

**The University of Leeds**  
**EXTERNAL EXAMINER'S REPORT**  
ACADEMIC YEAR: 2010– 2011

**PART A: GENERAL INFORMATION***Subject area and awards being examined:*

<b>School of:</b>	<b>Subject(s): Biochemistry and Biotechnology</b>
<b>Programme(s) / Module(s):</b>	<b>awards: (e.g. BA/BSc/MSc etc.) BSc</b>
Biochemistry	
Biochemistry (Industrial)	
Biochemistry (International)	
Biochemistry with Medical Biochemistry	
Biochemistry with Medical Biochemistry (Industrial)	
Biochemistry with Medical Biochemistry (International)	
Biochemistry with Molecular Biology	
Biochemistry with Molecular Biology (Industrial)	
Biochemistry with Molecular Biology (International)	
Biotechnology	
Biotechnology (Industrial)	
Biotechnology (International)	
Biochemistry in Relation to Medicine	
All BIOC modules	

The completed report should be attached to an e-mail and sent as soon as possible, and no later than 6 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 Academic Quality and Standards,  
Academic Quality and Standards Team,  
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?*

***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.*

The most obvious change over the last four years has been the upward trend in the number of 1sts awarded (2, 9, 4, 11) across the Biochemistry and Biotechnology programmes, which I think properly reflects the standards at Leeds. Although the degree of oscillation in numbers appears unusual, there has been an increased willingness to use the full range of marks at the upper end of the scale in marking exam scripts which is likely to have contributed to the trend.

Another marked change has been the development and implementation of a radically new honours Biochemistry programme, now in its 2<sup>nd</sup> year. This includes extended 60 credit modules spanning both semesters in each of the first two years with the idea of providing continuity to the teaching and learning experience. Too often we see students failing to appreciate connections between different parts of their courses, with 10 or 20 credit modules treated as stand-alone packages, so the new scheme should help to prevent this. There is an increased emphasis on the tutorial programme, particularly in year 1, which is commendable and the staff are to be congratulated on the care and commitment with which the scheme has been developed and implemented. The efforts will have been worthwhile if there is a consistent reduction in the tail of student performance at finals.

## 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 course offers an excellent education in modern Biochemistry, covering a wide range of subject matter at a challenging level commensurate with current research interest across the discipline. The new programme for single honours Biochemistry BSc students has extended to the 2<sup>nd</sup> year this year. While setting quite a challenge for students and staff alike, the new programme offers obvious benefits in terms of continuity of the learning and teaching and it will be interesting to see how this is reflected in students' performance at finals next year. Programme/module aims and ILOs are entirely appropriate and the assessment standards appropriate for the award.

### 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 programme compares well with similar programmes at other 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.*

The comments I have made previously on the 'Leeds Marking Scale' and the lack of viva examinations for students in discretionary zones remain my views still.

The performance at the upper end of the cohort this year was exceptionally good, with eleven 1sts. The top student averaged marks well over 80% which is absolutely outstanding, and there were two others with marks approaching 75% in final year which is extremely pleasing and a credit to the School. Marking standards at this upper end are good, with outstanding exam answers being properly awarded marks well into the higher range, and this is likely to have influenced the upward trend in the number of firsts over the last few years. This being the case, it may now be time to reconsider the algorithm for degree classification at Leeds since two of the students this year were helped into the first class band by virtue of a particularly high 2<sup>nd</sup> year mark. The Leeds algorithm allows the 2<sup>nd</sup> year to contribute either 33% or 50% of the overall mark, whichever gives the more favourable outcome. With both these students, the marks profile in final year was rather below what is expected of a 1<sup>st</sup> class student and both students only achieved the required mark by allowing the 2<sup>nd</sup> year to contribute 50%. Biochemistry (and other Biological Sciences disciplines) is a progressive educational programme, where knowledge and skill in final year builds on and extends that achieved in year 2. Hence, the standard achieved in final year is a better indication of a student's potential than that in year 2, particularly at the upper end of the spectrum where flair is increasingly in evidence. I would recommend that it is time to review the algorithm, arguing that the 1:1 ratio is not educationally valid for Biological Sciences in the way that it may be for other disciplines.

