ANNUAL QUALITY IMPROVEMENT REPORT 2018/19

Appendix 3: External Examiners' report

UG Biosciences

This appendix contains Year Leader's responses to 2018/19 External Examiners' comments and updates to actions from previous External Examiners' reports (if applicable).

As Year Leader/Course Director please ensure you reflect on External Examiners' comments in the Course Review section. Please ensure that any actions to be taken in response to these comments have been recorded in your Annual Quality Improvement Report.

For support or advice please contact Ana Filipovic, Academic Quality Officer 'Standards', afilipovic@rvc.ac.uk, 01707666938

Appendix 3 consists of:

a.	Updates to actions from previous years' reports
b.	2018/19 Collaborative Annual Report with responses from Course Director/Year Leader

Question	External Examiners comment	CD's response & Action	Update in 2018/19
1.2 Learning objectives, and the extent to which they were met	For the most part, learning objectives addressed by individual examination questions were indicated but this was not always done consistently and some omissions were noted. As a general observation, the complete range of learning objectives in each module required access to module handbooks; navigation of these online at speed and in high volume is cumbersome and practically impossible for the external examiners. Where it has been possible to review the learning objectives, these appear to have been met. However, the external examiners would value having ready access to printed materials containing this information (handbooks containing module descriptors, learning objectives, lecture lists etc). These should certainly be available during the examiners' visits — and ideally mailed (or e-links provided) much earlier in the academic session.	Since going paper free a number of years ago the college has not provided students or staff with printed module handbooks or other materials. However, it seems entirely appropriate to make hard copies of module handbooks available for External Examiners during their visit and to ensure that they have access to PDF or weblinks to the most up to date versions of these materials to aid their valuable work. Action Required: CD to request course coordinator to arrange printing of module handbooks for external examiners during their visit Action Deadline:	Ongoing discussions as to the best way to provide this information for External Examiners
	provided) much earlier in the academic session.	20-Jun-2019	
		Action assigned to:	
		course director course support team	
1.4 Resources (in so far as they affected the assessment)	no specific information has been provided in relation to resources for assessment. We would observe that the single largest and most valuable resource relevant to assessment, academic staff time, is at risk of being over-stretched given the volume of assessment and the rapidly increasing number of students. The College will need to evaluate the sustainability of current approaches to assessment within the context of student numbers and academic staffing levels. This relates to comments below on the nature and volume of assessments.	This is very timely. The Deputy Principal has commissioned a Work Load Allocation Model Study to define the hours related to all aspects of course delivery and assessment. This information will be used to inform our design of future assessment instruments Action Required: Course director to discuss the findings from the Work Load Allocation Model with the BSc/MSci leadership and course support team to ensure that delivery of course and assessments remain robust but also sustainable Action Deadline:	Ongoing – Work Allocation Model findings not published
		01-Jun-2019	
		Action assigned to:	
		Course Director	

2.2 Quality of candidates' knowledge and skills, with particular reference to those at the top, middle or bottom of the range

.... in BSc year 2 Applied Pharmacology, Section A marks were noticeably better than Section B. In all programmes, mean marks may be noticeably lower for some modules. There will be a number of possible reasons for these variations in quality of performance, so long-term analysis of patterns across several examination diets and student cohorts is recommended to identify causes, consequences and potential remedies for these variations.

The Gateway Programme examiners noted that the spread of marks was right or left skewed in some questions. For example, IGE and AH1 were left skewed, indicating that there were quite a few students who struggled with these modules. The problem may be attributable to the simple arithmetic requirements in these questions. On the other hand, TMA was right skewed, with average mark for TMA1 of 66%; this question was not dependent on arithmetical ability. Our interpretation is that the arithmetical issue is a problem that needs to be solved as it evidently disadvantages some students. One simple solution may be to change the order of questions on the exam paper, and not placing all the arithmetical questions together as a panic-inducing block. In discussion with the Gateway examiners it was apparent that this problem was not specific to the Gateway students and the same trends could be seen in BSc1 answers. On the whole, there was no statistical difference between the Gateway and BSc1 marks.

We are aware of some students finding arithmetic more challenging and our Learning Technology team are developing online tutorial material using authentic and relevant (laboratory/field) problems to work through different types of calculations. It is hoped that this will be offered to all students entering the programme in 2020 with a pilot version for 2019 entry. Great emphasis is put on the importance of calculations and several directed learning sessions (small group problem solving) are focused around the sorts of problems students may encounter when conducting laboratory or field experiments. Additionally there is a workshop dedicated to calculations in first year and there is a recap session in second year, as well as one to one (or small group) support available for all students via our Education Development team. For 2018-19 we have moved to two examination periods and will encourage students to reflect on their first exams in January and seek help and advice from ED before undertaking their term two module exams and research projects in term three

Action Required:

Course Director to liaise with Learning Technology team, Education Development team and tutorial leads to ensure that students have opportunity to discuss and develop their numeracy skills. Gateway, first, second, third year leaders to encourage students to reflect on exam performance and seek help from ED before the start of the second examination period

Action Deadline:

01-Jun-2019

Action assigned to:

Ongoing. There continue to be timetabled opportunities to develop numeracy and Learning Support team are aware of the short fall. Unfortunately the "Learning Sciences" software was not purchased in the last budget will be applied for 2020-21

