

The University of Leeds

EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2015– 2016

Part A: General Information

Subject area and awards being examined

Faculty / School of:	Biological Sciences
Subject(s):	<i>Microbiology and related degrees</i>
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

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?

Yes

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 intended learning outcomes are appropriate for BSc/MBiol degrees at a leading UK university. The course is structured so that in each year the students build on and extend information given in earlier elements of the course (I will return to this aspect later).

A valuable element of the programme is the intercalating Medical Students since this provides an opportunity to introduce to these potential clinicians important aspects of microbiology that are nowadays only superficially covered in the regular MBBS degree programme. This course is demanding and it is notable that this cohort of students performs well – a reflection presumably of their entry qualifications.

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 taught material and the assessment criteria are comparable with that at other leading UK 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.*

- A clear set of instructions is provided to markers of exam scripts. The first marker (I assume the question setter) marks and annotates the script in detail, indicating factually correct and inaccurate information, and evidence of supplementary reading. The script, together with the mark scheme is then passed to a moderator. If the marks of the moderator vary by more than +/- 5% then a moderated mark must be agreed. In the exam board the term used was within 10% or 10 marks and I think it should be clarified that there is a difference between +/- 5% and 10%, and indeed the criteria for projects and exam scripts seems to differ for no apparent reason.
- Although very clear marking criteria are included in the course handbook for students, I think it would be helpful to circulate these to examiners to consult while actually marking scripts and projects. A set of marking criteria were actually circulated with the project, but were far too broad and lacked specifics. I assessed several scripts and noted a seeming reluctance to award higher marks in some of the Advanced Topic Units – marks tended to peak in the mid-70s.
- I found it very difficult to see any justification for the Classification Scale (20-90) since scripts are marked on a 0-100 scale and then converted. In particular it diminishes the value and specifics in the detailed marking criteria.
- I note that in common with other universities (including my own) the final degree awarded is based on the application of mechanical procedures with little room for discretion. I also note that the little room available for discretion is associated with mitigation circumstances. I understand why, in an increasingly litigious society, this is necessary. However, different mechanical approaches inevitably favour some students' while disfavouring others. For example the preponderance rule causes problems when large module credit values are involved.
- I was surprised to see that final scores could be calculated using either a 1:1 or 1:2 marks from the 2nd:3rd years. While I can see some justification for this for certain subjects (particularly the Arts and Humanities), I think this is very difficult to justify for courses in which the final year is designed to build on and enhance knowledge particularly in the 2nd year. In the case of the microbiology and related degrees, the final year is dominated by the project, skills module and Advanced Topic Units, and in my opinion these should bear the greater weight for the final classification. I noted at least four students who benefited from the 1:1 weighting. Indeed my own university uses the 1:2 weighting, as do the other universities at which I have examined.

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.*

Overall the students in the microbiology cohort performed well, with the majority classified as 2.1 or 1. The performance of the intercalating and MBiol students was even better, with the majority classified as 1. In my opinion the categories are comparable with students graduating from other leading UK universities. I note that in nearly all cases the average marks were an improvement on 2014-5, but similar to 2013-4.

As noted by the previous external examiner, the marks for the advanced topic units were approx. 10% lower than those for the project and skills modules. However, this is a common observation and allows different skills and knowledge to be tested. For example, a student who failed two written exams actually produced a superb literature project.

I note that when marking the advanced topic units student who had covered aspects of the question in depth were nevertheless criticised for omitting specific aspects, indicating a need to balance breadth and depth. The students may need better guidance or the marking criteria modified to address this issue.

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.

As this is my first year this is not applicable

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.

It is very clear that the final years of the degree programmes and the intercalating programme benefit from the fact that so many of their teachers research research active, and the degree programme is genuinely research led. There is very much a focus on virology and immunology and as with many degrees at comparable universities, the breadth of the course is correspondingly restricted. From an education perspective I do not regard this as an issue.

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.

The first year of examining at a new university is always a challenge and although standards, as reflected in the students' written work, are comparable, each degree programme/university has its own protocols that can take time to get one's head around Significant details are often buried in the nowadays extensive documentation. Above I have pointed out some issues that are at variance with other boards, but so far the required information seems to be available in the supplied documents and spread sheets.

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, the documentation was extensive and so far includes the material needed to perform my duties.

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 draft examination papers and was given the opportunity to make comments and suggestions. The level of the questions at year 3/4 was challenging, but nevertheless suitable for a range of student abilities.

