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Sent by email to e.tate@imperial.ac.uk

25 February 2019

Dear Professor Tate,

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

I am writing further to the receipt of your report for Organic Chemistry modules on undergraduate programmes

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:** The justification for holding chemical biology specifically as a core element in year 3 is not obvious;
- 2. Programme Structure:** Summaries of content, issues, student feedback, and mark progression between years for all courses and a summary of actions (if any) taken forward based on student feedback, course issues, would be welcome;
- 3. Programme Structure:** Uneven expectations across lecturers and courses in terms of content memorisation and volume was noted;
- 4. Academic Standards:** The secondary rule
- 5. The Assessment Process:** Plagiarism of work;
- 6. The Assessment Process:** Timetable challenges have driven a future proposal to combine viva and talk for MChem projects;

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7. **The Assessment Process:** Supervisor marks for projects ('practical' component) tend to be high on average, well above 70%;
8. **The Assessment Process:** As external examiners it will be helpful to be provided with the 'paper trail' which shows what has been done to resolve the problem. It would be useful to record student and supervisor comments at the mid-way point of the MChem project, to identify problems and back any later decisions;
9. **The Assessment Process:** Comments on marks are in general ample but providing only 4-5 lines of justification for a failing or superb supervisor's mark is insufficient, and should be automatically returned for revision;
10. **The Assessment Process:** The examiners were in unanimous agreement that the mark schedule should be split up into sub-components within the supervisor mark for research projects (BSc and MChem);
11. **The Assessment Process:** Where project marks for 1st and 2nd markers lie outside a reasonable range (e.g 5% or 8%), it would be good practise to send that report to an independent 3rd marker, blind to the marks already given.
12. **Year-on-Year Comments:** Timetabling issues;
13. **Year-on-Year Comments:** Staff involved in lab courses should continue to seek feedback from student demonstrators on how practical scripts could be improved (e.g. to include non-obvious information about practical steps).

Response provided by the School:

1. The course structure naturally reflects topics which were felt to be core to an undergraduate chemistry degree. In addition, the fourth year consists of solely optional modules, reflecting research strengths in a broad range of areas in chemistry which are of current interest. Upon scrutiny of the earlier years of the degree schemes, it was clear that the foundation material necessary for the final year option modules was being taught, with the exception of some fundamental aspects of biological chemistry. It was decided that by introducing core biological chemistry modules in earlier years, this would provide the students with this foundation while at the same time, re-inforce some aspects of basic organic chemistry, which we felt some students were struggling with.

While subjects such as catalysis and materials are not named as core year 1 and 2 modules, the physical chemistry associated with, for example, surface and elemental analysis is covered, as is the basic chemistries associated with inorganic species which may later be encountered in catalysts and materials.

Finally, it is also worth noting that we are about to undertake a thorough and comprehensive review of our Yr1 and Yr2 programmes with implementations expected for the 2020/21 intake. So we will also carefully consider the role of 'core' biological chemistry in this exercise.

2. We required all convenors to submit a module report for the examiners. This was based on the recent recommendations of our examiners. All the summaries for the 11 fourth year modules were available; however, for the third year modules, one of the four core modules reports (CH4303) was missing and two of the optional module reports (CH3307 and CH3308) were also missing. We will encourage all convenors to submit their reports for the current session and ask that they also comment on the nature of the coursework. We have also asked convenors to keep a selection of examples for the examiners to review.
3. As might be expected, the material, the required knowledge for the assessment and the nature of the assessment will vary depending on the specific subject area. Some topics naturally lend themselves more readily to a problem-solving format of assessment. We encourage all staff to aim for a suitable balance of bookwork and problem-solving questions. If this cannot be achieved within a single question, we at least encourage a balance in the exam paper as a whole, and these aspects are specifically examined at the exam scrutiny meetings. While it is rare for an exam question to be derived from a single slide in a long course, we feel it is not unreasonable as long as that slide was covered in great detail and suitable explanations were provided in the lecture. Inevitably, not all material will be covered in an examination, and the four or six questions should cover a suitable spread of material to test the student's knowledge. We do take student feedback, in all aspects of the course, very seriously and their comments are addressed in the Board of Studies (and the Student Staff Panels) at which, student representatives are present.
4. The secondary rule is a Cardiff University policy, where a decision has been made to use averages, on the basis that one good mark counter-acts a poor mark. Applying the proposed scheme to two students qualifying for the secondary rule, a student with an average of 69% and a single mark of 59 would remain as an upper second, while a student with 67.7% average and a series of low sixties would achieve a first. Whilst we understand the examiners concerns, and the system they propose has merit, the current rule is clear and readily understandable to students, and typically rewards students with a good *average* performance.
5. Due to the examiners previous comments, we are very mindful of referencing literature in exam questions and we will continue to encourage staff to do so.
6. Projects are marked independently and we will make sure that the associated paper work makes this clear. The idea of a maximum project length is very sensible and will be forwarded to our project committee.
7. We will require supervisors to fully justify their marks and will suggest that the mark be made up of several criteria, all of which must be justified.

8. We will suggest that a project module report is prepared by convenors and this can include any details involving students who did not engage, the communications that took place or any other relevant factors for the board to consider.
9. *As for 7: We will require supervisors to fully justify their marks and will suggest that the mark be made up of several criteria, all of which must be justified.*
10. *As for 7 and 9: We will require supervisors to fully justify their marks and will suggest that the mark be made up of several criteria, all of which must be justified.*
11. We agree that this is best practice and will pass the comments on to the project committee. We would note that this is rare and typically if it occurs, such cases are very closely scrutinised already by the committee to determine if the average is fair or whether the project has been too generously or harshly marked. The committee therefore act as an independent adjudication committee; nevertheless, we will provide the examiners with this recommendation.
12. We understand the examiner's concern regarding the compact timetabling at the end of the spring semester. This is partly caused by the School giving the students more time to write up their reports. Unfortunately the School is not in a position to dictate to the University the timing/extension of the academic year. However, the timetabling of assessments is made clear to student's many months in advance, so at least they are able to plan their work accordingly in an effective manner.
13. Third year practicals now have timetabled feed-back sessions for each laboratory class. Whilst attendance at these sessions was approximately 25% of the class, useful feedback was obtained from these meeting. We will continue with this practice.

The University is pleased to note your positive comments including:

1. your positive indications regarding the programme structure, academic standards and assessment process;
2. It was noted that this has been a particularly challenging year, with strikes and the need to cover for absent colleagues at short notice. However, the staff are highly commended for the way they have pulled together to manage these changes and have continued to deliver a fundamentally strong course, with an interesting range of coursework elements;
3. It was noted that organisation of years 1 & 2 was well done, along with several examples of excellent teaching, including positive feedback on tutorials, which are supportive and effective, and adapted to student needs.

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