1369

Quality Assurance Team
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The University of Leeds

EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2014– 2015

Part A: General Information

Subject area and awards being examined

Faculty / School of:	Biological Sciences
Subject(s):	*Biochemistry*
Programme(s) / Module(s):	
Awards (e.g. BA/BSc/MSc etc):	BSc, MBiol

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

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.*

The ILOs and the standards achieved by students in meeting the relevant outcomes are entirely appropriate for a BSc in a science discipline. The programme develops a wide range of skills as well as specialist knowledge, preparing graduates for a broad range of career options including research.

This is the first year in which students have completed the MBiol programme. Their achievements against the ILOs show that these are entirely appropriate and take the students to a level commensurate with the award of a Masters degree.

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 subject matter, aims and ILOs in the BIOC programmes are appropriate and comparable to biochemistry degrees at other leading institutions.

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.*

As I noted last year, the skills module presents an excellent range of types of assessment. I do believe that the reliance on end-of-year closed-book examinations for the three Advanced Topic Units present some issues. These units are very good for teaching "factual" content close to the research front and are good preparation for students going on to further study. The exams themselves may be over-reliant on detailed factual recall in an age where, in a working environment, we have easy access to facts using digital resources. The assessment could be more geared to allowing a clearer demonstration of deeper understanding of the science.

One of the ATUs is taught in semester 1 but only examined at the end of the year. It was clear from reading scripts that many students were poorly prepared for these exams, despite them being offered classes specially to help prepare them. This problem may be overcome in part by examining the first ATU in the winter diet so that students can learn from this experience ahead of the final exams.

The BSc projects were of a very high standard and demonstrate the amount of effort that most students put in to this taste of independent work. Supervision of a large number of projects is challenging for staff but they should be congratulated on achieving such good outcomes.

The final year of the MBiol is very much geared towards project work, as is appropriate for top students who intend to go on to a research degree. The quality of the project reports was impressive, very close to publication quality in several cases. This is a very good reflection on the students and their supervisors. The assessments associated with the fourth year work were well designed and presented appropriate challenges to the students.

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 final year BSc class showed a very wide range of achievement. The best students were of a very high standard, comparable to students at other Russell Group institutions. This year, perhaps more noticeably than previously, several students had really struggled to perform well, particularly in the written examinations. Part of the reason for this may be that the selection of the best students for the MBiol programme highlights the weaknesses of the remainder of the class but, as noted above, some thought may need to be given to the teaching and assessment in the final year.

The marks obtained for the Advanced Topic Units were very much lower than for the projects and the skills module. There is a tendency to assume that this is just the way it should be when comparing exams with in-course assessment but I think that the margin of difference is worryingly large. There may be several reasons for this, in addition to the poor preparation of some students noted above. Some markers were clearly reluctant to award high marks for exam scripts, in spite of very positive comments. I would suggest that some have unrealistic expectations of what can be achieved by even the best student under exam conditions, with a very limited time to plan, construct and execute an essay on a very specific topic. Perhaps alternative assessment methods such as open-book or take-home exams could be considered. At the same time, it is possible that in-course assessment marking needs to more stringently differentiate the degree to which learning outcomes have been met. Lowering in-course marks and increasing exam marks should bring the two more into alignment without distorting overall performance.

From a limited reading of second year assessments, these showed a good range of knowledge and understanding among

the students and this may feed through to better performance in third year next year. This suggests that the recent changes to second year have been successful.
The MBiol cohort was outstandingly good and well-prepared for careers in science. This is reflected in their degree classifications.

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.

This was the first year in which MBiol have graduated. This programme has clearly been successful and, I believe, rewarding for staff as well as students. The Faculty is to be congratulated on this achievement.

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.

The programmes are very much research-focussed in years 3 and 4. This not only prepares students for a career in science, which many will clearly undertake, but for others heading in different directions gives a good understanding of how science is developed.

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

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.

I was happy with all the information provided both centrally by the university and by staff in Biological Sciences.

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, everything was made available

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, this was well handled. The draft questions were generally of a high standard and the few comments I had were taken on board. We did discuss the retrospective finding that some of the ATU exam questions were too specific and limited in scope. This is something to be considered for next year.

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?

Yes, I had access to all the written work. Most of the scripts were well annotated and it was clear to see how the mark awarded had been derived. There was a marked improvement on the previous year but I still saw a few cases where the comments were either to brief or were unhelpful. The qualitative guidelines provided to markers appear to be helping and the efforts to ensure that all scripts are appropriately annotated should continue. It is extremely helpful for the process of moderation and for external examiners to understand how marks have been arrived at.

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

Yes. The lab projects are of a very high standard, carried out within active research teams and provide a solid training in practical science. These are highly appreciated by students who want a career in research, industry or other areas of lab-based science. A large proportion of the BSc students undertook literature-based projects. These are also well constructed and appropriately assessed.

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. The administrative staff did an excellent job in putting together all the information for the Board and the external examiners. They were also very helpful and responsive to requests for information during the visits to Leeds.
The Board itself was smoothly run with all relevant staff given the opportunity to input relevant information and views. In most cases the decisions were very clear and needed no discussion, but I felt that all students in discretionary bands were properly considered and the correct decisions were made in all cases. This was helped by the introduction of a clear algorithmic approach to allow consistent decisions to be made.

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

The handling of these was exemplary, with confidentiality being maintained but enough information being provided to enable the Board to reach the right decision for each affected student.