This year there were seventeen 2.1s out of the total cohort of fifty nine students, which means that just over 47% obtained 2.1 or better. It is interesting to note that abolishing the algorithm that allows 2<sup>nd</sup> year to contribute 50% of the final mark would not have reduced the number of 2.1 or better degrees. This relatively low proportion of higher degrees continues the pattern of previous years which I think is out of line with other top institutions. It is difficult to identify the reason for this since only about a third of the 2.2s scored 55% or above, so there was no obvious clustering at the top end of this band. However, while I am happy with marking standards at the upper end, exam answers at the lower end of the 2.2 standard and below appear to be relatively harshly marked, something which is bound to spread the cohort into the lower classifications overall.

I remain concerned about the Leeds policy of double marking only 10% of the scripts and recommend at the very least that all potential fail scripts are referred to a second marker for reasons given in my previous report. Much better of course is to second mark everything, which ensures that the 2<sup>nd</sup> marker isn't biased by knowing that s/he is marking something that the first marker already considers to be a fail. A difficulty might be raised that the 2<sup>nd</sup> marker lacks the expertise of the question setter, particularly in the Advanced Topics modules. However, with an appropriate model answer showing what is expected, and annotations on the script to indicate errors or evidence of appropriate reading outside the lecture material (without the 1<sup>st</sup> marker indicating the awarded mark), such difficulties are minimised. After all, this is what an external examiner is expected to do but

s/he can only read a fraction of the scripts so knowing that everything has been double marked, and the mark debated between the two markers, would increase confidence in the system as a whole.

As has been apparent previously, the spread of performance across the individual questions in the Advanced Topics modules was significantly greater than was seen in other modules. There was useful discussion about this with staff who suggested that a more thorough review of the questions internally before the paper goes out might help to iron out potential difficulties with individual questions. I certainly think this is a good idea and would recommend additionally that comments and views of second markers would also be useful going forward.

**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.*

Yes. The performance of this year's cohort at the top end was extremely good although there was, as previously, a relatively low proportion of students achieving 2.1 or better overall. Standards are well in line with those elsewhere in the sector.

**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. 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 year has seen an extension of the restructuring of the honours Biochemistry programme through to Year 2 of the course. The Year 2 programme has continued the idea of including extended 60 credit modules across both semesters, together with new assessments, which has involved a lot of work on the part of the staff concerned who are to be commended for their efforts. The MRQ and SAQ papers will take some time to bed down but the data analysis components look particularly impressive. The emphasis on continuity within the teaching and learning experience is, I believe, a good idea and hopefully will produce an improved outcome at finals particularly at the lower end of the cohort.

**7. 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 Research Projects are at a very good standard, and the associated module BIOC 3160 has several additional components that collectively and impressively emphasise skills informed by the research environment provided at Leeds. The final year taught modules take students to the forefront of current research, particularly in the Advanced Topics modules, which include a variety of topics each dependent on the research expertise of the individual contributors.

## **The Examination Process**

8. **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.*

All materials were provided in good time and every effort was made to inform me appropriately and to answer any questions I had.

9. **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?**

- *The coherence of the policies and procedures relating to external examiners and whether they match the explicit roles they are asked to perform.*

Yes

10. **Was sufficient assessed/examination work made available to enable you to have confidence in your evaluation of the standard of student work?**

Yes

11. **Were the administrative arrangements satisfactory for the whole process, including the operation of the Board of Examiners?**

Yes

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

Yes

### **For Examiners involved in Mentoring Arrangements**

*If you have acted as a mentor to a new external examiner or have received mentor support please comment here on the arrangements.*

### **Other Comments**

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

I would like to thank all staff responsible for their courtesy, generosity and support both during my visit for the final exam board and earlier to meet the students. The support I have received throughout my time as external examiner has been tremendous.

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