

The University of Leeds
EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2017-18

QAT Received 02/10/2018

Part A: General Information

Subject area and awards being examined

Title and Name of Examiner:

Faculty / School of:

Chemistry

Subject(s):

Chemistry, Medicinal Chemistry, Natural Sciences

Programme(s) / Module(s):

Degree programmes administered by the School of Chemistry

Awards (e.g. BA/BSc/MSc etc):

BSc, MChem

Part B: Comments for the Institution on the Examination Process and Standards

Points of innovation and/or good practice

Please highlight areas of innovation or good practice within the programmes or processes you have been involved with in this box.

The Chemistry programme continues to be well structured and administered. I have commented previously on the research project poster session and 1-minute presentations in final year and this session ran very smoothly again this year and is also excellent in terms of creating a strong group identity for the student cohort. In light of the national industrial action which could have threatened to disrupt the teaching programme in a serious way, the School has reacted extremely well in minimising the impact on the students and especially those in final year.

Enhancements made from the previous year

Please highlight any enhancements made to the programme(s) or processes over the past year in this box.

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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

N/A

For Examiners in the first year of appointment

1.	Were you provided with an External Examiner Handbook?	-
2.	Were you provided with copies of previous External Examiners' reports and the School's responses to these?	-
3.	Were you provided with a External Examiner Mentor?	-

For Examiners completing their term of appointment

4.	Have you observed improvements in the programme(s) over the period of your appointment?	-
5.	Has the school responded to comments and recommendations you have made?	-
6.	Where recommendations have not been implemented, did the school provide clear reasons for this?	-

7.	Have you acted as an External Examiner Mentor?	-
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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

Standards

8.	Is the overall programme structure coherent and appropriate for the level of study?	Y
9.	Does the programme structure allow the programme aims and intended learning outcomes to be met?	Y
10.	Are the programme aims and intended learning outcomes commensurate with the level of award?	Y
11.	Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?	Y
12.	Is the programme(s) comparable with similar programmes at other institutions?	Y

Please use this box to explain your overall impression of the programme structure, design, aims and intended learning outcomes.

The programme structure is clear, attractive and fluent. There is a good balance between all forms of teaching and learning and the ILOs meet the expectations of any leading Russell Group UK university, for example. The flexibility and elements of choice in final years work very well and should motivate students.

13.	Is the influence of research on the curriculum and learning and teaching clear?	Y
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Please explain how this is/could be achieved (examples might include: curriculum design informed by current research in the subject; practice informed by research; students undertaking research)

There are no issues here. The links between teaching and current research are evident and strong.

14.	Does the programme form part of an Integrated PhD?	N
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Please comment on the appropriateness of the programme as training for a PhD:

(Research projects in final MChem and BSc years provide valuable experience of independent research and contact with PhD researchers.)

15.	Does the programme include clinical practice components?	N
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Please comment on the learning and assessment of practice components of the curriculum here:

N/A

16.	Is the programme accredited by a Professional or Statutory Regulatory Body (PSRB)?	Y
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Please comment on the value of, and the programme's ability to meet, PSRB requirements here:

The programme is Royal Society of Chemistry (RSC) accredited. RSC accreditation guarantees a high level of teaching standards and is widely respected as a benchmark of teaching quality. RSC accreditation is recognised by both employers and (prospective) students.

Assessment and Feedback

17.	Does the programme design clearly align intended learning outcomes with assessment?	Y
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Please comment on the assessment methods and the appropriateness of these to the ILOs, in particular: 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.

<p>The methods of assessment are unchanged from the previous year. The majority of student assessment is <i>via</i> written examination and laboratory work. Considering final year, apart from the research project (which involves assessed practical work over the course of the year and communication of outputs by a written report, a poster and a flash presentation), there is a continual assessment component to “Advanced Topics”. These forms of assessment are positive in that emphasis is not placed purely on examinations approaching graduation. The proportion of continual assessment marks available in Advanced Topics (40%) is however, perhaps a little high and could be reviewed periodically in the context of degree classification statistics.</p>		
18.	Is the design and structure of the assessment methods appropriate to the level of award?	Y
19.	Were students given adequate opportunity to demonstrate their achievement of the programme aims and intended learning outcomes?	Y
<p><i>Please comment on 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:</i></p> <p>The examination questions continue to contain a good balance of problem solving with other content and suitably stretch students intellectually. Research projects are appreciated by the students and it is evident from the poster day that there is a good level of personal investment and ownership; most students were very knowledgeable of their research. The performance of the student cohort was strong and for a second successive year the proportion of students achieving 1st and 2:1 class degrees was high. This fraction of students appears slightly large compared to many other UK Chemistry Departments and probably indicative of the fact that a significant part of the final year is evaluated by continual assessment. Nevertheless, this is a positive and reasonable reflection on the students’ abilities.</p> <p><i>Please use this box to provide any additional comments you would like to make in relation to assessment and feedback:</i></p> <p>On meeting students at poster day, there was a general agreement that the assessment procedure was efficient and fair and feedback was prompt and useful. Anecdotally, a small number of students on joint honours degrees appeared to receive informal feedback less frequently with respect to project work (i.e. infrequent communication with their supervisors).</p>		

The Progression and Awards Process

20.	Were you provided with guidance relating to the External Examiner’s role, powers and responsibilities in the examination process?	Y
21.	Was the progression and award guidance provided sufficient for you to act effectively as an External Examiner?	Y
22.	Did you receive appropriate programme documentation for your area(s) of responsibility?	Y
23.	Did you receive appropriate module documentation for your area(s) of responsibility?	Y
24.	Did you receive full details of marking criteria applicable to your area(s) of responsibility?	Y
25.	Were you provided with all draft examination papers/assessments?	Y
26.	Was the nature and level of the assessment questions appropriate?	Y
27.	Were suitable arrangements made to consider your comments on assessment questions?	Y
28.	Was sufficient assessed work made available to enable you to have confidence in your evaluation of the standard of student work?	Y
29.	Were the examination scripts clearly marked/annotated?	Y (mostly)
30.	Was the choice of subjects for final year projects and/or dissertations appropriate?	Y
31.	Was the method and standard of assessment appropriate for the final year projects and/or dissertations?	Y

32.	Were the administrative arrangements satisfactory for the whole process, including the operation of the Progression and Awards Board?	Y
33.	Were you able to attend the Progression and Awards Board meeting?	Y
34.	Were you satisfied with the recommendations of the Progression and Awards Board?	Y
35.	Were you satisfied with the way decisions from the School Special Circumstances meeting were communicated to the Progression and Awards Board?	Y

Please use this box to provide any additional comments you would like to make on the questions above:

As noted in the previous year, the majority of exam scripts and project reports were clearly marked and usefully annotated. This assisted in the external examination process and was very helpful. Some marked scripts were not so clear. If a formal marking protocol exists (where and when marks are made on scripts, for example and how marks are checked) then it is not obvious that it is universally adhered to.

In the previous year, my fellow examiners and I were supplied with a list of students at the classification boundaries with a comprehensive explanation of any mitigating circumstances. These data were extremely helpful in assisting us to make informed decisions. This year the available information was less and the decision-making process was slightly more difficult as a result.

The assessment of research projects was systematic and accurate. As noted last year, a 3rd “adjudicating” assessor (moderator) would be beneficial in cases where the two project-assessors opinions and marks differ by a significant margin. There was one notable case of this where a final year student was placed on a 2:1 – 1st boundary and the project mark had influence on the final degree classification.

Other comments

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

The standard of examination questions was high and the questions were appropriately challenging for students. The quality of examination model answers and the transparency of mark schemes was very good (and improved from the previous year). Unfortunately, I did not receive feedback from the question setters for semester 1 until semester 2 this year.

Otherwise, the support from academic and administrative staff throughout the year was excellent and I am extremely grateful for this.

Name of School and Head of School (or nominee)

Title and Name of Examiner:

Subject(s):

Inorganic Chemistry

Programme(s) / Module(s):

BSc Chemistry, BSc , MChem Chemistry & variants

Awards (e.g. BA/BSc/MSc etc):

BSc, MChem

Title and Name of Responder:

Position*:

Head of School

Faculty / School of:

Chemistry

Address for communication:

School of Chemistry,
University of Leeds
Leeds LS2 9JT

Email:

Telephone:

*If the individual responding to the report is not the Head of School please state their position within the School.

Completing the School response

The completed School response (including the full original report) should be attached to an e-mail and sent to the Pro-Dean for Student Education in the relevant Faculty. Following approval by the Pro-Dean for Student Education, the School must send the response (including the full original report) directly to the External Examiner. A copy must also be emailed to the Quality Assurance Team at qat@leeds.ac.uk. External Examiners should receive a formal response no later than six weeks after receipt of the original report.

Response to Points of innovation and/or good practice

Thank you for your positive comments regarding the MChem projects presentation day and our handling of the impact of the UCU strike.

Response to Enhancements made from the previous year**Response to Matters for Urgent Attention**

If any areas have been identified for urgent attention before the programme is offered again please provide a specific response to them here:

Response to questions 1-7 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

Standards**Response to questions 8 to 16 (and related comments)**

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

Thank you for your positive comments around the programme structure, diversity of teaching methods, evidence of research-based teaching and choice in the final years. We are pleased that you find the ILOs to meet the expectations of any leading Russell Group UK university

Assessment and Feedback

Response to questions 17 to 19 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

Thank you for your positive comments around the range of assessment methods, quality of exam questions, and the investment of students in their research projects

'The proportion of continual assessment marks available in Advanced Topics (40%) is however, perhaps a little high and could be reviewed periodically in the context of degree classification statistics' - We have put together a group to look at the assessment of the final year of the MChem programmes and, as part of this, will consider the balance of assessment tasks. We are seeking to address the differential in average marks between coursework topics and the exams.

'.. for a second successive year the proportion of students achieving 1st and 2:1 class degrees was high. This fraction of students appears slightly large compared to many other UK Chemistry Departments and probably indicative of the fact that a significant part of the final year is evaluated by continual assessment. Nevertheless, this is a positive and reasonable reflection on the students' abilities'. The group considering the assessment of the final year of MChem will make recommendations to guard against grade inflation. We are pleased that you acknowledge this was a particularly strong cohort, and that the classification profile is a fair reflection of their abilities.

'On meeting students at poster day, there was a general agreement that the assessment procedure was efficient and fair and feedback was prompt and useful. Anecdotally, a small number of students on joint honours degrees appeared to receive informal feedback less frequently with respect to project work (i.e. infrequent communication with their supervisors)'. Thank you for passing on the positive comments made by students. The group considering the assessment of the final year of MChem will set out expectations for feedback from project supervisors: of course this should be equitable for all students, both single and joint honours.

The Progression and Awards Process

Response to questions 20-35 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

'As noted in the previous year, the majority of exam scripts and project reports were clearly marked and usefully annotated..... Some marked scripts were not so clear. If a formal marking protocol exists (where and when marks are made on scripts, for example and how marks are checked) then it is not obvious that it is universally adhered to'. We do circulate guidelines on marking and mark checking, and will emphasise the importance of adhering to these.

'In the previous year, my fellow examiners and I were supplied with a list of students at the classification boundaries with a comprehensive explanation of any mitigating circumstances. These data were extremely helpful This year the available information was less and the decision-making process was slightly more difficult as a result'. We apologise that this information was not available and we will ensure it is provided in future.

'The assessment of research projects was systematic and accurate. As noted last year, a 3rd "adjudicating" assessor (moderator) would be beneficial in cases where the two project-assessors opinions and marks differ by a significant margin. There was one notable case of this where a final year student was placed on a 2:1 – 1st boundary and the project mark had influence on the final degree classification'. Project marks are considered by a panel comprising the module leader, assessment lead, DSE and heads of teaching sections. Each student's report is considered in turn and the markers reports are considered alongside their raw marks. Where marks are outliers or differences between the two markers are found, the panel may adjudicate based on their examination of the project report and markers reports, or a third marker may be recruited. We consider the process to be robust, although we acknowledge it may not have been documented fully in each case, we will ensure this is done in future.

Other comments

Response to items included in the 'Other Comments' section of the report

Thank you for your positive comments concerning the quality of exam questions and marking schemes, and the support provided by academic and administrative staff.

'Unfortunately, I did not receive feedback from the question setters for semester 1 until semester 2 this year'. We apologise for this and will ensure that feedback is provided promptly in future.

The University of Leeds
EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2017-18 QAT Received 22/06/2018

Part A: General Information

Subject area and awards being examined

Title and Name of Examiner:

Faculty / School of:

Chemistry

Subject(s):

Chemistry, Medicinal Chemistry, Natural Sciences

Programme(s) / Module(s):

Degree programmes administered by the School of Chemistry

Awards (e.g. BA/BSc/MSc etc):

MChem and BSc

Part B: Comments for the Institution on the Examination Process and Standards

Points of innovation and/or good practice

I have been impressed by the range of examination questions and a good selection of problem solving questions have been set. The levels of the questions are appropriate for the year of study.

Enhancements made from the previous year

Improvements have been made to the assessment of final year projects.

Matters for Urgent Attention

There are no matters for urgent attention.

For Examiners in the first year of appointment

1.	Were you provided with an External Examiner Handbook?	N/A
2.	Were you provided with copies of previous External Examiners' reports and the School's responses to these?	N/A
3.	Were you provided with a External Examiner Mentor?	N/A

For Examiners completing their term of appointment

4.	Have you observed improvements in the programme(s) over the period of your appointment?	Y
5.	Has the school responded to comments and recommendations you have made?	Y
6.	Where recommendations have not been implemented, did the school provide clear reasons for this?	Y
7.	Have you acted as an External Examiner Mentor?	N

Although no serious issues with the programmes were identified over my tenure as external examiner a number of minor improvements were suggested and acted on. The department is very open to suggestions from external examiners and responds positively to suggestions. The most significant change was a modification to the assessment of the final year projects which now provide a better distribution of marks.

Standards

8.	Is the overall programme structure coherent and appropriate for the level of study?	Y
9.	Does the programme structure allow the programme aims and intended learning outcomes to be met?	Y
10.	Are the programme aims and intended learning outcomes commensurate with the level of award?	Y
11.	Did the Aims and ILOs meet the expectations of the national subject benchmark (where relevant)?	Y
12.	Is the programme(s) comparable with similar programmes at other institutions?	Y
<p>These are very much in line with those prescribed by the Royal Society of Chemistry, as to be expected for accredited degree programmes. The standards are comparable with those at competitor universities, with good challenging examination questions being set across a wide-ranging curriculum.</p>		
13.	Is the influence of research on the curriculum and learning and teaching clear?	Y
<p>This is a key component of project work in the degree which forms a major part of the final assessment. Final year lecture courses are also clearly linked to the research interests of academic staff.</p>		
14.	Does the programme form part of an Integrated PhD?	N
N/A		
15.	Does the programme include clinical practice components?	N
N/A		
16.	Is the programme accredited by a Professional or Statutory Regulatory Body (PSRB)?	Y
See answer to Q12 above.		

Assessment and Feedback

17.	Does the programme design clearly align intended learning outcomes with assessment?	Y
<p>Assessment is conducted through a mix of examinations, lab work and project work. The examination papers are all scrutinised by the external examiners in order to assure quality and marking criteria. The examiners read a number of project reports produced by the students which were in line with the expectations for final year students.</p>		
18.	Is the design and structure of the assessment methods appropriate to the level of award?	Y
19.	Were students given adequate opportunity to demonstrate their achievement of the programme aims and intended learning outcomes?	Y
<p>The students graduating in chemistry from Leeds in 2017 are of a comparable standard to chemistry students graduating from other similar UK institutions, with the degree classifications in line with those awarded elsewhere. Students were able to demonstrate their achievements in a variety of ways, as appropriate to the learning outcomes. The examiners were very impressed by the poster presentation day in which 4th year MChem students were able to present their project work. The students who presented were of very high calibre and this is reflected in the high proportion of first class degrees awarded this year. When we visited in May some students commented that the feedback on project work (both MChem and BSc) that they were provided with was very variable and dependent on the particular assigned supervisor. Some guidelines on this would be useful.</p>		
<p>Some of the examinations are quite tough in terms of the sheer quantity of material that students are expected to have at their fingertips. This is compensated for by the use of coursework in which the students invariably obtain better marks. It is worth considering giving the students some degree of choice in order to allow them to play to their strengths, and/or possibly reducing the total amount of material covered in the final year advanced topics module.</p>		

The Progression and Awards Process

20.	Were you provided with guidance relating to the External Examiner's role, powers and responsibilities in the examination process?	Y
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21.	Was the progression and award guidance provided sufficient for you to act effectively as an External Examiner?	Y
22.	Did you receive appropriate programme documentation for your area(s) of responsibility?	Y
23.	Did you receive appropriate module documentation for your area(s) of responsibility?	Y
24.	Did you receive full details of marking criteria applicable to your area(s) of responsibility?	Y
25.	Were you provided with all draft examination papers/assessments?	Y
26.	Was the nature and level of the assessment questions appropriate?	Y
27.	Were suitable arrangements made to consider your comments on assessment questions?	Y
28.	Was sufficient assessed work made available to enable you to have confidence in your evaluation of the standard of student work?	Y
29.	Were the examination scripts clearly marked/annotated?	Y
30.	Was the choice of subjects for final year projects and/or dissertations appropriate?	Y
31.	Was the method and standard of assessment appropriate for the final year projects and/or dissertations?	Y
32.	Were the administrative arrangements satisfactory for the whole process, including the operation of the Progression and Awards Board?	Y
33.	Were you able to attend the Progression and Awards Board meeting?	Y
34.	Were you satisfied with the recommendations of the Progression and Awards Board?	Y
35.	Were you satisfied with the way decisions from the School Special Circumstances meeting were communicated to the Progression and Awards Board?	Y

The department could work a little more on ensuring consistency in the annotation of the marked examination scripts, and particularly in ensuring that the total mark is clearly visible on the front of the paper. The external examiners would have appreciated receiving recommendations from the internal board on the outcome for borderline candidates and having all relevant scripts and reports available for those candidates (some were available, some had to be manually extracted). Although we were able to reach conclusions on borderline cases a steer would have been helpful. We were asked to consider the relatively low average mark for a second year module; in cases like this it would be most helpful if a histogram of marks could be provided (we were given this on request) so that action can be recommended. It would have been helpful to have a final class list for the MChem students listing all the final module marks so that we can look for trends and discrepancies; this is achieved in other institutions, so it should be possible to find a suitable format. We were a little concerned that the (large) number of first class degrees awarded did not correlate at all with the number of first class marks awarded in the final year advanced topics module. This is something that should be reflected on for the future. We were however pleased to see a better distribution of project marks than we saw last year, though perhaps the distribution is still a little narrow. The project marking process is robust, although a bit more clarity in the moderation process would be helpful. For example we saw one project where two markers had awarded very different marks. The student had ended up on a borderline, so the policy on dealing with the discrepancy was particularly critical in this instance. As externals we were able to adjudicate, but a more robust internal process might have avoided the issue. The department should also keep an eye on the "grade inflation" metric being piloted in TEF as a rising number of first class degrees is being awarded.

Other comments

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

Name of School and Head of School (or nominee)

Title and Name of Examiner:

Subject(s):

Physical Chemistry

Programme(s) / Module(s):

BSc Chemistry, BSc , MChem Chemistry & variants

Awards (e.g. BA/BSc/MSc etc):

BSc, MChem

Title and Name of Responder:

Position*:

Head of School

Faculty / School of:

Chemistry

Address for communication:

School of Chemistry,
University of Leeds
Leeds LS2 9JT

Email:

Telephone:

*If the individual responding to the report is not the Head of School please state their position within the School.

Completing the School response

The completed School response (including the full original report) should be attached to an e-mail and sent to the Pro-Dean for Student Education in the relevant Faculty. Following approval by the Pro-Dean for Student Education, the School must send the response (including the full original report) directly to the External Examiner. A copy must also be emailed to the Quality Assurance Team at qat@leeds.ac.uk. External Examiners should receive a formal response no later than six weeks after receipt of the original report.

Response to Points of innovation and/or good practice

We are pleased that you have been impressed by the examination questions.

Response to Enhancements made from the previous year

We are pleased that you approve of the changes to assessment of final year projects (final reports marked by two independent markers, not the project supervisor).

Response to Matters for Urgent Attention

If any areas have been identified for urgent attention before the programme is offered again please provide a specific response to them here:

Response to questions 1-7 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

We are pleased that you have found the School to be receptive to suggestions. Many thanks for your help and your insightful recommendations over the 3 years.

Standards**Response to questions 8 to 16 (and related comments)**

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

We are pleased that you have found our standards to be comparable to competitor Universities and that you have recognised the prominence of research-based learning in our curriculum.

Assessment and Feedback

Response to questions 17 to 19 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

We are pleased that you have found our degree classifications to be in line with those awarded elsewhere, and that you were impressed by the MChem project presentations when you attended the presentation day in May.

Thank you for relaying the students' comments about variably useful feedback from project supervisors. We have put together a group to look at the assessment of the final year of the MChem programmes and, as part of this, will develop some expectations for project supervisors.

Thank you for the observation about the amount of material covered by exams. In response to this, we have changed the structure of physical chemistry exams on core modules at levels 1-3 such that these will now all contain some choice on Section B (previously Section Bs comprised two compulsory questions each worth 30 marks or three compulsory questions each worth 20 marks, students will now have a choice of either 2 out of 3 or 3 out of 4 optional questions). We have also changed the structure of the final year MChem Advanced Topics January paper this year, removing the requirement for students to answer at least one physical, one organic and one inorganic Section B question: students will now have a completely free choice.

The Progression and Awards Process

Response to questions 20-35 (and related comments)

Schools may provide a general response; however, where Examiners raise specific points these must be addressed individually:

Thank you for your considered comments:

'The department could work a little more on ensuring consistency in the annotation of the marked examination scripts, and particularly in ensuring that the total mark is clearly visible on the front of the paper'. We will emphasise this to staff marking papers in January and in June.

The external examiners would have appreciated receiving recommendations from the internal board on the outcome for borderline candidates and having all relevant scripts and reports available for those candidates (some were available, some had to be manually extracted). Although we were able to reach conclusions on borderline cases a steer would have been helpful. We were asked to consider the relatively low average mark for a second year module; in cases like this it would be most helpful if a histogram of marks could be provided (we were given this on request) so that action can be recommended. It would have been helpful to have a final class list for the MChem students listing all the final module marks so that we can look for trends and discrepancies; this is achieved in other institutions, so it should be possible to find a suitable format. We were a little concerned that the (large) number of first class degrees awarded did not correlate at all with the number of first class marks awarded in the final year advanced topics module. This is something that should be reflected on for the future. We were however pleased to see a better distribution of project marks than we saw last year, though perhaps the distribution is still a little narrow. The project marking process is robust, although a bit more clarity in the moderation process would be helpful. For example we saw one project where two markers had awarded very different marks. The student had ended up on a borderline, so the policy on dealing with the discrepancy was particularly critical in this instance. As externals we were able to adjudicate, but a more robust internal process might have avoided the issue. The department should also keep an eye on the "grade inflation" metric being piloted in TEF as a rising number of first class degrees is being awarded.

Other comments

Response to items included in the 'Other Comments' section of the report