NTNU
Norwegian University of
Science and Technology

Faculty of Social Science
and Technology Management
Department of Geography

Department of Geosciences
University of Oslo
Pb 1047, Blindern
03016 Oslo

Associate professor
Ivar Berthling
Telephone no.: +4773590843
E-mail: ivar.berthling@svt.ntnu.no

Dated:	Our ref.:	Your letter dated:	Your ref.:
26.09.2011	IB		

Evaluation of the MSc programme in Geosciences, University of Oslo - Report from external panel

The panel is elected by the Department of Geosciences, and consists of the following members:

Ivar Berthling. Department of Geography, NTNU (Leader)
Sigbjørn Grønås, Geophysical Institute, UiB
Elin Langsholt, NVE
Rolf Mjelde, Department of Earth Sciences, UiB

Summary

The Department of Geosciences is running a Master programme on a high international level. The percentage of students accomplishing a Master in time is very high, and has also been rising during the evaluation period. This is particularly impressing as the numbers of students have been increasing during this period, while the number of staff has been declining. The majority of students seem to be quite satisfied with the program, but a significant part also reports that the program has not quite met their expectations. For the future a rising number of international students probably require a more conscious approach to communication of information and the social environment. This is also important in order to keep a steady or higher fraction of Norwegian students.

The panel suggests

- A short common introductory course covering universal issues like research ethics and philosophy of science, as well as more practical themes like Library services and scientific writing.
- Introductory courses could also be considered for the individual disciplines, especially for basic methods, including instruments and computing facilities, not taught within specialized courses.
- Common standards for how possible thesis projects are communicated.
- Common standards for thesis supervision and attitude towards students.
- Better use of web for communicating characteristics of the disciplines, earlier and potential thesis projects and job opportunities.
- Reorganization of the discipline structure should be considered

Mandate

The external panel has not been given a clearly formulated mandate. The evaluation has been made from reports from the Department and their web site only. Questioning or interviews have not taken place, but the Panel leader had a meeting at the Department of Geosciences with Valerie Maupin (Head of Studies) and Chong-Yu Xu (Head of Master programme) to discuss an earlier version of the report.

The MSc programme consists of several disciplines – each with somewhat different study outlines. Although the panel is relatively broad, we do not entirely cover all of these disciplines. Nevertheless, we attempt to provide an overall evaluation of the programme, specifically addressing

- The outline of the Programme and how it is communicated on the web
- The Department's own evaluation, and the statistics, evaluations and reports that it is based on.
- Any critical issues that need improvements

Outline of the Master programme

The master programme at the Department of Geosciences consists of six different disciplines:

- Environmental Geology and Geohazards
- Meteorology and Oceanography
- Geology
- Geophysics
- Petroleum Geology and Petroleum Geophysics
- Physical Geography, Hydrology and Geomatics

The programme runs over four semesters, where the students either choose a 60 or a 30 ECT Thesis; the remaining 60 or 90 ECTs are allocated for courses. The different disciplines have variable degrees of freedom with respect to the courses offered; from only compulsory courses to a very free structure. Based on the student evaluation, a free structure seems sometimes to be challenging; on the other hand some students wants more choices of courses. It is, however, difficult to know if these are associated to disciplines with only compulsory courses.

The External panel is of the opinion that the structure of the Master programme, with its six different disciplines, is more complicated than perhaps necessary. The number of students, courses and probably staff on the different disciplines is unbalanced, and it is not intuitive what content is beneath the discipline names. A better structure would potentially cause less questions from students also, and we suggest that the Department consider a reorganization.

Web presentation

The presentation of the study programme follows a strict outline defined for all Master programmes at the University of Oslo. The web-page is tidy and clear, and the informative collection of links in the lower section should provide an effective source of information for students. Despite this, the members of the panel find the information provided in some cases too superficial to be really helpful. More specific information about the disciplines, earlier and possible future thesis projects and potential job opportunities would provide a more robust picture of the disciplines, and motivate to

increasing enrolment. This is commented upon by some students as well. From quick looks at other Master programme presentations at UiO, it is clear that it is possible to utilize the website for more detailed presentations than what the Department of Geosciences has chosen to do.

Despite the Department's own evaluation concluding that 'a consistent improvement has been made in the past few years', there are still some obvious errors and shortcomings: 'Norwegian Water Directorate' must be changed to 'Norwegian Water Resources and Energy Directorate (NVE)' and 'Jordforsk' merged into 'Bioforsk' in 2006. In addition, web-links are not provided to these and other mentioned institutions. Many students ask for suggestions for thesis projects. An institution like NVE has potential Thesis projects on their website.

Nothing on the Master in Geosciences website clearly shows that this master is organized in the English language.

Learning outcomes

The description of the learning outcomes seems to be better adapted to the National qualification framework than most Master programmes at UiO. Learning outcomes are divided in three groups; knowledge-based, skill-based and affective learning outcomes. The external panel is of the opinion that the 'knowledge-based' outcomes should be formulated as knowledge acquired rather than knowledge to be gained, incorporate both theory and methods, and be somewhat more specific. We also wonder why 'affective' is used as a term to describe the last group of learning outcomes; it should be 'universal', 'generic' or similar.

