Report on BIO300A, Autumn 2018

This is a summary of the BIO300A course Academic writing, during autumn 2018. We first describe the course design (Appendix 1), the learning activities and the assessment, and our own and the student's interpretations (Appendix 2 and 3) about what worked or not, including some thoughts on how to change the course next time.

Course responsible: Florian Berg and Øyvind Fiksen

Teaching assistants: Sissel Norland, Rebecca Marie Ellul, Heidi Kristina Meyer; Patrik Tang; Hilde Strand Dybevik; Martine Røysted Solås

The course design. We redesigned the course from earlier versions, and developed new learning outcomes:

After completing the course, you should be able to:

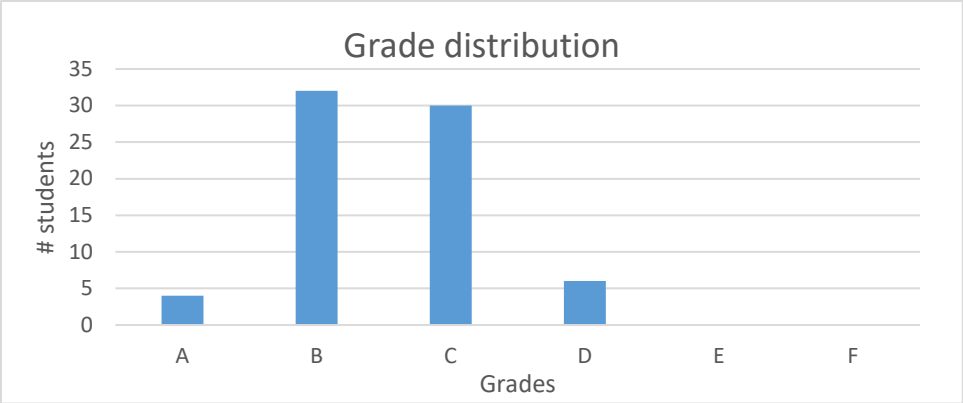
1. plan and carry out all stages of your own MSc research project
2. present their research results effectively in an oral presentation
3. write up their own research projects in a thesis or article format
4. draw conclusions from results (e.g. graphs of data)

We attach a detailed overview of the course activities and schedule below (Appendix 1, Outline BIO300A). The main elements are summarized here:

Learning activity	**#**	**Time factor**	**Hours**	**Grading weight**
Class meetings	14	2,0	28	
Group report	1	34,0	34	30,0%
Field work	1	8,0	8	
Term paper	1	40,00	40	40,0%
Peer review	2	5,0	10	15,0%
Presentation	1	10,0	10	15,0%

In total			**130**	**100,0%**

The assessment led to this final grading pattern:



What did we do? How did it go?

We started out in late August by going through the course plan and divide students into groups, and introduced them to writing the section Materials and methods in a thesis. The groups were sorted by study direction, with 4-5 students in each. Then we let the groups out to find data for their report, from publically available databases. Some collected their own data during other courses (marine biologists, microbiology). We had a long period early in the course when students focused on the course in statistics and R (BIO300B). We encouraged the students to use and analyse in this course, but we did not provide a plan for this, and our impression was that the two courses did not connect very well.

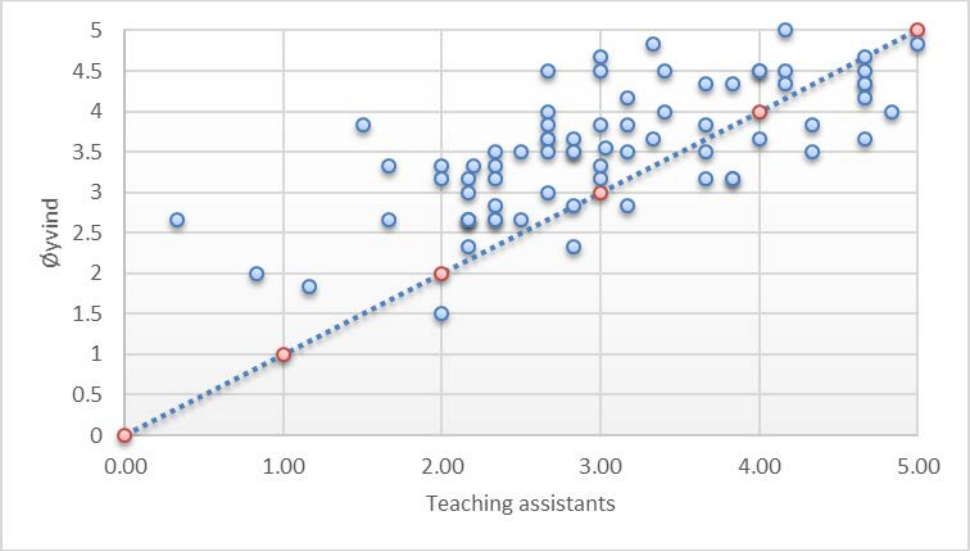
In the first place, we underestimated the struggle students would have in defining their own research question and further collect appropriate data to answer this question. All groups were assigned to one teaching assistant who should assist them with writing up their group report. Even though, background information on essential aspects for the “Material & Methods” as well as “Results” part of a scientific report were provided via lectures, most student groups struggled to meet the basic criteria. These problems might arise due to the large break of 6 week between the two introductory lectures and the following lectures on “How to write results”. For the next year, the plan should be to have more regular lectures and focus more on the essential parts, rather than given a large overview. In addition, the connection between BIO300A and 300B needs to be re-evaluated.

We met the students again in late October, and then had a series of lectures on academic writing, IMRAD, scientific process, finding and using scientific literature, supervision, science-policy interface and similar. We had not aligned these lectures with any assessment activity or exams, assuming that master students would attend the classes despite the absence of relevance to assessment. However, these lectures were quickly abandoned by the students, and soon only about 10-20 students out of 85 showed up. In the evaluation form, students point at the early morning lecture time as one possible reason for this, but given that other courses with 08:15 lectures do not experience the same, we suspect the lack of relevance to grading is the main explanation.

The other main activity was an individual written assignment, as training in writing an introduction to a thesis, of 2-3000 words in total. The students could choose their topic, and were encouraged to use their thesis-topic to save total workload. However, few had planned a specific topic within the time limit. Still, our impression was that this did trigger some more

thinking about where they were heading for the master project. The term paper was uploaded to MittUiB, and then redistributed for peer review by two students, then a comment by one TA and the teacher in the end. Both the introductions and the peer-reviews were quite good, and this seems to be an efficient way to get massive feedback from others. We should have included a revision process as well, but it is quite intensive both to the students and the teachers with the time this takes as it is.

All of the term papers was assessed and scored by Øyvind Fiksen, but TA's were asked to score the text they commented as well, independently, as a check on the reproducibility of the assessment. Here are the data that emerged from this:



The line in this diagram represent the target where assessments made by different teachers are equal. Clearly, the teacher (Øyvind) provides higher scores than the TA's (more points above the line), but there is a clear correlation in the assessment. Some individual differences between the TAs were also evident in the data (not shown).

What should we do differently next time?

The feedback from the students are generally positive, but many pointing out that the course is intensive for 5 ECTS. Possibly is the group project and the written assignment underestimated in our time-estimates, especially since students struggled to make use of their own master projects for the writing. Here are some ideas for next time/future courses:

1) Reduce the length of the term paper to maximum 1000 words, and let it be only introduction.
2) Reduce the peer-review and presentation part to count 10% each, the term paper to 30% and then have 20% left to a few short assignment connected to the lecturing. For instance, short specific writing exercises to be handed in, and an assignment about science, supervision, master project, or other issues that is treated in there. Alternatively, some individual/team scratch-card quizzes in class that count a small fraction of the final grade.
3) Work with bioWrite and bioST@AT to develop relevant resources. Focus more on descriptive statistics, developing good figures, and less on statistical hypothesis testing?

