

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): *Microbiology*

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

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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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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.
- The intercalating medics undertake an intensive year on a science programme and demonstrate that they can achieve a very high standard in project work and other modules taken alongside the BSc science students.

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 MICR 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 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.

I 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.

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.

The MBiol cohort was outstandingly good and well-prepared for careers in science. This is reflected in their degree classifications.

The intercalated medical students are clearly a bright bunch. They have a relatively light introduction to life science within the medical curriculum and are then launched into a final year Microbiology programme in which they demonstrate a high level of achievement, on a par with the upper half of the science class. I firmly believe, however, that when it comes to degree classification, they are given an unfair advantage over their peers on BSc Microbiology programmes because they take two modules that are much more basic. I can understand the logic in doing this to prepare them for more challenging work but one of these modules, worth 20 credits, had an average mark of 80% with the lowest being 75%. The assessment of this module needs to be more challenging, with marks in line with the ATUs or, as in many other institutions, the intercalated medical programme should be identical to the final year of the science BSc. I have no reason to expect that these first-rate students would not be able to achieve well.

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. This is particularly relevant for future medical practitioners.

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 too 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. It is very positive that the intercalated medical students have a real opportunity to experience scientific research.

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

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



UNIVERSITY OF LEEDS

15 October 2015

Dear

RESPONSE TO EXTERNAL EXAMINER REPORT 2014/15

BSc Microbiology – all programme variants

BSc Medical Microbiology – all programme variants

BSc Microbiology and Immunology – all programme variants

BSc Microbiology with Virology – all programme variants

BSc Microbiology in Relation to Medicine

MBiol, BSc Microbiology (Integrated Masters) – all programme variants

As Programme Leader, and on behalf of all of the staff who contribute to the teaching of Microbiology, I would like to thank [redacted] in [redacted] role as external examiner and for producing a thorough report. In particular I would like to express our gratitude to [redacted] for covering the absence of [redacted] who due to ill health was unable to act as external examiner this academic year.

No Matters for Urgent Attention were raised, but [redacted] address below.

[redacted] did raise a number of other points that I

- (i) *I 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.*

Academic staff are encouraged to set exam questions that span the entire content of ATU in order to probe understanding of the concepts rather than just factual recall of the lecture material. Staff will be reminded of this for the next academic session to ensure we do not simply assess rote learning of factual information

- (ii) *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 Programme Leaders, the Module Managers and the Director of Student Education have already carefully considered the timing of the ATU exams. Across the three different degree programmes in the School of Molecular and Cellular Biology there is no evidence that exam performance has reduced since the 1st semester ATU module exams were moved to semester 2. It is also important to reiterate that the rationale for moving the MICR3120 module exam to semester 2 was to enable students to focus on writing their final year project. In the past many students had commented that they found it difficult to write their project draft at the same time as revising for the MICR3120 exam. Exam essay writing

sessions were incorporated into the ATU modules, to provide students additional training in essay writing, for the first time this year. However, these exam essay sessions were poorly attended, perhaps explaining why some students seemed ill prepared. For the next academic year these exam essay sessions will be made compulsory to ensure all students can benefit. Additional resources will also be made available online, with exemplars of essays from previous years' examinations. Nonetheless, we will continue to monitor the situation to ensure students are not disadvantaged with examinations all being after Easter.

- (iii) *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.*

As outlined in (i) above, more emphasis will be placed on setting exam questions that test understanding of concepts and not just factual recall. In addition, academic staff in a meeting will receive instructions on how to use the full range of marks available for exam essays, to ensure truly excellent essays are awarded the appropriate marks. The Microbiology programme team will also discuss what are realistic expectations for the standards of essays written under examination conditions to ensure marking is fair.

- (iv) *The intercalated medical students are clearly a bright bunch. They have a relatively light introduction to life science within the medical curriculum and are then launched into a final year Microbiology programme in which they demonstrate a high level of achievement, on a par with the upper half of the science class. I firmly believe, however, that when it comes to degree classification, they are given an unfair advantage over their peers on BSc Microbiology programmes because they take two modules that are much more basic. I can understand the logic in doing this to prepare them for more challenging work but one of these modules, worth 20 credits, had an average mark of 80% with the lowest being 75%. The assessment of this module needs to be more challenging, with marks in line with the ATUs or, as in many other institutions, the intercalated medical programme should be identical to the final year of the science BSc. I have no reason to expect that these first-rate students would not be able to achieve well.*

We are currently re-evaluating the content of the Microbiology in Relation to Medicine degree. It is too late to implement major changes for the 2015-16 academic year, meaning any changes could be introduced for 2016-17. There is, however, scope to incorporate more advanced material from the suite of modules we teach to the BSc Microbiology students into the intercalating degree, which will make the content more challenging for the intercalating students.

Best wishes,

Programme Leader

Tel:
Email: