

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):	<i>Biochemistry, Biological Sciences and Microbiology</i>
Programme(s) / Module(s):	Microbiology; Microbiology with Immunology; Microbiology with Immunol (Int); Microbiology with Virology; Microbiology Ind; Medical Microbiology; Microbiology in Relation to Medicine; MBBS Microbiology
Awards (e.g. BA/BSc/MSc etc):	BSc/MSc

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
None required.

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

- 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.*

Both the programme aims and the ILOs are fully commensurate with the level of the award.

- 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.*

Despite some changes since last year, the programme still compares very favourably with similar programmes at other Russell Group universities, including my own, and remains more rigorous than those offered at some universities.

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 assessment methods remain varied. They include MCQs, short answer and longer essay questions (the latter used exclusively by the ATUs), skills modules and dissertations. This mix gives all students an equitable opportunity to demonstrate their understanding and learning level. Overall, modules seemed to be marked appropriately. There were some ATUs where the marks were disappointingly low – for example, 20% failed "Emerging infections"; 37% failed "Exploiting RNA world", which was a worse result than last year when it was also flagged as poor; 25% failed "Future of antibiotics"; 18% failed "Innate immunity". Analysis presented however showed that the "poor" modules were fairly marked and that in general in these cases the students gave bad answers. All dissertations were double-marked. Only some of the ATUs were double-marked (approximately 10%) – this is somewhat on the low side (see later comments).

It was obvious that the students from the different degree programmes favour different ATUs. How much guidance are they given as to how well an ATU fits what they have done previously? How much do the different ATU deliverers remember that their audience might not have much background in the topic area? How many people deliver each ATU? Guidance early on might be more appropriate than increased background in the ATUs, because if you make it too basic then it's no longer an ATU. "Immune evasion was a good example". Micro 64% average score, no fails; Biol Sci 55.9, 9.5% fails; Biochem 46.4, 23.9% fails! Feedback in the examiner's meeting was that guidance was already given, but that changes would be considered to teaching in earlier years to reflect poor performance in certain areas.

Student performance was on the whole extremely good (see next section).

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 academic standards of the students and their performances in relation to students on comparable courses remain as I said last year – of the order I would expect for a strong department in a Russell Group University. As before, on the whole students scored higher marks in the skills modules and dissertations than they did in the ATUs, although the best students scored similarly across the range of assessments.

One would normally expect students to improve year-on-year. It was disappointing to note that some students did markedly worse this year than last. Four of the students dropped between 8-12% from their second year marks, and only one student made a similar move in the opposite direction. By applying the 1:1 ratio for the last two years, all 4 students who markedly dropped in performance kept the grade they had achieved at the end of year two. If a 1:2 ratio had been applied, 2 of the 4 would have dropped a grade. There were small numbers of students in "my" courses this year so this may be a one-off. Nevertheless, I feel we need to watch to see this doesn't develop into a trend. If it does, why are students struggling so much in the final year, and is the use of 1:1 still appropriate? If it simply reflects the fact that the final year requires more academic rigour, and therefore you're actually "finding out" the less able students, then fine, but that should be reflected by using 1:2 rather than 1:1.

Of the Micro students, 41% got a first, 35% an upper second and 12% a lower second. Of the intercalating medics, with the exception of a single upper second, the rest all got firsts! An excellent cohort all round, with better results achieved than last year.

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. 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.

Time perhaps to reassess all three ATUs being examined in the final semester. For some students, these exams seem to be something of a shock. Consideration should be given to examining one at the end of the first semester, so that students could get feedback on their performance and perhaps learn from that (but only if feedback was detailed and constructive, which unfortunately is not always the case from the scripts I saw – see later comments).

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.

I was reassured this year that all students who wished to do a lab project for their dissertation were allowed to do one (unless it was obvious from the staff's experience that the student would have little chance of completing one successfully). However, I was still slightly surprised that so few students decided to do a lab project. In the equivalent courses at my University, a large majority of the students do a lab project for their dissertation. The University of Leeds has a long and proud tradition of research in Microbiology, which continues, and the diversity and quality of ATUs on offer testifies to this ongoing research effort. I'm not sure at what point students make their decision as to whether to do a lab-based or literature dissertation, and therefore if the ATU teaching has a chance to influence their decision. Is there anything that could be done to try to excite more of them about research before they make that choice?

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

N/A

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

N/A

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.

All information was provided in advance or on request in a timely manner.

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.

Again, all documentation was provided in advance or on request. I reiterate my comments from last year on the unnecessarily complicated transformation steps used to create the scale used. There seems to be a move within the University of Leeds to remove as far as possible discretion from the discretionary range, which is strange and disturbing. Either the Examiners Board should be allowed to express discretion (far preferable in my opinion), or they shouldn't. If the latter, just remove the discretionary ranges (and then face the subsequent, potentially litigious) backlash.

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?

All draft exam papers, model answers and marking schemes were provided well in advance. I was very pleased that my comments last year on poor marking schemes seemed to have been addressed, as the vast majority of marking schemes were given in detail and were very clear. However, there are still a few where there is no breakdown as to how many marks were to be allocated to each part of the model answer.

Overall, the MCQs were far better constructed than last year, and far fewer questions had a minimal root.

I was provided with far more information as to the content of the various components of the skills module and how they were marked, as I had requested last 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?

Initially I was only provided with exam scripts for those students whose final mark was still up for discussion. I then requested comparator scripts for each grade of degree but also for other students who were just either side of the borderlines between degrees, and these were quickly forthcoming. In fact, it was obvious that I could quickly see any script or dissertation that I requested.

On the whole scripts were clearly marked, but there are still some examiners whose handwriting is barely legible. Please ask a colleague if they can read your handwriting, and if they can't, please print in future!

Level of feedback on ATU questions varied enormously from marker to marker. Some were long and very detailed, others shorter but succinct. Others were virtually useless - "very good, detailed and good examples" with a mark of 70, "all of the important parts are covered and in some cases with a good level of detail" with a mark of 60. How does the latter student know how to improve to a 70 from those comments? Also, only a small proportion (I believe 10%) of ATU scripts were double-marked. I'm a little concerned that some students may have been marked either too leniently or too strictly, especially as there was evidence of mark modulation by the second marker for several scripts. However, it is difficult to see how this could reasonably be improved.

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

The choice of dissertation subjects was wide-ranging and appropriate. For the non-lab dissertations with some of the more unusual subjects, particularly those that involved public engagement or that were outside the usual range of scientific literature-based projects, care must be taken to ensure that these are marked appropriately. The external examiners were a little concerned that some of these might have been marked more harshly than the more traditional project. Methods and standards of assessment were otherwise appropriate, and the two markers were either in close agreement immediately or seemed to reach consensus simply.

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?

All administrative arrangements worked very smoothly. <> took over this year from <> as the Programme Administrator. <> was a hard act to follow, but <> has been brilliant. Everything was organised very well by the School, especially by <>, the Exams Officer (<>) and the Programme Leader (<>). I attended the Board of Examiners meeting, which was again very well attended. Discussion was lively at times, as it should be. I agreed with all of the Board's recommendations.

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

Yes.

Other comments

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

Additional feedback from meeting the student representatives in March.

The first year reps requested tutorials for Genetics. As things currently stand they only have lectures, and a lot of them were struggling with the theory. They felt extra tutorials would help in this respect, and in problem solving.

The second year reps felt that there were not enough past questions on the VLE to help them with writing essays. When it came to their tutorial work, they were not convinced that marking was equitable.

The third year reps had more to say. Firstly, they were in favour of moving one of the ATUs back to the first semester. They too felt that the presentation marking was not equal across the board. They also felt that advice from the tutors was not consistent, with varying workloads. Some tutors apparently essentially told them to go away, pick a topic and do it, whereas others set a topic, got everyone to do a summary page and then got them all to read each other's summary page and comment. They also complained that some tutors were not using the mark scheme.

I have no opinion on these points, but felt they should be reported. You will be better placed to know if there is any cause for concern in what I report here.

Faculty of Biological Sciences
Student Education Service

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Irene Manton Building
University of Leeds
Leeds
LS2 9JT, UK



UNIVERSITY OF LEEDS

30 September 2014

Dear

RESPONSE TO EXTERNAL EXAMINER REPORT 2013/14

BSc Microbiology
BSc Medical Microbiology
BSc Microbiology and Immunology
BSc Microbiology with Virology
BSc Microbiology in Relation to Medicine
MBiol, BSc Microbiology (Integrated Masters)

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 for producing a thorough report. No Matters for Urgent Attention were raised, but [redacted] did raise a number of other points that I address below.

- (i) *It was obvious that the students from the different degree programmes favour different ATUs. How much guidance are they given as to how well an ATU fits what they have done previously? How much do the different ATU deliverers remember that their audience might not have much background in the topic area? How many people deliver each ATU? Guidance early on might be more appropriate than increased background in the ATUs, because if you make it too basic then it's no longer an ATU. "Immune evasion was a good example". Micro 64% average score, no fails; Biol Sci 55.9, 9.5% fails; Biochem 46.4, 23.9% fails! Feedback in the examiner's meeting was that guidance was already given, but that changes would be considered to teaching in earlier years to reflect poor performance in certain areas.*

I agree these differences may reflect the background of the students, but this is more of an issue for students from Biological Sciences and Biochemistry programmes doing infection and immunity based ATUs such as Immune evasion. However, as indicated in the exam meeting, guidance and extra resources are made available to students who take ATUs provided by other degree programmes. For example for Stem Cells, a Biochemistry ATU, material from relevant Level 2 lectures is made available to Microbiology students.

- (ii) *One would normally expect students to improve year-on-year. It was disappointing to note that some students did markedly worse this year than last. Four of the students dropped between 8-12% from their second year marks, and only one student made a similar move in the opposite direction. By applying the 1:1 ratio for the last two years, all 4 students who markedly dropped in performance kept the grade they had achieved at the end of year two. If a 1:2 ratio had been applied, 2 of the 4 would have dropped a grade. There were small numbers of students in "my" courses this year so this may be a one-off. Nevertheless, I feel we need to watch to see this doesn't develop into a trend. If it does, why are students struggling so much in the final year, and is the use of 1:1 still appropriate? If it simply reflects the fact that the final year requires more academic rigour, and therefore you're actually "finding out" the less able students, then fine, but that should be reflected by using 1:2 rather than 1:1.*

I agree with [redacted] that the Microbiology programme group should monitor the performance of students at level 2 versus level 3 to ensure that student performance does not dip significantly in the final year.

- (iii) *Time perhaps to reassess all three ATUs being examined in the final semester. For some students, these exams seem to be something of a shock. Consideration should be given to examining one at the end of the first semester, so that students could get feedback on their performance and perhaps learn from that.*

The programme leaders, the module managers and the Director of Student Education carefully considered the comments from [redacted] and the other external examiners with regards to 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. Therefore, no changes to the timing of the examinations are planned for the 2014-15 academic year. However, exam essay writing sessions will be incorporated into the ATU modules, to provide students with additional training in essay writing.

- (iv) *I was reassured this year that all students who wished to do a lab project for their dissertation were allowed to do one (unless it was obvious from the staff's experience that the student would have little chance of completing one successfully). However, I was still slightly surprised that so few students decided to do a lab project. In the equivalent courses at my University, a large majority of the students do a lab project for their dissertation. The University of Leeds has a long and proud tradition of research in Microbiology, which continues, and the diversity and quality of ATUs on offer testifies to this ongoing research effort. I'm not sure at what point students make their decision as to whether to do a lab-based or literature dissertation, and therefore if the ATU teaching has a chance to influence their decision. Is there anything that could be done to try to excite more of them about research before they make that choice?*

The distribution of lab and non-lab projects is a reflection on the students' interests. ~60% of students are allocated either their 1st or 2nd choice project and the vast majority of students who want a laboratory project are allocated one. Students chose projects at the end of level 2 and the projects are allocated over the summer. To perform the allocation of projects later would require the projects to run in semester 2, which could put students who are applying for PhD and other laboratory based positions at a significant disadvantage.

- (v) *Again, all documentation was provided in advance or on request. I reiterate my comments from last year on the unnecessarily complicated transformation steps used to create the scale used. There seems to be a move within the University of Leeds to remove as far as possible discretion from the discretionary range, which is strange and disturbing. Either the Examiners Board should be allowed to express discretion (far preferable in my opinion), or they shouldn't. If the latter, just remove the discretionary ranges (and then face the subsequent, potentially litigious) backlash).*

As programme manager I agree with [redacted] that the examination board should be able to apply discretion and that the transformation steps are unnecessary. However, the 2-9 classification scale is University policy over which we as a Faculty have no control and that the COPA elements regarding discretion have been redrafted and further guidance given but that academic discretion still remains part of the process in considering the entire mark profile of students within the discretionary zones.

- (vi) *All draft exam papers, model answers and marking schemes were provided well in advance. I was very pleased that my comments last year on poor marking schemes seemed to have been addressed, as the vast majority of marking schemes were given in detail and were very clear. However, there are still a few where there is no breakdown as to how many marks were to be allocated to each part of the model answer.*

I will request that all model answers are provided with a breakdown of marks.

- (vii) *On the whole scripts were clearly marked, but there are still some examiners whose handwriting is barely legible. Please ask a colleague if they can read your handwriting, and if they can't, please print in future!*

I will request that staff ensure that all written feedback on exam scripts is legible.

- (viii) *Level of feedback on ATU questions varied enormously from marker to marker. Some were long and very detailed, others shorter but succinct. Others were virtually useless - "very good, detailed and good examples" with a mark of 70, "all of the important parts are covered and in some cases with a good level of detail" with a mark of 60. How does the latter student know how to improve to a 70 from those comments? Also, only a small proportion (I believe 10%) of ATU scripts were double-marked. I'm a little concerned that some students may have been marked either too leniently or too strictly, especially as there was evidence of mark modulation by the second marker for several scripts. However, it is difficult to see how this could reasonably be improved.*

I will request that detailed feedback is given on all exam scripts and that markers and second markers ensure that written comments and scores are align with the grade awarded.

- (ix) *The choice of dissertation subjects was wide-ranging and appropriate. For the non-lab dissertations with some of the more unusual subjects, particularly those that involved public engagement or that were outside the usual range of scientific literature-based projects, care must be taken to ensure that these are marked appropriately. The external examiners were a little concerned that some of these might have been marked more harshly than the more traditional project. Methods and standards of assessment were otherwise appropriate, and the two markers were either in close agreement immediately or seemed to reach consensus simply.*

The programme group will monitor the marks awarded for projects that are not literature and lab based to ensure that marking is appropriate and that they are not marked more harshly

- (x) *The first year reps requested tutorials for Genetics. As things currently stand they only have lectures, and a lot of them were struggling with the theory. They felt extra tutorials would help in this respect, and in problem solving.*

The request for additional support in Genetics will be addressed by changes to the level 1 skills module MICR1320, with a new practical class on genetics and associated support material.

- (xi) *The second year reps felt that there were not enough past questions on the VLE to help them with writing essays. When it came to their tutorial work, they were not convinced that marking was equitable.*

With regards to access to past papers for level 2 modules, there were 3 past papers for each examined module on the VLE. The exam papers for 2013-14 will be available in the next academic year providing further past questions. I will ask the module manager for level 2 skills module MICR2320 to examine the assessment of tutorial work to ensure that tutorial marking is equitable.

- (xii) *The third year reps had more to say. Firstly, they were in favour of moving one of the ATUs back to the first semester. They too felt that the presentation marking was not equal across the board. They also felt that advice from the tutors was not consistent, with varying workloads. Some tutors apparently essentially told them to go away, pick a topic and do it, whereas others set a topic, got everyone to do a summary page and then got them all to read each other's summary page and comment. They also complained that some tutors were not using the mark scheme.*

As outlined above, there are no plans to move the MICR3120ATU exam to January, but additional exam writing sessions will be incorporated into the ATU modules to enable students to develop their exam essay technique. With regards to assessment of third year presentations in MICR3325 I see no issue with the different ways in which tutors allocate research articles for the presentations. However, I have asked the module manager to ensure that all tutors use the marking scheme and to promote a more consistent approach to marking a simplified mark scheme will be introduced in the next academic year.

Best wishes,