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?

A selection of scripts and projects were available when I arrived and I requested others that were then provided. The examination scripts in particular were well annotated but it would be useful to have a clearer indication of the moderation process and the basis on which moderated marks were arrived at. For example, in Newcastle a pre-printed label is attached to each script so that the first markers' mark is noted, the moderator simply ticks if within +/-5%. If the margin is larger then an agreed mark needs to be entered and justified. Both markers initial the label.

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

Yes and the products were of a high standard. However, I personally find literature projects difficult to assess (particularly as there are so many excellent review journals around) and in we have abandoned them in favour of a practical skills module including a significant amount of data generation and analysis.

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?

I received a great deal of helpful support from the admin staff both before my arrival and during my two visits. A special mention must go to

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

Mitigating circumstances were handled in a confidential way but could be improved by quantifying the impact on the individual modules using a simple numerical scale (e.g.1, No impact, 2. Moderate impact, 3 Major impact)

Other comments

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

While I had the opportunity to meet some of the microbiology students over lunch, the absence of a viva means that it is very difficult to get an impression of the ability of the students to discuss aspects of microbiology, and to explore their ability to "think on their feet". One therefore leaves the process without much of a feel for the students. Our procedure in is similar, although the external examiners are invited to some of the student presentation of their projects.

**Faculty of Biological Sciences
Student Education Service**

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



UNIVERSITY OF LEEDS

7 November 2016

Dear

RESPONSE TO EXTERNAL EXAMINER REPORT 2015/16

BSc Medical Microbiology – all programme variants

BSc 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 you for your input and support as External Examiner and for producing a thorough report. No Matters for Urgent Attention were raised, but you did raise a number of other points that I address below.

- (i) *A clear set of instructions is provided to markers of exam scripts. The first marker (I assume the question setter) marks and annotates the script in detail, indicating factually correct and inaccurate information, and evidence of supplementary reading. The script, together with the mark scheme is then passed to a moderator. If the marks of the moderator vary by more than +/- 5% then a moderated mark must be agreed. In the exam board the term used was within 10% or 10 marks and I think it should be clarified that there is a difference between +/- 5% and 10%, and indeed the criteria for projects and exam scripts seems to differ for no apparent reason.*

There is indeed a difference between +/- 5% and 10% and we will strive to improve the description of our marking process at the exam board. In addition, we are in the process of reviewing how research project marks are reconciled and will be able to update you on this once discussions have been concluded.

For completeness, I include an excerpt from our Code of Practice on Assessment,'a subset of exam scripts (10 or 10% which ever is greatest) are second marked. If the assessors agree to within half a degree class ($\pm 5\%$), the primary marks are accepted in their entirety. If not, then every script is checked to arrive at a set of agreed marks by appropriate discussion between the markers. In the case of disagreement that cannot be resolved, the Examinations Officer will involve a third marker. The final mark will be the average of the two closest marks or all three marks if the third assessors' mark is equidistant between the marks given by the two original assessors. Projects are marked independently by two assessors. If their marks differ by more than 10% then they meet to agree a mark and provide a rationale for the agreed mark. If the assessors agree to within a degree class (10%) the marks are averaged. You note that there is a difference in criteria for projects and exam scripts (i.e. $>10\%$ for projects and $\pm 5\%$ for exam scripts).'

- (ii) *Although very clear marking criteria are included in the course handbook for students, I think it would be helpful to circulate these to examiners to consult while actually marking scripts and projects. A set of*

marking criteria were actually circulated with the project, but were far too broad and lacked specifics. I assessed several scripts and noted a seeming reluctance to award higher marks in some of the Advanced Topic Units – marks tendered to peak in the mid-70s.

The marking criteria for the projects are under review. With regards to using the full range of marks for the ATUs, including those >mid 70s, this will be discussed with academic staff to ensure that essays are awarded marks commensurate with work that is produced under exam conditions.

- (iii) *I found it very difficult to see any justification for the Classification Scale (20-90) since scripts are marked on a 0-100 scale and then converted. In particular it diminishes the value and specifics in the detailed marking criteria.*

The 20-90 scale is used throughout the University of Leeds, but its use is under review and likely to be phased out in due course.