		Course Director, year leaders, tutorial leads	
2.3 Please provide any additional comments and recommendations regarding the students' performance	In a number of instances, the poor handwriting of students in exam scripts was noted but it is unclear to us if there is a formal strategy for handling illegible scripts. This should be considered since illegibility of student responses can add considerable work to the assessment process. For example, if more than 1 in 5 words are illegible then a student could be called in to transcribe their answer prior to marking.	We thank the External Examiners for this observation and agree that over the past few years handwriting skills have declined, probably due to relatively less handwritten work now we have gone paper free. Course Director will discuss the possibility of asking students to transcribe their work. This may be challenging due to the short turnaround time for papers to be marked	Not completed
		Action Required:	
		Course director and Exam Board Chair to discuss with Examination Officers	
		Action Deadline:	
		01-Mar-2019	
		Action assigned to:	
		course director; exam board chair; examination officers	
3.1 Assessment methods (relevance to learning objectives and curriculum)	We do note, with concerns, the heavy reliance on the essay as a vehicle of examination in all programmes and modules. This strikes us as being disproportionately high in comparison with practice in natural sciences programmes in other comparable institutions (i.e. Russell Group universities outside of Oxbridge). One concern is that the reason for this reliance on the examination essay is unclear; it may well be articulated in a general assessment philosophy which we have not seen. However, there are a number of questions to be addressed to justify continuing inclusion of (usually more than one) essay for practically every module examination. A key question is, what is the essay examining that cannot be examined by in-course assessment, short-answer or MCQ format? If it is factual information, then that is clearly inappropriate. However, many of the model/indicative answers suggest that factual recall is a major requirement of the student response in the essay. If the essay is testing for integration and synthesis of knowledge plus demonstration of extensive study beyond the syllabus of lectures, there	We thank the External Examiners for their comments. Year leaders and module leaders have looked at the use of essays in exams in some detail, and agree that the essay style questions may not be fulfilling their intended purpose. For 2018-19 no exams in first or second year will have essay style questions, instead we have introduced short answer questions for some papers and have maintained longer problem solving questions. For first year papers multiple choice questions are used but these have been for second year papers. All papers have at least two different assessment styles (MCQ and PSQ or SAQ and PSQ etc.). These forms of assessment enable team marking of questions and so help to reduce staff overload. One third year module (Endocrine and Metabolic Syndromes) has piloted an open book exam based on	Completed Essays completely removed from 1 st and 2 nd year exams, focusing instead on problem solving and short answer style questions. Some third year modules have included open book style questions with pre-reading of a relevant research paper

is little indication that even the best-performing students demonstrate this (few if any make reference to academic literature or coverage beyond the lectures). If the essay is testing for ability to present a cogent and well-reasoned argument, then a single essay in a single examination sitting could be sufficient, although arguably a project report or dissertation would be a fairer, more rigorous and more authentic form of assessment to test this ability.

Another area of concern we have about essays is the marking load associated with them and the rigour with which the common grading scheme for essays is applied. We would suggest that programme committees and/or the Learning and Teaching Committee/Academic Board (or equivalent) review the modular and programme schemes of assessment with particular focus on the essay question format, its purpose/rationale, the practicalities of marking essays in massive volume, and appropriate facilitating/protective systems for ensuring sustained fairness and rigour in the setting and marking of essay questions (see 3.2 below).

critique of a relevant manuscript which students have prior sight of. This may be a more satisfactory way of testing students critical analysis particularly at the latter stages of the programme of study

Action Required:

Module leaders and year leaders to monitor use of assessment instruments other than essays and share best practice, with guidance from exam board chair. Education development to hold exam techniques workshops including timed essays

Action Deadline:

01-May-2019

Action assigned to:

module leaders, year leaders, exam board chair, Education Development

3.2 Extent to which assessment procedures are rigorous

We note the sampling approach for moderation that is in place for all programme assessments. Part of this moderation is that no further action is taken on discrepancies between the first and moderator markers unless the moderator has selected "yes" on the form. It may be worth considering additional actions such as moderating an expanded sample of scripts if more than two discrepancies are noted. This would provide additional assurances for individual students to whom a difference of a few % could make a very significant difference.

The objectivity of the marking scheme for essays is not always evident and including more MCQs and FIBs to increase the validity and robustness of the assessment may be a future alternative to the majority of long answer / essay questions. We observed in several instances that the words used by the examiner to summarise the essay standard ("very sound answer", "quite good answer", "excellent account" etc) and the grade awarded did not line up with the common grading scheme descriptions (for example, an "excellent account" attracted a mark of 65%). While this

. This is an issue that has recently been highlighted on other programmes within the college. Course Director will bring this up with the Chair of Learning Teaching and Assessment committee to determine whether the CGS should be tailored for each programme, or indeed whether a rubric should be developed for each individual question so that written feedback can be exactly tailored to the question

Within the bounds of the current CGS, examiners will be reminded to use words in their feedback that are consistent within the descriptors of the CGS for the mark they have awarded for a particular question

Action Required:

CD to discuss review of the common grading scheme and descriptors either for biosciences or for the college as a

Not completed. College wide issue

	may not be a systemic issue (most markers' comments were in line with the marks awarded), it is a concern because of the heavy reliance on essays in every module assessment and the potential for subjective interpretation of the common grading scheme. We are aware that markers may feel that the common grading scheme is not well tailored to each programme of study; it may be the case that the College will wish to review the common grading scheme and its application.	whole Exams officer to remind examiners to use words from the descriptors in the CGS that reflect the mark they are awarding Action Deadline: 01-May-2019 Action assigned to: course director exams officer	
3.4 Standard of marking	A general comment is that the quantity and quality of annotation on the scripts was variable, although there has been a clearly improving trend during the last few years. In some instances the handwriting of markers was illegible (pharmacology has a particularly notable culprit whose pencilled commentaries were almost entirely illegible), and there were many instances where a summary statement (useful for feedback to students and a guide to other examiners) was completely absent at the end of a long answer / essay script. These deficiencies must be corrected to facilitate the quality assurance of the assessment process and to aid feedback to students. A particular issue was noted in the Principles of Pathology paper 2: the absence of scale bars on pathology images, when students were required to comment about organ/lesion size for defined marks within the marking scheme, clearly disadvantaged all candidates. This necessitated adjustment of the marking scheme – but only after intervention of the external examiner at a very late stage; we were surprised that the issue had not been addressed earlier.	We will ask exams officer to remind examiners of the need to include this important information when preparing questions and that it should form part of the scrutiny during exam paper setting meetings. The instructions for examiners includes the need to provide written comments on the scripts they mark. CD will ask the exams officer to also include instructions to ensure that these comments are legible! It is noted that some examiners provide their written comments on a sticker. Although this may be time consuming to set up it may be helpful where handwriting is a known issue Action Required: course director will highlight the need for legible comments from examiners on scripts and will ask colleagues for their ideas on how to achieve this during our course management committee meeting exams office will add the need for comments to be legible to the instructions for examiners chair of exam board and exams officer to ensure that all figures and tables used in papers are suitably annotated at the paper setting meeting stage Action Deadline: 01-May-2019 Action assigned to:	Ongoing. Examiners were reminded to try to be legible on scripts and assignments. As an example of good practice some examiners now print stickers with their comments to attach to scripts

		Course director; exams officers; chair of exam board	
3.5 In your view, are the procedures for assessment and the determination of awards sound and fairly conducted? (e.g. Briefing, Exam administration, marking arrangements, Board of Examiners, participation by External Examiners)	We have a strong impression a high assessment load which may not be appropriate or academically justified; an increasing staff burden of assessment; and increased risks of marker and administrator error(complete comment online)	The programme will be undergoing Periodic Review in 2020 and the suitability/sustainability of the assessment load should be one of the areas under scrutiny. A document was drawn up some years ago (Assessment Tariff) by the Academic Registrar and Associate Dean of Undergraduate Learning and Teaching to try to to ensure equal assessment load across different modules and programmes. Some of the BSc3 modules predate this but have been changing to ensure that their in course assignments and exams are within the guidelines. It is hoped that this ensures parity between different forms of assessment at the same level. The work load allocation model also takes assessment time into account and so also offers valuable insight into the marking load for individual modules and courses. Module leaders and year leaders will be reminded to use the Assessment Tariff when designing new assessments Regarding release of titles for ICA to External Examiners, the exams officers will be asked to provide this information to enable more effective scrutiny Action Required: Exams office to remind module leaders to utilise the Assessment Tariff when designing different types of assessment. Where their assessment doesn't fit with those described in the document they should seek advice from the Academic Registrar. Course Support team and Exams officers will be asked to provide the titles of summative in course assessments and provide them on the spreadsheet alongside marks and student information	Ongoing (Periodic Review in 2020)

		Action Deadline:	
		01-May-2019	
		Action assigned to:	
		exams officers; course support	
4.4 I was able to scrutinise an adequate sample of students' work and marks to enable me to carry out my duties	We would ask you to note that the volume of written work that needs to be sampled has increased markedly in the last three years and that a more stream-lined approach would aid the examiners working in the short time-frame of their visit. For example, bundles of scripts could be pre-prepared with samples from high-medium- and low-performing candidates already selected and identified. IT access continued to be a major limiting factor for us this year. We request that dedicated, secure computers, with log-in done in advance, are available for us to review all on-line materials. For the BSc programmes, exam scripts and projects were available but the full-range of in-course assessments was not available.	We appreciate the huge volume of documents that need to be sampled by the External Examiners in a short space of time, and are very grateful for your tireless work. We will endeavor to ensure that high - medium - low scripts and ICA are made readily available either in paper or electronic format and that there are enough computers available and accessible for you to carry out the sampling. In general, the Exams Office does not give External Examiners a batch/sample of scripts, instead they are provided with a range of scripts	Ongoing discussion for best way to present scripts and assignments for EEs to scrutinize in 2019-2020 cycle
		Action Required:	
		Exams office to work with course support and IT to ensure access for External Examiners during the visit. To make available online course work and projects as well as low - medium and highly marked scripts from each question / module exam	
		Action Deadline:	
		01-Jun-2019	
		Action assigned to:	
		exams officer; course support team; IT	
4.9 I have received enough support to carry out my role	To a great extent, the external examiner's role is rather unclear. It would be helpful to external examiners if the College sets out clearly its expectations of the external examiner role, and any specific objectives for external examiner action in advance of the visit. We would value the development of a policy document which set	Thank you for your comments. The course management team appreciate the need for clarity for the role of External Examiners and agree that a handbook is an excellent idea.	COMPLETED
	out clear guidance for external examiners. We are unclear as to our role in relation to scrutinising or validating the marks of individual students, particularly those who have had individual circumstances or who sit at a critical mark boundary. Issues such as this	Action Required: Course Director to discuss the development of an External Examiner handbook with the Academic Registrar and the Director of Assessment, for	

	could be more clearly articulated.	approval at the relevant goodemic	
	,	approval at the relevant academic committee	
	The induction day(s) for new external examiners could be improved by an indication of if/how it wishes them to	Action Deadline:	
	contribute at all stages of the assessment process. At	01-Jun-2019	
	the exam paper review stage we spend much time correcting errors or ambiguities that should be picked	Action assigned to:	
	up earlier. During the time-constrained visit days, we are confronted by a large assemblage of exam scripts with little or no commentary. The development of an examiner's handbook or policy document would be very helpful.	course director, academic registrar, director of assessment	
	As noted previously, we would value printed module descriptors, learning objectives and lecture lists being available during our visit (and ideally mailed or link emailed prior earlier in the academic session)		
4.10 I have received sufficient information to carry out my role (where information was insufficient, please give	See linked question 4.9 above	Course director will look into the possibility of clear guidelines for the role of the External Examiners with the Academic Registrar and Director of Assessment	COMPLETED
details)		Action Required:	
		Course Director to discuss the development of an External Examiner handbook with the Academic Registrar and the Director of Assessment, for approval at the relevant academic committee	
		Action Deadline:	
		01-Jun-2019	
		Action assigned to:	
		course director; academic registrar; director of assessment	

Collaborative Report

BSc in Bioveterinary Sciences, 2018/19

Lead examiner: Dr Lucy Green

Collaborating examiner(s): Professor William Holt, Dr Kerstin Baiker, Dr Robin Flynn, Dr Dan Lambert

The Programme

Please comment, as appropriate, on the following aspects of the programme:

1.1 Course content

This is a report covering Biosciences suite of courses produced as a collaboration between all external examiners. Comments relating to specific programmes, pathways or modules are indicated where appropriate.

As a general observation, we observed a programme, which has a breadth of modules that offer choice to students in veterinary and biological science. The module flexibility, which starts in year 2, continues with more flexibility and choice in subsequent years. The structure of the programme allows progression from foundation through to advanced undergraduate level (MSci). The widening access offered by the Gateway course is a valuable addition. Within year 3, the wide variety of modules available provide students with an opportunity to specialize as they complete their final year. This will be valuable for students who have already decided upon a potential future career pathway. This is reinforced by the project module, the 60 credit projects in particular allow students the opportunity to gain a deeper understanding of a particular area, display ownership of the work and develop independence.

The courses incorporate problem-based learning, critical thinking skills and practical work with traditional lectures.

1.2 Learning objectives, and the extent to which they were met

Gateway / BSc1 / BSc2 - The learning objectives addressed by a particular examination question were not always stated in guide answers. This was also noted in 2017.18 and it would be an enhancement if this could be achieved for all questions.

BSc 3 - We do note that some of the exam papers, at least those prepared for staff in year 3, identify what lectures and learning objectives are being tested. This will aid in the provision of feedback for students.

College response:

We do ask question authors to include the learning objectives when submitting questions and it is unfortunate this is not always adhered to. Year and Modules Leaders will be reminded when submitting questions in the future. ACTION: Course Director, Year Leaders, Exams Office

Overall - We note that there is access to course handbooks online and that the college has gone paper-free. However as noted in 2017.18, navigating this system at speed during the days when on site is cumbersome. It would substantially enhance the external examiner experience if there were a printed copy of module descriptors, learning objectives, summary of course assessment (in course and examination) and lecture list for each module. These should certainly be available in printed format during the examiners' visits, but ideally also sent to the examiners at the time of examination script scrutiny.

College response:

All material is located on RVC LEARN, which the Externals have access too. In addition Exams Office sends link together with the papers to help Externals navigate through LEARN pages. What might be useful is for the Course Team (Course Support and Year Leaders) to make contact with the specific EEs with this detail early in the academic year.

1.3 Teaching methods

All programmes make use of a wide range of teaching and learning methods, including lectures, projects (including extended data-generating and data-handling research projects in Year 3 BSc and Year 4 MSci), directed private study, tutorials, directed group activities and practical work. Some programmes incorporate a placement year. We also note the extensive provision of learning support materials and processes (e.g. online resources, lecture capture, tutorial support etc).

1.4 Resources (in so far as they affected the assessment)

No specific information has been provided to examiners in relation to resources for assessment. The resources to deliver effective teaching and learning appear to be excellent. The recent improvements in the site facilities will have enhanced the student experience. In 2017.18, examiners commented on the resource of academic staff time, as being at risk of being over-stretched given the volume of assessment and the rapidly increasing number of students. This year, examiners noted that adjustments had been made to assessment with fewer essay-style questions. No information was provided to examiners as to the impact of more short-answer style exam questions on staff assessment time or on the speed of feedback to students on in-course assessments. Linked to this are examiner observations on variable feedback style (see later) and potential time/resource savings that might be made by a more uniform approach.

College response:

- a. We would like to thank the External Examiners for these positive comments especially regarding the recent improvements to the Camden Site
- b. Departmental Teaching Co-ordinators will be approached to determine whether they have conducted any analysis on the impact of more short answer style questions on staff assessment time. In regards to student feedback, this was released to students as published on the Exams Timetable. These dates meet with our Feedback policy to ensure timely feedback. There was one instance when, due to a family emergency, results were delayed but this was communicated to students appropriately. (**CD**, **Departmental Teaching Co-ordinators**)
- c. Variable feedback style and quality is a College wide issue. Some Module Leaders are in the process of developing online rubrics which it is hoped will unify the approach, eg Dev (Bsc1/ Gateway)

1.5 Please provide any additional comments and recommendations regarding the Programme

Following discussion with the programme lead for MSci WAB it might be prudent to re-think the description or title given to this program. This would ensure that suitable students are self-selecting for this programme, such that they have the most appropriate academic background.

College response:

Thank you for this comment with regards the branding of the MSci Wild Animal Biology course. This process has already begun and is under active consideration at the moment with plans to develop a 3 year BSc Wildlife and conservation course and an optional 4th year research option (MSci). (WAB Pathway Leader)

Student performance

Please comment, as appropriate, on:

- 2.1 Students' performance in relation to those at a similar stage on comparable courses in other institutions, where this is known to you
- Mostly, the performance of students is comparable to what we have observed in Russell Group universities offering similar or related programmes of study (Birmingham, Nottingham, Southampton, Liverpool).
- For BSc 1 / Gateway it was noted that there was a high degree of fails and Qualified fails in IGE and BoC modules.

College response:

- a. BoC and IGE are the first modules and may take students time to adjust to new learning styles. Exams were held in January (for the first time) but essay style questions were removed from the papers. Students were given a mock exam after Reading Week, which included all styles of exam questions included on the Summative January papers (MCQ, SAQ, PSQ). Course Directotr will discuss whether additional support can be offered by Education Development either F2F or online. It has been noted that there was a lower average of entry qualifications for Gateway for 2018-19, which may be one contributing factor, although direct analysis has not been carried out. BSc1 entry qualifications were similar to previous cohorts
- For BSc 2 it was observed that there was a higher number of students resitting TEW module.

College response:

- b. EWI has now been split into two 15 credit modules. Although the LOs, content and in course assessments will remain similar this means that there will be two separate papers. It is hoped that this will reduce the numbers of students needing to resit the papers (students are only allowed 15 credit qualified fail in BSc year 2, so EWI was not eligible as a qualified fail)
- For these cohorts it would be of value to formally record possible reasons for this.

College response:

- c. Year Leader will formally record some reflection on the unexpected failure rate after discussion with module leader as part of their AOIR (BSc2 Year Leader, EWI Module Leader)
- For BSc 3 including BSc Comp Path and MSci it was apparent that the number of students failing was in line with similar programs elsewhere.

2.2 Quality of candidates' knowledge and skills, with particular reference to those at the top, middle or bottom of the range

In all programmes, we were able to sample assessed material across the range of student ability.

For BSc 1 and especially Gateway, the arithmetic component of questions continues to be a struggle for some students.

College response:

a. Numeracy continues to be a concern and staff will continue to engage with Education Development to ensure that appropriate support is available and flagged to students who require additional help. There are module specific directed learning sessions as well as a calculation based skills tutorial in first year. **These will be reviewed by Module Leaders and tutorial conveners.**

Action Required:

- 1. Inheritance, Genetics and Evolution Module Lead to review module content and assessments with the view to supporting students with numeracy issues, in the light of the 2018-19 examination results. (Deadline: April 2020).
- 2. Educational Development Dept. (o develop and deliver numeracy workshops to support students struggling with mathematical concepts/data interpretation in the Inheritance, Genetics and Evolution Module and the Animal Husbandry Module. Also, to run a series of drop-in sessions to address the problems of specific students. (Deadline: April 2020)

Module Leaders and Year Leaders to ensure that all examination questions are mapped to specific learning objectives. (Deadline: April 2020).

We note that course leaders have offered directed learning sessions to support students with this element of the assessment, and note in last year's course director response that online tutorial material is being developed by Learning Technology. We also note that the course leaders have attempted to modify the order of examination questions (as suggested in last years' examiners' report) as a way of avoiding the tendency for students to panic when first confronted with the mathematically based questions. It was clear, however, from the examination board discussion that course leaders were very aware of these problems and were making every effort to help.

The examiners noted that, overall, the exam marks achieved by the Gateway students were very similar to those taking the BSc 1 exams. However, that there was a noticeable discrepancy in performance between Gateway students and BSc 1 students in terms of the IGE marks (Gateway median was 26.6% compared with 37.5% for BSc 1) and that there were 14 fails among the Gateway cohort. The reasons for this difference were possibly caused by the numeracy issues mentioned above.

College response:

b. Discrepancy of IGE marks between Gateway and BSc1 students is of some concern. Students will be reminded of additional support available through Education Development (Gateway Leader, IGE Module Leader)

For BSc 1, some aspects of in-course assessment resulted in very high grades this was particularly apparent for IGE and TMA. The assessments therefore may not have been effective in discerning depth of knowledge, may have simply indicated compliance by students to a task, and also are in danger of giving false comfort to students' over underperformance in the exam. In some contrast, for the BoC module (in which there were a number of qualified fails) the course assessment grades were mostly in the 2ii – 3rd class bracket.

For BSc2, all but one student achieving a 1st class classification did so on the basis of an overall year mark in the low 70%. It is probably linked to the noticeably lower grades for some modules (as described above). Examiners were not able to see how this compares to previous years, and this long-term analysis would be helpful. Additional long-term analysis of patterns across several examinations and student cohorts is recommended to identify causes, consequences and potential remedies for these variations.

College response:

c. We would like to thank the External Examiners for this observation. Brief analysis has been carried out on year marks for each graduating cohort for several years and confirms this finding that most Firsts are in the low to mid 70% range in each year of the course. This may be due to the breadth of modules covered, large range of different styles of in course and examination assessments and the weightings that are given to each component of each module within the programme. Increasing the weighting of ICA would likely increase the overall module scores and therefore year and final degree classifications. (Course Director, Chair of Course Management Committee – for discussion at CMC)

For BSc2 TEW, it appeared that students were avoiding certain problem-solving questions and those that did tackle them were scoring low. For question 8, it was observed that the three highest scores were for students who were achieving an overall year 2ii or 2i classification. This may reflect engagement of students with tutorials on problem-solving skills – this would be consistent with national data linking attendance to performance, and it is something that could be analysed further and brought to the attention of students.

College response:

d. Thank you for this observation regarding EWI PSQ. Engagement for some activities continues to be of concern for BSc cohorts. The benefits of attendance will be stressed to all students as in previous years during year leader and module leader intro sessions (BSc Year Leaders, Module Leaders)

Overall Gateway/BSc1/BSc2 - Since the problem-solving question issues have resulted in some changes to practice, it would be of benefit to the examiners if an academic year-year summary (table or graphical) could be generated of performance in problem-based questions for BSc1, BSc2 and Gateway. This would be helpful to external examiners and module leaders alike as they would be able to judge at a glance whether their innovations or changes were effecting any improvements in exam outcomes.

For BSc 3 there was consistent trend for all in course assessments to offer the opportunity for students to obtain marks at the higher end of the spectrum. Generally, this trend was corrected during the end of year exams where the distribution of marks tended to produce clusters of 2.2 or 2.1 grades for modules. There were clearly materials in all papers that discriminated the upper standard students from those who obtained average marks. Likewise those students with a failing performance appeared to perform badly throughout modules and modes of assessment. This would suggest that the examinations are suitable for identifying those who have developed a deeper understanding and also those who have performed independent/additional reading.

For BSc 3 - There were some very good examples of question construction in D&D Yr3. Additionally the problem solving questions are clearly short but efficient in terms of highlighting students with a deep or superficial

knowledge of the area. There are some modules where the true value of these are displayed and PSQs which tend to focus only on knowledge recall are easily identified as consistently giving higher marks in comparison to true PSQs. It may be worth the module leads reviewing these internally and review those PSQs which consistently result in higher scores, identify potential elements focusing on knowledge recall only and replace these.

College response:

f. Thank you for highlighting best practice with regard to D&D questions. [Development of guidance for exam questions and during paper setting meetings] Individuals involved in exam scrutiny will be asked to identify questions which rely more heavily on factual recall so that question setters can be asked to replace with those that require reasoning, a deeper knowledge of the subject area (Course Director / Year & Module Leaders; Exam Office to assist where needed)

2.3 Please provide any additional comments and recommendations regarding the students' performance

For BSc 3/MSci, Bsc Comp Path, AoP for example, poor handwriting of students was noted with markers' comments being not much more legible. An online system would improve this and the overall fairness of the assessment. One candidate could type and print their answers so it must be feasible?

College response:

a. We thank the External Examiners for this and agree that online examinations would help with legibility of scripts. The College has investigated use of online systems for all candidates but currently lacks resources to enable this for the whole cohort. Unfortunately, only students with special exam arrangements are able to be accommodated at the present time

Assessment Procedures

Please comment, as appropriate, on:

3.1 Assessment methods (relevance to learning objectives and curriculum)

There have been substantial and positive changes to the assessment methods for 2018.19.

For Gateway/ BSc1 /BSc 2 - The removal of essay style questions for gateway/ BSc1 /BSc 2 now brings the programmes in line with other Russell Group courses. Testing for integration and synthesis of knowledge plus demonstration of extensive study beyond the syllabus of lectures is now fulfilled only by in course assessment, e.g. report writing. As already noted, the examiners feel that this must have been of benefit to staff assessment time, and we would imagine that students will find the short answer / MCQ styles to be a more rigorous test of their knowledge. It would be good if the impact of these changes were to be assessed in some way. Certainly from the examiners' perspective, review of examination papers was much more straightforward.

College response:

a. We would like to thank the External Examiners for positive comments about the recent changes made to the assessment diet for Gateway/BSc1/2 and will endeavour to provide some analysis from the Departmental Teaching Coordinators regarding staff time (as above) and academic achievement between modules/years of study (as above)

In all programmes, there is a good range of assessment procedures; this variety provides students with a number of ways to demonstrate knowledge and learning, and there is no reliance on a single method of assessment. The balance between in-course assessments and formal written examinations in modules is broadly consistent across programmes and is in line with wider practice in the sector.

In BSci 3 EMS - As mentioned before, including assessed teaching material and LOs in model answers is excellent practice and even though not found for all exam questions, they seem to be used more this academic year.

College response:

We would like to thank the External Examiners for highlighting best practice from the BSc3 EMS module and will continue to request LOs in model answers (Course Director / Year Leaders)

For Bsc Comp Path, assessment methods are of good academic standard and cover the comparative aspect of the course. Mark distribution through papers seemed fair and discriminatory, and double marking strategy confirmed the robustness in large majority of cases.

3.2 Extent to which assessment procedures are rigorous

The procedures on the whole are rigorous, but the examiners identified a few issues that should be considered.

For Gateway/ BSc1 /BSc 2 - Examiners observed modules in which the median was lower (IoD) or higher (OH) relative to other modules in that cohort (also noted by 2nd marker on one of these). These observations suggest that it would be of great value to the overall rigour of the assessment process to set up simple macros within marking spreadsheets and analyse grades according to the marker. We appreciate that there is a solid moderation process in place, but this knowledge would help shed light on the instances where a module grades are observed to be high or lower than others.

College response:

We thank the External Examiners for the suggestion to analyse grades from individual markers within the marking spreadsheets and will consult with Exams team to set this up (Course Director, Exams Office)

For all years - As already noted, we would suggest that a review of the common grading scheme is undertaken, across the years, to ensure that it fits the purpose of the current curriculum and handbook expectations and guidelines, including mention of appropriate referencing style. We also suggest that a review of consistency, across the years, in marking style is undertaken for exam and in course assessments.

College response:

b. The common grading scheme is used College wide and is not specific for individual courses. Course Director will consult with Director of Assessment to the best way to move this forward (**Course Director, Director of Assessment**)

c. Thank you for highlighting that there are several different formats for marking style and feedback between different pieces of work. Highlighted elsewhere in this report for some pieces of work there is now a prompt for markers to give clear written feedback i.e. "you could improve your mark by" as well as prompts for individual parts of a given piece of work. This has not been adopted across the board but could be investigated further (Module Leaders, Year eaders)

The YR3 project dissertation double marking is to be commended, as this is a serious time commitment, however it was troubling that such large discrepancies could exist between the two markers. There was ~9-10 projects that had a 20%+ difference in marker one vs marker two. A simple agreement in this case is not fair on the student as it likely leads to a middle point being picked. It might be worth considering a sliding scale, where by up to a 10% difference can be rectified between examiners. However, 10%+ difference would benefit from a third marker as there would a clear difference in the fundamental scientific opinion of the two examiners at this gap. I understand there is a moderation procedure in place, however it may not be fair on the staff involved or the student in cases where the gap between examiners is so large.

College response:

d. The policy for double marking of major pieces of work, such as the Research Project, is set at a College wide level. In 2018-19 we introduced the use of a 'facilitator' to ensure that, where the two markers differed across a grade boundary and their marks were not adjacent, an experienced academic was ask to ensure appropriate justification of the agreed mark was documented. The use of a third marker is not something the College uses as this could potentially lead to three disparate marks. Ensuring parity between markers will be discussed with Learning and Wellbeing as part of ongoing staff and examiner training

3.3 Consistency of the level of assessment with the Framework for Higher Education Qualifications (FHEQ)

The level of assessment in all programmes is consistent with the FHEQ.

3.4 Standard of marking

The standard of marking is good overall and a number of developments in recent years have continued to demonstrate improvements in clarity and consistency.

One area for concern is in the consistency of feedback style and quality. This is summarized as follows: For short answer questions / problem-solving questions:

Some markers used pen which was the same colour as the candidate's and one marker is using pencil (not legible). Some markers consistently assign one tick per mark, while others pepper the page with ticks and then assign a score which doesn't link up with it. Some markers used crosses for incorrect answers and one marker struck through the actual text. Aside from this wide variety of marking style there is also a variable level of annotation of scripts with comments to help explain marks. A consensus should be reached on style to maximize value to the students. A further observation concerned the allocation of marks within short answer questions – sometimes this had not been decided at the time of question setting and notes had been made by markers at the time of marking on guide answers concerning the allocation of marks. As an additional thought, examiners felt it would be of merit for question setters to consider always indicating to students within the body of the question (if more than one part to it) as to how the marks would be awarded – naturally some questions already do this when broken down into parts a, b....etc.

College response:

- ai) Thank you for highlighting these inconsistencies in annotation. Will consult with Exams Office to see ensure that appropriate guidance is given within marking packs. The Directorate of Learning and Wellbeing will also ask to consider including appropriate training in the College's Inset Day. (Course Director, Directorate of Learning and Wellbeing, Exams Office)
- aii) Thank you for highlighting these discrepancies, the allocation of marks for parts of questions within the question itself and how they are allocated alongside the model answer is required at the question setting stage but this can be re-iterated in guidance to question setters. Questions that are lacking in allocations of marks or are insistent should be highlighted at the paper setting meetings and returned to the author for rewriting. (Year & Module Leader, with assistance from the Exams Office)

For coursework:

There was some really very good / excellent feedback offered on coursework. A particularly good feature of some markers' feedback was a section on 'Things you could do to improve this work'. However overall, examiners observed a wide range in the style with which feedback is delivered (tracked comments in word/pdf files; excel tabulated, listed within the online system, listed+categorized in some way within the online system etc.). This variability may affect the use that the student can make of the feedback and may also lead to confusion in the student body as a whole. It may be that students get greater benefit from tracked comments but that the online system makes more difficult for some assessors to implement. In some instances examiners awarded a first-class mark and did not give any real justification - for example, 'excellent abstract' as the only feedback does not allow a student to know why they did well and allow them to repeat it with confidence next time. In other instances the feedback language was vague, for example comments like 'sound answer' or 'Brush up on bits' do very little to aid students in evaluating their performance. We also observed many instances in which the feedback descriptors used by a marker did not align with the grade assigned according to the common marking scheme (the value words like 'good' or 'excellent' should align with the grade awarded). This issue was flagged up last year and suggests that it should be reviewed alongside the common grading scheme itself. For the BSc 2 project, it was noted that several assessors arranged their feedback comments according to the sections of the report. On the face of it this seems logical, but it may not serve the students as well as if it arranged according to 'features' or 'qualities' – for example categories like 'context', 'analysis', 'critical evaluation', 'presentation' (each with a different weighting) and some of which will cut-across project write up sections. The nature and uniformity of feedback should be reviewed.

College response:

bi) Thank you for highlighting discrepancies in wording used in feedback and the marks awarded for some pieces of work. Course Director will ask Year Leaders to remind marks regarding the use of words in the descriptors matching with the marks awarded. As this is also a College wide issue, will ask for it to be included in training for new examiners. We would ask that External Examiners (**CD**, **Directorate of Learning and Wellbeing**)

bii) Thank you for these comments regarding the feedback of BSc2 projects and suggestions to ask for written comments under different qualities rather than sections of the report. Course Director will raise this at the next CMC. Development of a straightforward feedback rubric for research projects may aid consistency which can then be carried over into BSc3 and MSci research projects (Course Director, BSc2 project co-ordinator?)

There seemed to be a big emphasis on referencing by many markers, and it was not always clear (largely due to the variable style in which feedback is delivered) what part this played in the mark awarded. As far as the examiners could see, the stance on referencing was not always mentioned in online course work guidance and certainly does not seem to be mentioned in the common marking scheme.

College response:

Thank you for this observation that there is a lack of explicit mention of referencing in the Common Grading Scheme. At the 2.1 classification the CGS states "Appropriate reference to published work from authoritative sources", whilst at 1st class "Published work from authoritative sources used extensively and appropriately". This has generally been interpreted to include both the use of references as well as appropriate citation and listing in the college-endorsed format (Harvard) and students are given guidance in the appropriate sources of information to use and how to present them within their written work, with additional guidance from online resources, skills tutorials, tutor input etc.

There appeared to be some evidence of discrepancies in the marks awarded to Gateway students for their "Lambing reports" (narratives that summarise and analyse their experiences during an on- farm placement. The discrepancies appeared to relate to the expectations of the difference markers, some of whom appeared to award low marks (i.e. 35 - 40%) while others awarded marks in the 80% range. Although these marks had been moderated, it was often very difficult for the external examiner to understand why such a wide discrepancy existed. It would be worth trying to analyse these results in more detail to see whether this impression was correct.

College response:

c) This year a new Module Leader took over for Animal Husbandry and the marking of the lambing report was shared over a wider range of staff than in previous years. Gateway leader is planning to flag this with the module leader to gather her comments and suggestions in advance of the 2020 laming period. (**Gateway Leader**)

For essay-based questions (year 3 and 4):

The biggest area for concern was across the modules for yr3/4 was the lack of a common system for denoting when a mark(s) are awarded. For students reviewing their scripts should they need to following failure of an exam, this is problematic. Likewise there were a number of examples where marks had initially been summed

incorrectly. However, this would not be an issue if a consistent approach was used.

Within modules the extent of feedback was still variable – often the feedback did not directly relate to the points expected within the model answer provided with exam questions. Finally, there were some instances where the written comments did not tally with the marks provided, e.g. an examiner commenting 'excellent and exceeding answer' but only awarding 82%.

College response:

Thank you for highlighting that some marks had initially been incorrectly summed. If the questions are being marked on either the 0-10 or Common Grading Scheme then the allocation of marks is not who the schemes works. The schemes are a holistic overview of how a student has performed and not a summing up of marks (as is with a PSQ) The need to be accurate with addition of marks will be included in marker instructions and as above clear guidance on ensuring that written feedback conforms to the descriptors in the common grading scheme and where there are parts to a question how the marks have been awarded (**Course Director / Year Leaders**).

3.5 In your view, are the procedures for assessment and the determination of awards sound and fairly conducted? (e.g. Briefing, Exam administration, marking arrangements, Board of Examiners, participation by External Examiners)

The procedures are sound and fair. Determination of final degree results follows an agreed algorithm, which is applied consistently and fairly.

The examiners were grateful to the exams office for their excellent communication, paperwork and hosting. Examiners were offered access to anything requested and asked at intervals throughout the day if anything further was required.

We felt that a briefing of examiners by module leads at the start of the visit would have been of merit (this could complement the summary document of courses / assessments) and would give them the opportunity to outline what went well or not so well that year.

College response:

a. Thank you for this valuable suggestion. We will endeavor to prove module packs and ensure that each Year leaders is on hand to brief External Examiners of how modules have run at the start of their visit. (Course Director, Year Leaders, Exams Office)

We have already commented in this report about variability in feedback style, marking style and annotation of scripts. The moderation procedure is sound and in place. As already commented, additional data on markers would enhance assurances around this system.

The breadth of modules on offer to students is as it was last year. In response to the 2017.18 examiner report the course director commented that the programme will be undergoing Periodic Review in 2020 and the suitability/sustainability of the assessment load should be one of the areas under scrutiny. The review should reveal whether the multiple component in-course assessments coupled with multiple examination papers for multiple modules across an entire degree programme (e.g. several dozen discrete components contribute to a 3-year Biological Sciences programme) pose risks for the College (i.e. sustainability in relation to the academic and administrative staff workload, and recognising the increasing number of students).

College response:

b. Thank you for this suggestion. Suitability and sustainability of assessments will be included as one of the items under scrutiny in the next Periodic Review (Course Director)

Evaluation of in-course assessments and projects has to be undertaken using an online system that is rather cumbersome for external examiners. There are a large number of in-course assessments, and the examiners would ideally like to have a reasonably objective method of comparing the grades awarded, it may be useful to develop a sampling strategy.

College response:

c. The Course Director and Exams Office will discuss the possibility of development of a strategy to make this more straightforward and investigate whether by sampling from top, middle bottom after marking (**Course Director, Exams Office**)

Some module leaders were not present at the board meeting which, while probably inevitable, did partially disabled a full immediate discussion around specific issues. External examiners were given ample opportunity within the agenda to voice feedback.

College response:

d. Module Leaders will be reminded of the dates of Exam Boards and asked to be present or, if unable to attend, to send a deputy (**Year Lead, Heads of Departments**)

3.6 Opinion on changes to the assessment procedures from previous years in which you have examined

For Gateway/ BSc1 /BSc 2 - The removal of essays from year 1 and 2 examinations appear to have been a good development, for staff and students. The assessment of critical thought is developed and assessed through project writing. It will be interesting to see whether the change has any impact on how these students fair when faced with examination essays in subsequent years.

BSc 3 including Bsc Comp Path: The marking system had not changed. The increase of model answers providing a link to the teaching material and Learning objectives is commendable.

BSc Year 3/MSci - As a new examiner in 2019 I cannot comment on this.

3.7 Please provide any additional comments and recommendations regarding the procedures

General Statements

4.1	Comments I have made in previous years have been addressed to my satisfaction				
Yes					
Add	itional comments, particularly if your answer was no:				
	Answer = Yes, although some aspects are still in progress and where relevant have been reiterated in this new report.				
4.2	An acceptable response has been made				
Yes					
Add	itional comments, particularly if your answer was no:				
4.3	I approved the papers for the Examination				
Yes					
Add	itional comments, particularly if your answer was no:				
	I was able to scrutinise an adequate sample of students' work and marks to enable me to carry out duties				
Yes					
Add	itional comments, particularly if your answer was no:				

Over all years - We note a comment from the 2017.18 examiner report - "For example, bundles of scripts could be pre-prepared with samples from high- medium- and low-performing candidates already selected and identified.". This didn't happen for 2018.19 and would expedite the examiner process. For all years, an additional graphical display of mark distribution for examiners would be appreciated in future years.

For Gateway/ BSc1 /BSc 2 - exam scripts and projects were available but the full-range of in-course assessments was not available.

College response:

a. A mentioned previously, we will work on the development of a strategy to make sampling more straightforward (**Course Director, Exams Office**)

b. Course Director will investigate producing graphical displays of mark distribution in time for the arrival of External Examiners (**CD**, **Exams Office**)

4.5 I attended the meeting of the Board of Examiners held to approve the results of the Examination
Yes
Additional comments, particularly if your answer was no:
4.6 Candidates were considered impartially and fairly
Yes
Additional comments, particularly if your answer was no:
4.7. The standards act for the awards are appropriate for avalifications at this level in this authors.
4.7 The standards set for the awards are appropriate for qualifications at this level, in this subject Yes
Additional comments, particularly if your answer was no:
4.8 The standards of student performance are comparable with similar programmes or subjects in other UK institutions with which I am familiar
Yes
Additional comments, particularly if your answer was no:

4.9 I have received enough support to carry out my role

No

Additional comments, particularly if your answer was no:

We are complimentary of the exams office team for all their support and clear communication. But there has been no real additional clarity given to the external examiner's role following comments made in previous years. Naturally the existing examiners have developed a strategy for the examiner days, informed by prior experience of some examiners during similar roles at other Universities. However, it would be helpful to external examiners if the College sets out clearly its expectations of the external examiner role, and any specific objectives for external examiner action in advance of the visit. This could be set out in a policy document which articulates our role e.g. in relation to scrutinising or validating the marks of individual students, particularly those who have had individual circumstances or who sit at a critical mark boundary. The induction day(s) for new external examiners should complement this by setting out if/how it wishes them to contribute at all stages of the assessment process.

As noted earlier, we would value printed module descriptors, learning objectives, lecture lists and assessment list being available during our visit (and ideally mailed or link emailed earlier in the academic session / at time of question setting / review) and perhaps an indication from module leads on how the year went (at start of examiner day).

College response:

We welcomed the External Examiners' comments from last year, relating to improving the information given to them. We have since revised the procedure for External Examiners to specify their duties. We have consequently updated the RVC webpages dedicated to External Examiners.

We have not received similar comments from other External Examiners appointed on other Exam Boards.' Instead of the face to face annual training, which was historically delivered at the inset day on assessment each January, we have created a bespoke RVC online training for the new External Examiners available to them as soon as they are appointed. We will be conducting a review of RVC practice against the revised UK Quality Code specifically to external expertise during 2019/20 academic year.

We will endeavor to provide printed module handbooks with class by class and overall learning objectives, Award maps including assessment lists and relevant Grading Schemes during the External Examiner visit as well as a zip file containing this information when questions are sent for review. (Course Director, Year & Module Leaders, Course Support, Exams Office)

4.10 I have received sufficient information to carry out my role (where information was insufficient, please give details)

No

Additional comments, particularly if your answer was no:

See linked question 4.9 above

4.11 Appropriate procedures and processes have been followed

Yes

Additional comments, particularly if your answer was no:

4.12 The processes for assessment and the determination of awards are sound
Yes
Additional comments, particularly if your answer was no:

Completion

If you have identified any areas of good practice, please comment more fully here. We may use information provided in our annual external examining report:

5.1 Do you have any suggestions for improvements based on experience at other institutes? We may use information provided in our annual external examining report:

No further comments

5.2 External Examiner comments: For College information only (Responses to External Examiners are published on the College's website. Please only use this box to add any comments that you wish to remain confidential, if any)