

The University of Leeds

EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2013– 2014

Part A: General Information

Subject area and awards being examined

Faculty / School of:

Earth & Environment

Subject(s):

Environmental Sciences

Programme(s):

BSc Environmental Biogeoscience
 BSc Environmental Conservation
 BSc Environmental Conservation (Ind)
 BSc Environmental Science
 BSc Environmental Science (Ind)
 BSc Environmental Science (Int)
 BSc Meteorology & Climate
 BSc Meteorology & Climate (Ind)
 MEBS Environmental Science (Int)
 MEBS Meteorology & Climate (Ind)

Awards (e.g. BA/BSc/MSc etc):

Name and home Institution / affiliation of Examiner

Completed report

The completed report should be attached to an e-mail and sent as soon as possible, and no later than six weeks after the relevant meeting of the Board of Examiners, to exexadmin@leeds.ac.uk.

Alternatively you can post your report to:

Head of Quality Assurance
 Room 12:81, EC Stoner Building
 The University of Leeds, Leeds LS2 9JT

Part B: Comments for the Institution on the Examination Process and Standards

Matters for Urgent Attention

If there are any areas which you think require urgent attention before the programme is offered again please note them in this box

None

For Examiners completing their term of appointment

Please comment on your experience of the programme(s) over the period of your appointment, remarking in particular on changes from year to year and the progressive development and enhancement of the learning and teaching provision, on standards achieved, on marking and assessment and the procedures of the School

I have enjoyed acting as your external examiner on the BSc environment programs and particularly appreciated the flexibility offered to me as first term external examiner to observe my predecessor before starting my own term. During these 4 years, I have learned a lot and have come to appreciate the dedication that school staff have for improving the students' learning experience and the quality of the courses/degree programs offered. It is also pleasing to note that the feedback from students through us as external examiners is taken seriously by the school hierarchy and invariably acted upon to the benefit of future

cohorts.

In my first year, I pointed out (as did my predecessor) the lack of statistical rigour in some of the dissertation work and although teething problems remain and the problem is cyclical (e.g. see last year's report), subsequent years have generally seen significant improvement as a result of provision of a module in statistics in year 2 which is appreciated by the students. I have also witnessed improvements in the quality of feedback on modules to students, although letting feedback deadlines slip in some modules remains a perennial problem from a student perspective. Perhaps the biggest improvement I have seen is in the quality of dissertations, where students really seem to engage with their research topics and where the good students produce work not far off publication quality.

There was confusion this year in that all dissertations were assigned to me and I ended up seeing quite a few of the Social Science ones (partly because they were nominated for prizes). I would like to note here that significant issues remain here regarding the quality of these dissertations. This may well reflect my own ignorance of the research methods in this area but several of the dissertations I saw appear to be based on no more than personal experiences and prejudices dressed up with poor surveys and no objective interpretation, yet were considered first class pieces of work. I believe that some serious thought needs to be given to objectivity training for students working on this area.

I would like to finish by thanking the administrative team for looking after us and ensuring that we have access to exam papers in timely fashion and making the examination visit run smoothly. They are the lifeblood of the school teaching administration system and students regard them in high esteem.

Standards

1. Please indicate the extent to which the programme Aims and Intended Learning Outcomes (ILOs) were commensurate with the level of the award

- *The appropriateness of the Intended Learning Outcomes for the programme(s)/modules and of the structure and content of the programme(s);*
- *The extent to which standards are appropriate for the award or award element under consideration.*

I have always found module booklets to be very clear in terms of what is expected and the learning outcomes. These aims and ILOs are consistent with the specified learning pathways and provide increased progression on the learning curve towards programme goals.

2. Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?

- *The comparability of the programme(s) with similar programme(s) at other institutions and against national benchmarks and the Framework for Higher Education Qualifications.*

Yes. The aims and intended learning outcomes were in all cases commensurate with comparable institutions within the UK.

3. Please comment on the assessment methods and the appropriateness of these to the ILOs

- *The design and structure of the assessment methods, and the arrangements for the marking of modules and the classification of awards;*
- *The quality of teaching, learning and assessment methods that may be indicated by student performance.*

Mixing coursework and exams/essays is clearly to the advantage of students who seem to perform better in coursework than exams, generally improving their mark (although not always the case with all modules). In most cases, the balance of coursework (around 30%) versus exams/essays appears to be appropriate.

4. Were students given adequate opportunity to demonstrate their achievement of the Aims and ILOs?

- *The academic standards demonstrated by the students and, where possible, their performance in relation to students on comparable courses;*
- *The strengths and weaknesses of the students as a cohort.*

Based on feedback on scripts and also talking to students, this is indeed the case. Students demonstrated good grasp of the subject matter in each module and achieved comparable standards to other institutions. There are continuing problems related to late feedback for some modules, to the extent that students didn't feel they could then apply the learning outcomes to subsequent modules.

5. For Examiners responsible for programmes that include clinical practice components, please comment on the learning and assessment of practice components of the curriculum

6. Please comment on the nature and effectiveness of enhancements to the programme(s) and modules since the previous year

It would be particularly helpful if you could also identify areas of good practice which are worthy of wider dissemination.

Many of the modules have stayed the same and hence the comment does not really apply. Notably however, there appears to be a regression with regard to SOEE2640 where students strongly feel that they need a solid chunk of lab work to complement the lectures and fieldwork. This came through in both the online questionnaire survey and also in the feedback session between students and the external examiners. I would strongly recommend that this issue is addressed as students feel they come out with inadequate skill sets for some of the environmental careers they wish to pursue. The introduction of SOEE3760 has been received with great enthusiasm and students really appreciated the effort staff put in to ensure that they understood the material before moving on, although there was also the feeling that perhaps there was too much for a 10-credit module.

7. Please comment on the influence of research on the curriculum and learning and teaching

This may include examples of curriculum design informed by current research in the subject; practice informed by research; students undertaking research.

This is strongly reflected in the quality of dissertations, particularly for students that do science-based dissertations. Some of the dissertations I have seen this year, notably on water quality issues, metal adsorption to iron and manganese oxides, ice nucleation and black carbon parameterisation are good examples of projects strongly rooted in frontier research.

8. Where the programme forms part of an Integrated PhD, please comment on the appropriateness of the programme as training for a PhD

For Examiners involved in mentoring arrangements

9. If you have acted as a mentor to a new External Examiner or have received mentor support please comment here on the arrangements

I did not have a mentor as such but was given the opportunity to observe my predecessor before I took up my appointment. This was very invaluable and I would recommend it for every external examiner for a first appointment.

The Examination/Assessment Process

10. The University and its Schools provide guidance for External Examiners as to their roles, powers and responsibilities. Please indicate whether this material was sufficient for you to act effectively as an External Examiner.

Whether External Examiners have sufficient access to the material needed to make the required judgements and whether they are encouraged to request additional information.

Yes. The instructions are very clear and classification rules unambiguous. We also have online access to VLE.

11. Did you receive appropriate documentation relating to the programmes and/or parts of programmes for which you have responsibility, e.g. programme specifications or module handbooks, marking criteria?

The coherence of the policies and procedures relating to External Examiners and whether they match the explicit roles they are asked to perform.

Yes, again, these could be accessed on line.

12. Were you provided with all draft examination papers/assessments? Was the nature and level of the questions appropriate? If not, were suitable arrangements made to consider your comments?

All scheduled examination papers were sent to me to check before they were taken by students. My comments and feedback were taken on board.

13. Was sufficient assessed / examined work made available to enable you to have confidence in your evaluation of the standard of student work? Were the scripts clearly marked/annotated?

All the assessed work was made available to me upon my arrival. I examined most of these and in general, scripts were well annotated with comments to justify the marks, except in a few cases (2160 and 3190) which lacked detail. I also saw good examples of moderation (3410/5685M) where the moderator was able to compare marks between two first markers and recommendation of a systematic scaling down of one of them for being more generous, resulting in more equitable assessment for the cohort.

14. Was the choice of subjects for dissertations appropriate? Was the method and standard of assessment appropriate?

Mostly yes but serious consideration needs to be given to those students carrying out social science dissertations. I would also suggest revamping the dissertation booklet to clarify and emphasize that research MUST be objective and not be

used to justify prejudices. There were indications that such dissertations were marked somewhat generously this year. Indeed, I would suggest the phrase "possibly of publishable quality" should be used to discriminate truly outstanding dissertations (80-100).

15. Were the administrative arrangements satisfactory for the whole process, including the operation of the Board of Examiners? Were you able to attend the meeting? Were you satisfied with the recommendations of the Board?

The arrangements were adequate despite leaving and did a good job of filling shoes. What was missing this year a clear guidance of "problem" cases but these were in most cases obvious.

16. Were appropriate procedures in place to give due consideration to mitigating circumstances and medical evidence?

Yes.

Other comments

Please use this box if you wish to make any further comments not covered elsewhere on the form

I will use this section to highlight feedback from students we met and also general observations. We only had 3 students across all Earth Science programmes this year, only one of whom took Environment Science. Thus while the feedback should be taken with the small number statistics in mind, it is worth noting that this is one of your top students!

In general, students enjoyed the Leeds experience and reserved specific praise for staff for being supportive and always open for discussion and willingness to help.

Fieldwork was seen as an important component of their training, exposing them to real world problems and preparing them for independent research. Indeed, the view from the Environmental Science perspective was that they needed more and particularly in the final year where they didn't have any/much. There was also a request to broaden the scope of the second year field trip to include material for other pathways (the view being that it only appears to cater for Earth & Atmospheric pathways and not enough for management and biology pathways).