- (iv) *I note that in common with other universities (including my own) the final degree awarded is based on the application of mechanical procedures with little room for discretion. I also note that the little room available for discretion is associated with mitigation circumstances. I understand why, in an increasingly litigious society, this is necessary. However, different mechanical approaches inevitably favour some students' while disfavouring others. For example the preponderance rule causes problems when large module credit values are involved.*

We will relay your comments to our Pro-Dean of Student Education as the process of dealing with mitigation circumstances and considering performance profiles is being reviewed at Faculty level.

- (v) *I was surprised to see that final scores could be calculated using either a 1:1 or 1:2 marks from the 2nd:3rd years. While I can see some justification for this for certain subjects (particularly the Arts and Humanities), I think this is very difficult to justify for courses in which the final year is designed to build on and enhance knowledge particularly in the 2nd year. In the case of the microbiology and related degrees, the final year is dominated by the project, skills module and Advanced Topic Units, and in my opinion these should bear the greater weight for the final classification. I noted at least four students who benefited from the 1:1 weighting. Indeed my own university uses the 1:2 weighting, as does the other universities at which I have examined.*

The 1:2 and 1:1 ratios are used University wide and are not restricted to the Microbiology degrees and the Faculty of Biological Sciences. However, we will relay your comments to the University.

- (vi) *As noted by the previous External Examiner, the marks for the advanced topic units were approx. 10% lower than those for the project and skills modules. However, this is a common observation and allows different skills and knowledge to be tested. For example, a student who failed two written exams actually produced a superb literature project. I note that when marking the advanced topic units students who had covered aspects of the question in depth were nevertheless criticised for omitting specific aspects, indicating a need to balance breadth and depth. The students may need better guidance or the marking criteria modified to address this issue.*

Guidance to students on answering ATU questions is provided in special exam sessions. These sessions include reviewing exam answers from previous examinations. However, greater emphasis on how the students' essays are marked using the assessment criteria can be provided in future sessions.

- (vii) *It is very clear that the final years of the degree programmes and the intercalating programme benefit from the fact that so many of their teachers are research active, and the degree programme is genuinely research led. There is very much a focus on virology and immunology and as with many degrees at comparable universities, the breadth of the course is correspondingly restricted. From an education perspective I do not regard this as an issue.*

Teaching in Microbiology is aligned with our research strengths, which is reflected by the significant virology component. However, teaching is also provided in bacteriology throughout the degree, with three ATU topics in the area of bacteriology and other ATUs also include bacteriology content.

(viii) *A selection of scripts and projects were available when I arrived and I requested others that were then provided. The examination scripts in particular were well annotated but it would be useful to have a clearer indication of the moderation process and the basis on which moderated marks were arrived at. For example, in a pre-printed label is attached to each script so that the first markers' mark is noted, the moderator simply ticks if within +/-5%. If the margin is larger then an agreed mark needs to be entered and justified. Both markers initial the label.*

As outlined above in (i), moderation is only applied if there is a discrepancy of over 5% between the first and second markers. If this does not occur, the first set of marks are accepted in their entirety. In this instance the second marker should initial the scripts they have second marked.

(ix) *I personally find literature projects difficult to assess (particularly as there are so many excellent review journals around) and in we have abandoned them in favour of a practical skills module including a significant amount of data generation and analysis.*

Many of our students chose literature projects in order to develop non-laboratory skills. Whilst they may be able to utilise review articles in a literature project, it is relatively straightforward to identify students who rely on a handful of review articles as the scope and discussion of the content is limited. However, the extension exercise in which the students write a grant proposal based on their literature project is a highly discriminatory exercise that requires the students to identify a scientific problem and to design experiments to study this.

(x) *Mitigating circumstances were handled in a confidential way, but could be improved by quantifying the impact on the individual modules using a simple numerical scale (e.g. 1 No impact, 2 Moderate impact, 3 Major impact)*

The reporting of mitigating circumstances is currently under review. Our Pro-Dean, who is an External Examiner at is a proponent of what you suggest.

(xi) *While I had the opportunity to meet some of the microbiology students over lunch, the absence of a viva means that it is very difficult to get an impression of the ability of the students to discuss aspects of microbiology, and to explore their ability to "think on their feet". One therefore leaves the process without much of a feel for the students. Our procedure in is similar, although the External Examiners are invited to some of the student presentations of their projects.*

The final year students present their projects in a poster session at the end of the academic session. This might provide the External Examiner with an opportunity to meet with students and assess their intellectual abilities.

Best wishes,

Programme Leader

Tel: 0113 34
Email: