

**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:

Biological Sciences

Subject(s):

*Biochemistry*

Programme(s) / Module(s):

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

BSc

**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*

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**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?*

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**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*

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## 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 these 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.

### 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.*

The skills module provides an excellent range of assessments during the course and in the final exam. These are very distinct from other written exams and test the analytical skills developed in this module.

The project provides an excellent experience for independent research either in a laboratory or by analysing a topic through the relevant literature. The assessments for these are well constructed and entirely appropriate. My only comment to the staff is that thought should be given as to whether the project supervisor should be marking the written report as well as providing a mark for the performance in executing the project. I would suggest that it might be better to use two independent markers who can assess the report purely on the basis of the marking criteria.

Half of the credits for the final year are derived from the Advanced Topics Units and these are assessed in three closed book exams at the end of the year. While there has been some attempt to introduce more interesting and challenging questions for some of these units, there is an over-dependence on recall of detailed knowledge. I would encourage the School to take a careful look at the assessment of these units, asking whether they all need to be assessed in the same way and, particularly at the same time. Assessing the semester 1 module at the end of the semester would give students helpful feedback, enabling them to assess their progress in the final year and helping them understand better how to improve in the semester 2 ATUs.

There is much in the performance of students to indicate excellent teaching. The best students are able to perform at a very high level.

As I wrote last year, I find it impossible to fully grasp the complex system used by the university for degree classification. To mark on a 0-100 scale, using clear qualitative indicators of performance across the full scale and with specific borderlines in mind, I cannot understand why it would help to convert these then to a different scale that fails to properly recognise outstandingly good or especially poor performance. If this is a result of a reluctance to use the full range of marks available by colleagues in some disciplines, it would be more sensible to address this problem rather than make a nonsense of good practice.

### 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 general quality of the work I saw was high and, having met with some of the students earlier in the year, I could see that the general level is comparable with those at other good universities. The projects, particularly the lab-based projects, had allowed students to demonstrate a wide range of skills and the written reports were of a standard to those I have seen at <> and at other institution where I have examined.

The levels of performance in the written exams at the end of the year, relating to the ATUs, were significantly lower than in other elements of the programme for most students and this is an area which clearly concerns the School. It is important to understand the reasons for this and to enable students to show their abilities across the board. One contributing factor may be a reluctance of some markers to use the full range of marks at the upper end of the scale, despite the provision of qualitative guidelines. Having worked successfully to develop greater consistency at the lower end of the scale, a similar approach to develop better practice at the top end is to be encouraged. Second markers / moderators could help here in ensuring that the marking, particularly of the ATU exams is suitably rewarding excellence.

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.*

Colleagues in Leeds have put in a good deal of work to improve practice across the BSc programme, notably within the skills module. A new ATU has been successfully introduced and proved popular with students.

The main development and focus of attention in the past year has been the introduction of the integrated masters programme, with a dozen of the top students taking a partially different third year and progressing to the final year of the masters programme next year. The evidence so far indicates that everything is on track for a successful introduction of this programme.

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 an intrinsic strength of the programme, most clearly demonstrated in the project component of the final year but also in the advanced topics modules which discuss recent research and even, in some cases, future directions of research. This gives the students heading for research careers an excellent grounding and gives all students a good understanding of the nature of research and the basis of scientific knowledge and understanding.

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 have 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?**

Yes, I saw all the work for borderline students and staff were responsive to requests for even more examples! Many of the scripts were well annotated and it was clear to see how the mark awarded had been derived. In too many cases the comments were either too brief or were unhelpful. This is an area where it takes a good deal of time and effort to change markers' behaviour but I believe it necessary to take some action. The qualitative guidelines provided to markers should make it easy to provide appropriate comments.

**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 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. 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.

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

I thought that 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**

3 October 2014

Dear

**RESPONSE TO EXTERNAL EXAMINER REPORT 2013/14**  
**BSc Biochemistry**  
**BSc Biochemistry in Relation to Medicine**  
**MBiol, BSc Biochemistry (Integrated Masters)**  
**BSc Medical Biochemistry**  
**MBiol, BSc Medical Biochemistry (Integrated Masters)**

Thank you for all of the hard work and time and energy you have put into acting as Biochemistry external examiner again this year. Thanks also for the very positive remarks you have made about the programme – I will only mention here, and provide some feedback on, aspects you highlight for comment.

- Last year you asked about the range of assessments available to finalists and I highlighted that the full range of assessment methods were developed over the full set of modules and that not all modules carried all types of assessment. We particularly highlighted for you the skills module BIOC3303, and I'm very pleased that, with time to look specifically at this module this year, you have found it to contain 'an excellent range of assessments'.
- You have highlighted the possibility of changing the markers for the project module and the possibility of the supervisor providing the 'execution' mark while two other staff would provide the marks for the written report. In my own role as external examiner for Biochemistry degrees I have seen both systems used (here and elsewhere) and I have not noticed any bias or marks discrepancy in one system over the other. Nevertheless this is something we will look at during the coming year as we review the module and programme.
- Another point you raise concerns the timings and marks of the ATU modules. As you'd expect we continually monitor and review the marks for all our modules, and pay particular attention to the ATU modules as between them they form a half of the final year marks. Last year we introduced a new exam setting meeting to streamline the setting of these exam papers and I think you are already seeing some benefit in this, but as you say there may still be some tendency to rely heavily on detailed knowledge recall in some questions. While of course this may benefit a few students, we are trying to implement a high level of thought and problem solving (although this is assessed mainly in BIOC3303). We will continue to review the questions set in the ATU exam setting meeting and will try to introduce less simple recall questions through this means in the future.
- The question of timing of these examinations is a vexed question. Our evidence is that examinations at January results in lower overall marks. So for example the average year 2 Biochemistry mark achieved by students since 1997 showed a remarkable fall during the period when January examinations were held and a steep recovery since examinations were all held in the May/June exams period. We put this down to lack of revision time for the Jan exams period and a higher

likelihood of simply learning for the exam and not integrating the subject matter enough. We have also modified the timetable of ATU lectures so that a much longer period is now available for revision at the end of the courses ready for the May examinations. I did not come across any complaints this year in advance of the exams about this arrangement. It is also interesting to contrast the results obtained in year three before and after the introduction of the new course including the May ATU examinations. Until that time third year was assessed in four modules (BIOC3500, 3600, 3700 and 3800). These modules all contained essay examinations AND in course work. Since the start of the new course in-course assessment forms part of BIOC3303 rather than the ATU modules. Table 1 shows the average module marks obtained since the 2006-7 academic year. The project module (BIOC3160) shows a gentle trend upwards over this time period. The average marks for BIOC3500-3800 show good consistency across the time period until the new ATU modules started and these are remarkably in line with the averages obtained on the ATU modules. However it must be born in mind that the comparative marks in the ATUs are also supplemented by the marks in BIOC3303 (skills) and hence the *overall* performance of the students is better with the new arrangements (Fig. 2).

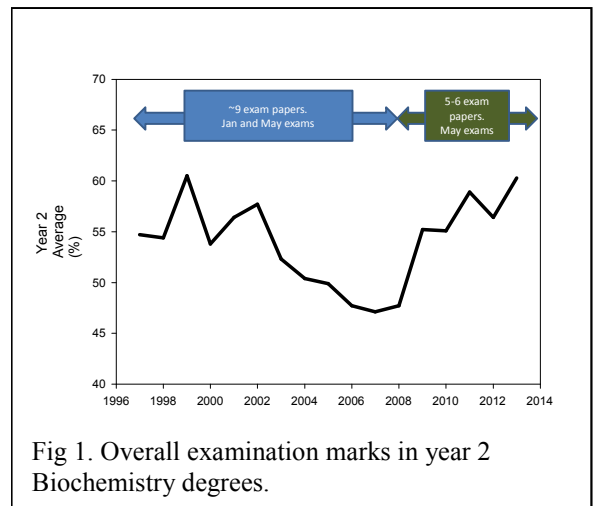


Fig 1. Overall examination marks in year 2 Biochemistry degrees.

Year	BIOC3160	BIOC3500	BIOC3600	BIOC3700	BIOC3800	ATUs
2006-7	62.7	57.1	53.2	53.8	54.5	
2007-8	60.7	53.7	56.8	54.1	52.0	
2008-9	66.4	54.7	57.1	58.1	57.0	
2009-10	63.5	54.3	53.6	55.6	56.9	
2010-11	65.4	53.5	57.1	56.7	56.7	
2011-12	64.7					54.7
2012-13	64.6					54.6
2013-14	65.7					54.9

This year we have around 60% of the Biochemistry graduates graduating with First Class or Upper Second class honours degree. This is the best year of results achieved since 2006-7 and contrasts starkly with 2005-6 and 2007-8 where only around 30% of graduates hit this level and 2006-7 and 2009-10 where over 20% of our finalists achieved only third class honours, ordinary degrees or failed. It should also be remembered that 4 students in 2013-4 counted in the black (failed percentage (about half of this bar)) actually have mitigating circumstances and will take modules in August and should graduate – many with Lower Second class honours.

Despite these great achievements this year compared with the past we are in agreement with you in wanting these marks for ATU modules to be higher. The programme team has discussed the issue at length and we will institute additional measures for the next academic year to support students in maximising their potential in ATU examinations. We will introduce additional briefing sessions at

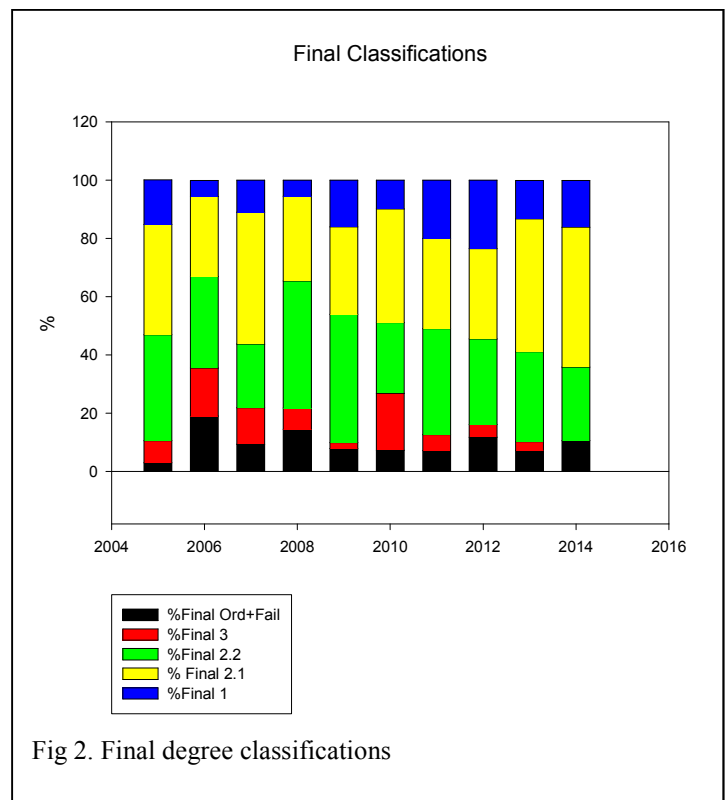


Fig 2. Final degree classifications

the start of each ATU module, which will include a discussion of the qualities of a good essay at level 3, and of the Faculty's level 3 marking criteria to emphasise what is required. In addition, for three ATU topics (one in each ATU module, which is currently offered to all students in all of the School's programmes; currently 'Visualising Viruses', 'World of Viruses' and 'Molecular Oncology') we will offer specific essay writing seminars. We will provide marked but un-annotated scripts at ~40%, 60% and 80% levels in the VLE and ask students to grade them in advance of the seminar. Then the marking will be explained / revealed. Annotated versions would then be made available through the VLE. We will record attendance to monitor the effectiveness of these measures."

I hope you'll agree that there is no evidence here that simply reinstating Jan exams would improve matters (and my personal view is that it may harm the progress we have already made) so we will concentrate on two aspects. Firstly to try to make sure that staff marking are using the full marks range available. We have already made some steps forward as you note in your report, but more needs to be done. We are also considering carefully how we can provide more feedback to students earlier in the course on the level of their work. These ideas will be worked up during the summer and in the next academic year.

- You also make very reasoned and rational points concerning the conversion of marks from the 0-100 scale to the Leeds 2-9 scale. I can only confirm that you are not the first external examiner to make these comments and that a number of staff here are equally frustrated by these regulations.
- You note the successful introduction of the MBIOL course. We have now passed many of these students into Level 5 (year 4) and we wait to see how they achieve next year. They will all be carrying overall averages of  $\geq 65\%$  into year 4. We have also recruited an increased number of students (24) into year 3 of the MBIOL for next year.
- I am pleased to see that you are very happy with our procedures for handling exams papers and the setting of exams. While we continue to try to iron out errors which have happened once the papers get out of our hands to exams section, we are pleased that such occurrences are rare and the process overall has run smoothly. I am also pleased that you found our mitigating circumstances procedures to be exemplary. This is an area where we have taken some time to develop a robust, caring and confidential procedure and I will be very happy to pass your comments onto the chair of that committee.

I hope my responses help you to understand our procedures and our thoughts on the way forward. We look forward to working with you again next year.

With best wishes,