Other comments

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

Faculty of Biological Sciences
Student Education Service

Student Education Office
Irene Manton Building
University of Leeds
Leeds
LS2 9JT, UK

UNIVERSITY OF LEEDS

28 October 2015

Dear

RESPONSE TO EXTERNAL EXAMINER REPORT 2014/15
BSc Biochemistry – *all programme variants*
BSc Biochemistry in Relation to Medicine
MBiol, BSc Biochemistry (Integrated Masters) – *all programme variants*
BSc Medical Biochemistry – *all programme variants*
MBiol, BSc Medical Biochemistry (Integrated Masters) – *all programme variants*

Thank you for your thoughtful comments on the Biochemistry degree programmes for 2014-5. I apologise for the delay in sending you our response to your report, but I have changed roles within the Faculty and have handed over the post of Biochemistry Programme Leader to while I have become the Faculty Director of Postgraduate Studies. However, we felt it was most appropriate for me to respond to your report for 2014-5 as I was the Programme Leader for the whole of that academic year.

Once again, thank you for your comments on our standards, both for the BSc programmes, but also for the new MBiol programmes, which had the first graduates this summer. We were also extremely pleased with the consistently high standard achieved by these MBiol students where 91.7% graduated with first class honours.

I'd like to respond to some of your comments. You have highlighted the assessment of our ATU modules. Our view is that the assessment of these modules must be seen alongside the assessment and content of all the final year modules. Many universities assess exactly the same content but with skills, factual content and problem solving spread across each module, while we have separated these aspects into separate modules. Thus, we feel that our ATU modules do, as you say, provide the factual content required for a graduate biochemist and that is what we assess in those modules. We ask the question setters for those topics to set discriminating questions that allow the students to show off their knowledge and we encourage an aspect of problem solving – i.e. using knowledge rather than just factual recall – in those examinations. However, this is something that is not so easy in some topic areas, and we continue to try to improve our exam setting processes for the ATU modules. Since your visit we have had a number of meetings to review question setting and particularly the use of the full range of marks available during the assessment and marking of ATU essays. We will make some changes to the instructions to markers based on our deliberations. We hope also that you can help us in avoiding too narrow questions when you review the questions. We have also considered the effect of a January examination in the ATU modules. This is something we have resisted – we want students to take a more synoptic view to studying biochemistry and to bring information from some topics into answering questions on others. The division of material is, of course, purely based on artificial definitions of topic areas and we try to encourage a more multi- or inter-disciplinary thinking.

You make specific comment on the preparedness of students for the ATU exams. Our analysis shows that students did no worse on the Semester 1 exam than in the two Semester 2 exams. Thus, the longer period

from the taught sessions to the exams did not cause any significant lowering of their marks. It is also worth looking at the overall performance of the students this year. The percentage of students graduating with upper second class degrees or better was 53% for the BSc cohort, in line with the similar statistics for the last five years of the programme. However, these figures exclude some of our very best students – the MBiol cohort. These students took the ATU papers in 2013-4, but since they did not graduate last year their statistics could not be included last year. If we include all of the biochemistry students who graduated in 2014-2015, the percentage of students with better than upper second class marks is 62.1% - the highest percentage since 2002-3! The timing of the examinations appears to have little effect on the overall marks – indeed the statistics tend to show the opposite – that better marks have been achieved in the years since we removed January examinations. This is particularly true for the second year examinations. We are not complacent however. We firmly believe that we should put our effort into helping the students prepare for the examinations rather than change the timing of the exams. In this respect, we have changed the number and nature of the training sessions for preparing for ATU examinations and have introduced extra training periods where students will review and grade past exam questions to learn more about our marking criteria.

We have also noted that this year there was a higher percentage of students who did not graduate in July because of examination fails. This perhaps reflects that a number of students who had failed in previous years were re-taking examinations this year, but this is a trend we will be keeping an eye on.

You wondered if the selection of the best students for the MBiol was weakening the performance of the BSc cohort. I hope you agree that the statistics I have presented above do not support this conclusion, but again we will keep an eye on this, especially as our numbers on the MBiol programmes grows.

As I mentioned above, we have already started to discuss our final year marking criteria to address problems of staff not using the full range of marks, and perhaps having unrealistic expectations of what is possible in an exam-based one hour essay. We will continue to stress this point to markers and will expect second markers to help in addressing such issues. In my experience elsewhere this is a nationwide issue.

I am pleased that you found all of our procedures to be in order. We have taken some time to learn how to handle the very difficult cases of mitigating circumstances that we are sometimes presented with, but I believe we now have robust and efficient methods in place to deal with these and I am pleased that you agree.

A final comment that you make, concerned the employability of our students. I echo your comments that our course prepares students extremely well for both research careers and those going into other graduate employment. We are very proud of our achievements in this area and we think it reflects on the effort and hard work of many people. I would like to record thanks to all the academic staff in this respect but would also highlight the work of the Faculty Employability Officer, who provides excellent training and help to the students in preparing CVs and in getting ready for interviews etc. This has been a relatively new innovation in Leeds and I think we are seeing the benefits already. Finally, we note that all these improvements – in assessment and training – have resulted this year in a significant increase in the satisfaction scores in the most recent NSS survey.

I am very happy to have led the biochemistry programmes for a number of years and to have seen the improvements in achievement, satisfaction and employability during my time as Programme Leader and I am proud to hand over the leadership of these programmes to Long may our successes in Biochemistry continue and thank you for your help and support as External Examiner during the last few years.

With best wishes,

Programme Leader

Tel:
Email: