

**The University of Leeds**  
**EXTERNAL EXAMINER'S REPORT**  
**ACADEMIC YEAR: 2015-2016**

**Part A: General Information****Subject area and awards being examined**

<i>Faculty / School of:</i>	School of Molecular and Cellular Biology
<i>Subject(s):</i>	Biological Sciences
<i>Programme(s) / Module(s):</i>	Biological Sciences Programme, including Biotechnology with Enterprise, Industrial, International and Integrated Masters. Year 1 & 2 modules for Biological Sciences Year 3 modules: BIOL3112, BIOL3210, BIOL3211, BIOC3900, BIOL3305, BIOL3306
<i>Awards (e.g. BA/BSc/MSc etc):</i>	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](mailto: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.

**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?*

Not applicable.

**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*

Not applicable.

## 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 aims and ILOs associated with the programmes and individual modules continue to be commensurate with the award of a BSc or MBIol degree in Biological Sciences.

There is possible concern about the substantial year on year variation in overall results. The percentage of students achieving a 1st or 2:1 degree in 2015 was 80%, but in 2016 was only 62% while in 2014 it was 69%. While it is normal that some cohorts are stronger than others, the degree of variability is rather surprising considering the fixed entry grades. There were a large proportion of students this year with mitigating circumstances that may partly account for the substantially reduced average in 2016. However, after these have completed the Autumn exams, I recommend that the median overall mark across the last ten years is reviewed to assess the extent of variation.

### 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 Aims and ILOs of the Biological Sciences degree programmes at Leeds meet the national subject benchmarks and are equal to if not better than similar programmes at other institutions. In terms of programme content, it could be that Biological Sciences at Leeds comes under the influence of the sister programmes in Microbiology and Biochemistry such that the course has a particular bias towards these subjects, as well as biotechnology. However, this reflects the research-led nature of teaching at Leeds, which focuses on these areas; but this is a strong point, and the course and module content is made very clear in the offer material.

This is the first year I believe that MBIol students have graduated in Biological Sciences. 6 out of 8 obtained a 1st class degree, while the other two got a 2:1. The level 4 mark was better than level 3 for 7 out of 8 but interestingly closer to their level 2 average emphasising the more challenging nature of level 3, presumably as a result of the ATUs. There was a suggestion at a staff-student forum that organization of the 4<sup>th</sup> year of the MBIol course needed some improvement. This is not unexpected being the first year this has operated and I assume that this is being reviewed.

### 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.*

The modules use an appropriate range of assessment methods to test whether intended learning outcomes have been achieved; this includes a breadth of summative coursework exercises that allow students to demonstrate different skills as well as more standard examinations that include long answers and MCQs, the latter being of an impressively high and consistent standard. I would particularly this year like to praise the practical skills modules (introductory, intermediate and advanced). These have been separated away from the subject-based modules and, although there is a danger that the link between knowledge gained and how it was derived from hypothesis-driven experimental research may be less obvious, I believe that this has allowed the creation of more innovative and exciting ways to spend time in the laboratory. This is important if we are to develop open-minded and free-thinking scientists that enjoy doing lab work. The progressive-based skills training is especially well planned and coordinated at Level 1. It is considered as a whole, provides an appropriate balance of formative and summative assessments, offers clear indication of when feedback will be given and will ensure an outstanding practical training as would be sought by future employers. It also seems to give clear opportunities for interaction between students and their personal tutors in a setting where the tutor will get to know their student's strengths and weaknesses quite quickly. I do though encourage convenors to ensure that examples are frequently given that link the skills and theory modules.

I am convinced that students are receiving appropriate final degree classifications, although it still puzzles me as to why the University sees the need to convert standard percentage point marks onto a 2 to 9 scale.

### 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 ATUs are recognised as an excellent innovation that enables students to explore a range of research topics in depth. However, the variability in mean marks for different questions requires attention to ensure that students are not being unfairly penalised for picking certain topics or do not select topics simply based on perception of difficulty. Considering the number taken, it would also benefit to reflect on the ways these are assessed. The ambition was to provide depth in selected subject material, which is excellent and I was very pleased to hear that more training was provided to students this year in how to address ATU questions. However, I am still concerned that many students will struggle to achieve the depth of understanding that is apparently expected across such a wide range of ATUs by some examiners. Indeed, based on the

lower than average marks for the ATU modules, I do believe that there is an unrealistic expectation of what students can achieve in exam answers. I also worry about variability in marking of ATUs.

Hence, any changes that improve consistency and quality are worth careful consideration. For example, how much training is provided to markers? How often are ATUs double-marked? Could the best two answers be counted rather than all three. Another possibility is to increase the option of additional alternative 20 credit modules that bring together related material in different ATUs, such as takes place with the Cancer Biology module. Indeed, this module should be extended from 10 to 20 credits to save students trying to find an alternative 10 credit module in what may well be a quite unrelated area.

Importantly, a rise in the average ATU module mark would allow degree classifications to be weighted towards Level 3. For me, a science degree should be progressive with clear evidence that exit velocity is taken into account. This may become more important to employers if degrees are awarded via Grade Point Averages in the future. In this sense, I think that with changes to the ATU assessment process Leeds could anticipate this change by improving the Level 3 average so that it ensures most students are seen to graduate with a strong exit velocity.

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

Not applicable.

**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.*

I'm not aware of any substantial changes to the programmes or modules since the previous year. It is worth noting though that there was an alarming incident with one ATU exam when some students were allowed to start the exam before all students had arrived in the examination room. This suggests an urgent need for more invigilator training by the University.

**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.*

There remains a clear influence of research on the curriculum and ILOs. This is most evident in the third year, when students undertake a research project as well as a series of ATUs.

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

Not applicable.

**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**

Not applicable.

**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 provided with appropriate guidance and excellent support as an external examiner by the University of Leeds.

**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, all documentation relating to the Biological Sciences degree programmes was provided to me in the form of electronic or hard copies that were either sent to me by post or available upon visiting Leeds. I was provided with excellent support and guidance by the various staff involved in delivery of the Biological Sciences Programme, particularly from the Chair of Examiners, <<>>, the Programme Leader, <<>>, the Chair of the Mitigating Circumstances committee, <<>>, and the Course Administrator, <<>>. I am particularly grateful to <<>> for responding to my request from last year and judiciously selecting an appropriate set of student work to review representing different grade boundaries or with specific concerns for me to focus on during my visit. It was much more helpful than facing unfiltered boxes of scripts of all students. I was also

provided as requested with the complete programme spreadsheet indicating the recommendations of the internal exam board, although could I ask for a hard copy of this spreadsheet next time as we failed to get the USB stick to work on my laptop.

**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 was provided with all exam papers with model answers well ahead of time. The questions were challenging but appropriate, and most model answers were clear and comprehensive. There remains some inconsistency though with a few model answers too brief to properly assess what was required or to provide appropriate guidance to a second marker. I had opportunity to feed back my comments before exam papers went to print.

**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 exam scripts and project dissertations were available, although as indicated above I was specifically provided with a selection of student work that reflected those in the middle or on the boundaries of different degree bands, or students for which special attention was required by the exam board. This was very helpful as it allowed me to use my time more effectively and I am grateful to the administrative team at Leeds for responding to my previous request for this.

In terms of marking exam essays, then my opinion is that this would benefit from use of a mark scale with defined mark intervals rather than an open 0-100 scale. I feel that this would lead to more consistency in marking and be particularly valuable to staff that are new to marking. I'd wholly support moving to a more structured system with clear descriptors for different mark bands with new staff given appropriate training in use of these marks. I would also like to see more schematic diagrams in answers and this should be more actively encouraged. I also continue to urge staff to use the upper end of the marking range as there were still multiple examples of work with comments suggesting exemplary answers that were given only 70%.

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

An excellent range of cutting-edge research driven laboratory and analytical projects was again on offer, although some concern was raised about the allocation process this year and it's important that Biological Sciences students see that they are getting a fair deal. It was notable that the majority of students who did a year in industry scored first class marks in their projects as would be expected. This should be highlighted to second year students! There was decent annotation of some projects but not all, and very little annotation on the MBiol projects that I looked at. Feedback forms have useful scoring systems for both types of project and some helpful comments from most supervisors. However, some feedback comments tended to focus on minor grammatical aspects, whereas more useful feedback would reflect on understanding, interpretation and analysis. Moreover, the feedback forms should be completed electronically and signed - some comments were in pencil and could be altered, some were hand-written, others had only very brief comments or lacked any comments. Some uniformity is required here and I would encourage a slightly more extensive critique than some supervisors provide otherwise there could be suspicion that a few people give little time to the marking. A lot of marks are on offer here and the time spent marking needs to be proportional to the amount of marks on offer.

For analytical projects, I very much appreciate the draft grant proposal, which is a stimulating and valuable goal for this type of project. It wasn't clear from the marksheets though whether there is any element of project assessment based on oral or poster presentation? Why are talks done in the Biochemistry programme but not Biological Sciences?

**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 arrangements were excellent and I am very grateful to <<>> for <<>> highly efficient support during my visits. The Board of Examiners was again expertly chaired by <<>>, and I received valuable guidance from <<>> and <<>>. I was able to attend the Board of Examiners meeting and there was a good turn out from members of staff. The exam board meeting was well run and I was satisfied with the recommendations made.

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

Yes, mitigating circumstances were carefully considered with discretion by a panel chaired by <<>>. Students are clear that this opportunity is available to them and the supporting evidence required. There may be a concern though given the number of students that submitted mitigating circumstances this year that this system is being inappropriately used. It would be worth - if it isn't already - making it abundantly clear on the submission site (and to personal tutors) the sort of mitigating circumstances that are accepted and the likely outcome of having mitigating circumstances accepted in terms of still needing to sit exams or complete coursework.

**Other comments**

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

I wish to extend my congratulations to all those involved in management and delivery of teaching on these two Biological Sciences degree courses as there is no doubt that they provide an outstanding experience and excellent training for the students, and award degree classifications that are fully consistent with those expected from one of the top research intensive Universities in the UK.

Student Education Office  
Irene Manton Building  
University of Leeds  
Leeds  
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**UNIVERSITY OF LEEDS**

7 November 2016

Dear

**RESPONSE TO EXTERNAL EXAMINER REPORT 2015/16**

**BSc Biological Sciences** – *all programme variants*

**BSc Biological Sciences (Biotechnology with Enterprise)**

**MBiol, BSc Biological Sciences (Integrated Masters)** – *all programme variants*

**MBiol, BSc Biological Sciences (Biotechnology with Enterprise) (Integrated Masters)** – *all programme variants*

Thank you for your External Examiner's report for the academic year 2015-16, and for useful discussions during your visits. You raise a number of points for consideration by the Programme Team, which we will work on over the coming year.

You note a possible concern about the variation in the proportion of the cohort receiving first and 2.1 degrees, which has been noticeable over the last three years, and suggest that we review the situation in September, when a significant number of first attempts will have been taken by students with mitigating circumstances, and perform an analysis of the past ten year's results. We will certainly do this, though changes to the course and admission requirements over the last ten years may make retrospective analysis over this period unreliable.

Thank you for your very positive comments about our skills modules; this is an area that we have done a lot of work with over the past few years, and we are delighted that you comment positively on these modules.

While you note the progress that we have made to provide additional support to students taking the ATU modules, you are still concerned about the expectation of examiners, and the variability of marks. You enquire about marker training; last year there was a session held during an academic staff meeting to highlight the use of qualitative criteria, and the use of the full marking range. A further session is planned in the coming academic year to review the role of second markers. In line with the Code of Practice on Assessment, 10% of exam scripts, plus all fails are always check marked. Discrepancy of >5% between the two markers leads to check marking of all scripts, and a third marker is involved if disagreement cannot be resolved. We note your suggestion that we consider moving to a mark scale with defined mark intervals, and will pass on your recommendation to the Faculty Director of Student Education. We will continue to work to improve both consistency of marking, and the use of the full mark range.

Thank you for your comments on project allocation, marking and feedback. Changes have been introduced for allocation of projects for the coming year, to manage student expectations more effectively, and ensure that the maximum number of students are allocated one of their chosen projects. The effectiveness of these changes will be evaluated with both staff and students. We will work to improve the consistency of feedback on projects at both BSc and MBiol level. You note the difference in assessment of projects between biochemistry programmes, which include a viva, and biological sciences (and microbiology) programmes which include a poster session; both presentation elements contribute 10% of the module marks. Marks for this element of assessment are identified in the spreadsheet. The difference between the programmes is largely historical in origin, and is regularly reviewed.

You note that the minutes from the student-staff forum suggested that some improvements to the 4<sup>th</sup> year of the MBIol course was needed. We have consulted with the students extensively and modified the final year in light of the feedback received.

Thank you once again for your detailed review of our programmes and processes, and for your help and support in continuing to make incremental improvements to the experience we provide for our students.

With best wishes,

Programme Leader

Tel: 0113 34

Email: