

External Examiner Report (2023/24)

Name of External Examiner	Andrew Archer
Name of Programme	Mathematics (including some of the service teaching) Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Mostly
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
We mosly had good access to everything we needed, though on the morning of the 27th June, when we assembled to check all the marks, we did not have access to the PTEM system to start with. There was clearly some scrabbling around as Maths admin contaced IT colleagues to get access for us. We did not have to wait that long, and I would not really decribe this as a big deal, but would have been better if access had been sorted out in advance.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
I was generally impressed by the level and standard of the courses offered and the suitability of the assessments (largely exams, which are appropriate for the discipline). The Imperial students clearly have a great range of good quality modules to choose from and have what they need to get a top education. The level of challenge to the students is high, but appropriate.	
Where relevant, does the programme meet the requirements of the Professional Statutory Regulatory Body (PSRB) or accrediting body	Yes
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
I think the types of assessments offered are entirely appropriate to the discipline, i.e. a mixture of courseworks and final examinations, with the latter generally carrying the greater weight.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able to answer 'yes'.	
I like the way that I deal with two Imperial Maths academics regarding the exams. They respond well to my feedback and understand what I mean when I comment, because they have the academic expertise. When I asked questions about one particular draft exam that had not been prepared in the usual format (indicating length, etc) all my queries were fully addressed. Though it would have been better if the exam setter had included all the relevant info (used the template everyone else uses) at the outset.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I was really impressed by the dilligence of the marking and the ammount of green pen from a second marker.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study aboard or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners ?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes

Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Regarding the number of Mitigating Circumstances (MC) claims made by students, I think there is a bit of a problem. I think the Maths leadership is already aware of, but I think is worth mentioning: There appears to be a culture amongst some of the Imperial students that it is OK to submit a self-certificated MC claim in order to postpone assessments to later in the summer, in order to spread out their workload or for other such reasons (but not due to ill health, bereavement, or the other usual reasons that MC claims exist from). When discussing with the students over lunch, one of them clearly thought this was acceptable practice to do this. I'm well aware that sorting this out is not going to be easy, because you don't want to affect the genuine MC claimants. But some work to try to alter the culture in the student body is needed. In my university, I think we probably do have a few too many MC claims that we have to accept (but are actually not valid), but somehow the culture of students at Imperial I see, to choose to "defer" their exams does not exist. I think that's because our graduation ceremonies are in July, before when the resit (SAP) period is. I'm not sure what the solution to this problem is, but maybe part of the answer is to decrease a little the total amount of assessments each year. That said, what I see is not out of line with what I see in my Uni and elsewhere, but maybe as a discipline we over-assess somewhat.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	

Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Overall, I'm very impressed by how things are run. In particular, I'm continually impressed by Chris Hallsworth. He does a great job in my view. He seems to be on top of everything and when discussing how things were going, I find he has a good sense of what is going well and what can be improved with the teaching.

Let me mention some things that were discussed, but I think are worth further consideration:

Some students mentioned an issue related to one of the exams (an error in the exam paper) and the way a correction to the exam was delivered during the exam, to those taking the exam. In some venues, there was an announcement from the front and in another something was written on the board, if I understood correctly. Overseas students did not fully comprehend the announcement. Given that the direction of travel in HE seems to be (mostly rightly!) towards enabling students with additional needs to take exams in an environment that enables them to do the best, getting messages out in an equitable manner is becoming increasingly difficult. For example, in my Uni there are students who are taking exams in quiet rooms, various amounts of extra time and I even heard of a student who was allowed to listen to music during the exam to help them concentrate. Getting messages/corrections through to the students in an equitable manner is therefore almost impossible, if such exam adjustments are allowed. For that reason, in my Uni we never issue exam corrections. We just tell the students that if they think there is an error on the exam, they should say so, do their best based on what they think and to make sure they don't waste time on that question if there are other questions still to answer. I'm not necessarily arguing that my Uni's position is better. Rather, I think some consideration into these issues needs to occur and whatever is decided, the students need to be informed and understand how to react in these sorts of situations.

I could not fail to notice that some of the severely failing Year 2 students nonetheless had a good mark in their group project module. Obviously, they had benefited from the hard work of the others in their group. I'm told that the dept is moving towards just a pass/fail (rather than a grade) for this module. I think that is a good step forward.

I'm pleased the Dept has a plan to move away from the default scaling of exam marks. My impression is that far too much scaling is done. My view is that the default should be that marks are not scaled and that doing so should be something of a "last resort". The plan to slowly introduce "no scaling" year by year is a good one. The one thing I would encourage it to keep discussing this issue amongst colleagues in the Dept. If academics are used to their exams being scaled, then it is quite some cultural shift to move to not scaling. People need to change a little how they set their exams, to avoid marks having to be scaled. This needs to be recognised and understood. I think the leadership of the Department is moving in this direction and I write this to support and applaud their direction of travel.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

The Department is very grateful to the external for these kind, supportive comments and for the helpful suggestions for improving the programme.

We share the external's concerns regarding mitigating circumstances procedure, and especially regarding the number of exams being deferred. We have undertaken an analysis of the distribution of claims, and there does appear to be an excess of these in year 2. A number of colleagues have arrived independently at the conclusion that workload at this stage of the programme is excessive.

In line with the external's recommendation, we are taking steps to rationalize the assessment load in year 2 specifically. In addition, we have set clear expectations about the requirement for evidence in support of mitigating circumstances claims.

The trends in mitigating circumstances have been seen across the College. Updates to the College mitigating circumstances policy were expected this year, to address this, but have been delayed.

Finally, we share the external's concern about the Group Project mark in year 2. This is not always a fair reflection of individual effort, and we have moved to make this module pass/fail instead.

Name and Position of Departmental Respondent:

Chris Hallsworth, DUGS

Date:

8 October 2024

External Examiner Report (2023/24)

Name of External Examiner	David Leslie
Name of Programme	Machine Learning and Data Science Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	No
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I am sorry, but as an external consultant to the College I am not prepared to install IC-specific software onto my phone (the authenticator). I would happily use a generic 2-factor authenticator such as Google's, as accepted on every other institution's security, but not something specific. This means I have been unable to access Blackboard this year. We have workarounds that mean I can carry out my duties.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
The curriculum is excellent. There is no standard curriculum in this emerging field, but the team have developed a programme that ensures graduates develop the key sets of understanding and skills for applying MLDS when they finish the programme.	
Where relevant, does the programme meet the requirements of the Professional Statuary Regulatory Body (PSRB) or accrediting body	N/A
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
All assessments are coursework, and the level and suitability are spot on. Like the rest of the sector, there do not yet appear to be any actions to try to mitigate the challenges of students using AI to complete this coursework. It's going to be needed for this type of programme in the near future, but for now the team are not behind anyone else.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
The assessment setting progress has been gloriously collaborative, with the setters discussing my comments with me and coming to mutually acceptable outcomes.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes

Did you consider that the marking was consistent and fair?	Yes
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study aboard or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

The department flagged to me that there seemed to be a high number of merits and distinctions. I considered the level of the assessments that were set, and the level of attainment on them, and believe it correct that a higher proportion than usual of the students are being awarded merits and distinctions. The students are learning high level stuff, and performing highly.

