

Introduction

Your report is an important and integral part of the quality assurance of the programmes of study at the College and acts as an institutional record of the effective completion of the assessment process and the maintenance of academic standards of its awards. The report template, based on the indicators and guidance in the QAA Quality Code, will ask you to comment on the standards and comparability of the provision, good and/or innovative practice and suggestions for further enhancement where appropriate.

This report form can also be accessed electronically at the [external examining webpage](#). Should you require any further information or you have any queries, please contact the Registry Quality Assurance team: external.examiner@imperial.ac.uk or 0207 594 8993.

Completing the Report

1. The report template asks you to address specific questions (with a range of stated responses from “Yes/Always” to “No/Never”, with the opportunity to provide any qualifying/explanatory comments) and also asks a series of questions to which the College would like to receive more detailed written feedback/commentary. You are asked to comment fully under each of the headings, particularly where there are negative responses to any of the questions.
2. Your feedback will influence how the Department develops its programmes. To assist the College and the Department, please ensure that your report contains clear feedback. One word or one sentence responses throughout the report will not provide the Department with sufficient information to enable them to further enhance the programme(s).
3. In line with the expectations of the Quality Code, external examiners’ reports will be shared with staff, students and student representatives and may be disclosed in response to requests made under the Freedom of Information Act. Reports will also be shared with professional, statutory and regulatory bodies and the Quality Assurance Agency upon request. **Therefore there should be no identifiable reference to individual members of staff or students (either by use of name or student ID number) in the report to ensure that appropriate confidentiality is maintained.** The College may also, on occasion, use anonymous extracts from your annual report in promotional material.
4. In addition to maintaining confidentiality by refraining from using names or any other identifier, examiners are requested not to provide significant details about specific assessment tasks.
5. Examiners are reminded that where they have a serious concern they should follow the procedure available from the [website](#). They may make a separate confidential serious concerns report directly to the Provost on any matter of serious concern in addition to their annual report. A ‘Serious Concerns Report’ template for this purpose is available to download from the external examiner website at the link shown above. Please be assured that this report is confidential.

Report Submission

6. Completed reports should be returned within one month of the final meeting of the Board of Examiners, at the latest by **21 Aug 18 for undergraduate programmes** or **1 Feb 19 for postgraduate programmes**.
7. The report should be returned electronically, as an e-mail attachment and in MS Word format, to the Registry Quality Assurance team at: external.examiner@imperial.ac.uk
8. Payment of your annual fee for external examining duties will only be processed upon receipt of a satisfactorily completed report.

Report Dissemination

9. The College greatly values the feedback provided by its external examiners in their annual reports. Please note that a sample of reports across the provision are personally read by the Vice Provost (Education).
10. The Registry Quality Assurance team will ensure that the report is considered by the appropriate Departmental staff. Departmental staff will be expected to provide a formal response to the feedback/comments in your report and this will be circulated to you at the earliest opportunity.
11. In addition to the department review of the report, the Quality Assurance team undertake analysis of all reports to identify any themes arising, make recommendations for College-wide improvements to process or procedures, or to disseminate best practice.

Examiner's Details	
Full name and title	Professor James Gavin Esler
Home institution or other affiliation	University College London
Degree being examined (e.g. BSc/GEP/MBBS/MEng/MSc/MRes)	MRes Mathematics of Planet Earth
Subject and part being examined (e.g. Biology)	Mathematics
Year of Tenure	1

*** If this is your final year of office please ensure you complete the final section of this report.**

1. Programme Information/support for External Examiner Role

1(a)	Programme/Module Information Please confirm if the following was provided to you (either sent directly or through a publication site link)	
(i)	Programme handbook(s) / programme specification including programme learning outcomes?	Yes/Always
(ii)	Syllabus or module descriptors including learning outcomes?	Yes/Always
(iii)	Assessment briefs / marking criteria	Yes/Always
(iv)	Sufficient information about the programme(s) / modules in order to fulfil your role?	Yes/Always
(v)	Is there any additional documentation/ information that you would have benefited from receiving?	No/Never

I was sent everything I needed, including lecture notes and other useful materials.

New External Examiners only

1(b)	College Induction and Appointment Process Please answer the following questions with regards to the College appointment and induction process	
(i)	Did you find the appointment process fit for purpose?	Yes/Always
(ii)	Was the appointment made in a timely manner?	Yes/Always
(iii)	Do you consider that the arrangements for the Induction day were sufficient?	N/A
(iv)	Did you find the follow-up information useful?	N/A
(v)	Was the department process to provide an induction to the programme and specific requirements of your role effective?	Yes/Always
(vi)	Following completion of your first year of tenure, is there any additional information/ support that you feel would be beneficial to provide at induction in future?	No/Never
Unfortunately, due to other commitments, I was unable to attend the induction day.		

Q1: Department response

2. Programme/Curriculum Design

2(a)	Overall programme design and coherence Please comment on the strengths and weaknesses of the programme design in relation to:	
(i)	The balance and content of the degree programme(s) in relation to stated learning outcomes; The content and syllabus of the taught component of the MRes course is wholly successful in meeting the intended learning outcomes (e.g. 'Acquire foundations in analysis and solution on a computer of partial differential equations, statistical techniques for inference and data assimilation, deterministic and stochastic techniques for taking a systems view of earth systems and processes' and 'Gain an appreciation for the key processes in the earth system and their role in climate.') As far as balance is concerned, one comment is that a lot of attention is given to the mathematical foundations of probability theory, perhaps at the expense of more practical topics in e.g. data assimilation. Whether this emphasis on theory is too much is a debatable point, as a rigorous foundation will be extremely helpful for students accessing probability heavy research topics, and it is also appropriate that the subject is taught in line with the research interests of staff.	
(ii)	Coherence and currency of the programme(s) and the appropriateness of compulsory modules/units in relation to stated learning outcomes; My view is that each of the four taught MRes modules are coherent and contribute towards the students gaining fundamental understanding in line with the learning outcomes.	
(iii)	Suitability of the programme design in relation to the relevant subject benchmarks/ Professional Statutory Regulatory Body (PSRB) or Accrediting Body requirements (where applicable);	

Not applicable.	
(iv)	Where applicable, the relevance and integration of placements¹ to the overall programme and its contribution to the programme learning outcomes;
Not applicable.	

2(b)	Assessment Strategy Please comment on the strengths and weaknesses of the assessment strategy in relation to:
(i)	The rigour, appropriateness and overall quality of the methods of assessment (unseen written papers, essays/dissertations, orals, clinical examinations) in relation to the level of study and the intended learning outcomes; The four taught MRes courses are assessed by examination, coursework and project work. I found the quality and level of rigour of the examinations to be high in all cases, and certainly appropriate to the MRes level. One slight concern I had was over the rather high weighting given to the coursework component in some of the modules. Although the coursework was generally of high quality and appropriate, in some cases the balance of formative versus summative material didn't quite justify the high weighting in the overall assessment. In some cases (e.g. MAMCDTE) I would have preferred to have seen more open-ended or mini-project style questions to address this issue. This issue was discussed at some length in the exam board meeting, and I understand that appropriate changes were made in advance of the 2018/19 session. I looked at all of the MRes dissertations and read some in detail. These were rigorously completed, generally well-written (taking into account the experience level of the students), and overall I was very impressed. Many of them would not look out of place as a chapter or two of a PhD.
(ii)	The balance and comparability of assessment methods across modules of the same level; The exam assessments of the four MRes courses are well-balanced and comparable. To repeat the point made above, I think that the department should continue to review the balance and content of the coursework components.
(iii)	The suitability of the overall assessment load for the programme(s); The overall assessment load seems entirely appropriate. In fact, I am impressed that the students were able to complete both their MRes courses and such high quality dissertations in the time available to them.

Q2: Department response

3. Assessment Process, Marking and Moderation

3(a)	Drafting of Assessment	
(i)	Did you receive all of the necessary draft assessments for comment / approval?	Yes/Always
(ii)	Were the nature and level of the questions (or tasks) appropriate?	Yes/Always

¹ Placements are any provision taken away from the direct College environment and may include: Year abroad, year in industry, modules studied at other approved HEIs (collaborative modules), or any other periods away from the College as part of an approved study plan.

(iii)	Were suitable arrangements in place to consider your comments on the draft assessments?	Yes/Always
(iv)	Did you receive feedback on your comments?	Yes/Always

3(b)	Marking and Moderation of scripts (Examination, assessed coursework, dissertation/project reports)	
(ii)	Was the general standard and consistency of marking appropriate?	Yes/Always
(iii)	Was there evidence that assessed work had been moderated internally, either through check marking or second marking?	Yes/Always
(iv)	Were the scripts marked in such a way as to enable you to see the reasons for the award of given marks?	Yes/Always
Sample exam scripts and coursework were made available at the exam board meeting, from which I was able to verify that appropriate marking and moderation had taken place. The dissertations had been marked by two examiners, and their separate reports were made available to me.		

3(c)	In relation to Practical Examinations	
(i)	Were satisfactory arrangements made for the conduct of practical examinations?	n/a
(ii)	Was the general standard and consistency of marking appropriate?	n/a

3(d)	In relation to Oral Assessments (including Viva Voce Examinations)	
(i)	Were satisfactory arrangements made for the conduct of oral assessments (e.g. presentations, poster presentations etc...)?	n/a
(ii)	Were suitable arrangements made for you to conduct viva voce examinations?	n/a
(iii)	Was the purpose for conducting a viva voce examination and the criteria for selecting candidates for a viva voce clear?	n/a
(iv)	Was the assessment of such work appropriate and consistent?	n/a

3(e)	Please comment on the assessment process, marking and moderation in relation to:
(i)	The suitability of marking schemes / marking criteria and, where appropriate, model answers and the consistency with which these were applied;
Exam assessments were sent to me with model answers and mark schemes on which I was able to comment. In general, these were highly satisfactory.	

(ii)	The suitability of the procedures for marking and moderation and the consistency with which these were applied;
The marking and moderation procedures were in line with my expectations (based on my own department and on other institutions where I have been an external).	
(iii)	Whether the grade boundaries for the assessment are set at the appropriate level and applied consistently;
The grade boundaries are appropriate, based on examination of sample examination scripts and coursework which were made available to me, and comparing these with the norms I have observed at other MSc-level programmes on similar topics at comparable institutions.	
(iv)	The extent to which the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with College policies and regulations
The assessment process is rigorous and in line with the College policies and regulations as I understand them.	

3(f)	Programme content which has been delivered and assessed by another institution (this would cover 1) placement activity, e.g. some or all of an undergraduate year abroad study plan, and 2) modules undertaken at local partner institutions, i.e. what are termed collaborative modules).	
(i)	Was it clear in advance of the Board that students under consideration had undertaken content away from the College?	Yes/Always
(ii)	Were the procedures for incorporating marks obtained by students at another institution clear and consistently applied?	Yes/Always
(iii)	Was any such provision discussed at the Board of Examiners, particularly in relation to progression/award decisions, overall value and consistency with regards to the programme(s) of study?	Yes/Always
The mathematics of planet earth programme is delivered as a joint programme with the University of Reading. Lectures are undertaken in both institutions, with students present at both campuses with videolink widely used. My impression is that this joint delivery aspect works successfully.		

Q3: Department response

4. Board of Examiners

4(a)	Board of Examiners' Meeting	
(i)	Were you invited to attend the meeting?	Yes/Always
(ii)	Were you able to attend the meeting?	Yes/Always
(iii)	Was the meeting conducted to your satisfaction?	Yes/Always
(iv)	Were you satisfied with the recommendations of the Board of Examiners?	Yes/Always

I found the exam board meeting to be professional and business-like. All of the issues raised relating to assessment methods and moderation were treated seriously and discussed at length, with the examiners present contributing useful ideas for mitigating problems and improving the assessment provision in 2018-19. The award of MRes degrees was uncontroversial as there were few borderline cases.

4(b) Please comment on the following aspect related to Boards of Examiners' Meetings:

(i) Whether the arrangements for degree classification (e.g. the scheme for the award of honours [UG] / scheme for the award of pass, merit or distinction [PG] – whichever is relevant) are set at the appropriate level and applied consistently.

Yes, the arrangements are at the appropriate level and were applied consistently.

(ii) Whether the College procedures governing mitigating circumstances and/or academic misconduct (e.g. plagiarism cases) were considered and applied fairly and equitably to all students.

Yes.