Further, we are not convinced about the accuracy of the description of the general learning outcomes, where it is stated that, among other things, 'students should be able to reflect around central, ethical, philosophical and scientific problems in relation to individual work and the work of others'. The problem is that none of these issues seems to be reflected in any master level course at the Department.

Overall quality of the programme

An evaluation of the quality of a study programme must be based on several different measures to capture both the pedagogic quality and the level of course content. We base our evaluation of programme quality on three main information sources; general statistics, student evaluation and the reports from tilsynssensor. All sources imply that the Department of Geosciences offers a Master programme of high international standard. The statistics regarding students completing their master on time is amazing, especially considering that this is achieved during times of increasing student enrolment and decreasing staff.

Evaluation material

The external panel bases its evaluation on material made available by the Department of Geosciences. The documents are (1) the Departments own evaluation, (2) general statistics, (3) student questionnaire, (4) reports from tilsynssensor and (5) report on administrative routines. In addition, the departments web pages for the programme has been used.

The panel feels that the material is not entirely sufficient to draw firm conclusions. Especially, the student questionnaire has a disappointingly low response rate, and we recommend that the Department finds means to increase response in future surveys. The statistics are sometimes somewhat difficult to interpret, and better summarizing comments and trend diagrams would be

welcomed. Some of the statistics is broken down on individual disciplines; it would, however, been useful if more information was directly connected to disciplines. For instance, it is sometimes possible to distinguish comments directly towards disciplines on the student questionnaire, in other cases it is difficult to know whether comments concern discipline specific issues or the total programme.

Report of Periodical Programme evaluation

The Department's own evaluation is mainly a summary of the Programme and the evaluation material. The evaluation is mainly well organized and mostly in accordance with the underlying statistics and material. Some weak points are worth emphasizing, however:

1. The description of goals and learning outcomes is not in accordance with the description on the web (only 'skills' are mentioned).
2. We find a slight tendency towards mentioning but not emphasizing critical comments within the student survey.
3. There is a clear bias in the student response to information provided on career opportunities; some are very happy, some quite critical. This bias is not commented upon.

The most interesting parts for the panel are the concluding points, especially the last bullet which indicates potential improvements. Here, the Department point to (1) student recruitment, (2) website routines, (3) the possibility of long-term follow-up of graduates, in order to assess programme goals, (4) the organization into disciplines and their variable recruitment, and (5) the decreasing staff numbers, as issues to be improved and discuss. Regarding (1) we would have liked to see more statistics regarding recruitment of Norwegian students, and to know more about how Norwegian applicants perform with respect to enrolment in competition with excellent foreign students; (2) is very generally described; (3) is a good idea, but not very defined at this point; and (4) should be discussed further. Point (5) touches a general problem. It is more than strange that a Department whichis performing well, with high standards on their educational programme despite decreasing staff members, does not gain more resources. Sometimes it seems like decreasing performance is a better strategy for resource allocation.

Statistics and facts

This material could have been better presented. Nevertheless, it is this material that best shows how well the Master programme performs. The increasing number of applicants, the percentage of students accomplishing their degree, and the number of ECT points produced pr student all point to success. Despite the increasing number of foreign students showing a strong internationalization of the programme, we would urge the Department to take action to increase the number of Norwegian students. The fraction of female students has been relatively constant around 35%, and the Department should attempt to increase this number. It is likely that an increasing number of Norwegian students also would increase the female fraction.

Student questionnaire

Only about ¼ of the students responded to the survey. From such a low number, the performance of the individual disciplines can hardly be evaluated. The lack of response from the students may probably be a bad signal, as often the most co-operative students respond to such surveys. It may also be a signal about insufficient communication between administration and students.

The feedback from the students is fairly positive, but for a not insignificant part of the students, the Master course does not live up to expectations. Their suggestions primarily concern actions for improving the introduction to the programme, especially on the discipline level; efforts for more uniform thesis supervision; and problems related to timing and overlap of courses, especially intensive courses. Also, some students report on disinterested lecturers and supervisors. Based on the small number of respondents, it is very difficult to estimate to which degree the latter type of comments should be taken seriously since a few students are always hard to please; on the other hand the panel thinks it is imprudent not to mention this in the report. As one student puts it, 'we should be a little more important', another remarks that 'Generally a student is looked upon as an annoying distraction to professors'. We suggest that the Department take such allegations seriously rather than failing to mention them in their own report.

One specific issue raised in the survey is 'the social environment'. The response clearly shows that there is much room for improvement here.

Report from tilsynssensor

The reports in general show that the courses work well, and that there is accordance between the grades given and those suggested by tilsynssensor. Some places it is mentioned that skills in basic tools, such as Excel, are insufficient. Such tools may be introduced in a common introductory course. It is somewhat unsettling that simple suggestions made by tilsynssensor sometimes are not implemented the following years. As the tilsynssensor system is part of the quality control system at the University of Oslo, it is very important that these reports are actively used to improve courses, rather than just being administrative necessities that are implemented but not paid attention to. The routines regarding collecting and sending evaluation material to the tilsynssensor does not seem to be well implemented.

Report on administrative routines

The report shows that the administration is ambitious with respect to maintaining and developing routines for running the master programme efficiently. There seem to be some contradictions between this report and the student survey. The increasing number of foreign applicants and the problem of providing fair assessments of the applicants is an important issue.



Ivar Berthling



Sigbjørn Grønås



Rolf Mjelde



Elin Langsholt