Quality Assurance Team
Received 29/06/2016

The University of Leeds

EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2015– 2016

Part A: General Information

Subject area and awards being examined

Faculty / School of:	Earth and Environment
Subject(s):	*Geophysical Sciences*
Programme(s) / Module(s):	3 and 4-year degrees; BSc and MGeophys
Awards (e.g. BA/BSc/MSc etc):	BSc, MGeophys

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

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None

Only applicable in first year of appointment
Were you provided with copies of previous relevant External Examiners' reports and the response of the School to these?

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

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.*

This is my second year as External Examiner, and I was again impressed by the quality of the taught programmes offered at both BSc and MGeophys. The programmes are well-designed, delivered and assessed and are rigorous in terms of content.

This year there was a range of final degree marks ranging from 73 to 58% which seem appropriate given the exam scripts and coursework that I inspected. I notice that while the best students got the first class degrees they deserved, on the BSc programme the best students only just got first class marks in their third (final) year.

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.*

The geophysics programmes are well known and respected. The students benefit from a larger number of specific geophysics modules which give them an excellent broad training. Standards of numeracy are at least as good as other Russell group Universities where I have been examiner.

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.*

I believe that the ILOs are fully addressed. I am impressed by the range of materials available to me as an external examiner, and the VLE resource is impressive. I had all the information available needed to assess the programmes/individual modules.

Through their degree courses there is a range of assessment methods and the balance of different methods seems appropriate (fieldwork, coursework, examination, final year project).

Annotation on examination scripts, is in general good. However as I commented last year, the Inverse Theory module scripts still have too little annotation. I repeat again – “I find it very difficult to check the examination script marking for this module due to very sparse commentary on the exam scripts”.

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.*

The range of modules available to Geophysics students is impressive, with good choice (but see comments re MGeophys below). These modules are well designed and allow students to achieve their full potential.

This year I looked closely at, and was particularly impressed by SOEE3350 Geoelectrics, SOEE2212 Tectonophysics, SOEE2190 Time Series Analysis, SOEE2550 Applied Geophysics, SOEE2250 Numerical methods and Statistics, Global Geophysics SOEE3530.

A major component of the final year of both the BSc and MGeophys students is the individual Research Projects. The topics were wide-ranging and appropriate. I think the writing style is overall better than last year – across the cohort. Report structure was generally clear and I liked the module handbook guidance. I gather that you have implemented changes so that supervisors comment on a component of the project. This has clearly worked. I think the projects this year are substantially better than the ones I looked at last year, not just in terms of writing. However there is still a range of writing abilities in the cohort.

Marks for research projects are tightly clustered, and I think you under mark at the top end. It became clear during my visit in June 2016 that the Geophysics projects had been marked by staff who did not have access to the “official” School marking criteria sheets which sets out separate project attributes for >70% and >80%. The marking scheme attached to the projects that staff used, did not differentiate for marks above 70%. Too many of the project marks are clustered between 70 and 74%. The top few projects were under marked by between 5 and 10% in my view. I think this is the most significant comment within my report and requires action.

I skyped with four of the MGeophys (Int) students who were very positive about their experiences in Leeds. They had all done the year abroad, and had all had a great time overseas. They were positive about their experience in Leeds

generally, and were particularly happy with the field courses which they said had been excellent. They were particularly complementary towards <<>> for <> commitment.

They raised one generic issue, and one specific module related issue. The general one concerned a lack of choice/non-ideal choice in their final year, after they had returned from their year overseas. Some students were disappointed that they could not choose more of the MSc modules and that some MSc modules were full.

There were concerns raised by the students about the Inverse Theory module. In short: concerns around assessments, non-academic staff running lectures, feedback. They said that there had been a problem with the first assessment. I note quite a lot of low marks for this, but that this has been rectified by the co-ordinator so that overall practical mean is fine. There were also some negative comments about a guest lecturer (PhD student?) on the Inverse Theory module when the co-ordinator was away, but course questionnaires do not mention that, and look broadly ok (overall module satisfaction question), although the students do not recommend the module (especially 5675 small cohort). The students mentioned lack of feedback, and this seems to be confirmed looking at the course evaluation questionnaires. I looked in VLE and the second practical is present, and there are a very few sparse comments on each practical, but no overall statement as to how student did/how they could improve. Adequate, definitely not good, would also be my description of the feedback. The first practical is not uploaded so I cannot make any assessment about this. The more negative feedback on this module is form the MGeophys students who generally did well on it. The exam scripts are still very sparsely marked in terms of commentary and still difficult to really assess whether they are properly marked (please look at my last years comments). Overall the MGeophys students did better, but some of the BSc students also did well, and the overall grade profile looks fine. The Blackboard information on this module is good. I think the module co-ordinator needs to be more focussed when delivering this module as it likely detracts from the overall student perception of their final year (e.g. NSS).

I noticed that performance by the BSc Geophysical Sciences students in year 3 was a bit lower than in previous years. Looking more closely a substantial contribution to this was achievement in SOEE3260 Global seismology, where some of the students with good first class marks elsewhere did very poorly in the module examination, and achieved marks in the 50's for the module overall. I note the commentary from the co-ordinator that some changes are needed. Overall, I am content that this module has not unduly affected overall degree performance.

Minor Comment: the only module for which we could not find a module overview/synopsis was Fundamentals of Geophysics SOEE2630. There was scant information on this course in VLE – there were some turnitin assignments, but no overarching documents about nature of assessments or lectures or practicals.

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

N/A

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.

Two things here:

1. Definite improvement to quality of writing in final year research project. But still needs further improvement.
2. Even more information now available in VLE – including videos of lectures.

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.

I can see evidence of current research being embedded in individual modules, especially at 3 and 5-level.

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

N/A

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

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.

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.

Documentation needed was all provided, and well-organised. Exemplary. Administrative support was again excellent in June 2016.

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?

Yes I commented on these. Yes the nature and level of questions was appropriate.

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?

I worked through all the modules that I was asked to inspect. All scripts had good levels of annotation, with the exception of Inverse Modelling mentioned earlier.

I had a very complete access to coursework via VLE, other electronic means, or through paper copies.

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

There was an excellent range of subjects for the BSc and MGeophys dissertations. All dissertations are double-marked, and the way that the final marks were derived was transparent.

Please see my comments above about marking to the top of the range for final year research projects for the very best projects.

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?

Yes

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

Yes – as far as I could tell. I was given minutes of meetings that had been held prior to my arrival where this had been addressed.

Other comments

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