(iii) Whether the consideration of borderline performances was conducted fairly and equitably, and in line with College Procedures.

There were no borderline cases this year, due to the relatively small cohort.

Q4: Department response

5. Academic Standards

5 Please comment on academic standards and student achievement with regard to:

(i) The appropriateness of the standards set for the awards in relation to the Framework for Higher Education Qualifications, national subject benchmarks and any additional Professional, Statutory and Regulatory Body (PSRB) or accrediting body requirements (where relevant);

The standards set for the award seem to me to be appropriate to the national subject benchmark.

(ii) The standards of student performance in the programme(s) or parts of programmes and whether these are comparable with standards achieved by students on similar programmes or parts of programmes in other UK higher education institutions of which you have experience;

Based on the primarily on the high quality of the students' dissertations, and secondarily on their exam performance, the MRes standards exceed those I have encountered on comparable MSc programmes at other institutions. This may be partly due to the excellent students attracted by the mathematics of planet earth CDT, but the teaching staff and project supervisors on the programme clearly deserve much of the credit too.

(iii) The extent to which the academic standards and standards of student performance across modules within the programme(s) are comparable;

There are no serious problems with varying standards across the four taught modules.

(iv)	For external examiners <u>not</u> in their first year of appointment – are the standards of student performance across modules within the programme(s) comparable to those in previous cohorts;
n/a	

Q5: Department response

5. Response to previous year's External Examiner Report

6.	Response to previous year's report	
(i)	Did you receive the formal written response from the department to the previous year's External Examiner report ² ?	N/A
(ii)	Are you satisfied that the issues raised in the previous report either have been, or are being, addressed?	N/A

Q6: Department response

7. Overview Comments, Recommendations and Good Practice

Please provide an overview of your assessment of the programme(s) and modules for which you are responsible as External Examiner. Please identify any specific matters relating to the academic standards of the awards and/or the quality of learning opportunities provided to students that should be addressed. Please also highlight any examples of good and/or innovative practice that you consider to be worthy of wider dissemination within the College.

7a.	Recommendations / Suggestions for Enhancement
My main recommendation is for the department to review the weighting of the coursework component of each of the MRes courses, with a view to reducing the weighting where the coursework is mainly formative, or if a high weighting is to be maintained, by ensuring that there is sufficient summative coursework, perhaps in the form of open-ended mini-projects.	

² i.e. completed copy of the report template sent on by the Quality Assurance Team on behalf of the department.

7b.	Examples of good and/or innovative practice in learning, teaching and assessment
There is much to admire on the MRes programme, e.g. • Excellent quality project supervision (evidenced by the MRes theses) • Good use of remote learning technology, to coordinate the programme between institutions • An excellent and original curriculum spanning the gap from rigorous mathematical development on the one hand to practical atmospheric, oceanic and climate science on the other	

7c.	Overview Comments
The 2017-18 MRes cohort have received an excellent foundation to succeed at PhD level.	

Q7: Department Response

8. For Examiners final year in office only: Final Exit Report

8	Please provide an overview of your term of office. This should ideally include comment on any changes in standards of student performance over time, major developments in the provision during your tenure, the implementation of any recommendations for enhancement (this is not an exhaustive list and examiners are welcome to comment on any matters they consider appropriate)
n/a	

Q8: Department Response

9. Overall Confidence statement

The independent views of our External Examiners form an important part of the annual reporting of the maintenance of standards and judgement of the governing body.

Please complete the following section with regards to the module(s)/programme(s) of study to which this report relates. Where you are unable to say 'Yes', commentary must be provided in the comments box below.

(i)	The degree awarding body is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
(ii)	The assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme(s) and is conducted in line with the College's policies and regulations	Yes
(iii)	The academic standards and the achievements of students are comparable with those in other UK degree-awarding bodies of which you have experience	Yes

Overall, I was hugely impressed with the strength of the 2017-18 MRes cohort, based on mainly on reading their dissertations (but also on their exam performance) and I believe that they have been given an excellent foundation for success on the PhD programme, which is after all the main purpose of the programme. Viewed as a stand-alone degree, the MRes is well administered and meets all of the standards one would expect from Imperial College.

External Examiner Signature (an electronic or typed signature is acceptable):	James Gavin Esler.
Date of submission:	22-1-19

Please email your completed form (as an MS Word file) to: external.examiner@imperial.ac.uk

Internal Use Only

Name and title of Department Respondent	
Position:	<i>e.g. Director of Undergraduate Studies, Programme Director, Programme Coordinator etc.</i>
Date:	

Read by Vice Provost (Education)		Date:	
Comments			
Further action required by Department			

Response to Vice Provost Comments / Further Action:	
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Date:	
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Introduction

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11. In addition to the department review of the report, the Quality Assurance team undertake analysis of all reports to identify any themes arising, make recommendations for College-wide improvements to process or procedures, or to disseminate best practice.

Examiner's Details	
Full name and title	Prof Timo Betcke
Home institution or other affiliation	University College London
Degree being examined (e.g. BSc/GEP/MBBS/MEng/MSc/MRes)	MSc
Subject and part being examined (e.g. Biology)	Applied Mathematics
Year of Tenure	3

* If this is your final year of office please ensure you complete the final section of this report.

1. Programme Information/support for External Examiner Role

1(a)	Programme/Module Information Please confirm if the following was provided to you (either sent directly or through a publication site link)	
(i)	Programme handbook(s) / programme specification including programme learning outcomes?	No/None
(ii)	Syllabus or module descriptors including learning outcomes?	No/None
(iii)	Assessment briefs / marking criteria	Yes/All
(iv)	Sufficient information about the programme(s) / modules in order to fulfil your role?	Yes/All
(v)	Is there any additional documentation/ information that you would have benefited from receiving?	Choose an item.
I was very happy with the documentation provided		

New External Examiners only

1(b)	College Induction and Appointment Process Please answer the following questions with regards to the College appointment and induction process	
(i)	Did you find the appointment process fit for purpose?	N/A
(ii)	Was the appointment made in a timely manner?	N/A
(iii)	Do you consider that the arrangements for the Induction day were sufficient?	N/A
(iv)	Did you find the follow-up information useful?	N/A
(v)	Was the department process to provide an induction to the programme and specific requirements of your role effective?	N/A
(vi)	Following completion of your first year of tenure, is there any additional information/ support that you feel would be beneficial to provide at induction in future?	N/A

Q1: Department response

N/A

2. Programme/Curriculum Design

2(a) Overall programme design and coherence

Please comment on the strengths and weaknesses of the programme design in relation to:

(i) The balance and content of the degree programme(s) in relation to stated learning outcomes;

The MSc in Applied Mathematics is a world leading programme that gives a broad and high-quality training in all areas of Applied Mathematics. The programme is appropriate for Imperials standing and there are no immediate weaknesses.

(ii) Coherence and currency of the programme(s) and the appropriateness of compulsory modules/units in relation to stated learning outcomes;

The programme is well designed and fulfils the expectations for a modern Applied Mathematics MSc.

(iii) Suitability of the programme design in relation to the relevant subject benchmarks/ Professional Statutory Regulatory Body (PSRB) or Accrediting Body requirements (where applicable);

I am not able to comment on this question.

(iv) Where applicable, the relevance and integration of placements¹ to the overall programme and its contribution to the programme learning outcomes;

Not applicable

2(b) Assessment Strategy

Please comment on the strengths and weaknesses of the assessment strategy in relation to:

(i) The rigour, appropriateness and overall quality of the methods of assessment (unseen written papers, essays/dissertations, orals, clinical examinations) in relation to the level of study and the intended learning outcomes;

The assessment is mostly based on examinations with some shorter projects depending on module, and a larger thesis at the end. The mixture of this and weighting is appropriate.

(ii) The balance and comparability of assessment methods across modules of the same level;

There were no strong outliers this year and modules were broadly of comparable level.

(iii) The suitability of the overall assessment load for the programme(s);

It is appropriate for an MSc in Applied Mathematics at a top university.

Q2: Department response

We thank the Examiner for the positive remarks.

¹ Placements are any provision taken away from the direct College environment and may include: Year abroad, year in industry, modules studied at other approved HEIs (collaborative modules), or any other periods away from the College as part of an approved study plan.

3. Assessment Process, Marking and Moderation

3(a)	Drafting of Assessment	
(i)	Did you receive all of the necessary draft assessments for comment / approval?	Choose an item.
(ii)	Were the nature and level of the questions (or tasks) appropriate?	Yes/All
(iii)	Were suitable arrangements in place to consider your comments on the draft assessments?	Yes/All
(iv)	Did you receive feedback on your comments?	Yes/All
No further comments necessary		

3(b)	Marking and Moderation of scripts (Examination, assessed coursework, dissertation/project reports)	
(i)	Did you receive a sufficient number of scripts and other assessed work, including those of first class, distinction, borderline and failed candidates, for scrutiny?	Yes/All
(ii)	Was the general standard and consistency of marking appropriate?	Yes/All
(iii)	Was there evidence that assessed work had been moderated internally, either through check marking or second marking?	Yes/All
(iv)	Were the scripts marked in such a way as to enable you to see the reasons for the award of given marks?	Yes/All
The standard of marking was generally high		

3(c)	In relation to Practical Examinations	
(i)	Were satisfactory arrangements made for the conduct of practical examinations?	N/A
(ii)	Was the general standard and consistency of marking appropriate?	N/A
Not applicable		

3(d)	In relation to Oral Assessments (including Viva Voce Examinations)	
(i)	Were satisfactory arrangements made for the conduct of oral assessments (e.g. presentations, poster presentations etc...)?	N/A
(ii)	Were suitable arrangements made for you to conduct viva voce examinations?	N/A
(iii)	Was the purpose for conducting a viva voce examination and the criteria for selecting candidates for a viva voce clear?	N/A
(iv)	Was the assessment of such work appropriate and consistent?	N/A
Not applicable		

3(e)	Please comment on the assessment process, marking and moderation in relation to:
(i)	The suitability of marking schemes / marking criteria and, where appropriate, model answers and the consistency with which these were applied;
Marking schemes were well designed and consistently applied.	
(ii)	The suitability of the procedures for marking and moderation and the consistency with which these were applied;
These procedures are well tested and robust. There were no inconsistencies.	
(iii)	Whether the grade boundaries for the assessment are set at the appropriate level and applied consistently;
Grade boundaries were consistently and appropriately set and applied.	
(iv)	The extent to which the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with College policies and regulations
The assessment produce was rigorous and fair. To my knowledge it was in line with College policies and regulations.	

3(f)	Programme content which has been delivered and assessed by another institution (this would cover 1) placement activity, e.g. some or all of an undergraduate year abroad study plan, and 2) modules undertaken at local partner institutions, i.e. what are termed collaborative modules).	
(i)	Was it clear in advance of the Board that students under consideration had undertaken content away from the College?	N/A
(ii)	Were the procedures for incorporating marks obtained by students at another institution clear and consistently applied?	N/A
(iii)	Was any such provision discussed at the Board of Examiners, particularly in relation to progression/award decisions, overall value and consistency with regards to the programme(s) of study?	N/A

Q3: Department response

We thank the examiner for the positive remarks. We were happy that our procedures remained robust in AY 2017/20018.

4. Board of Examiners

4(a)	Board of Examiners' Meeting	
(i)	Were you invited to attend the meeting?	Yes
(ii)	Were you able to attend the meeting?	Yes
(iii)	Was the meeting conducted to your satisfaction?	Yes
(iv)	Were you satisfied with the recommendations of the Board of Examiners?	Yes

4(b)	Please comment on the following aspect related to Boards of Examiners' Meetings:
(i)	Whether the arrangements for degree classification (e.g. the scheme for the award of honours [UG] / scheme for the award of pass, merit or distinction [PG] – whichever is relevant) are set at the appropriate level and applied consistently.
Last year there was some confusion with respect to certain regulations. This year the meeting went much smoother and the meeting leadership was in good command of the procedures. I did not find anything to fault.	
(ii)	Whether the College procedures governing mitigating circumstances and/or academic misconduct (e.g. plagiarism cases) were considered and applied fairly and equitably to all students.
See (i)	
(iii)	Whether the consideration of borderline performances was conducted fairly and equitably, and in line with College Procedures.
They were applied consistently. However, I do continue to doubt the strong role that external examiners play in the borderline cases in the pre-board meeting. Ideally, recommendations for borderline cases should have made before the externals arrive, together with a short justification on the recommendation. The externals can then either agree or make alternative suggestions at the examiners meeting. This would make the role of the externals less of that as an active decider and more a check on the decision, which I think is more appropriate.	

Q4: Department response

We thank the Examiner for the comments. The comments concerning the appropriate role of an External Examiner concerning borderline cases will be taken seriously. We will make appropriate modifications to our procedures so that the External becomes less of an "active decider" and more of a "checker". As before, we will ensure clear recommendations for borderline cases from the moderation panel are sent to the Externals. However, instead of asking feedback for each individual borderline candidate, we will invite general comments (and welcome any disagreements).

5. Academic Standards

5	Please comment on academic standards and student achievement with regard to:
(i)	The appropriateness of the standards set for the awards in relation to the Framework for Higher Education Qualifications, national subject benchmarks and any additional Professional, Statutory and Regulatory Body (PSRB) or accrediting body requirements (where relevant);
As already noted the standards are at an internationally leading level for this MSc Programme and I do not doubt that they satisfy the criteria of the various bodies.	
(ii)	The standards of student performance in the programme(s) or parts of programmes and whether these are comparable with standards achieved by students on similar programmes or parts of programmes in other UK higher education institutions of which you have experience;
I am again and again impressed by the high levels of the Imperial Mathematics students, no matter whether they are undergraduate or graduate students. They far exceed the level of students at most UK institutions.	
(iii)	The extent to which the academic standards and standards of student performance across modules within the programme(s) are comparable;
The standards of the students across modules was consistent.	

(iv)	For external examiners <u>not</u> in their first year of appointment – are the standards of student performance across modules within the programme(s) comparable to those in previous cohorts;
Yes.	

Q5: Department response

We thank the Examiner for the positive comments.

6. Response to previous year's External Examiner Report

6.	Response to previous year's report	
(i)	Did you receive the formal written response from the department to the previous year's External Examiner report ² ?	Yes
(ii)	Are you satisfied that the issues raised in the previous report either have been, or are being, addressed?	Yes

Q6: Department response

N/A

7. Overview Comments, Recommendations and Good Practice

Please provide an overview of your assessment of the programme(s) and modules for which you are responsible as External Examiner. Please identify any specific matters relating to the academic standards of the awards and/or the quality of learning opportunities provided to students that should be addressed. Please also highlight any examples of good and/or innovative practice that you consider to be worthy of wider dissemination within the College.

7a.	Recommendations / Suggestions for Enhancement
The Mathematics Department is taking good steps towards opening up modules to more project based work. I would like to see this development continue and enhanced.	
7b.	Examples of good and/or innovative practice in learning, teaching and assessment
See above	
7c.	Overview Comments
My main issue has been raised above, namely the key role of external examiners in deciding about borderline cases. Externals should be a check on the decisions of the department, but not the main driver of the decisions.	

Q7: Department Response

The project-based modules indeed are growing in number and popularity. We expect this trend to continue. As discussed above, we will make appropriate modifications to our procedures regarding borderline candidates.

² i.e. completed copy of the report template sent on by the Quality Assurance Team on behalf of the department.

8. For Examiners final year in office only: Final Exit Report

8	Please provide an overview of your term of office. This should ideally include comment on any changes in standards of student performance over time, major developments in the provision during your tenure, the implementation of any recommendations for enhancement (this is not an exhaustive list and examiners are welcome to comment on any matters they consider appropriate)

Q8: Department Response

N/A

9. Overall Confidence statement

The independent views of our External Examiners form an important part of the annual reporting of the maintenance of standards and judgement of the governing body.

Please complete the following section with regards to the module(s)/programme(s) of study to which this report relates. Where you are unable to say 'Yes', commentary must be provided in the comments box below.

(i)	The degree awarding body is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
(ii)	The assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme(s) and is conducted in line with the College's policies and regulations	Yes
(iii)	The academic standards and the achievements of students are comparable with those in other UK degree-awarding bodies of which you have experience	Yes

External Examiner Signature (an electronic or typed signature is acceptable):	Timo Betcke
Date of submission:	22/11/2018

Internal Use Only

Name and title of Department Respondent	Dr Ryan Barnett
Position:	<i>Applied Mathematics MSc Director</i>
Date:	09/04/2019

Introduction

Your report is an important and integral part of the quality assurance of the programmes of study at the College and acts as an institutional record of the effective completion of the assessment process and the maintenance of academic standards of its awards. The report template, based on the indicators and guidance in the QAA Quality Code, will ask you to comment on the standards and comparability of the provision, good and/or innovative practice and suggestions for further enhancement where appropriate.

This report form can also be accessed electronically at the [external examining webpage](#). Should you require any further information or you have any queries, please contact the Registry Quality Assurance team: external.examiner@imperial.ac.uk or 0207 594 8993.

Completing the Report

1. The report template asks you to address specific questions (with a range of stated responses from “Yes/Always” to “No/Never”, with the opportunity to provide any qualifying/explanatory comments) and also asks a series of questions to which the College would like to receive more detailed written feedback/commentary. You are asked to comment fully under each of the headings, particularly where there are negative responses to any of the questions.
2. Your feedback will influence how the Department develops its programmes. To assist the College and the Department, please ensure that your report contains clear feedback. One word or one sentence responses throughout the report will not provide the Department with sufficient information to enable them to further enhance the programme(s).
3. In line with the expectations of the Quality Code, external examiners’ reports will be shared with staff, students and student representatives and may be disclosed in response to requests made under the Freedom of Information Act. Reports will also be shared with professional, statutory and regulatory bodies and the Quality Assurance Agency upon request. **Therefore there should be no identifiable reference to individual members of staff or students (either by use of name or student ID number) in the report to ensure that appropriate confidentiality is maintained.** The College may also, on occasion, use anonymous extracts from your annual report in promotional material.
4. In addition to maintaining confidentiality by refraining from using names or any other identifier, examiners are requested not to provide significant details about specific assessment tasks.
5. Examiners are reminded that where they have a serious concern they should follow the procedure available from the [website](#). They may make a separate confidential serious concerns report directly to the Provost on any matter of serious concern in addition to their annual report. A ‘Serious Concerns Report’ template for this purpose is available to download from the external examiner website at the link shown above. Please be assured that this report is confidential.

Report Submission

6. Completed reports should be returned within one month of the final meeting of the Board of Examiners, at the latest by **21 Aug 18 for undergraduate programmes** or **1 Feb 19 for postgraduate programmes**.
7. The report should be returned electronically, as an e-mail attachment and in MS Word format, to the Registry Quality Assurance team at: external.examiner@imperial.ac.uk
8. Payment of your annual fee for external examining duties will only be processed upon receipt of a satisfactorily completed report.

Report Dissemination

9. The College greatly values the feedback provided by its external examiners in their annual reports. Please note that a sample of reports across the provision are personally read by the Vice Provost (Education).
10. The Registry Quality Assurance team will ensure that the report is considered by the appropriate Departmental staff. Departmental staff will be expected to provide a formal response to the feedback/comments in your report and this will be circulated to you at the earliest opportunity.
11. In addition to the department review of the report, the Quality Assurance team undertake analysis of all reports to identify any themes arising, make recommendations for College-wide improvements to process or procedures, or to disseminate best practice.

Examiner's Details	
Full name and title	Prof. Emilian Parau
Home institution or other affiliation	University of East Anglia
Degree being examined (e.g. BSc/GEP/MBBS/MEng/MSc/MRes)	MSc
Subject and part being examined (e.g. Biology)	Applied Mathematics
Year of Tenure	2

* If this is your final year of office please ensure you complete the final section of this report.

1. Programme Information/support for External Examiner Role

1(a)	Programme/Module Information Please confirm if the following was provided to you (either sent directly or through a publication site link)	
(i)	Programme handbook(s) / programme specification including programme learning outcomes?	Yes/All
(ii)	Syllabus or module descriptors including learning outcomes?	Yes/All
(iii)	Assessment briefs / marking criteria	Yes/All
(iv)	Sufficient information about the programme(s) / modules in order to fulfil your role?	Yes/All
(v)	Is there any additional documentation/ information that you would have benefited from receiving?	No

New External Examiners only

1(b)	College Induction and Appointment Process Please answer the following questions with regards to the College appointment and induction process	
(i)	Did you find the appointment process fit for purpose?	N/A
(ii)	Was the appointment made in a timely manner?	N/A
(iii)	Do you consider that the arrangements for the Induction day were sufficient?	N/A
(iv)	Did you find the follow-up information useful?	N/A
(v)	Was the department process to provide an induction to the programme and specific requirements of your role effective?	N/A
(vi)	Following completion of your first year of tenure, is there any additional information/ support that you feel would be beneficial to provide at induction in future?	N/A

Q1: Department response

2. Programme/Curriculum Design

2(a)	Overall programme design and coherence Please comment on the strengths and weaknesses of the programme design in relation to:
(i)	The balance and content of the degree programme(s) in relation to stated learning outcomes; The Applied Mathematics MSc programme has a good balance between taught modules and the final MSc project. The content of the programme is well designed to achieve the learning outcomes.
(ii)	Coherence and currency of the programme(s) and the appropriateness of compulsory modules/units in relation to stated learning outcomes; The programme is coherent. The large number of optional modules and the diversity of projects' subjects are a strength of the MSc.
(iii)	Suitability of the programme design in relation to the relevant subject benchmarks/ Professional Statutory Regulatory Body (PSRB) or Accrediting Body requirements (where applicable); The programme design is suitable for the Applied Mathematics subject benchmarks. The methods of teaching, the examinations and the project design are adequate.
(iv)	Where applicable, the relevance and integration of placements¹ to the overall programme and its contribution to the programme learning outcomes;
2(b)	Assessment Strategy Please comment on the strengths and weaknesses of the assessment strategy in relation to:
(i)	The rigour, appropriateness and overall quality of the methods of assessment (unseen written papers, essays/dissertations, orals, clinical examinations) in relation to the level of study and the intended learning outcomes; The methods of assessment for taught modules (written examination, coursework, project) are appropriate and rigorous.
(ii)	The balance and comparability of assessment methods across modules of the same level; The assessment methods were of similar standard on the Applied modules of the same level I supervised.
(iii)	The suitability of the overall assessment load for the programme(s); The overall assessment load is suitable for an MSc.

Q2: Department response

We thank the Examiner for the positive comments about the MSc.

¹ Placements are any provision taken away from the direct College environment and may include: Year abroad, year in industry, modules studied at other approved HEIs (collaborative modules), or any other periods away from the College as part of an approved study plan.

3. Assessment Process, Marking and Moderation

3(a)	Drafting of Assessment	
(i)	Did you receive all of the necessary draft assessments for comment / approval?	Yes/All
(ii)	Were the nature and level of the questions (or tasks) appropriate?	Yes/All
(iii)	Were suitable arrangements in place to consider your comments on the draft assessments?	Yes/All
(iv)	Did you receive feedback on your comments?	Yes/All
I have received all the exam drafts questions in advance, I have made suggestions, which were considered and I received positive feedback on my comments.		

3(b)	Marking and Moderation of scripts (Examination, assessed coursework, dissertation/project reports)	
(i)	Did you receive a sufficient number of scripts and other assessed work, including those of first class, distinction, borderline and failed candidates, for scrutiny?	Yes/All
(ii)	Was the general standard and consistency of marking appropriate?	Yes/All
(iii)	Was there evidence that assessed work had been moderated internally, either through check marking or second marking?	Yes/All
(iv)	Were the scripts marked in such a way as to enable you to see the reasons for the award of given marks?	Yes/All
I have seen borderline papers on the modules I supervised and some others. I have also received all the projects, and I could see the marks of both markers, their comments, the moderators' decisions (where needed) and their comments, which was very helpful.		

3(c)	In relation to Practical Examinations	
(i)	Were satisfactory arrangements made for the conduct of practical examinations?	N/A
(ii)	Was the general standard and consistency of marking appropriate?	N/A

3(d)	In relation to Oral Assessments (including Viva Voce Examinations)	
(i)	Were satisfactory arrangements made for the conduct of oral assessments (e.g. presentations, poster presentations etc...)?	N/A
(ii)	Were suitable arrangements made for you to conduct viva voce examinations?	N/A
(iii)	Was the purpose for conducting a viva voce examination and the criteria for selecting candidates for a viva voce clear?	N/A
(iv)	Was the assessment of such work appropriate and consistent?	N/A

3(e)	Please comment on the assessment process, marking and moderation in relation to:
(i)	The suitability of marking schemes / marking criteria and, where appropriate, model answers and the consistency with which these were applied;
The marking schemes were well-designed and clear. They were applied consistently.	
(ii)	The suitability of the procedures for marking and moderation and the consistency with which these were applied;
The procedures were suitable.	
(iii)	Whether the grade boundaries for the assessment are set at the appropriate level and applied consistently;
The grade boundaries are at the appropriate level and are applied consistently	
(iv)	The extent to which the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with College policies and regulations
The assessment process is conducted in line with College policies and regulations and they do measure the student achievement rigorously.	

3(f)	Programme content which has been delivered and assessed by another institution (this would cover 1) placement activity, e.g. some or all of an undergraduate year abroad study plan, and 2) modules undertaken at local partner institutions, i.e. what are termed collaborative modules).	
(i)	Was it clear in advance of the Board that students under consideration had undertaken content away from the College?	N/A
(ii)	Were the procedures for incorporating marks obtained by students at another institution clear and consistently applied?	N/A
(iii)	Was any such provision discussed at the Board of Examiners, particularly in relation to progression/award decisions, overall value and consistency with regards to the programme(s) of study?	N/A

Q3: Department response

We thank the Examiner for the positive comments. We are pleased that the procedures continued to be robust in AY 2017/2018.

4. Board of Examiners

4(a)	Board of Examiners' Meeting	
(i)	Were you invited to attend the meeting?	Yes
(ii)	Were you able to attend the meeting?	Yes
(iii)	Was the meeting conducted to your satisfaction?	Yes

(iv)	Were you satisfied with the recommendations of the Board of Examiners?	Yes
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4(b)	Please comment on the following aspect related to Boards of Examiners' Meetings:
(i)	Whether the arrangements for degree classification (e.g. the scheme for the award of honours [UG] / scheme for the award of pass, merit or distinction [PG] – whichever is relevant) are set at the appropriate level and applied consistently.
The scheme for PG classification was applied consistently.	
(ii)	Whether the College procedures governing mitigating circumstances and/or academic misconduct (e.g. plagiarism cases) were considered and applied fairly and equitably to all students.
The College procedures for mitigating circumstances on borderline cases were applied fairly and equitably.	
(iii)	Whether the consideration of borderline performances was conducted fairly and equitably, and in line with College Procedures.
The borderline performances were discussed fairly and equitably in the Board.	

Q4: Department response

We thank the Examiner for the positive remarks.

5. Academic Standards

Academic Standards	
5	Please comment on academic standards and student achievement with regard to:
(i)	The appropriateness of the standards set for the awards in relation to the Framework for Higher Education Qualifications, national subject benchmarks and any additional Professional, Statutory and Regulatory Body (PSRB) or accrediting body requirements (where relevant);
The standards are appropriate, as defined on the QAA Benchmarks for Mathematics for a Master.	
(ii)	The standards of student performance in the programme(s) or parts of programmes and whether these are comparable with standards achieved by students on similar programmes or parts of programmes in other UK higher education institutions of which you have experience;
There are very high academic standards for written examinations and projects, comparable with other top institutions in the UK.	
(iii)	The extent to which the academic standards and standards of student performance across modules within the programme(s) are comparable;
The academic standards across modules are comparable.	
(iv)	For external examiners <u>not</u> in their first year of appointment – are the standards of student performance across modules within the programme(s) comparable to those in previous cohorts;
Yes, they are.	

Q5: Department response

We thank the Examiner for the positive comments.

6. Response to previous year's External Examiner Report

6.	Response to previous year's report	
(i)	Did you receive the formal written response from the department to the previous year's External Examiner report²?	Yes
(ii)	Are you satisfied that the issues raised in the previous report either have been, or are being, addressed?	Yes

Q6: Department response

N/A

7. Overview Comments, Recommendations and Good Practice

Please provide an overview of your assessment of the programme(s) and modules for which you are responsible as External Examiner. Please identify any specific matters relating to the academic standards of the awards and/or the quality of learning opportunities provided to students that should be addressed. Please also highlight any examples of good and/or innovative practice that you consider to be worthy of wider dissemination within the College.

7a.	Recommendations / Suggestions for Enhancement
As the comments I had last year were addressed, I have no other comments this year. The quality of MSc projects was again impressive, in some cases.	
7b.	Examples of good and/or innovative practice in learning, teaching and assessment
The availability of the markers' comments and moderators' comments was very useful, again.	
7c.	Overview Comments
I had excellent communication with Imperial College before and during the Exam Board, and the whole process was very smooth.	

Q7: Department Response

We thank the Examiner for the positive comments. We are very pleased that the Exam Board meeting ran smoothly.

8. For Examiners final year in office only: Final Exit Report

8	Please provide an overview of your term of office. This should ideally include comment on any changes in standards of student performance over time, major developments in the provision during your tenure, the implementation of any recommendations for enhancement (this is not an exhaustive list and examiners are welcome to comment on any matters they consider appropriate)
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² i.e. completed copy of the report template sent on by the Quality Assurance Team on behalf of the department.

Q8: Department Response

N/A

9. Overall Confidence statement

The independent views of our External Examiners form an important part of the annual reporting of the maintenance of standards and judgement of the governing body.

Please complete the following section with regards to the module(s)/programme(s) of study to which this report relates. Where you are unable to say 'Yes', commentary must be provided in the comments box below.

(i)	The degree awarding body is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
(ii)	The assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme(s) and is conducted in line with the College's policies and regulations	Yes
(iii)	The academic standards and the achievements of students are comparable with those in other UK degree-awarding bodies of which you have experience	Yes

External Examiner Signature (an electronic or typed signature is acceptable):	E Parau
Date of submission:	18/11/2018

Internal Use Only

Name and title of Department Respondent	Dr Ryan Barnett
Position:	<i>Applied Mathematics MSc Director</i>
Date:	09/04/2019

Introduction

Your report is an important and integral part of the quality assurance of the programmes of study at the College and acts as an institutional record of the effective completion of the assessment process and the maintenance of academic standards of its awards. The report template, based on the indicators and guidance in the QAA Quality Code, will ask you to comment on the standards and comparability of the provision, good and/or innovative practice and suggestions for further enhancement where appropriate.

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Completing the Report

1. The report template asks you to address specific questions (with a range of stated responses from “Yes/Always” to “No/Never”, with the opportunity to provide any qualifying/explanatory comments) and also asks a series of questions to which the College would like to receive more detailed written feedback/commentary. You are asked to comment fully under each of the headings, particularly where there are negative responses to any of the questions.
2. Your feedback will influence how the Department develops its programmes. To assist the College and the Department, please ensure that your report contains clear feedback. One word or one sentence responses throughout the report will not provide the Department with sufficient information to enable them to further enhance the programme(s).
3. In line with the expectations of the Quality Code, external examiners' reports will be shared with staff, students and student representatives and may be disclosed in response to requests made under the Freedom of Information Act. Reports will also be shared with professional, statutory and regulatory bodies and the Quality Assurance Agency upon request. **Therefore there should be no identifiable reference to individual members of staff or students (either by use of name or student ID number) in the report to ensure that appropriate confidentiality is maintained.** The College may also, on occasion, use anonymous extracts from your annual report in promotional material.
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5. Examiners are reminded that where they have a serious concern they should follow the procedure available from the [website](#). They may make a separate confidential serious concerns report directly to the Provost on any matter of serious concern in addition to their annual report. A ‘Serious Concerns Report’ template for this purpose is available to download from the external examiner website at the link shown above. Please be assured that this report is confidential.

Report Submission

6. Completed reports should be returned within one month of the final meeting of the Board of Examiners, at the latest by **21 Aug 18 for undergraduate programmes** or **1 Feb 19 for postgraduate programmes**.
7. The report should be returned electronically, as an e-mail attachment and in MS Word format, to the Registry Quality Assurance team at: external.examiner@imperial.ac.uk
8. Payment of your annual fee for external examining duties will only be processed upon receipt of a satisfactorily completed report.

Report Dissemination

9. The College greatly values the feedback provided by its external examiners in their annual reports. Please note that a sample of reports across the provision are personally read by the Vice Provost (Education).
10. The Registry Quality Assurance team will ensure that the report is considered by the appropriate Departmental staff. Departmental staff will be expected to provide a formal response to the feedback/comments in your report and this will be circulated to you at the earliest opportunity.
11. In addition to the department review of the report, the Quality Assurance team undertake analysis of all reports to identify any themes arising, make recommendations for College-wide improvements to process or procedures, or to disseminate best practice.

Examiner's Details	
Full name and title	Konstantinos Kardaras
Home institution or other affiliation	LSE
Degree being examined (e.g. BSc/GEP/MBBS/MEng/MSc/MRes)	MSc
Subject and part being examined (e.g. Biology)	Mathematics and Finance
Year of Tenure	3

* If this is your final year of office please ensure you complete the final section of this report.

1. Programme Information/support for External Examiner Role

1(a)	Programme/Module Information Please confirm if the following was provided to you (either sent directly or through a publication site link)	
(i)	Programme handbook(s) / programme specification including programme learning outcomes?	Yes/All
(ii)	Syllabus or module descriptors including learning outcomes?	Yes/All
(iii)	Assessment briefs / marking criteria	Yes/All
(iv)	Sufficient information about the programme(s) / modules in order to fulfil your role?	Yes/All
(v)	Is there any additional documentation/ information that you would have benefited from receiving?	No

New External Examiners only

1(b)	College Induction and Appointment Process Please answer the following questions with regards to the College appointment and induction process	
(i)	Did you find the appointment process fit for purpose?	N/A
(ii)	Was the appointment made in a timely manner?	N/A
(iii)	Do you consider that the arrangements for the Induction day were sufficient?	N/A
(iv)	Did you find the follow-up information useful?	N/A
(v)	Was the department process to provide an induction to the programme and specific requirements of your role effective?	N/A
(vi)	Following completion of your first year of tenure, is there any additional information/ support that you feel would be beneficial to provide at	N/A

induction in future?	

Q1: Department response

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2. Programme/Curriculum Design

2(a)	Overall programme design and coherence Please comment on the strengths and weaknesses of the programme design in relation to:
(i)	The balance and content of the degree programme(s) in relation to stated learning outcomes; Very satisfactory
(ii)	Coherence and currency of the programme(s) and the appropriateness of compulsory modules/units in relation to stated learning outcomes; Quite satisfactory – I can see that the programme is improving in this respect each year that passes.
(iii)	Suitability of the programme design in relation to the relevant subject benchmarks/ Professional Statutory Regulatory Body (PSRB) or Accrediting Body requirements (where applicable); Very satisfactory
(iv)	Where applicable, the relevance and integration of placements¹ to the overall programme and its contribution to the programme learning outcomes; N/A

2(b)	Assessment Strategy Please comment on the strengths and weaknesses of the assessment strategy in relation to:
(i)	The rigour, appropriateness and overall quality of the methods of assessment (unseen written papers, essays/dissertations, orals, clinical examinations) in relation to the level of study and the intended learning outcomes; Very satisfactory
(ii)	The balance and comparability of assessment methods across modules of the same level; Very satisfactory
(iii)	The suitability of the overall assessment load for the programme(s); Very satisfactory

¹ Placements are any provision taken away from the direct College environment and may include: Year abroad, year in industry, modules studied at other approved HEIs (collaborative modules), or any other periods away from the College as part of an approved study plan.

Q2: Department response

3. Assessment Process, Marking and Moderation

3(a)	Drafting of Assessment	
(i)	Did you receive all of the necessary draft assessments for comment / approval?	Yes/All
(ii)	Were the nature and level of the questions (or tasks) appropriate?	Yes/All
(iii)	Were suitable arrangements in place to consider your comments on the draft assessments?	Yes/All
(iv)	Did you receive feedback on your comments?	Most/Usually

3(b)	Marking and Moderation of scripts (Examination, assessed coursework, dissertation/project reports)	
(i)	Did you receive a sufficient number of scripts and other assessed work, including those of first class, distinction, borderline and failed candidates, for scrutiny?	Yes/All
(ii)	Was the general standard and consistency of marking appropriate?	Yes/All
(iii)	Was there evidence that assessed work had been moderated internally, either through check marking or second marking?	Yes/All
(iv)	Were the scripts marked in such a way as to enable you to see the reasons for the award of given marks?	Yes/All

3(c)	In relation to Practical Examinations	
(i)	Were satisfactory arrangements made for the conduct of practical examinations?	N/A
(ii)	Was the general standard and consistency of marking appropriate?	N/A

3(d)	In relation to Oral Assessments (including Viva Voce Examinations)	
(i)	Were satisfactory arrangements made for the conduct of oral assessments (e.g. presentations, poster presentations etc...)?	N/A
(ii)	Were suitable arrangements made for you to conduct viva voce examinations?	N/A

(iii)	Was the purpose for conducting a viva voce examination and the criteria for selecting candidates for a viva voce clear?	N/A
(iv)	Was the assessment of such work appropriate and consistent?	N/A

3(e)	Please comment on the assessment process, marking and moderation in relation to:
(i)	The suitability of marking schemes / marking criteria and, where appropriate, model answers and the consistency with which these were applied;
Very satisfactory	
(ii)	The suitability of the procedures for marking and moderation and the consistency with which these were applied;
Very satisfactory	
(iii)	Whether the grade boundaries for the assessment are set at the appropriate level and applied consistently;
Yes, they were.	
(iv)	The extent to which the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with College policies and regulations
Very satisfactory	

3(f)	Programme content which has been delivered and assessed by another institution (this would cover 1) placement activity, e.g. some or all of an undergraduate year abroad study plan, and 2) modules undertaken at local partner institutions, i.e. what are termed collaborative modules).	
(i)	Was it clear in advance of the Board that students under consideration had undertaken content away from the College?	N/A
(ii)	Were the procedures for incorporating marks obtained by students at another institution clear and consistently applied?	N/A
(iii)	Was any such provision discussed at the Board of Examiners, particularly in relation to progression/award decisions, overall value and consistency with regards to the programme(s) of study?	N/A

Q3: Department response

4. Board of Examiners

4(a)	Board of Examiners' Meeting	
(i)	Were you invited to attend the meeting?	Yes
(ii)	Were you able to attend the meeting?	Yes
(iii)	Was the meeting conducted to your satisfaction?	Yes
(iv)	Were you satisfied with the recommendations of the Board of Examiners?	Yes

4(b)	Please comment on the following aspect related to Boards of Examiners' Meetings:
(i)	Whether the arrangements for degree classification (e.g. the scheme for the award of honours [UG] / scheme for the award of pass, merit or distinction [PG] – whichever is relevant) are set at the appropriate level and applied consistently.
They were indeed considered and applied fairly, as much as I could judge.	
(ii)	Whether the College procedures governing mitigating circumstances and/or academic misconduct (e.g. plagiarism cases) were considered and applied fairly and equitably to all students.
Yes, they were.	
(iii)	Whether the consideration of borderline performances was conducted fairly and equitably, and in line with College Procedures.
Yes, they were.	

Q4: Department response

5. Academic Standards

5		Please comment on academic standards and student achievement with regard to:
(i)	The appropriateness of the standards set for the awards in relation to the Framework for Higher Education Qualifications, national subject benchmarks and any additional Professional, Statutory and Regulatory Body (PSRB) or accrediting body requirements (where relevant);	
Very satisfactory		
(ii)	The standards of student performance in the programme(s) or parts of programmes and whether these are comparable with standards achieved by students on similar programmes or parts of programmes in other UK higher education institutions of which you have experience;	
Very satisfactory		
(iii)	The extent to which the academic standards and standards of student performance across modules within the programme(s) are comparable;	

Similar to the last two years – satisfactory.

(iv) For external examiners not in their first year of appointment – are the standards of student performance across modules within the programme(s) comparable to those in previous cohorts;

Yes.

Q5: Department response

6. Response to previous year's External Examiner Report

6. Response to previous year's report

(i) Did you receive the formal written response from the department to the previous year's External Examiner report²? Yes

(ii) Are you satisfied that the issues raised in the previous report either have been, or are being, addressed? Yes

Q6: Department response

7. Overview Comments, Recommendations and Good Practice

Please provide an overview of your assessment of the programme(s) and modules for which you are responsible as External Examiner. Please identify any specific matters relating to the academic standards of the awards and/or the quality of learning opportunities provided to students that should be addressed. Please also highlight any examples of good and/or innovative practice that you consider to be worthy of wider dissemination within the College.

7a. Recommendations / Suggestions for Enhancement

I am aware of some restructuring of courses that will make the programme even stronger, in my opinion. I am fully supportive.

7b. Examples of good and/or innovative practice in learning, teaching and assessment

² i.e. completed copy of the report template sent on by the Quality Assurance Team on behalf of the department.

7c.	Overview Comments

Q7: Department Response

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8. For Examiners final year in office only: Final Exit Report

8	Please provide an overview of your term of office. This should ideally include comment on any changes in standards of student performance over time, major developments in the provision during your tenure, the implementation of any recommendations for enhancement (this is not an exhaustive list and examiners are welcome to comment on any matters they consider appropriate)

Q8: Department Response

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9. Overall Confidence statement

The independent views of our External Examiners form an important part of the annual reporting of the maintenance of standards and judgement of the governing body.

Please complete the following section with regards to the module(s)/programme(s) of study to which this report relates. Where you are unable to say 'Yes', commentary must be provided in the comments box below.

(i)	The degree awarding body is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
(ii)	The assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme(s) and is conducted in line with the College's policies and regulations	Yes
(iii)	The academic standards and the achievements of students are comparable with those in other UK degree-awarding bodies of which you have experience	Yes

External Examiner Signature (an electronic or typed signature is acceptable):	Konstantinos Kardaras
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Date of submission:	06/03/2019
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Please email your completed form (as an MS Word file) to: external.examiner@imperial.ac.uk

Internal Use Only

Name and title of Department Respondent	
Position:	<i>e.g. Director of Undergraduate Studies, Programme Director, Programme Coordinator etc.</i>
Date:	Click here to enter a date.

Read by Vice Provost (Education)		Date:	Click here to enter a date.
Comments			
Further action required by Department			

Response to Vice Provost Comments / Further Action:	
Date:	Click here to enter a date.

Introduction

Your report is an important and integral part of the quality assurance of the programmes of study at the College and acts as an institutional record of the effective completion of the assessment process and the maintenance of academic standards of its awards. The report template, based on the indicators and guidance in the QAA Quality Code, will ask you to comment on the standards and comparability of the provision, good and/or innovative practice and suggestions for further enhancement where appropriate.

This report form can also be accessed electronically at the [external examining webpage](#). Should you require any further information or you have any queries, please contact the Registry Quality Assurance team: external.examiner@imperial.ac.uk or 0207 594 8993.

Completing the Report

1. The report template asks you to address specific questions (with a range of stated responses from “Yes/Always” to “No/Never”, with the opportunity to provide any qualifying/explanatory comments) and also asks a series of questions to which the College would like to receive more detailed written feedback/commentary. You are asked to comment fully under each of the headings, particularly where there are negative responses to any of the questions.
2. Your feedback will influence how the Department develops its programmes. To assist the College and the Department, please ensure that your report contains clear feedback. One word or one sentence responses throughout the report will not provide the Department with sufficient information to enable them to further enhance the programme(s).
3. In line with the expectations of the Quality Code, external examiners' reports will be shared with staff, students and student representatives and may be disclosed in response to requests made under the Freedom of Information Act. Reports will also be shared with professional, statutory and regulatory bodies and the Quality Assurance Agency upon request. **Therefore there should be no identifiable reference to individual members of staff or students (either by use of name or student ID number) in the report to ensure that appropriate confidentiality is maintained.** The College may also, on occasion, use anonymous extracts from your annual report in promotional material.
4. In addition to maintaining confidentiality by refraining from using names or any other identifier, examiners are requested not to provide significant details about specific assessment tasks.
5. Examiners are reminded that where they have a serious concern they should follow the procedure available from the [website](#). They may make a separate confidential serious concerns report directly to the Provost on any matter of serious concern in addition to their annual report. A ‘Serious Concerns Report’ template for this purpose is available to download from the external examiner website at the link shown above. Please be assured that this report is confidential.

Report Submission

6. Completed reports should be returned within one month of the final meeting of the Board of Examiners, at the latest by **21 Aug 18 for undergraduate programmes** or **1 Feb 19 for postgraduate programmes**.
7. The report should be returned electronically, as an e-mail attachment and in MS Word format, to the Registry Quality Assurance team at: external.examiner@imperial.ac.uk
8. Payment of your annual fee for external examining duties will only be processed upon receipt of a satisfactorily completed report.

Report Dissemination

9. The College greatly values the feedback provided by its external examiners in their annual reports. Please note that a sample of reports across the provision are personally read by the Vice Provost (Education).
10. The Registry Quality Assurance team will ensure that the report is considered by the appropriate Departmental staff. Departmental staff will be expected to provide a formal response to the feedback/comments in your report and this will be circulated to you at the earliest opportunity.
11. In addition to the department review of the report, the Quality Assurance team undertake analysis of all reports to identify any themes arising, make recommendations for College-wide improvements to process or procedures, or to disseminate best practice.

Examiner's Details	
Full name and title	Professor Anthony Carbery
Home institution or other affiliation	University of Edinburgh
Degree being examined (e.g. BSc/GEP/MBBS/MEng/MSc/MRes)	MSc Pure mathematics
Subject and part being examined (e.g. Biology)	Pure Mathematics
Year of Tenure	3

* If this is your final year of office please ensure you complete the final section of this report.

1. Programme Information/support for External Examiner Role

1(a)	Programme/Module Information Please confirm if the following was provided to you (either sent directly or through a publication site link)	
(i)	Programme handbook(s) / programme specification including programme learning outcomes?	Yes/All
(ii)	Syllabus or module descriptors including learning outcomes?	Yes/All
(iii)	Assessment briefs / marking criteria	Yes/All
(iv)	Sufficient information about the programme(s) / modules in order to fulfil your role?	Yes/All
(v)	Is there any additional documentation/ information that you would have benefited from receiving?	Yes
It would have been useful to receive the agenda for the examiners' meeting in advance.		

New External Examiners only

1(b)	College Induction and Appointment Process Please answer the following questions with regards to the College appointment and induction process	
(i)	Did you find the appointment process fit for purpose?	N/A
(ii)	Was the appointment made in a timely manner?	N/A
(iii)	Do you consider that the arrangements for the Induction day were sufficient?	N/A
(iv)	Did you find the follow-up information useful?	N/A
(v)	Was the department process to provide an induction to the programme and specific requirements of your role effective?	N/A
(vi)	Following completion of your first year of tenure, is there any additional information/ support that you feel would be beneficial to provide at induction in future?	N/A

Q1: Department response

We will prepare the agenda in advance of the meeting and email it to the external examiners

2. Programme/Curriculum Design

2(a)	Overall programme design and coherence Please comment on the strengths and weaknesses of the programme design in relation to:
(i)	The balance and content of the degree programme(s) in relation to stated learning outcomes; This is all fine.
(ii)	Coherence and currency of the programme(s) and the appropriateness of compulsory modules/units in relation to stated learning outcomes; This is all fine too.
(iii)	Suitability of the programme design in relation to the relevant subject benchmarks/ Professional Statutory Regulatory Body (PSRB) or Accrediting Body requirements (where applicable); I don't believe this is directly relevant. The programme compares well with those in other institutions.
(iv)	Where applicable, the relevance and integration of placements¹ to the overall programme and its contribution to the programme learning outcomes; N/A.
2(b)	Assessment Strategy Please comment on the strengths and weaknesses of the assessment strategy in relation to:
(i)	The rigour, appropriateness and overall quality of the methods of assessment (unseen written papers, essays/dissertations, orals, clinical examinations) in relation to the level of study and the intended learning outcomes; Courses were handled in my examiner's report for the undergraduate programme. I didn't feel that the procedures for moderation of project work marks worked quite as well as last year. There were some high marks given which I feel were insufficiently justified by the markers and insufficiently scrutinised by the moderation board. The issue arises when project markers award very high marks but do not provide detailed arguments to justify these marks. (In other cases the arguments for very high marks were well-made.) Perhaps markers can be asked to provide more detail to support the award of very high marks, and perhaps the moderation board could be a little more critical in such cases?
(ii)	The balance and comparability of assessment methods across modules of the same level; This is fine.
(iii)	The suitability of the overall assessment load for the programme(s); This is fine.

¹ Placements are any provision taken away from the direct College environment and may include: Year abroad, year in industry, modules studied at other approved HEIs (collaborative modules), or any other periods away from the College as part of an approved study plan.

Q2: Department response

We shall ask the markers to justify their marks better, in particular if they are very high. We shall apply stricter standards of moderation when the marks are not sufficiently justified.

3. Assessment Process, Marking and Moderation

3(a)	Drafting of Assessment	
(i)	Did you receive all of the necessary draft assessments for comment / approval?	Yes/All
(ii)	Were the nature and level of the questions (or tasks) appropriate?	Yes/All
(iii)	Were suitable arrangements in place to consider your comments on the draft assessments?	Yes/All
(iv)	Did you receive feedback on your comments?	Most/Usually
See undergraduate report. Patchy response under (iv).		

3(b)	Marking and Moderation of scripts (Examination, assessed coursework, dissertation/project reports)	
(i)	Did you receive a sufficient number of scripts and other assessed work, including those of first class, distinction, borderline and failed candidates, for scrutiny?	Yes/All
(ii)	Was the general standard and consistency of marking appropriate?	Most/Usually
(iii)	Was there evidence that assessed work had been moderated internally, either through check marking or second marking?	Yes/All
(iv)	Were the scripts marked in such a way as to enable you to see the reasons for the award of given marks?	Most/Usually
For courses, see undergraduate report. For project work, see response above to 2 (b)(i).		

3(c)	In relation to Practical Examinations	
(i)	Were satisfactory arrangements made for the conduct of practical examinations?	N/A
(ii)	Was the general standard and consistency of marking appropriate?	N/A

3(d)	In relation to Oral Assessments (including Viva Voce Examinations)	
(i)	Were satisfactory arrangements made for the conduct of oral assessments (e.g. presentations, poster presentations etc...)?	N/A
(ii)	Were suitable arrangements made for you to conduct viva voce examinations?	N/A
(iii)	Was the purpose for conducting a viva voce examination and the criteria for selecting candidates for a viva voce clear?	N/A

(iv)	Was the assessment of such work appropriate and consistent?	N/A

3(e)	Please comment on the assessment process, marking and moderation in relation to:
(i)	The suitability of marking schemes / marking criteria and, where appropriate, model answers and the consistency with which these were applied;
See undergraduate report.	
(ii)	The suitability of the procedures for marking and moderation and the consistency with which these were applied;
For courses, see undergraduate report. For projects, see above.	
(iii)	Whether the grade boundaries for the assessment are set at the appropriate level and applied consistently;
Yes.	
(iv)	The extent to which the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with College policies and regulations
This is fine.	

3(f)	Programme content which has been delivered and assessed by another institution (this would cover 1) placement activity, e.g. some or all of an undergraduate year abroad study plan, and 2) modules undertaken at local partner institutions, i.e. what are termed collaborative modules).	
(i)	Was it clear in advance of the Board that students under consideration had undertaken content away from the College?	N/A
(ii)	Were the procedures for incorporating marks obtained by students at another institution clear and consistently applied?	N/A
(iii)	Was any such provision discussed at the Board of Examiners, particularly in relation to progression/award decisions, overall value and consistency with regards to the programme(s) of study?	N/A

Q3: Department response

No response required

4. Board of Examiners

4(a)	Board of Examiners' Meeting	
(i)	Were you invited to attend the meeting?	Yes
(ii)	Were you able to attend the meeting?	Yes

(iii)	Was the meeting conducted to your satisfaction?	Yes
(iv)	Were you satisfied with the recommendations of the Board of Examiners?	Yes
As mentioned above, having the agenda in advance of the meeting would have been helpful.		

4(b)	Please comment on the following aspect related to Boards of Examiners' Meetings:
(i)	Whether the arrangements for degree classification (e.g. the scheme for the award of honours [UG] / scheme for the award of pass, merit or distinction [PG] – whichever is relevant) are set at the appropriate level and applied consistently.
Yes.	
(ii)	Whether the College procedures governing mitigating circumstances and/or academic misconduct (e.g. plagiarism cases) were considered and applied fairly and equitably to all students.
Yes.	
(iii)	Whether the consideration of borderline performances was conducted fairly and equitably, and in line with College Procedures.
Yes.	

Q4: Department response

See the response to Q1

5. Academic Standards

5	Please comment on academic standards and student achievement with regard to:
(i)	The appropriateness of the standards set for the awards in relation to the Framework for Higher Education Qualifications, national subject benchmarks and any additional Professional, Statutory and Regulatory Body (PSRB) or accrediting body requirements (where relevant);
This is fine.	
(ii)	The standards of student performance in the programme(s) or parts of programmes and whether these are comparable with standards achieved by students on similar programmes or parts of programmes in other UK higher education institutions of which you have experience;
Imperial continues to have very high standards overall and the programme compares very favourably with those in other institutions.	
(iii)	The extent to which the academic standards and standards of student performance across modules within the programme(s) are comparable;
This is fine.	
(iv)	For external examiners <u>not</u> in their first year of appointment – are the standards of student performance across modules within the programme(s) comparable to those in previous cohorts;
Yes, though I felt the project work was perhaps of marginally lower standard than last year.	

Q5: Department response

No response required

6. Response to previous year's External Examiner Report

6.	Response to previous year's report	
(i)	Did you receive the formal written response from the department to the previous year's External Examiner report²?	Yes
(ii)	Are you satisfied that the issues raised in the previous report either have been, or are being, addressed?	Yes

Q6: Department response

No response required

7. Overview Comments, Recommendations and Good Practice

Please provide an overview of your assessment of the programme(s) and modules for which you are responsible as External Examiner. Please identify any specific matters relating to the academic standards of the awards and/or the quality of learning opportunities provided to students that should be addressed. Please also highlight any examples of good and/or innovative practice that you consider to be worthy of wider dissemination within the College.

7a.	Recommendations / Suggestions for Enhancement
Something which has concerned me, and, I understand, also concerns colleagues inside Imperial, is the way that students who don't pass the requirements for the MSc are treated. Usually they are required to re-sit modules the following year. In the case of a bad failure this is probably inevitable, but in marginal cases it seems inhumane to insist that students wait until the following summer to take what might be just a single re-sit exam which in all likelihood will be capped at 50% anyway. Might the department investigate ways of streamlining how things work in such cases?	
7b.	Examples of good and/or innovative practice in learning, teaching and assessment
N/A	
7c.	Overview Comments
Imperial is once again to be congratulated for its continuing very high standards.	

Q7: Department Response

There is an ongoing discussion of the resit examinations. Taking into account the need to uphold our standards, individual arrangements for marginal cases do not seem feasible. Introducing September resits for all modules would dramatically increase the workload of setters, checkers and externals. We do conduct Autumn oral examinations in exceptional cases (e.g. when someone has an offer of a PhD place but could not attend an exam due to mitigating circumstances).

² i.e. completed copy of the report template sent on by the Quality Assurance Team on behalf of the department.

8. For Examiners final year in office only: Final Exit Report

8	Please provide an overview of your term of office. This should ideally include comment on any changes in standards of student performance over time, major developments in the provision during your tenure, the implementation of any recommendations for enhancement (this is not an exhaustive list and examiners are welcome to comment on any matters they consider appropriate)
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Q8: Department Response

n/a

9. Overall Confidence statement

The independent views of our External Examiners form an important part of the annual reporting of the maintenance of standards and judgement of the governing body.

Please complete the following section with regards to the module(s)/programme(s) of study to which this report relates. Where you are unable to say 'Yes', commentary must be provided in the comments box below.

(i)	The degree awarding body is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
(ii)	The assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme(s) and is conducted in line with the College's policies and regulations	Yes
(iii)	The academic standards and the achievements of students are comparable with those in other UK degree-awarding bodies of which you have experience	Yes

For (iii) – they are higher at Imperial than in most other institutions.

External Examiner Signature (an electronic or typed signature is acceptable):	A. Carbery
Date of submission:	05/11/2018

Internal Use Only

Name and title of Department Respondent	Alexei Skorobogatov, Professor of Pure Mathematics
Position:	MSc Pure Mathematics Programme Director
Date:	22/03/2019

Introduction

Your report is an important and integral part of the quality assurance of the programmes of study at the College and acts as an institutional record of the effective completion of the assessment process and the maintenance of academic standards of its awards. The report template, based on the indicators and guidance in the QAA Quality Code, will ask you to comment on the standards and comparability of the provision, good and/or innovative practice and suggestions for further enhancement where appropriate.

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Completing the Report

1. The report template asks you to address specific questions (with a range of stated responses from “Yes/Always” to “No/Never”, with the opportunity to provide any qualifying/explanatory comments) and also asks a series of questions to which the College would like to receive more detailed written feedback/commentary. You are asked to comment fully under each of the headings, particularly where there are negative responses to any of the questions.
2. Your feedback will influence how the Department develops its programmes. To assist the College and the Department, please ensure that your report contains clear feedback. One word or one sentence responses throughout the report will not provide the Department with sufficient information to enable them to further enhance the programme(s).
3. In line with the expectations of the Quality Code, external examiners’ reports will be shared with staff, students and student representatives and may be disclosed in response to requests made under the Freedom of Information Act. Reports will also be shared with professional, statutory and regulatory bodies and the Quality Assurance Agency upon request. **Therefore there should be no identifiable reference to individual members of staff or students (either by use of name or student ID number) in the report to ensure that appropriate confidentiality is maintained.** The College may also, on occasion, use anonymous extracts from your annual report in promotional material.
4. In addition to maintaining confidentiality by refraining from using names or any other identifier, examiners are requested not to provide significant details about specific assessment tasks.
5. Examiners are reminded that where they have a serious concern they should follow the procedure available from the [website](#). They may make a separate confidential serious concerns report directly to the Provost on any matter of serious concern in addition to their annual report. A ‘Serious Concerns Report’ template for this purpose is available to download from the external examiner website at the link shown above. Please be assured that this report is confidential.

Report Submission

6. Completed reports should be returned within one month of the final meeting of the Board of Examiners, at the latest by **21 Aug 18 for undergraduate programmes** or **1 Feb 19 for postgraduate programmes**.
7. The report should be returned electronically, as an e-mail attachment and in MS Word format, to the Registry Quality Assurance team at: external.examiner@imperial.ac.uk
8. Payment of your annual fee for external examining duties will only be processed upon receipt of a satisfactorily completed report.

Report Dissemination

9. The College greatly values the feedback provided by its external examiners in their annual reports. Please note that a sample of reports across the provision are personally read by the Vice Provost (Education).
10. The Registry Quality Assurance team will ensure that the report is considered by the appropriate Departmental staff. Departmental staff will be expected to provide a formal response to the feedback/comments in your report and this will be circulated to you at the earliest opportunity.
11. In addition to the department review of the report, the Quality Assurance team undertake analysis of all reports to identify any themes arising, make recommendations for College-wide improvements to process or procedures, or to disseminate best practice.

Examiner's Details	
Full name and title	Professor Mark Kambites
Home institution or other affiliation	University of Manchester
Degree being examined (e.g. BSc/GEP/MBBS/MEng/MSc/MRes)	MSc Pure Mathematics
Subject and part being examined (e.g. Biology)	Pure Mathematics
Year of Tenure	1

* If this is your final year of office please ensure you complete the final section of this report.

1. Programme Information/support for External Examiner Role

1(a)	Programme/Module Information Please confirm if the following was provided to you (either sent directly or through a publication site link)	
(i)	Programme handbook(s) / programme specification including programme learning outcomes?	Yes
(ii)	Syllabus or module descriptors including learning outcomes?	Yes
(iii)	Assessment briefs / marking criteria	Yes
(iv)	Sufficient information about the programme(s) / modules in order to fulfil your role?	Yes
(v)	Is there any additional documentation/ information that you would have benefited from receiving?	No

New External Examiners only

1(b)	College Induction and Appointment Process Please answer the following questions with regards to the College appointment and induction process	
(i)	Did you find the appointment process fit for purpose?	Yes
(ii)	Was the appointment made in a timely manner?	Yes
(iii)	Do you consider that the arrangements for the Induction day were sufficient?	n/a
(iv)	Did you find the follow-up information useful?	Yes
(v)	Was the department process to provide an induction to the programme and specific requirements of your role effective?	Yes
I was unable to attend the College induction day due to a prior commitment, but the written materials provided and induction by the Department were excellent and seem quite adequate preparation.		
(vi)	Following completion of your first year of tenure, is there any additional information/ support that you feel would be beneficial to provide at induction in future?	No

Q1: Department response

No response required

2. Programme/Curriculum Design

2(a)	Overall programme design and coherence Please comment on the strengths and weaknesses of the programme design in relation to:
(i)	The balance and content of the degree programme(s) in relation to stated learning outcomes; The MSc programme appears to contain a good balance of material appropriate for its learning outcomes.
(ii)	Coherence and currency of the programme(s) and the appropriateness of compulsory modules/units in relation to stated learning outcomes; The programmes are entirely appropriate in this respect.
(iii)	Suitability of the programme design in relation to the relevant subject benchmarks/ Professional Statutory Regulatory Body (PSRB) or Accrediting Body requirements (where applicable); The programme seems suitable in relation to the QAA MSOR subject benchmarks. I am not aware of any other requirements which apply.
(iv)	Where applicable, the relevance and integration of placements¹ to the overall programme and its contribution to the programme learning outcomes; n/a

2(b)	Assessment Strategy Please comment on the strengths and weaknesses of the assessment strategy in relation to:
(i)	The rigour, appropriateness and overall quality of the methods of assessment (unseen written papers, essays/dissertations, orals, clinical examinations) in relation to the level of study and the intended learning outcomes; The methods of assessment used (for most modules unseen written papers supplemented with a small amount of coursework, plus a substantial dissertation to complete the programme) are standard for a rigorous academic masters degree in pure mathematics, and so are entirely appropriate.
(ii)	The balance and comparability of assessment methods across modules of the same level; The balance and comparability of methods is generally good.
(iii)	The suitability of the overall assessment load for the programme(s); This seems entirely appropriate.

Q2: Department response

No response required

¹ Placements are any provision taken away from the direct College environment and may include: Year abroad, year in industry, modules studied at other approved HEIs (collaborative modules), or any other periods away from the College as part of an approved study plan.

3. Assessment Process, Marking and Moderation

3(a)	Drafting of Assessment	
(i)	Did you receive all of the necessary draft assessments for comment / approval?	Yes
(ii)	Were the nature and level of the questions (or tasks) appropriate?	Yes
(iii)	Were suitable arrangements in place to consider your comments on the draft assessments?	Yes
(iv)	Did you receive feedback on your comments?	See below
My comments were of a minor nature and I specifically indicated that I did not require feedback at the time; I did see responses later, and these were satisfactory.		

3(b)	Marking and Moderation of scripts (Examination, assessed coursework, dissertation/project reports)	
(i)	Did you receive a sufficient number of scripts and other assessed work, including those of first class, distinction, borderline and failed candidates, for scrutiny?	Yes
(ii)	Was the general standard and consistency of marking appropriate?	Yes
(iii)	Was there evidence that assessed work had been moderated internally, either through check marking or second marking?	Yes
(iv)	Were the scripts marked in such a way as to enable you to see the reasons for the award of given marks?	Yes

3(c)	In relation to Practical Examinations	
(i)	Were satisfactory arrangements made for the conduct of practical examinations?	n/a
(ii)	Was the general standard and consistency of marking appropriate?	n/a
There are no practical examinations.		

3(d)	In relation to Oral Assessments (including Viva Voce Examinations)	
(i)	Were satisfactory arrangements made for the conduct of oral assessments (e.g. presentations, poster presentations etc...)?	n/a
(ii)	Were suitable arrangements made for you to conduct viva voce examinations?	n/a
(iii)	Was the purpose for conducting a viva voce examination and the criteria for selecting candidates for a viva voce clear?	n/a
(iv)	Was the assessment of such work appropriate and consistent?	n/a
I was not involved in any oral examinations.		

3(e)	Please comment on the assessment process, marking and moderation in relation to:
(i)	The suitability of marking schemes / marking criteria and, where appropriate, model answers and the consistency with which these were applied;
Marking schemes were generally good, and were consistently applied.	
(ii)	The suitability of the procedures for marking and moderation and the consistency with which these were applied;
Marking and moderation procedures seem very good.	
(iii)	Whether the grade boundaries for the assessment are set at the appropriate level and applied consistently;
Generally speaking the PTEM boundaries were used to set module grade boundaries appropriately.	
(iv)	The extent to which the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with College policies and regulations
To the best of my knowledge, all assessment was fair, rigorous and in line with appropriate policies and regulations.	

3(f)	Programme content which has been delivered and assessed by another institution (this would cover 1) placement activity, e.g. some or all of an undergraduate year abroad study plan, and 2) modules undertaken at local partner institutions, i.e. what are termed collaborative modules).	
(i)	Was it clear in advance of the Board that students under consideration had undertaken content away from the College?	n/a
(ii)	Were the procedures for incorporating marks obtained by students at another institution clear and consistently applied?	n/a
(iii)	Was any such provision discussed at the Board of Examiners, particularly in relation to progression/award decisions, overall value and consistency with regards to the programme(s) of study?	n/a
I do not believe this applied to any students on this programme.		

Q3: Department response

No response required

4. Board of Examiners

4(a)	Board of Examiners' Meeting	
(i)	Were you invited to attend the meeting?	Yes
(ii)	Were you able to attend the meeting?	No
(iii)	Was the meeting conducted to your satisfaction?	n/a
(iv)	Were you satisfied with the recommendations of the Board of Examiners?	Yes

I was unfortunately unable to attend the final MSc exam board due to a prior commitment. However, I had a chance to scrutinise and comment on all relevant documents before the meeting, and combining this with the assurance provided by the attendance of the other external examiner, I am satisfied with the conduct and standards of the meeting.

4(b)	Please comment on the following aspect related to Boards of Examiners' Meetings:
(i)	Whether the arrangements for degree classification (e.g. the scheme for the award of honours [UG] / scheme for the award of pass, merit or distinction [PG] – whichever is relevant) are set at the appropriate level and applied consistently.
The arrangements are at the appropriate level and generally applied consistently.	
(ii)	Whether the College procedures governing mitigating circumstances and/or academic misconduct (e.g. plagiarism cases) were considered and applied fairly and equitably to all students.
From what I saw, application of these procedures was exemplary.	
(iii)	Whether the consideration of borderline performances was conducted fairly and equitably, and in line with College Procedures.
The consideration was fair and in line with appropriate procedures.	

Q4: Department response

No response required

5. Academic Standards

5	Please comment on academic standards and student achievement with regard to:
(i)	The appropriateness of the standards set for the awards in relation to the Framework for Higher Education Qualifications, national subject benchmarks and any additional Professional, Statutory and Regulatory Body (PSRB) or accrediting body requirements (where relevant);
The standards are entirely appropriate.	
(ii)	The standards of student performance in the programme(s) or parts of programmes and whether these are comparable with standards achieved by students on similar programmes or parts of programmes in other UK higher education institutions of which you have experience;
The standards achieved by the students are quite high compared with most UK HEIs. Particularly impressive are the standards achieved in project and dissertation work by students at the upper end of the ability spectrum.	
(iii)	The extent to which the academic standards and standards of student performance across modules within the programme(s) are comparable;
Comparability between the modules on this programme is good.	
(iv)	For external examiners <u>not</u> in their first year of appointment – are the standards of student performance across modules within the programme(s) comparable to those in previous cohorts;
n/a	

Q5: Department response

No response required

6. Response to previous year's External Examiner Report

6.	Response to previous year's report	
(i)	Did you receive the formal written response from the department to the previous year's External Examiner report²?	n/a
(ii)	Are you satisfied that the issues raised in the previous report either have been, or are being, addressed?	n/a

Q6: Department response

No response required

7. Overview Comments, Recommendations and Good Practice

Please provide an overview of your assessment of the programme(s) and modules for which you are responsible as External Examiner. Please identify any specific matters relating to the academic standards of the awards and/or the quality of learning opportunities provided to students that should be addressed. Please also highlight any examples of good and/or innovative practice that you consider to be worthy of wider dissemination within the College.

7a.	Recommendations / Suggestions for Enhancement
I believe this programme is working well and currently have no recommendations or suggestions.	
7b.	Examples of good and/or innovative practice in learning, teaching and assessment
I was generally impressed by the care taken with the assessment process, and with the standard of projects. I have not really seen enough yet to form a view on learning and teaching more widely.	
7c.	Overview Comments
All issues are covered above.	

Q7: Department Response

No response required

8. For Examiners final year in office only: Final Exit Report

8	Please provide an overview of your term of office. This should ideally include comment on any changes in standards of student performance over time, major developments in the provision during your tenure, the implementation of any recommendations for enhancement (this is not an exhaustive list and examiners are welcome to
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² i.e. completed copy of the report template sent on by the Quality Assurance Team on behalf of the department.

	comment on any matters they consider appropriate)
n/a	

Q8: Department Response

n/a

9. Overall Confidence statement

The independent views of our External Examiners form an important part of the annual reporting of the maintenance of standards and judgement of the governing body.

Please complete the following section with regards to the module(s)/programme(s) of study to which this report relates. Where you are unable to say 'Yes', commentary must be provided in the comments box below.

(i)	The degree awarding body is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
(ii)	The assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme(s) and is conducted in line with the College's policies and regulations	Yes
(iii)	The academic standards and the achievements of students are comparable with those in other UK degree-awarding bodies of which you have experience	Yes
Everything I have seen suggests academic standards are very high, and I currently have no concerns on this front.		

External Examiner Signature (an electronic or typed signature is acceptable):	Mark Kambites
Date of submission:	18/02/2019

Internal Use Only

Name and title of Department Respondent	Alexei Skorobogatov, Professor of Pure Mathematics
Position:	<i>MSc Pure Mathematics Programme Director</i>
Date:	22/03/2019

Introduction

Your report is an important and integral part of the quality assurance of the programmes of study at the College and acts as an institutional record of the effective completion of the assessment process and the maintenance of academic standards of its awards. The report template, based on the indicators and guidance in the QAA Quality Code, will ask you to comment on the standards and comparability of the provision, good and/or innovative practice and suggestions for further enhancement where appropriate.

This report form can also be accessed electronically at the [external examining webpage](#). Should you require any further information or you have any queries, please contact the Registry Quality Assurance team: external.examiner@imperial.ac.uk or 0207 594 8993.

Completing the Report

1. The report template asks you to address specific questions (with a range of stated responses from “Yes/Always” to “No/Never”, with the opportunity to provide any qualifying/explanatory comments) and also asks a series of questions to which the College would like to receive more detailed written feedback/commentary. You are asked to comment fully under each of the headings, particularly where there are negative responses to any of the questions.
2. Your feedback will influence how the Department develops its programmes. To assist the College and the Department, please ensure that your report contains clear feedback. One word or one sentence responses throughout the report will not provide the Department with sufficient information to enable them to further enhance the programme(s).
3. In line with the expectations of the Quality Code, external examiners' reports will be shared with staff, students and student representatives and may be disclosed in response to requests made under the Freedom of Information Act. Reports will also be shared with professional, statutory and regulatory bodies and the Quality Assurance Agency upon request. **Therefore there should be no identifiable reference to individual members of staff or students (either by use of name or student ID number) in the report to ensure that appropriate confidentiality is maintained.** The College may also, on occasion, use anonymous extracts from your annual report in promotional material.
4. In addition to maintaining confidentiality by refraining from using names or any other identifier, examiners are requested not to provide significant details about specific assessment tasks.
5. Examiners are reminded that where they have a serious concern they should follow the procedure available from the [website](#). They may make a separate confidential serious concerns report directly to the Provost on any matter of serious concern in addition to their annual report. A ‘Serious Concerns Report’ template for this purpose is available to download from the external examiner website at the link shown above. Please be assured that this report is confidential.

Report Submission

6. Completed reports should be returned within one month of the final meeting of the Board of Examiners, at the latest by **21 Aug 18 for undergraduate programmes** or **1 Feb 19 for postgraduate programmes**.
7. The report should be returned electronically, as an e-mail attachment and in MS Word format, to the Registry Quality Assurance team at: external.examiner@imperial.ac.uk
8. Payment of your annual fee for external examining duties will only be processed upon receipt of a satisfactorily completed report.

Report Dissemination

9. The College greatly values the feedback provided by its external examiners in their annual reports. Please note that a sample of reports across the provision are personally read by the Vice Provost (Education).
10. The Registry Quality Assurance team will ensure that the report is considered by the appropriate Departmental staff. Departmental staff will be expected to provide a formal response to the feedback/comments in your report and this will be circulated to you at the earliest opportunity.
11. In addition to the department review of the report, the Quality Assurance team undertake analysis of all reports to identify any themes arising, make recommendations for College-wide improvements to process or procedures, or to disseminate best practice.

Examiner's Details	
Full name and title	Professor Jim Griffin
Home institution or other affiliation	University of Kent
Degree being examined (e.g. BSc/GEP/MBBS/MEng/MSc/MRes)	MSc
Subject and part being examined (e.g. Biology)	Statistics
Year of Tenure	2

* If this is your final year of office please ensure you complete the final section of this report.

1. Programme Information/support for External Examiner Role

1(a)	Programme/Module Information Please confirm if the following was provided to you (either sent directly or through a publication site link)	
(i)	Programme handbook(s) / programme specification including programme learning outcomes?	Yes/Always
(ii)	Syllabus or module descriptors including learning outcomes?	Yes/Always
(iii)	Assessment briefs / marking criteria	Yes/Always
(iv)	Sufficient information about the programme(s) / modules in order to fulfil your role?	Yes/Always
(v)	Is there any additional documentation/ information that you would have benefited from receiving?	No

New

External

1(b)	College Induction and Appointment Process Please answer the following questions with regards to the College appointment and induction process	
(i)	Did you find the appointment process fit for purpose?	N/A
(ii)	Was the appointment made in a timely manner?	N/A
(iii)	Do you consider that the arrangements for the Induction day were sufficient?	N/A
(iv)	Did you find the follow-up information useful?	N/A
(v)	Was the department process to provide an induction to the programme and specific requirements of your role effective?	N/A
(vi)	Following completion of your first year of tenure, is there any additional information/ support that you feel would be beneficial to provide at induction in future?	N/A

Q1: Department response

Many thanks for the positive comments.

2. Programme/Curriculum Design

2(a)	Overall programme design and coherence Please comment on the strengths and weaknesses of the programme design in relation to:	
(i)	The balance and content of the degree programme(s) in relation to stated learning outcomes; The programme is well-constructed with a good balance of modules and clearly meets the stated learning outcomes.	
(ii)	Coherence and currency of the programme(s) and the appropriateness of compulsory modules/units in relation to stated learning outcomes; The compulsory modules are standard core parts of statistics: probability, inference and modelling. These are appropriate for the learning outcomes.	
(iii)	Suitability of the programme design in relation to the relevant subject benchmarks/ Professional Statutory Regulatory Body (PSRB) or Accrediting Body requirements (where applicable); Yes, the programme is consistent with subject-level benchmarks in mathematical sciences.	
(iv)	Where applicable, the relevance and integration of placements¹ to the overall programme and its contribution to the programme learning outcomes; To my knowledge, placements are not available as part of this programme.	

¹ Placements are any provision taken away from the direct College environment and may include: Year abroad, year in industry, modules studied at other approved HEIs (collaborative modules), or any other periods away from the College as part of an approved study plan.

2(b)	Assessment Strategy Please comment on the strengths and weaknesses of the assessment strategy in relation to:
(i)	The rigour, appropriateness and overall quality of the methods of assessment (unseen written papers, essays/dissertations, orals, clinical examinations) in relation to the level of study and the intended learning outcomes; The programme is mostly assessed by modules with a mix of in-course assignments and unseen written exams. A few modules are assessed by in-course assignments only. The exam papers contain high-quality, rigorous questions which allow a range of abilities to be tested. The in-course assignments are set at an appropriate level for this level of study.
(ii)	The balance and comparability of assessment methods across modules of the same level; The balance of assessment methods is appropriate. Some parts of statistics are better suited to in-course assessment than written exam and this is reflected in this programme. I think that the department should commended for its effects to make marks comparable across written exams and in-course assignments
(iii)	The suitability of the overall assessment load for the programme(s); The overall assessment load is usual for a statistics programme at this level.

Q2: Department response

As stated, our modules are assessed either through written examination, in-course assignments or a combination of the two. For all the different assessment methods we do our best to ensure that the students' marks are comparable across written exams and in-course assignments. Many thanks to the external examiner for recognising our efforts and for the overall positive comments.

3. Assessment Process, Marking and Moderation

3(a)	Drafting of Assessment	
(i)	Did you receive all of the necessary draft assessments for comment / approval?	Yes/Always
(ii)	Were the nature and level of the questions (or tasks) appropriate?	Yes/Always
(iii)	Were suitable arrangements in place to consider your comments on the draft assessments?	Yes/Always
(iv)	Did you receive feedback on your comments?	Yes/Always

3(b)	Marking and Moderation of scripts (Examination, assessed coursework, dissertation/project reports)	
(ii)	Was the general standard and consistency of marking appropriate?	Yes/Always
(iii)	Was there evidence that assessed work had been moderated internally, either through check marking or second marking?	Yes/Always
(iv)	Were the scripts marked in such a way as to enable you to see the reasons for the award of given marks?	Yes/Always

The new electronic system for exam moderation is extremely useful and, I think, can lead to better

examination papers than the usual postal system.

3(c)	In relation to Practical Examinations	
(i)	Were satisfactory arrangements made for the conduct of practical examinations?	N/A
(ii)	Was the general standard and consistency of marking appropriate?	N/A

3(d)	In relation to Oral Assessments (including Viva Voce Examinations)	
(i)	Were satisfactory arrangements made for the conduct of oral assessments (e.g. presentations, poster presentations etc...)?	N/A
(ii)	Were suitable arrangements made for you to conduct viva voce examinations?	N/A
(iii)	Was the purpose for conducting a viva voce examination and the criteria for selecting candidates for a viva voce clear?	N/A
(iv)	Was the assessment of such work appropriate and consistent?	N/A

3(e)	Please comment on the assessment process, marking and moderation in relation to:	
(i)	The suitability of marking schemes / marking criteria and, where appropriate, model answers and the consistency with which these were applied;	
	Model answers and clear marking schemes were made available for all papers.	
(ii)	The suitability of the procedures for marking and moderation and the consistency with which these were applied;	
	The marking and moderation procedure were standard for University level statistics programme and applied consistently across papers.	
(iii)	Whether the grade boundaries for the assessment are set at the appropriate level and applied consistently;	
	Grade boundaries were set at an appropriate level and applied consistently.	
(iv)	The extent to which the assessment process measures student achievement rigorously and fairly against the intended outcomes of the programme(s) and is conducted in line with College policies and regulations	
	The assessment process is rigorous and fair and follows College policies and regulations.	

3(f)	Programme content which has been delivered and assessed by another institution (this would cover 1) placement activity, e.g. some or all of an undergraduate year abroad study plan, and 2) modules undertaken at local partner institutions, i.e. what are termed collaborative modules).	
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(i)	Was it clear in advance of the Board that students under consideration had undertaken content away from the College?	N/A
(ii)	Were the procedures for incorporating marks obtained by students at another institution clear and consistently applied?	N/A
(iii)	Was any such provision discussed at the Board of Examiners, particularly in relation to progression/award decisions, overall value and consistency with regards to the programme(s) of study?	N/A

Q3: Department response

Thank you for your positive comments. We are happy to know that the introduction of this new electronic system for checking the examination papers, both internally and externally, has worked very well and improved our communications.

4. Board of Examiners

4(a)	Board of Examiners' Meeting	
(i)	Were you invited to attend the meeting?	Yes/Always
(ii)	Were you able to attend the meeting?	Yes/Always
(iii)	Was the meeting conducted to your satisfaction?	Yes/Always
(iv)	Were you satisfied with the recommendations of the Board of Examiners?	Yes/Always

4(b)	Please comment on the following aspect related to Boards of Examiners' Meetings:
(i)	Whether the arrangements for degree classification (e.g. the scheme for the award of honours [UG] / scheme for the award of pass, merit or distinction [PG] – whichever is relevant) are set at the appropriate level and applied consistently.
Yes.	
(ii)	Whether the College procedures governing mitigating circumstances and/or academic misconduct (e.g. plagiarism cases) were considered and applied fairly and equitably to all students.
Yes.	
(iii)	Whether the consideration of borderline performances was conducted fairly and equitably, and in line with College Procedures.
Yes.	

Q4: Department response

Many thanks for your positive comments.

5. Academic Standards

5	Please comment on academic standards and student achievement with regard to:	
(i)	The appropriateness of the standards set for the awards in relation to the Framework for Higher Education Qualifications, national subject benchmarks and any additional Professional, Statutory and Regulatory Body (PSRB) or accrediting body requirements (where relevant);	
The standards are appropriate both with respect to subject benchmarks and Royal Statistical Society standards.		
(ii)	The standards of student performance in the programme(s) or parts of programmes and whether these are comparable with standards achieved by students on similar programmes or parts of programmes in other UK higher education institutions of which you have experience;	
Yes, the cohort had an impressive number of students graduating with distinctions and the student performance is comparable to other UK HEI.		
(iii)	The extent to which the academic standards and standards of student performance across modules within the programme(s) are comparable;	
Yes, these standards are comparable.		
(iv)	For external examiners <u>not</u> in their first year of appointment – are the standards of student performance across modules within the programme(s) comparable to those in previous cohorts;	
Yes, this year's performances were comparable to last year's performances.		

Q5: Department response

Many thanks for your positive comments. We always do our best to ensure that our MSc in Statistics is comparable with other UK HEI MSc degrees and its standards are appropriate with respect to the Royal Statistical Society standards.

5. Response to previous year's External Examiner Report

6.	Response to previous year's report	
(i)	Did you receive the formal written response from the department to the previous year's External Examiner report ² ?	Yes
(ii)	Are you satisfied that the issues raised in the previous report either have been, or are being, addressed?	Yes
I was glad to see that the department went "above-and-beyond" in replying to the issues raised last year.		

Q6: Department response

² i.e. completed copy of the report template sent on by the Quality Assurance Team on behalf of the department.

We are happy to have resolved the issues raised in the previous year and to have such positive responses this year. Many thanks.

7. Overview Comments, Recommendations and Good Practice

Please provide an overview of your assessment of the programme(s) and modules for which you are responsible as External Examiner. Please identify any specific matters relating to the academic standards of the awards and/or the quality of learning opportunities provided to students that should be addressed. Please also highlight any examples of good and/or innovative practice that you consider to be worthy of wider dissemination within the College.

7a. Recommendations / Suggestions for Enhancement

I am very happy with the way that the programme is run and assessed. I do not have any particular recommendations this year.

7b. Examples of good and/or innovative practice in learning, teaching and assessment

The new electronic system for moderating exams was very useful and allowed interaction between each internal examiner and me. This was much more effective than the standard postal system when issues needed to be raised and allowed a conversation to develop if needed.

The department offers many interesting projects which lead to high-quality dissertations

7c. Overview Comments

This is an excellent MSc programme with a wide range of options. Assessment is appropriate and is able to distinguish between levels of student ability. It's also clear that members of staff care about outcomes for students.

Q7: Department Response

Thank you for your overwhelmingly positive comment. We are happy to know that you also consider the MSc in Statistics an excellent programme. As you are aware in the academic year 2018-19 four additional streams have been added that help students take a balanced and coherent programme as well as reflect the diversity of modern statistics. In the academic year 2019-20 we are also adding one additional stream on Data Science.

We would like to thank you for your invaluable feedback that helps towards the improvement of our programme.

8. For Examiners final year in office only: Final Exit Report

8 Please provide an overview of your term of office.

This should ideally include comment on any changes in standards of student performance over time, major developments in the provision during your tenure, the implementation of any recommendations for enhancement (this is not an exhaustive list and examiners are welcome to comment on any matters they consider appropriate)

Q8: Department Response

9. Overall Confidence statement

The independent views of our External Examiners form an important part of the annual reporting of the maintenance of standards and judgement of the governing body.

Please complete the following section with regards to the module(s)/programme(s) of study to which this report relates. Where you are unable to say 'Yes', commentary must be provided in the comments box below.

(i)	The degree awarding body is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
(ii)	The assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme(s) and is conducted in line with the College's policies and regulations	Yes
(iii)	The academic standards and the achievements of students are comparable with those in other UK degree-awarding bodies of which you have experience	Yes

External Examiner Signature (an electronic or typed signature is acceptable):	J Griffin
Date of submission:	15/10/2018

Internal Use Only

Name and title of Department Respondent	Dr Marina Evangelou (Lecturer in Biostatistics); Department of Mathematics & School of Public Health
Position:	<i>Programme Director</i>
Date:	27 March 2019