4) Integrate better with BIO300B, have a dedicated BIO300B-component directed towards the data presentation and analysis that is part of BIO300A. Spread the lectures in both courses over a longer period in time to make it possible.
5) Alternatively – take the whole group out of town for 1-3 days and dropping the lectures? A more intense and social event that covers it all? This requires some funding and organization. Or just three full day seminars – with student activities included, distributed over the semester, including pizza or lunch? This could be combined with some group activities/tutorials where students meet before they submit smaller assignments like rewriting a poorly written piece of text, plot a figure of data and figure text, write an abstract etc. – possibly connected to the report assignment?
6) Make one single report with all elements in place? One possibility is that students write an individual introduction and discussion, and a group MM and results - all on the same topic. First, the groups have to decide on a question, then they can write an introduction individually, find the data, develop a joint MM and results section, and finally an individual discussion. This model reduce the free rider problem. The peer review could be done on a draft version, with a possibility to revise and reply to comments, before the final version is delivered for assessment. This require an early decision on topic, and streamlining of data, so that the report is ready in time for peer review and revision.
7) We need to train students in group work, and emphasise the importance of this skill. Perhaps will we also be allowed to let students assess each other's contribution to the group activity? Maybe we should give students active roles in the group also, have one group leader, the lead author of the report. A challenge here is that teachers need to strengthen our knowledge in cooperative learning – but our ambition of making teamwork an integral part of BIO300A remains.
8) We noticed that students in general had gaps in their it-competence related to interactions with the UiB resources. For instance, many did not seem to know that they had access to servers with regular backup through their student login, or that the UiB resources could be accessed with VPN connection. We need to make sure that all students are aware of this, and include a module in MittUiB with all necessary information.

Suggestions from one of the TA's.

1. I think it is super important for them to learn how to write an intro and conclusion, but perhaps instead of splitting the group report and individual essay, combine them so they only have one big assignment rather than 2 and they can get the experience from writing a whole report rather than the disjunction. This was one of the biggest comments I had when I met with all of my groups. That and the fact that there was a disproportionate amount of work between group members, but none of them wanted to 'publically' mark down who did not contribute enough during the process (in the order of the co-author list) on hand-in. I understand it is important for them to learn how to work in groups since that will happen in their career, but I think the assignments should be combined to one big assignment in more of the AIMRD style, either as a group or an individual report instead of having the two assignments. Then peer-review process could be longer and we could have two/three days for presentation/poster session rather than just one half-day.

2. The students are already complaining that there is too much workload, adding more short assignments is not going to help, even if you reduce the word limit. I do think it could be useful to have short assignments based on lectures though, but instead of them handing it in to us to grade, make it more of a discussion activity on mittuib where we have like three discussion points people can participate in each week or every other week based on the lectures and the students have to comment on at least one of them. I did this during my bachelor's degree for a few of my classes, and it was a good way to get students involved and to pay attention. Or have short quizzes at the end of the lecture and the students would only be able to miss like 3 or 5 of the lectures (depending on how long they are).

3. There really should be a tie-in point between BIO300B and BIO300A, but it should also be emphasized to the students that they do not have to actually use R for their stats, just a suitable statistical program.

4. I am not sure how a 1-3 day trip out of town will really help? Unless they all collect their data/work on their project together then.

BIO 300 autumn 2018

Aim and content

The course aims to give students the knowledge needed to plan a basic scientific study, carry out appropriate statistical analyses, interpret results and report these in written and oral formats. The course is an introduction to the formulation of hypotheses, design of research projects, and scientific writing. Students will get practice with scientific reporting through keeping a record of methods and results based on their own field project data sets.

Learning outcomes

After completing the course, you should be able to:

1. plan and carry out all stages of your own MSc research project
2. present your research results effectively
3. write up your own research projects in a thesis or article format
4. draw conclusions from results (e.g. graphs of data)

General info

First meeting: Thursday 16th of August, 12:15. Thormøhlens gate 51 (VilVite), Auditorium. At VilVite, two stairs up.

Class activity: We prefer student-active learning, and the time in class include much group discussions, and some tutorials related to the group assignments and projects. You will only encounter a few traditional lectures. It is more engaging and fun to talk and discuss with others than to just sit and listen, and you learn and remember more. Therefore, attend classes and prepare for it.

Work in groups: At the beginning of the semester, we split all of you into groups of 4-6 students. You work in these groups throughout the course, in class and within the group projects. Parts of the class activities are preparations for the projects, and you can work with the projects in some of the class time, with supervision from the teachers and teaching assistants. Working with others is an important skill. In fact, employers are looking for collaborative employees, and your ability to function within a group is a key success factor in academic life.

Teachers: Florian Berg (post doc, course leader) and Øyvind Fiksen (professor, course leader).

Required reading: We use no specific textbook for this course. However, we recommend looking into library web pages for some general writing advice (e.g. “Guides to Better Science” by the British ecological Society, or the “Ten Simple Rules” series published by PLOS Computational Biology. In addition, you are going to read several scientific articles during the course.

Workload & assessment

Assessment: Various individual and group assignments. See the table below for more details. We provide the exact criteria and rubrics for all assessment activities as the course progresses, on MittUiB.

Workload: Approximately 130 hours is the standard workload for 5 ECTS. The table below specifies the estimated workload on each learning activity, and its particular weight in the final assessment.

Learning activity	**#**	**Time factor**	**Hours**	**Grading weight**
Class meetings	14	2,0	28	
Group report	1	34,0	34	30,0%
Field work	1	8,0	8	
Term paper	1	40,00	40	40,0%
Peer-review	1	10,0	10	15,0%
Presentation	1	10,0	10	15,0%

In total			**130**	**100,0%**

Learning activities and outcomes

Class meetings/lectures: We will meet regularly and work our way through the course content. You find the schedule for these meetings in the table below. We announce changes or deviations at MittUiB, so make sure you follow the information there.

A central goal of the course is to learn to 'think, read and write critical' in a scientific world. In the written assignments and presentation, you have to demonstrate this knowledge, and during class meetings, we will prepare for it through organized group discussions and tutorials.

Learning outcomes developed here: 1, 2, 3, 4.

Group work: The group work involves planning and conducting your own research/field project. The main goal for this is to conduct the fieldwork and to present you results in an efficient way, both written and oral. For the group work and report, each group will be assigned to one teaching assistant who will help you during the semester.

Learning outcomes: 1, 2.

Term paper and peer-review: You also get training in writing a scholarly text on a scientific biological issue. There will be two options to choose the topic for the term paper: (1) your own master project or (2) we will provide you data. Start thinking about a theme early – you can suggest a theme in MittUiB and receive comments and suggestions from the teachers until 25th of October, which is the deadline to decide on a topic.

You also have to read and comment on two another student assignment (peer-review). This peer-review is part of the final grading (15%). In addition, you will receive comments and feedback from other students and the teachers on your own assignment. Revising these comments is optional, but can be beneficial.

One of the core academic values and an inherent element of a scholarly text is to give credits to your sources and earlier work, and to be able to separate own contributions from others. We routinely check all assignments for plagiarism. Remember, plagiarism includes copying text (including translating) word by word from other sources, even if you refer to them. The art of the game is to write well referenced, but *independent* texts – where you develop your own perspective on the topic.

Learning outcomes: 3, 4.

Detailed work plan BIO300 2018:

Week	Date Time	Who	Theme	Place
33	16.08 12:15	FB	Introduction. Forming groups. Learning activities.	VilVite aud.
33	17.08 12:15	FB	Writing I: Material and methods	VilVite aud.
34-41	20.08 12.10	ST	Fieldwork	
43	22.10 08:15		Writing II: Results	VilVite aud.
43	23.10 12:00	ST	Submission I: Material and methods to TAs	
43	25.10 08:15		Writing III: Introduction	VilVite aud.
43	25.10 12:00	ST	Deadline topic selection "Term paper"	
43	26.10 16:00	TA	Feedback I: Material and methods from TAs	
44	29.10 08:15	FB	Plagiarism	VilVite aud.
44	30.10 12:00	ST	Submission II: Results to TAs	
44	01.11 08:15		Critical reading I	VilVite aud.
44	02.11 16:00	TA	Feedback II: Results from TAs	
45	05.11 08:15	HF	How to cite: using the right references	VilVite aud.
45	08.11 08:15	ØF	Writing IV: Discussion	VilVite aud.
45	09.11 16:00	ST	Submission III: Final report	
46	12.11 08:15	VV	Scientific misconduct: What is it, why does it matter & how do we deal with it?	VilVite aud.
46	15.11 08:15		Critical reading II	VilVite aud.
47	19.11 08:15	FB	What is peer-review?	VilVite aud.
47	22.11 08:15		How to present: Presentation vs. poster? Or something else?	VilVite aud.
47	23.11 16:00	ST	Submission IV: Term paper for peer-review	
48	26.11 08:15	VV	How to be successful supervised!	VilVite aud.
48	29.11 08:15		Open session	VilVite aud.
48	30.11 16:00	ST	Feedback III: Review of term paper	
49	07.12 08:15	ST	Final presentations	HiB – Stort aud.
49	07.12 18:00	ST	Submission V: Response letter to review	

FB = Florian Berg
ST = Students
HF = Hege Folkestad
ØF = Øyvind Fiksen
TA = Teaching assistant
VV = Vigdis Vandvik

Lecture
Optional
Mandatory

Appendix 2. Feedback from students after the course

What did you expect to learn from this course before you started? What generic skills did you think you needed to do your Master project and thesis?	What I liked about the course	Things that should be changed or improved	We included a series of lectures as part of the course, mainly on topics that should make it easier for you to succeed in writing your thesis. However, we had very low attendance. Our colleagues tell us to make these lectures mandatory, because now they have to give all this information to you one by one. What was the main reasons for not attending? Anything (besides making it mandatory) we could have done to increase attendance?
I expected to get a brief introduction to academic writing and reading. These skills were required mostly before this course, and not during or after it.	I liked the individual assignment and the feedback/review process	My grade was severely affected by the group report. My group suffered from several students "not bothering" to work continously through the semester. The group was disfunctional, though i tried to gather the other group memebers for sessions, it was impossible. The group task suffered severely from this and it affected my grade towards the final grade.	Decrease number of lectures or attendance based work. that would litterally solve your problem. I think students attended the amount they felt they could without it getting in the way of other subjects. This course had far too much going on, it seemed unstructured and messy at times.
I think that the name of the course is completely inappropriate and in the description of the course, it is little explained that the main scope of the course is literally how to write a scientific paper, peer-review and make a presentation/poster.	1) the course touched topics that personally I've never heard before. Lectures like the process of peer reviewing, ethic, critical reading, and scientific methods were all very useful. These are topic that no one ever talks about in an informative way, but that are super important in the everyday life of a researcher. 2) I liked how different professors/people were involved in giving lectures. 3) I liked how the professors followed the students with emails and descriptions of the ongoing assignments.	1) citation platform lecture: I think it is really important to ask the class what are the most used programs for citing before to do a lecture about them. The lecture on EndNote was little useful if Mendeley or other programs are more used instead. After obtaining what is the most used program by the students in the course, organize a lecture on it to describe how it works would be the best. 2) Sometimes the scope of the writing was mixed between writing a master thesis/report and writing an article. I think would be best to focus on how to write an article more than how to write a report or a master thesis in general, as it was done for most of the time during the lectures. 3) Maybe a lecture to learn how to interpret the results of a research would have been very very useful. 4) I understand that working in a group can be useful and the amount of work for professors are less, but I find that having a grade depending on other people is very little convenient. 5) very very important, maybe at the beginning, saying how figures and tables should look like.	
The course surpassed positively all my expectations and the topics explained during the lectures will be useful and hopefully sufficient to perform a good Master project.	4) I loved the last lecture when presentations and poster were showed together with some food and all the people.	6) Of little importance, but still... The course required continuous attention and effort for the duration of the whole semester, apart from the lectures. The load of work was way over 5 credit points even more if someone wants to achieve high scores. 7) way too much importance to plagiarism and copyright.	I personally think that the lectures were great... Obviously a bit heavy to have at 8.30 in the morning, but definitely worth it for the motivations I stated before.
I had no expectations of the course, only took it since it is mandatory. The purpose of the course was quite unclear. To do my master project I think I would need to practice writing, finding literature and get some tips on where to look for a project.	I liked that although the workload is a bit high with two assignments, they are quite small and the essays are quite doable. I liked that there was extensive help and quick responses from teachers and assistants. I liked the presentation day. It's interesting to get a view of everybodys project and see how and what other poeple has done. Thanks for the coffee and cake, much appreciated.	Instead of (or in addition to) having peer review on term paper, assing group reports that groups can peer review. This will help the discussion after presentations as the reviewer naturally can start up the questioning and feedback. Talk to eachother. It's hard too understand the assignment and peer review criteria when teachers assistants doesn't have the same view on the assignments or if the two head teachers promote two different styles of writing. Try to make power points and assignment criteria understandable on their own. You need to be able to read and understand your powerpoints and criteria without asking questions if you're not able to meet up. Try to set deadlines a bit earlier and make use of the four weeks of nothing in the beginning. At least get criteria for term paper up early so you can lay out the work on your own. Students ,who haved not started on their final Master project and thesis, should be barred from attending the course. The work load without being able to piggy back on the Master project or thesis is way more than the 5 points of study credit. Drop the group task and make a two step submission of the individual task, pre- and post peer-review.	Have to get up at 6 to make to 8.15 lecture and my motivation don't get higher when my friends tell me they are useless. Didn't attend lectures so can't say anything about the content, but if I was going to attend them they need to be earliest 10 am. Since you have all of the master students in this course and scheduling the course in hours when everybody can attend is probably impossible, you might wanna post powerpoints which are understandable and clear without an oral presentation to get your message across.
	A lot of good tips about scientific writing and how to work with the Master project and thesis.	The presentation day should have been held prior to the start of the exam period or at the start of next semester (not a problem if the students only have this subject and the Master project/thesis.	Probably because a lot of the students have followed other subjects or that the few lectures that they did attend were about topics that have already been covered in lectures in lower level subjects. Because it is sometimes unnecessary like the first lecture: get to know each other..wast of time - group work in the lecture ...boring - Florian never seem happy with us, while Øyvind was more nice to us and optimistic - that both of lectures started at 8:15 - the information given in lectures you could easily know before or just read the pp.
How to write master project and thesis. Knowledge about the topic and how to write	Nothing	Less assigmenets	I think you should give more credits because this course had a lot of work compared to other subjects at 5 credits or the same amount of work as 10 credits subject...
From this course i expected to learn the correct way to write a scientific text, how to handle data and general advice as to how I should proceed with developing a master thesis. Besides the related knowledge on the subject and laboratory techniques, I thought I would also need a better understanding of source siting, proper writing techniques and master creative thinking when it came to developing my thesis.	The course was very informative on how to master scientific writing, and I really liked that the course was not a streamlined process and forces us as students to be independent in our work. The lectures were very good and the TA's were very helpful (Big shout out to Patrick).	One of my biggest issues with the course was that there were no lectures for an entire month. I know that this was due to overlapping courses(bio325?), but maybe there could have been extra lectures for the students which were unable to attend due to this course? The group project was in many ways a challenge, as it was quite hard to find relevant raw data. I can see the value in having to interpret other peoples raw data, but due to the lack of data relevant to our masters direction we had to go for something which was not quite relevant. Maybe there could be raw data produced from the university available so that all students got to analyze data relevant for their masters? This part of the course may have actually been really good for everyone else and me and my group just kinda did a bad job. I would also have liked it if we had written two term papers in this subject and then had two peer reviews. I personally did not feel like i got the most out of my peer reviews by not trying to fix the issues which they had with my paper. Would be nice to have another chance to learn from my mistakes and thus improve my scientific writing. This also applies to the other students as well, as the peer-review process really did demonstrate that some students could use an extra guiding hand in order to become better at writing. (Probably applies to me as well) To criticize the teaching staff, I will say that it is quite odd that the main teachers Florian and Øyvind were not in agreement over how several things should be done. I understand that there is not really a "correct" answer all the time and things can come down to personal opinion and preference, but the teaching staff being in disagreement over certain matters makes it quite hard for us students to know what is right and what is wrong.	Tried to attend most of the lectures, but had to skip some due to overlapping lectures, sickness and the like. There is also the concept the 8 am Monday lecture which i know for a fact that neither me or most of my colleagues are too fond of and was probably a good reason for there being such low attendance on these days. I believe that a big problem with attendance was that many people believed they already "knew" what was being spoken about in the lecture, due to writing in previous courses. Maybe make it more clear to people that what they learn in these lectures is not the same as what they have had in previous courses because it was rather obvious that some students did not "know" how to write As you have said, people skipping lectures means that TA's and supervisors will have extra work on their hands. Making it mandatory would in my opinion be a good way to go forward, this is a matter of great importance to the rest of the students master projects and if people are willing to dedicate thousands of hours to their master projects, they should also be willing to dedicate a couple of hours a week to lectures. All in all I will say that the course was a very valuable experience and I believe it will be very helpful in my future work with a master thesis

From the course I expected to:

-learn how to structure a thesis in a good manner
-use litterature in a correct way
-develop my critical thinking skills
-present results in forms of tables and figures in an appropriate way

Skills I thought I needed:

-good scientific writing skills
-good referencing technique
-able to illustrate my findings in a good way

-your effort to redesign this course
-the group project + presentation

I see were you wanted to go with this course design, and I get how important it is to begin thinking about our writing early in the masters. I guess the supervisors will thank you for this effort! However, the workload of this course is huge. Even if you considered the regulations for 5 ECTs, it was intense.

I found it very OK to include the group work with optional deadlines to give us an idea of how it is to receive feedback during the writing process. Our group got to conduct active sampling and got a good idea of how a big project like our master thesis might be like. I found it nice to combine this work with posters and presentations since this is a relevant part of our thesis.

The individual term paper, on the other hand, was challenging in combination with deadlines in BIO325. I know that your aim was to introduce us to the world of peer-reviewing, but there must be another way to this.

-every lecture was at 08.15. I understand that it might be hard to fit everyone's schedule but this is very early. I am a semi-earlybird but found it hard to motivate myself going
-interactive sessions are a nice thought and can be very relevant, but maybe not at 08.15
-sometimes I felt intimidated by the way the lecture was hold. A serious topic can be presented in a nice and interactive way without scaring us students ;) Introduce us slowly to this scientific battlefield....
-the semester itself was very intense and I was very busy with the other courses in addition to this one - sometimes I just did not prioritise lectures

About making the lectures mandatory: Please don't. It is really hard to get through this semester and I feel everyone benefits from this course one way or another. We have the lecture notes and I will definetely use these when starting my writing process. Mandatory lectures are old school - try to schedule them a bit later and motivate rather than scare us to write :)

Appendix 3

From the 'open channel' (Two student responses)

"I have never had such a heavy workload in a subject, and this is not a regular workload for a 5stp subject. The group report itself + lectures would be enough to make a 5stp subject from what I am used to. Second of all, it is really unfair of you to allocate ""30 hours"" to one task and ""40 hours"" to another. This is not how it works. We spent way more than 34 hours on our group report, because it was very demanding. Doing the codes took most of the hours (about 15), and I don't even know if that was something that was taken into consideration when allocating time. Or the fact that making a presentation was an additional 2-5 hours spent on this task.

