

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>Medical Sciences</i>
Programme(s) / Module(s):	BSc Medical Sciences; BSc Medical Sciences (Industrial); BSc Medical Sciences (International); MBiol, BSc Medical Sciences (Integrated Masters)
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?

N/A

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

N/A

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 BSc Medical Science programme aims to provide students with comprehensive knowledge and understanding of major areas of medical science. Teaching is research-led and equips students with knowledge of research techniques and their practical application. Students are equipped with appropriate transferable skills for advanced study or employment in medical research. To achieve these programme specifications, students study a broad range of modules. In Year 1, all modules are compulsory, whereas in Years 2 and 3, there is a balance of compulsory and optional units. The compulsory modules in Year 1 provide an appropriate foundation covering a broad range of medical science topics complemented with training in relevant scientific skills. The compulsory modules in Year 2 further develop student knowledge in physiology, pharmacology and neuroscience and extend training in scientific skills. The optional modules not only build on this knowledge, but through their diversity provide students with excellent opportunities to explore their own interests in the medical sciences. The compulsory modules in Year 3 include training in advanced scientific skills and a laboratory/literature-based research project. The optional modules allow students to explore research frontiers in a broad range of medical science areas. I commend the structure of the BSc Medical Science programme over the three years of study and the opportunities it provides to students to explore widely medical science. I consider the ILOs entirely appropriate for this BSc Medical Science programme.

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.*

My own institution does not offer a BSc Medical Science programme. However, the general structure of the programme at the University of Leeds is highly comparable to equivalent degrees at my own institution. There is a strong emphasis on training in scientific skills and critical transferable skills, not just the acquisition of knowledge. In part this training is achieved through a research project, the largest single component of the Year 3 course. Importantly at the University of Leeds, like at my own institution teaching is research-led. Thus, through comparison with equivalent courses at my own institution as well as discussions with colleagues at other UK universities, I am confident that the Aims and ILOs of the BSc Medical Science programme more than meet the expectations of the national subject benchmark.

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 Medical Science programme employs a wide range of assessment methods. In Year 1 and 2, MCQs, EMQs and DI questions are widely used, but there are also some essay questions, particularly in Year 2. In Year 3, assessment of the research project includes a literature review, a supervisor's report on laboratory work and a dissertation. Other Year 3 assessments include essays and questions to explore data interpretation, experimental design and paper review skills, all fundamental skills that students at this level should have acquired. I was encouraged greatly to see that some assessments in Years 1 and 2 included short note format. My own view is that short note questions enable greater exploration of student knowledge and understanding than optically-marked questions. At all levels, I consider that student work was appropriately marked and the boundaries of different degree classes were correctly set. Marking of student work was rigorous, but fair with all work in Year 3 double marked and student scripts well annotated; it was clear how examiners had decided what marks to award students. Thus, I consider teaching quality to be high and assessment methods rigorous, but fair.

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.*

Like at my own institution, the research project provided an excellent opportunity for students to demonstrate their achievement. The research dissertation synthesized student skills in an important number of areas including literature review, data analysis and interpretation and scientific communication. The Year 3 examinations provided students with further opportunities to demonstrate their knowledge and understanding of specific areas of medical science, their ability to advocate a viewpoint and their skills in data interpretation, experimental design and paper review. I was greatly encouraged to see the full range of marks employed by academic staff when marking student work, with little bunching of marks at degree classification boundaries. I saw no evidence of grade inflation. My own marking of work was entirely consistent with that of the academic staff. The student work that I reviewed was of an equivalent standard to that of students at my own institution. I did not take a record of the distribution of marks across the different degree classes for the graduating cohort of students on the BSc Medical Science programme. However, my recollection is that it was as I expected it to be with a reasonable number of students attaining first class honours, the largest group attaining upper second class honours and no long tail to the distribution of marks. This distribution of marks is consistent with that which I observed over the previous two years I have acted as external examiner for the BSc Medical Science programme. It is also consistent with the distribution of awarded degrees for similar programmes at my own institution.

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.

I consider that the BSc Medical Science programme is a very well run, high quality course where research strongly influences teaching. My impression is that few enhancements were necessary during the current academic year compared to the previous year. Nevertheless, the academic staff and administrators responsible for the course have made efforts to improve further communication with students and to respond to student feedback where appropriate.

Areas of good practice that I commend strongly include first, the widespread use of lecture recording and its high quality. It was again clear from my meeting with students studying on the programme that they valued greatly the recorded lectures and other online tools available to them to support student learning. Second, the strong emphasis on practical teaching through the three years of study. I commend most strongly academic staff for providing students with high quality practical training, which both challenges students and provides them with insight into laboratory research. Third, the Advanced Topics and their assessment. The students that I met were enthusiastic about the opportunity to study Advanced Topics. Fourth, as I have commented previously, I am impressed by the peer assisted study scheme whereby Year 2 students assist Year 1 students with their studies. It was clear from the enthusiasm of the students that this scheme is a win-win for both groups of students. I commend strongly this scheme and encourage its wide adoption. Finally, I applaud as excellent practice the self-reflection exercise that Year 3 students undertook as part of their research dissertation. I would very much like to see a similar exercise adopted by my own Department for its degree programmes.

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 teaching is research-led on the BSc Medical Science programme at the University of Leeds. In Year 3, student research projects were heavily based on the research expertise of the academic staff. These projects provided students with the opportunity to experience first-hand cutting-edge medical research competitive at an international level. The other modules in Year 3, particularly the advanced topics in medical sciences, took students to the limit of current knowledge in selected areas, challenging students with the latest ideas and newest hypotheses in these areas. In addition, in Year 2, I saw evidence of neuroscience research informing teaching. The standard of some student work in Year 2 was again at an advanced level that I did not expect to see. Thus, it was very clear that research influences strongly teaching on the BSc Medical Science programme. I commend strongly this practice.

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.

I was provided with comprehensive information about my role as an external examiner. Staff at the University of Leeds were extremely helpful, clearly explaining about the BSc Medical Science programme and answering my questions thoroughly. I am very grateful to all staff for their collegiality. I was made very welcome.

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.

Ahead of my first visit in academic year 2013-2014, I received very detailed information about the BSc Medical Science programme; some information was in paper format, while other documents were made available online. As part of my briefing, marking criteria were clearly explained. As part of my visits this academic year, I was again able to access online information about the programmes and reminded about marking criteria.

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?

I was provided with all draft examination papers in a timely fashion. I consider that the nature and level of difficulty of the questions was appropriate for each of the three Years of study. The level of difficulty of the questions increased appropriately from one year to the next. The Year 3 examination papers provided students with opportunities to demonstrate the depth and breadth of their knowledge and understanding, their powers of data analysis and interpretation and their ability to advocate a viewpoint. The breadth of examination questions appropriately reflected the wide-ranging opportunities the course design provides for students to explore medical science. I provided some comments on the examination papers. However, the vast majority of these comments were minor in nature, focusing on ensuring that the meaning of questions would be clear for students and correcting some minor typographical errors.

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?

Definitely, more than sufficient student work was made available to enable me to have strong confidence in the standard of work on the BSc Medical Science programme. Thankfully, staff provided valuable direction as to which scripts I should focus my attention on first. The scripts were clearly marked with comments, indicating correct / incorrect / irrelevant information and justifying the awarded mark. This level of information is particularly valuable because of the breadth of material examined on the BSc Medical Science programme. I was also encouraged to see that most second markers provided a good level of comments on scripts. I consider that there has been an improvement in the annotation of scripts over my period as external examiner for the BSc Medical Science programme. I applaud this change.

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

With the growth in student numbers, it is a major challenge to provide sufficient numbers of high quality research projects covering a wide range of subjects. Breadth can be limited because research in University Departments is concentrated in specific areas to achieve international excellence and the number of research-active staff puts pressure on the number of laboratory projects that can be offered. Inviting outside staff to contribute research projects for student dissertations is one solution, but there are the challenges ensuring parity of marking across dissertations. For the BSc Medical Science programme, I was greatly encouraged to see a wide range of subjects offered for dissertations consistent with the breadth of the course. I was further encouraged to see a substantial number of laboratory-based research projects offered to students, not just literature-based dissertations. The method and standard of assessment was appropriate. I commend the use of a marking matrix. I found this tool particularly useful for judging the standard of work both reviewing the assessment of work by supervisors and independent second markers and forming my own opinion of the dissertation. It was entirely appropriate that supervisors provide comments on student performance, while the dissertation is marked independently by the supervisor and second marker. While I understand that it is University policy not to annotate dissertations, I again encourage supervisors to annotate one copy, either a hard copy or an electronic copy, which can be made available to external examiners. I'm sure this annotated copy would also help the second marker evaluate the work.

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?

The standard of administrative arrangements was a gain excellent. The whole process was conducted in a highly professional manner from the review of draft examination papers, to arrangements for visits to the University of Leeds, review of marked examination scripts and dissertations and finally the conduct of the Board of Examiners meeting. I attended the Board of Examiners meeting, which was also attended by the appropriate University staff and all the other external examiners. All University academic staff and external examiners participated actively in the meeting. Individual students were considered in turn with adequate time allowed for full discussion of each student's performance, particularly those with mitigating circumstances and those at degree classification boundaries. All students were fairly treated and the whole process was fully transparent. Importantly, there was consistency and uniformity of standards across the different degree programmes considered by the Board of Examiners. I was fully satisfied with the recommendations of the Board of Examiners. The process was professionally conducted and the awarded marks fully justified.

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

Appropriate procedures were used for students with mitigating circumstances. A Special Cases Committee evaluated the evidence for all students with mitigating circumstances, then external examiners scrutinised student work with special care ahead of the Board of Examiners meeting. At the Board of Examiners meeting, the case of students with mitigating circumstances was discussed fully and where appropriate there was an adjustment of marks. As for all other students, students with mitigating circumstances were treated fairly and there was full transparency. There was consistency and uniformity of standards across the different degree programmes. Thus, the marks awarded to students with mitigating circumstances were rigorously reviewed and fully justified.

Other comments

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

I welcomed very much the opportunity to meet students studying on the BSc Medical Science programme when I visited the University of Leeds on Wednesday 27th April 2016. I was impressed greatly by the enthusiasm of students from each of the three years of study for the course. It was especially helpful to meet again students that I had met in previous years and hear them reflect on the whole course. As in previous years, the student I met highlighted the breadth of choice available to them, the high standard of organisation of the course and the commitment, dedication and accessibility of the academic staff. I congratulate all staff responsible for the course.

I would like to emphasize the first class opportunities for hands on practical training available to students studying on the BSc Medical Science programme and related degree programmes at the University of Leeds. With ever increasing time and resource pressures being placed on University Departments across the country, it is refreshing to see commitment to the provision of practical teaching. I applaud strongly staff at the University of Leeds for the excellent practical training that they are giving to undergraduate students.

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 Sciences – all programme variants
MBiol, BSc Medical Sciences (Integrated Masters) – all programme variants

On behalf of the Medical Sciences programme team, I'd like to extend our thanks for your continuing hard work as External Examiner for the Medical Sciences programmes at Leeds. As ever, it was a great pleasure to meet up with you in Leeds and compare our experiences of delivering biomedical sciences programmes. Your input is always insightful and well-considered and as a consequence extremely helpful in our efforts to make the course at Leeds the best possible training experience for our students.

Obviously, it's always gratifying when there are no major issues to resolve, but equally we were very pleased that you recognised our efforts to improve communication with our students and, in particular, to improve the quality of our feedback on assessments. This continues to be an area where we can and will improve our NSS/programme survey ratings. We will also strive to enhance what we do in other areas, such as support for study choices that link to a student's own career objectives, allied to more professional skills training. As noted previously, the lecture recording system is now universally used in our School and is immensely popular with our students.

We were also pleased that you also flagged our focus on research-led teaching (an important strand in all our programmes) and our commitment to practical training. As we discussed last year, we are now starting to roll out new practicals that incorporate more-up-to-date data acquisition and analysis equipment and software, giving our students a more 'research-like' practical learning experience. With investment, we hope to continue making major improvements in this area.

I look forward to your next visit to Leeds.

Yours sincerely,

Programme Leader, Medical Sciences

Tel: 0113 34
Email: