Course evaluation GEOM11 2017

Introduction
The 2017 edition of GEOM11 is the first as it replaces GEOM05. The two courses have many curricular similarities, but there are a few major differences between the two courses. GEOM05 was given the first half of the autumn term, while GEOM11 was given during the second half of the autumn term (i.e. Oct-Jan). The most significant change was the new fieldtrip to Tenerife to study the volcanology of the island, which replaced the previous fieldtrip along the Swedish west coast. The fieldtrip to Tenerife enables us to cover aspects of volcanology and igneous petrology that cannot be illustrates as well in an area that mostly consists of polymetamorphic intrusive rocks.

This course evaluation is based on the responses, comments and suggestions made by the students in a course valuation format directly after the written exam of the course. Additional comments were given in a round table discussion format.

Student course valuation summary
In general the students thinks that there is a good balance between lectures, exercises and presentation material (lecture notes et.c.). However, a number of students would like to have a few more exercises. Explanatory notes for lecture slides with little text is desired and more specific additional reading suggestions, e.g. rather than referring to a book title, we (lecturers) should advice on specific chapters or pages. Provide solutions for all home assignments.

The students generally think that the course is well structured and that the content is relevant for the course goals. Suggestions for improvements are more exercises on radiometric dating and tracing of geological processes through radiogenic isotopes. More integration (through exercises) between crystallisation processes and petrography is also suggested. Video on key diagrams such time-isotope ratios or phase diagrams would be beneficial.

The students are well pleased with the course literature, although we should bear in mind that it does not cover all parts of the course. Additional material such as videos, links and other resources on Live@Lund was much appreciated. There was a general opinion that the instructions for the Gran Final could be more detailed.

The students are generally pleased with the teaching methods for the course; they particularly liked the electronic response cards. One suggestion for improvement is to go through exercises and home assignments. Video lectures are also appreciated. Lectures and exercises are generally well structured and pedagogical, although there was a bit of overlap between some isotope lectures, and that some of the statistics felt a little rushed. Some also express that thermodynamics might need a little more time.

The highlight of the course was the fieldtrip to Tenerife, but the students point out that many aspects of the course came together during the trip, which was very illustrative for a number of processes.
All students that responded the course valuation felt that the course met their expectations and that they are satisfied with their learning outcomes. Some note that the course is very demanding, but thought this was ok since it was clear from the start. The main suggestions for improving the course are:

- More exercises.
- Maybe more group discussions, perhaps together with the lecturer.
- Separate the Gran Final further from the exam.
- Upload (video) solutions to home assignments or separate sessions were the lecturer go through the answers.
- More quantitative feedback on performance.
- More flipped classroom style lectures + exercises.

Reflection and summary
We agree with the students that the course would benefit from separating the written exam from the Gran Final. One potential option is to have the written exam relatively early in the course, followed by the Gran Final work that leads up to a concluding fieldtrip. In this way, we can prepare the students better for the fieldtrip through their tasks in the Gran Final, and the students need not to worry about the exam, as it should be past them.

The suggestion to produce more video material and more exercises is encouraging and we are positive to this, but note that this will inflict on the time available. Perhaps more flipped classroom style lectures would enable more integration between exercises and lectures, but also require more preparatory work from the students. This is an option that we will consider when revisions are discussed in preparation for the next time the course is given. This setup would also enable us to provide more quantitative feedback quicker to the students. Single best answer multiple-choice self tests might provide an additional way to assess progress during the course. These self-tests can be organised to mimic written exams in both context and form, thereby providing the student with a direct and quantifiable assessment of their progress.

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