Regarding this, I was not the only one to react when asked not to attend R club for help. We too understand that this is not what the club is for, but we had no other way of making our codes. The group report calls for things we have no way of doing without help or spending countless hours working on it and struggling our way to a solution, which again makes the time allocation useless and unfair to the students. If I can make a suggestion for next year it would be to hire in TAs with experience in R, and preferably have your own R club or writer's club. That way you can show students how you want them to make their graphs, as we spent hours making graphs that we were later told wasn't very publishable. I don't think it's very constructive to show this to us long after the group report is submitted.

I did not find that the course leaders were very lenient about offering help when asked, as they would mainly just refer to pages/things that had already been said (and as a fourth year one would of course have done this research before actually asking a question, so this is neither helpful nor constructive). I understand that it is necessary that we do our own research, but when presenting a question in a way that makes it clear that one has done the necessary research, it seems almost insulting to just refer back to something that was the background for my question.

The scientific essay was a very diffuse exercise which many of us have never done before, and you would barely tell us how to write it or give examples, which I believe would have helped a great deal. Now that I have gotten feedback from the course leader I can obviously see that he had something different in mind than what I wrote. Interestingly, the people who did the peer review applauded the same parts of the essay that he criticized, which indicates that they didn't know how to write a scientific essay either.

I was initially happy with the peer review exercise because I felt like I learned something from telling others what was good and lacking from their text, but with the paragraph above in mind, I obviously had no business correcting someone else's essay because I apparently did it wrong myself. I think for next year you could benefit from uploading an example of a scientific essa so that students may actually understand what it is, and what they are supposed to include. I think that way they can learn a lot more because they also know what to look for in their own text and in other people's text.

I also disagree on your choice not to allow us to submit our essays to TAs during writing, if needed. The point of the class is to learn how to write those things, and if you won't allow us to get feedback underway so that we can make adjustments accordingly, there's really no point. I could take suggestions and learn from the people who did the peer review for my paper, but I really don't see the point when they have much of the same background and prerequisites as I have for writing the paper. So instead, I have pretty much only the feedback from the teacher so far, that I can use to make changes. But I think I would have learned so much more if I had gotten some of this feedback during the writing process, so that I could adjust my essay accordingly.

TAs and course leaders gave very different feedback on the report submissions. Things were moved between different sections by one person who reviewed the paper, and then moved back to its original place by the next person reviewing it. This was very confusing and in the end we decided to go with the feedback of the course leader, but I feel like this indirectly undermines/invalidates the TA's feedback. I guess that a lot of the feedback is based on acquired taste, but we're here to learn and we often got so confused that we ended up deleting entire paragraphs because different feedback said different things about it.

That being said: I have learned a bit about what is expected to be included in the different sections of a thesis, but this is the bare minimum of what I would have expected as a takeaway from this subject. When considering the amount of lectures and the workload, I would evaluate the learning as being inefficient. A lot more time than necessary was spent on struggling with R or similar, and I feel like if we had been allowed to attend R groups or had our own collective study group for the course, our takeaway from the subject could have been so much higher."

****

"there should be an option for peer evaluation of your group members and yourself after the report is handed in but before the grading (and if there already is: my bad). for example, contribution to discussion/writing, attending study group meetings, and doing homework that has been agreed upon in study group.

We're experiencing that not everyone in the group is pulling their load (or doing work at all), and should this continue, then getting the same grade as them sucks"