They also bemoaned the lack of Lab work for a degree in Environmental Sciences; apparently the only way to ensure getting such training is to do Chemistry in the first year but they would rather it was linked to programme-specific modules.

Feedback has been seen as a major issue this year, with in one case a 3-week deadline turning into 6 weeks. While students appreciated the high quality of feedback, they feel that the 3-week turnaround for some modules is unrealistic and only serves to frustrate them when inevitably staff miss these deadlines. For the final year in particular, they would rather staff set realistic timescales and also inform students in good time if deadlines will be missed instead of them seeking clarification/updates.

Another issue linked to feedback was that most hand-in deadlines are at the end of a semester, often meaning that students will not have had feedback before they have to sit the exam at the end of the semester. It also means that in fact turnaround time is longer as they don't get work back until after the vacation!

Portfolios were seen as useful to allow them to access assessed work and benefit from the detailed feedback. However, they felt that better organisation was needed with regard to return dates as often it is on top of other pressures.

Perhaps serious consideration needs to be made with regard to making the pathways more porous. Apparently, the existing pathways can be too limiting in terms of equipping students with breadth of knowledge and skill sets. The feeling is that the Environment programmes focus too much on atmosphere and climate but would benefit from opening up electives in Geography. Linked to this was that the timetabling of modules was not always even, in some cases, students had no modules in semester 1, making managing workloads difficult.

Perhaps online survey returns could be improved by limiting number of questions to 3-4 cores ones. Students just don't feel they have time even for a 5-minute survey amongst all the other commitments with some many modules.

School of Earth and Environment

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**UNIVERSITY OF LEEDS**

07 October 2014

Dear

**RE: Response to External Examiner's Report (BSc/MEnv Environment programmes),
2013/14**

I would like to thank you for examining our BSc Environment programmes for the last academic session, and for the past 4 years. We are very grateful for the contribution you have made over the years in maintaining, and further improving, the high academic standards of our programmes.

We are pleased that you have recognised the high quality of research-based content in our programmes, in particular in the improved standards of dissertation research carried out by our students, and improvements in statistics and research methods. We have worked hard over the last two years to improve these aspects, based on your recommendations from previous years. In addition, it is good to hear that our work in improving student feedback has been noticeable and resulted in real differences.

In response to your specific comments:

- We are aware that late feedback on coursework remains to be a problem for some staff and modules. All staff are aware of the School's 3-week deadline. We note that the students are aware that the 3-week turnaround deadline for marking and feedback may not always be possible, and it is important for staff to recognise that students would rather know in advance that feedback will be delayed and to have a realistic estimate of when it will be returned. We have made this very point clear to staff during start of year briefings etc. in past years, but will again re-enforce this point, particularly through one-to-one conversations between the management team and colleagues who are persistently late in their feedback. We hope that a move to e-submission and electronic marking will help with turnaround times as well. On the related topic of setting of coursework deadlines near the end of semesters, for most modules this arises from a tricky balance between allowing enough time for feedback before the end of the course (and exams), and the students having enough time to learn sufficient material such that the coursework assignment meets the module learning objectives. We will remind module leaders that where appropriate, they may consider setting deadlines earlier if allowed by content delivery within the module, and encourage them to do so where appropriate – particularly if it also helps to alleviate “deadline bunching” between modules. This year we are also trying to collect deadline data earlier, so that we can

proactively identify and remediate for any deadline bunching rather than try to reactively address issues. This year we are also requesting information from staff as to the date when assessments are set. This will be useful in seeing how much time students are given to complete assignments, and in helping them to manage their time.

- The lack of lab work is a critical issue, and it is important that we respond to concerns from the students that they feel they are missing out on important skills in their degree programmes. As you may be aware, the lab work components of several key modules (including SOEE2640 and SOEE2540) have been substantially reduced over the past couple of years. This has been enforced by loss of teaching lab space due to ongoing space pressure within the school and faculty. However, we agree with your comments and the concerns of the students, and recognise fully that lab skills are a cornerstone of specialist training for environmental scientists. In addition, they reflect key aspects of our research-based learning philosophy within the BSc programmes. We will be making it our top priority to find a solution to this issue in readiness for the next teaching cycle, even if this requires some financial input from the school, in terms of sourcing appropriate facilities elsewhere on campus.
- We had hoped that moving module and programme feedback surveys to an online system would encourage students to participate. We have already streamlined these surveys to cut down individual questions and the amount of time needed to complete them. We will reinforce the message to students that the surveys are streamlined to be simple and fast to complete, and that feedback obtained is used to make important and tangible improvements to modules and the programmes. In addition, it is important to recognise that we obtain feedback from students using other methods, such as the student-staff forum where we are able to respond much more quickly to their concerns than may be possible from end of module surveys. We are working this session to review how we collect module feedback. We are aware that students are asked the same questions too often and we are looking at ways to reduce this yet still gain the feedback on our modules that we need.
- As was recognised in previous years, the portfolio system has not worked as well as we had hoped, and we will be continuing our plan to phase these out. Instead we aim to increase the use of electronic submission and feedback. This year the School has started work on helping staff to engage with electronic submission and feedback and for 2014/15 we have introduced a policy where we expect electronic submission to be used on all modules where it is possible and in addition we are trialling electronic marking and submission on selected level 1 modules. Also, we are pleased that several staff have already been using both electronic submission and feedback on their modules across programme levels, prior to these School initiatives. University regulations require us to retain copies of annotated student work, and electronic submission and marking will allow us to retain annotated work and to return a copy to students.
- We feel that we offer an excellent breadth of environmental science across our 5 pathways. We are surprised to hear that the students believe that there is a strong bias towards atmospheric & climate science in the Environmental Science programme. Specific atmospheric science / meteorology content is generally confined only to the atmosphere pathway itself. However, given that the approach of our programme is to consider the whole Earth system, topics regarding the Earth's climate system are a central theme to many of the diverse areas across the programme, as well as core content (e.g. the L2 Climate Science module). We feel that this is appropriate, and that each of the pathways does a good job at linking into this core content. We have made substantial efforts in recent years to enhance provision within the biosphere pathway, which we recognised as an area in high demand from our students and an area where we needed to increase our expertise. Following the appointment of a new academic staff member in this area, a new research-led L3 module (SOEE3760) has been developed on

the topic of the terrestrial biosphere. It is good to hear that this has been very well received by the students. We will communicate to staff feedback regarding the possibility that too much content has been put into this module, and assist them in re-assessing this. In addition, we already include content in the biosphere pathway from other schools (biology), where we recognise that we do not have as broad experience in the school as we may have in other areas. In addition, the new Leeds Curriculum offers students the opportunity to take Discovery modules, which enable them to explore further either within their discipline or outside of this. This adds extra flexibility to their curriculum, if timetabling allows.

- Timetabling balance between the pathways remains a challenge. Our desire to allow students to follow any possible combination of the pathways is at direct odds with a straightforward timetabling solution that works well for all combinations. We work hard every year to optimise the timetable to accommodate common choices in the best way possible. In addition, modules that are taught from outside the school present an additional challenge, since we have no control over when they are taught. Students who have a severe imbalance between semesters are advised by their tutors and programme leaders in how to best manage workloads. Despite our best efforts, we recognise that certain combinations, which are popular with students, have presented some of the most problematic timetabling. With this in mind, we will attempt as best we can to improve timetabling in coming years for combinations that are popular with students, where necessary through coordination with other schools.
- In terms of fieldwork provision, we are currently undertaking a review of our provision in the Environmental Science programme. We also recognise that our current fieldwork provision does not map onto the breadth of subject matter that is covered in the programme. This is particularly the case at Level 2. At Level 3, we already offer two distinct field courses – one appropriate to atmospheric science and oceanography (Arran field course) and one appropriate to the biosphere / conservation aspects of the programme (Slapton Ley field course). We are currently in the process of exploring options for adding a third course covering the environmental management angle of the programme. In addition, at Level 1 we are exploring options to add content in the biosphere aspects of the programme to the existing water quality / geochemistry field course. At Level 2, the current content is focussed on water quality / geochemistry / atmospheric science. This covers the breadth of physical science topics covered in the programme. However, we recognise that we should explore options for reinforcing environmental management / biosphere content and related field skills in Level 2 fieldwork. This will be part of our existing fieldwork provision review. We also highlight to students that the focus of the fieldwork is not primarily on the application, it is on the field observational and data analysis skills, which can be applied to a wide range of different areas of Environmental Science.
- Although not directly applicable to our programmes, we support the proposal to introduce more rigour into the dissertation research methods for students pursuing research projects in more social science facing topics. We have improved our guidelines for acceptable research topics and methods for BSc students, making it clear that BSc students must carry out research that is predominantly natural science based. We will continue to reinforce this message. We feel that the quality of BSc dissertation research has improved considerably in the past two years, as highlighted by your comments regarding the high level of research-led content in these projects.

Finally, we acknowledge that it was unfortunate that you only had a small number of students to talk to when you visited Leeds. We are investigating alternative times at which students and external examiners can meet each other in future.

Once again we would like to thank you for your detailed and constructive comments, and for your valuable input over the past 4 years as external examiner. It is pleasing to know that we are doing well and that overall our students are satisfied. We are however always looking to improve and over the past 4 years your independent perspective has been a valuable part of the review and development process, and has led to real improvements in our programmes.

Yours sincerely,

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