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Sent by email to Professor Mark Stevens

09 August 2019

Dear Professor Stevens,

Re: Institutional Response: External Examiner Annual Report 2017/18

I am writing further to the receipt of your report for the MRes in Biosciences.

Your report has been considered by the School and is the basis of this Institutional Response on behalf of the Vice-Chancellor. The School will also use its contents to help inform their [Annual Review and Enhancement](#) process and where appropriate, [Periodic Review](#).

Issues highlighted in your report:

1. **Programme Structure:** Consider expanding opportunities for students to gain hands-on experience of common research techniques.
2. **Programme Structure:** Consider using a series of sequential deadlines to address student concerns about the intensity of assessment in stage 1.
3. **Programme Structure:** Use the appointment of a new module leader on BIT002 as an opportunity to review the module against key learning outcomes.
4. **Programme Structure:** The phasing of some taught components relative to assignments in other modules could be optimised.
5. **Programme Structure:** Students with little background in bioinformatics in their previous studies would benefit from greater provision of online material, revision sessions and/or more demonstrators.

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6. **Programme Structure:** Students would appreciate more diverse examples of real-world datasets in statistics assignments.
7. **Programme Structure:** In some cases it could have been clearer how marks were allocated against sections of the grant proposal, with some only receiving a single overall mark.
8. **Programme Structure:** For candidates planning to undertake Stage II overseas, it will be important to assign a University second supervisor to scrutinise plans and agree a schedule for regular updates.
9. **The Assessment Process:** The contribution of the supervisors mark for effort in the laboratory to the overall module mark is excessive; in other organisations it is closer to 10-15%.
10. **The Assessment Process:** One marker that acted as supervisor to two students and co-supervisor to a further two students, where the reports on the dissertation and laboratory performance were near identical. These reports provided insufficient student-specific critique to justify the marks allocated and should, in my view, either be revised or disregarded.
11. **The Assessment Process:** In a case where there appeared to be a high degree of sharing of data and images among four dissertations, the mark sheets did not indicate that data sharing had occurred, despite the obvious similarity of the results chapters.
12. **The Assessment Process:** The following should be considered to prevent any future occurrence of data sharing:
 - i. Candidates and their supervisors must be reminded of the expectation that Master's level research reflects independent and original research, and that where findings involve input from others this is fully and transparently acknowledged to allow the specific contributions of the candidate to be evaluated.
 - ii. No projects involving significant joint working should be allowed in future.
 - iii. The processes for reviewing project proposals and progress should be reviewed and reinforced accordingly, perhaps reviewing objectives and outputs at 6-8 weeks into projects rather than (or in addition to) the mid-term review.

Response provided by the School:

1. The Board has agreed that this would be beneficial for students and has decided to pursue two routes to achieve this goal: a) to contact a colleague who has previously organised a CRISPR/Cas9 practical, to explore possibilities for implementing it from 2019/20; b) to discuss with Heads of Research Hubs, specifically, Imaging and Single Cell Analysis, how to run meaningful demonstrations for small groups of students. These demonstrations would be linked to specific essays / coursework. We are currently pursuing both routes.
2. The Board has considered this recurring point. As a consequence, BIT002 lectures are moving earlier for 2019/20, starting during BIT010

week-long gap between statistics and bioinformatics. A timetable of submission deadlines for the entire MRes course would be produced in good time for the start of 2019/20.

3. The module leader had revisited the key learning outcomes for BIT002 and they were being revised for 2019/20.
4. This point is addressed above (2) as changes to the timetable are taking into consideration both taught components and assignment deadlines.
5. To ease the initial work load, provide preparatory materials, and relieve some time in the taught schedule we will convert the initial taught session (Day 1) into a self-study activity with formative online assessment in advance of the course. This will be provided during the new introduction to bioinformatics at the beginning of the 2019/20 module weeks prior to commencing the taught bioinformatics sessions.
6. The Board has confirmed that students often ask for more data sets for BIT010 but due to a limit on teaching/marking resources there was no scope to mark multiple sets; in addition, there is a need for standardisation. Nevertheless, currently the BIT010 module leader together with a BIT018 module leader is exploring a possibility of providing an alternative dataset.
7. The form has been revised by the module leader. Markers will be reminded of the need to provide marks for individual sections.
8. This policy is in place for all students outside our School, including those in other schools within the BLS College.
9. The Board has decided to implement the lower supervisor mark (15%) for 2019/20. The module leader will be adjusting the marking criteria and marking form as well as module description.
10. From 2018/19 we do not allow co-supervision for the projects. We are considering feasibility of having a limit of one project per supervisor instead of the current two projects per supervisor limit.
11. These cases were brought to our attention by Prof Stevens in good time for action to be taken prior to Exam Board meetings. Briefly, as Prof Stevens was present at the Exam Board meetings where this issue was extensively discussed: from 2018/19 we do not allow co-supervision for the projects. Our policy on data sharing is clearly outlined to the candidates and the supervisors. In cases where there is a need for data sharing, or where there is a perceived data sharing / originality concern, the MRes course Director's approval has to be obtained.

12. In addition to point 11, which addresses part of this point: the training students currently receive regarding what we entitle 'plagiarism' but actually includes all unfair practice including group work, data-sharing and technical assistance for practical work that has not been appropriately acknowledged is discussed in some detail in a session in BIT011 in early October of each academic year. This is associated with a Turnitin exercise that BIT011 and BIT002 run jointly. Work from the three modules is checked with Turnitin and issues of unfair practice are discussed with students in the February tutorial with the personal tutor.

As a result of what happened in 2017-2018, the MRes course Director will now also be running a second session in July dealing specifically with dissertation writing and issues of text plagiarism, data sharing, acknowledging data sharing and group work, recognising technical assistance.

The Director also now scrutinises all project abstracts at the time of project approval in late October - early November. We specifically ask all supervisors to seek approval from the Director if they envisage data sharing, and to provide justification.

Any case of plagiarism (using a broader definition outlined above) detected during assessment of grant proposal or dissertation documents is dealt with through our School's established Unfair Practice procedure. Any cases that have been flagged up by assessors, External Examiners or supervisors are reported at Exam Boards.

The University is pleased to note your positive comments including:

1. Your positive indications regarding the programme structure, academic standards and assessment process.
2. Guidance on further reading and revision sessions provided to support students lacking background knowledge from previous studies.
3. The Data Handling in Statistics & Bioinformatics module (BIT010) embeds key skills in statistical analysis and bioinformatics that will be of lasting benefit to those pursuing research careers.
4. The inclusion of a new assessed component involving critical evaluation of a manuscript in BIT011 is welcomed.
5. The grant proposal assignment in BIT011 is an excellent initiative as it requires review of pertinent literature, formulation of ideas, hypotheses and objectives, selection of experimental approaches, and planning.
6. The Secretary for the programme is to be commended for her hard work in managing administration of the programme and the demands of students and University processes.
7. The use of third markers where variance between the supervisor and second marker exceeded 10%, is welcome.

8. Coursework on BIT011 was richly annotated, with clear allocation and justification of marks and constructive feedback.

We hope that you will find this response satisfactory and thank you for your continued support of the programme.

In order to meet the expectations of the [QAA Quality Code](#), both the External Examiner Annual Report and this Institutional Response will be published on the University's [Public Information website](#) and will be available to all students and staff.

We are most grateful for your comments and for your support in this matter.

Yours sincerely,



Mr Simon Wright
Academic Registrar