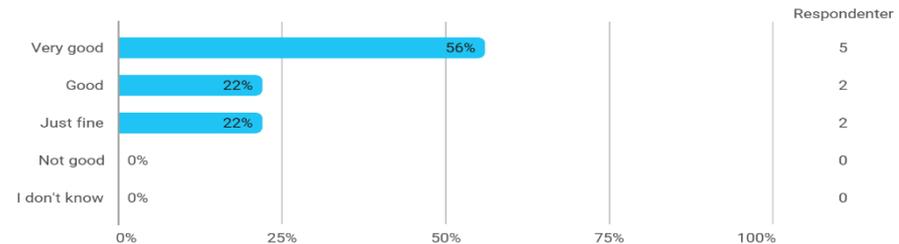
2023



2024

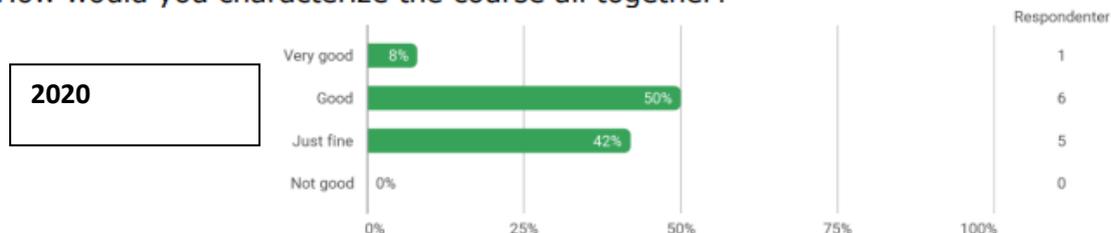


2025



**Comment:** Satisfaction levels with course are high and stable over the last 3 years, despite the “too much workload” issue the course carries. This indicates a pick up somewhat in satisfaction from 2020 (below).

## How would you characterize the course all together?



The improved satisfaction scores presumably represent the result of action taken based upon student feedback.

### 4. Erfaringer fra andre som bidrar i undervisningen på emnet, både studenter og ansatte

I have a guest lecturer from SARS, Pavel Burkhardt (1 lecture every year since 2020). He has also been involved in giving lab tours. He involved a Post Doc Anna Ferraioli in this in 2025. I think they have had a positive experience teaching the course and the students (that took the opportunity for lab visits) have been very positive about lab visits and seeing the organisms we work with. This informal setting let the students ask all kinds of questions and is a positive of the course in my mind.

### 5. Strykprosenten på emnet

No students have failed the course in my time. Also, complaints “klaging”, asking external graders to grade the exam, is quite low, with none since 1 in 22 (to the best of my knowledge). The number that take the re-exam “tidlig eksamen” are also quite low with 4 re-exam requests in 2025 being the highest I recall. There were zero in 2024 (VT2025).

### 6. Eventuell fagfellevurdering

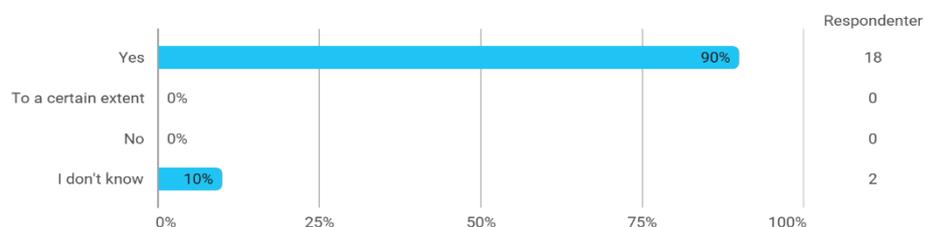
Ingen slik vurdering er gjort

### 7. Vurdering av samsvar mellom emnets læringsutbyttebeskrivelse og undervisnings-, lærings- og vurderingsformer

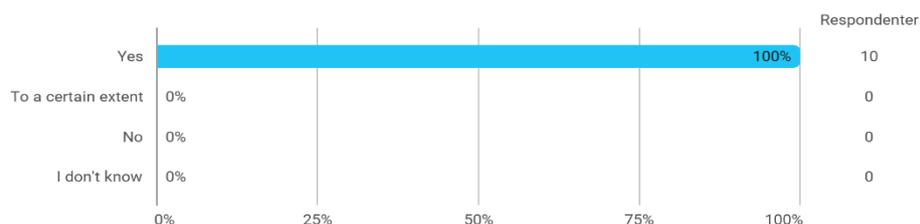
Læringsutbyttebeskrivelse er reflektert i undervisningen gjennom forelesninger og kollokvier samt arbeid og presentasjon av semesteroppgaven. Eksamen inneholdt spørsmål fra store deler av det som er definert som pensum.

Does the subject fit its description at [www.uib.no/course/MOL213?](http://www.uib.no/course/MOL213?)

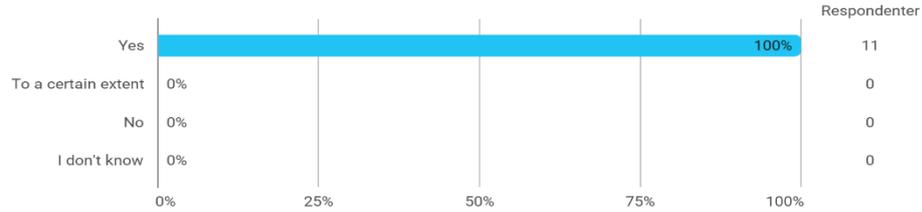
2023



2024



2025



**Comment:** good alignment between description and expectation.

**8. Vurdering av om framdrift og opplegg for emnet er i samsvar med de fastsatte målene for emne og program**

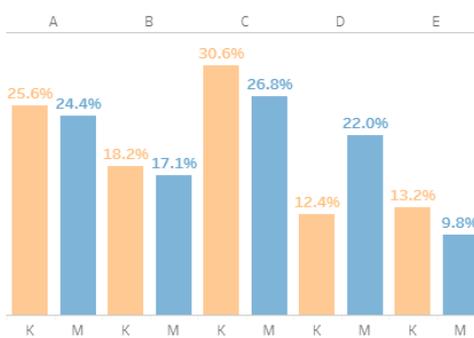
In general, as shown by both increasing student numbers and satisfaction while upholding grades and class average, the course is going in a good direction.

A course goal is to reach as many students as possible and enable them to understand complex topics, with a depth and within a broad range that stimulates their interest in developmental biology (hence the unofficial lab visits). Time however is limited, in particular during the short Autumn term and the 11 lectures are undoubtedly dense.

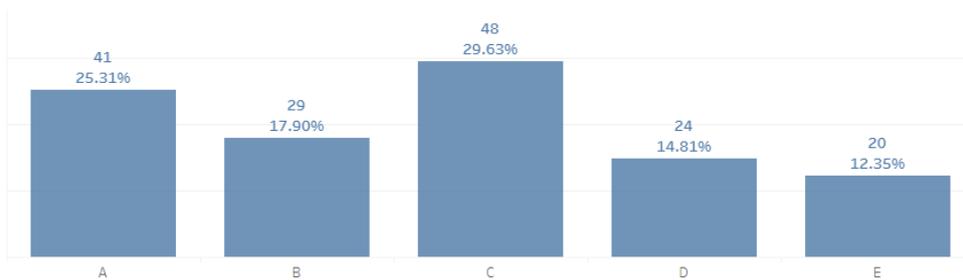
Karakterfordeling tabell

	B	D	E	C	A
2020	9	4	5	6	5
2021	4	3	2	6	4
2022	6	5	2	9	8
2023	4	5	4	11	9
2024	3	4	4	10	6
2025	3	3	3	6	9

Karakterdistribusjon på kjønn



Karakterfordeling i hele perioden.



Looking at the performance over the last 6 years as shown above, the distribution is fairly gaussian with a weight to the left (A). Women perform slightly better than men but its pretty even. Considering the complexity of the subject I think such a range is satisfactory and a goal is to maintain it, or push it even further left, reducing the number of D and E grades, continuing the approaches outlined herein (feedback, modification, improvement, accommodation etc).

I feel this is appreciated by most students. Comment from anonymous exam Survey from a student (2022) when asked if the exam time was sufficient,

*“The option to directly comment on an exam, and explain my doubts about questions in a comment box is a great thing, and makes me wish my home university exams had one more often! I thought the time was plentyful. As an exchange student, I slacked in the first two months, and used the recent weeks to catch up. At least for as much as I could. It's been truly mindblowing and wonderful diving into developmental biology, genuinely. Wish I started paying attention from the start! It made me realize this is something I might want to pursue further.”*

And 2025 *“Very demanding course, but also very rewarding once the information starts to make sense. Also, very interesting. It gave me a new perspective on how developmental genetics works, something I have been wondering about for some years now.”*

But we can't leave out the more usual *“mixed reviews”*! Which may have had the most impact on course design in recent years, especially in triggering a return to transmissive teaching in parallel to flipped classroom.

- 2023 - The lectures felt very unstructured and messy, especially the first half, and this made the course hard and unmotivating.
- I think the lectures would be much better if they were in person, and I also think that more people would watch the lectures then.
  - I thought that the lectures were hard to follow, because of structure and because Fergle speaks without point between the sentences.
  - I was missing some focus on tying everything together.
- 2024 - Essentially I think it would work better if it was closer to how Mol200 is run
- I think it is much easier to follow along in physical class sessions
  - its kinda demotivating, better to just have regular lectures
  - Having videos you can rewatch and available slides is a massive plus.
  - Jeg er veldig lite fan av flipped classroom. Blir veldig lite motivert til å følge faget slik
  - I find it easier to be disciplined and actually attend live lectures.
  - for this subject I would personally prefer more of a frontal approach, with the teacher explaining in person
  - It is good as is.
- 2025 - Ekstremt vanskelig. Tema som ikke har blitt nevnt i forelesning (on the exam)
- This semester I did not have time for meeting up at the live lectures, meaning that I would prefer recorded for this semester. However if I did have time I would prefer live.
  - I really like to go to live lectures, but if I had to choose one I would chose recorded.
  - I personally prefer live lectures, they are more interactive and the dedicated space means an easier time focusing on the material

**9. I de tilfellene det er tilknyttet praksis eller arbeidsrelevans i emnet, skal det evalueres om ordningen fungerer tilfredsstillende.** Ikke relevant for MOL213.