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
The students on this programme are generally stronger than those I see in other similar masters programmes. They have received (on average) higher grades as a result.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	David Woods
Name of Programme	MSc Statistics Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Administration was efficient and effective	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments focussed on project marks, and appropriate measures were implemented to ensure parity and vigour this year.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
Programme continues to provide an excellent advanced training in Statistics. I am familiar with many UK Statistics MSc programmes, and this programme is the most rigorous and challenging. The core is entirely appropriate, and an impressive range of elective modules are offered. Future plans, on which I was consulted, will continue to keep the programme at the forefront of the field.	
Where relevant, does the programme meet the requirements of the Professional Statutory Regulatory Body (PSRB) or accrediting body	N/A
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
Assessments are rigorous and fair, with an appropriate mix of types. Exam papers are produced to a high standard and in a timely manner for the external. In general, the assessment load seems reasonable.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes

Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study aboard or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

BoE meeting was run to a high standard and very efficiently

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
As stated before, this is a very high level programme, which has consistently met these standards across the four years of my appointment.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
The poster presentations, and associated "away-day", make both an excellent early formative/summative assessment for the MSc summer dissertations. it also acts as a mini-celebration of the end of the taught programme and as an effective team bonding activity.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
The programme team have discussed potential plans for embedding more data science and employability skills in the programme, and I would encourage them to implement their excellent plans.	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	
Making criteria for more subjective assessments (e.g., presentations and dissertations) appropriately reflect the need to incorporate EDI issues.	

Final Exit Report:

For those in their final year of tenure only, please provide an overview of your term of office, including: Any changes in standards of student performance over time Major developments in provision...
As discussed above, the programme continues to be excellent, and to recruit high performing students. The best summer dissertations each year are truly at a very high standard. The programme team have made changes were necessary, e.g., to elective modules to reflect student demand. My only major comment across the four years involved the weighting of the project marks in the final degree classification. The original rules "double counted" the project (e.g., distinction required overall average, including project, over 70% and project over 70%). This did create some anomalies in the degree classification. Hence, I recommended the change to the new system (where the taught component

average alone is taken into account in degree classification). My comments on the consideration of borderline cases for the dissertation were also appropriately considered. Overall, I very much enjoyed my tenure as external examiner, and it was exciting and a privilege to work with the programme team.

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Dr Matthew Turner
Name of Programme	Mathematics MSc Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
The structure of the MSc is good, and is similar to the rest of the mathematics sector.	
Where relevant, does the programme meet the requirements of the Professional Statuary Regulatory Body (PSRB) or accrediting body	Yes
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
The assessment strategy is in line with the sector. Mainly assessment is via coursework and exam, but there are modules which allow for mainly coursework assessment. The project is substantial and allows the student to demonstrate their research skills.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes

Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
The projects are always very well supervised, and students are allowed to express their own ideas and put their stamp on the projects.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
None at this stage	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	
None	

Final Exit Report:

For those in their final year of tenure only, please provide an overview of your term of office, including: Any changes in standards of student performance over time Major developments in provision...
Throughout my 4 years I've seen the administration of the exams at Imperial improve and I now believe that the degree programmes in Mathematics are administrated at a high level. The exam papers are generally error free with clear solutions. There are generally a few hiccups with permissions on Teams when it comes to the examboard events which can delay the checking of information, but otherwise everything has been very good.

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Hamid Abban
Name of Programme	MSc in Pure Mathematics Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Mostly
Did you receive details of timings for moderation/Boards of Examiners	Mostly
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	N/A
Did the response address your comments adequately?	
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
Overall the programme is coherent and well planned.	
Where relevant, does the programme meet the requirements of the Professional Statuary Regulatory Body (PSRB) or accrediting body	Yes
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
Exams are on the heavy side in terms of density of questions and number of exams.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Mostly
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes

Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Mostly
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Hamid Abban
Name of Programme	Pure Mathematics Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	N/A
Did the response address your comments adequately?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
All good within pure mathematics. The range of courses offered at IC is strong and comparable to top institutions globally while being UK leading. The coherence is well satisfied while being challenging. The offering of the course on "Lean" by Kevin Buzzard is commendable and sector-leading, although improvements can be made (see comments below).	
Where relevant, does the programme meet the requirements of the Professional Statuary Regulatory Body (PSRB) or accrediting body	Yes
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
Assessments are generally coherent and well managed. A particularly positive aspect is the rigorous process of moderation of individual projects. One issue, which is already noted by the department, is perhaps the heavy load of exams - both individually and as a whole - putting extra pressure on students without achieving much in terms of assessment. Going away from default calling is very welcome, and perhaps should be accompanied by a slight change in the exam questions level of difficulty. Another avenue to improvement the assessment is to address the consistency of the level of difficulty of exams across the modules. While most exams were at the same level perhaps one or two presented higher levels of difficulty, which was pointed out at the moderation stage but not addressed.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Mostly
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
see my comments above	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	
For study abroad, were the procedures for credit and grade transfer applied fairly?	
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes

Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
The work of the senior tutor was particularly impressive.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
The Lean course is 100% assessed by CW, so my feedback is based on conversations with students. They found the continuous assessments overwhelming and felt unable to follow other modules while taking Lean. Also, they felt that those students who volunteered to take part in "Lean Club" have an advantage in comparison with other students. I suppose these could both be addressed easily, if appropriate.	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Jason Lotay
Name of Programme	Mathematics Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Mostly
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Mostly
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Some necessary materials to complete my work were not available on the Examiners day initially due to ICT issues, which rendered the first morning essentially pointless.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
In general the courses seem at quite a good level. However, there are several very niche courses, and courses that do not seem to fit coherently within the maths curriculum as a whole. (This feeling was confirmed in discussions with students.) I also noticed a great disparity in the amount of material and level of difficulty in courses, with some courses appearing to have too little content and have easy exams, with others having exams were much too hard.	
Where relevant, does the programme meet the requirements of the Professional Statuary Regulatory Body (PSRB) or accrediting body	Yes
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
I do have some concerns concerning the coursework marks, particularly for 100% coursework-based courses. The marks appeared to be inflated (and out-of-step with the students' marks in other modules), sometimes to an excessive degree with many students attaining very high marks. I am also worried that students are putting too much effort towards these coursework modules to their detriment in other courses (this could be one way to interpret the large grade disparity). I am also concerned that the exams as assessment is not working that well in terms of actual enabling the students to gain understanding - conversations with (good) students clearly indicated their lack of understanding of material despite their high marks (and one student proudly confirmed that they didn't understand a course at all but scored highly in it anyway). This is achieved by a large dependence by the students on past exam papers and similarity from year to year in the papers. In fact, this is so clear that students were very concerned by any course with a new lecturer for which the exam might be different, that the lecturers deliberately produced mock exams very close to the actual exam - this is poor practice.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Mostly
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Mostly
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Sometimes I clearly indicated that a paper was too long or too hard, but this was not adequately acted on (and indeed the paper transpired to be too long or too hard as I had predicted). As I already said, some courses were clearly too easy and the high marks in the exam reflected this.

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Mostly
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I think the moderation procedures seem to have worked well. I am not sure that marking is consistent at all - some courses are clearly marked harshly and others marked generously.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes

Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Mostly
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I think the Final Exam board is a waste of time. There is no need to have all examiners (with almost all attending remotely with their cameras off and clearly not paying attention) in attendance. It is clear that all decisions have already been made (correctly) and so there is really no role for any of us to play in the meeting - we are bystanders for more than 2 hours. This process has to change. I also don't really see where the forum is to make constructive criticism about courses or projects - in that meeting would be strange as it is front of all examiners.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Mostly
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
As I have said, I think the teaching and assessment at Imperial encourages students to prioritise memorising past papers and familiarity with that format (much like school exams) over actually learning and understanding the material. It seems clear to me that the quality of mathematicians produced by this degree programme is not as good as it should given the research standing of the maths department, so I think Imperial has to re-think its course contents, delivery and assessment.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
The wide variety of courses is very good, but the impression I got from the students is that there were too many and too many that were too niche. I would consider trying to make the programme much more coherent, and trying to limit niche courses.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
Oral assessment would be very good. I think introducing pass/fail for some assessments would also be good. I would vary exams much more from year to year, and emphasise understanding in the questions being asked.	

Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.

I do not have any comments on this.

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

I think overall Imperial is doing well, and there are excellent people working very hard to make sure the assessment works well. However, I think there are some clear areas for improvement. For example, I still think coursework (including projects) is too highly marked and students should be given more guidance on expected time to spend on coursework, and be more strict in marking to try to clamp down on students using coursework as an "easy options". The large number of deferrals is also disconcerting - this needs to be tightened up as students are abusing the system to try to gain an advantage, and the self-referral option on health grounds is also clearly being abused.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Jason Lotay
Name of Programme	MSc Pure Mathematics Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
The majority of the courses seem to be of an appropriate standard. A small number of courses I was managing I believe were both too light on material and too easy in comparison to other courses - I have contacted the appropriate person in charge of the relevant courses directly about this. The programme, if actually followed by the students, does provide appropriate educational challenge. However, it became clear in conversation with students that some were able to do well in examinations despite not understanding the course material - this is due to the fact that in many courses the exams do not change much from year to year, so students simply do enough past papers that they can get a good mark in the exam. I mentioned last time that perhaps more could be done around sustainability, entrepreneurship and co-creation, so I believe the faculty is already considering improvements in this direction.	
Where relevant, does the programme meet the requirements of the Professional Statuary Regulatory Body (PSRB) or accrediting body	Yes
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
As I said above, there are issues around the examinations in terms of too much similarity from year to year, and therefore not pushing students to understand the material in quite a few cases. I am still concerned about the possibility of grade inflation with regards to coursework-based modules and projects. It is clear that students tend to put more work into these modules to try to get higher grades, and there are also reasons why their grades might be higher in a project or such a module based on their specific interests. However, there are cases where there seems to be a large discrepancy between the student's marks elsewhere in the assessment and these coursework marks - these should be looked at carefully, since they often give rise to a difference in degree classification (typically Distinction over Merit). In general, the number of distinctions seems a bit too high.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Mostly

Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Some courses are too easy and some courses are too hard by virtue of how they are assessed (i.e. the exam is much too difficult). These issues are dealt with via scaling, but some of this scaling is too drastic in my view. I am therefore concerned that the level of assessment may not always be fit for purpose. My comment about coursework assessment above is also relevant here.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Mostly
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Gaining access to the papers and coursework was not straightforward and not as much time as perhaps wanted was given to do this. This was mainly due to problems during the External Examiner visit. Some of these were the same problems as last year, so I sincerely hope this will be rectified next time.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners ?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Mostly
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Mostly
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I think more could be done with comparing with previous years. I suggested this last year, so hopefully it will be done next time. I am concerned that there are too many distinctions, so I would say that the programme is a bit generous in comparison to others.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Mostly
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Mostly
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I think my relevant comments on this have been made elsewhere.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
I think the moderation process around coursework seems to be working well.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	

I think the assessment by examination needs to be re-thought in terms of making it achieve its goal of genuinely challenging students to understand the course material. I am also concerned about the mitigating circumstances procedure in the following manner. It is clear that students are using the self-certification process to make the exam period easier to manage (i.e. claiming illness so as to have a lighter load), and then doing the exams at a later time when it is more convenient, which ultimately will surely lead to higher marks. The fact that even good students are doing this is particularly concerning. I would strongly suggest that something needs to change to stop this practice, as students are using the self-certification to gain an academic advantage, which is not its purpose.

Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.

I have no comments here.

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

I think in general there are many good things about this course. However, there are some key aspects of assessment, course design, and exam procedures that need to be looked at closely in my view to ensure standards.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Dr Matthew Turner
Name of Programme	UG BSc/MSci Mathematics (inc. pure) BSc Mathematics with Applied Mathematics/Mathematical Physics BSc with Mathematical Computation BSc Mathematics with Statistics BSc Mathematics with Statistics for Finance BSc Mathematics, Optimisation and Statistics Team appointment PGT MSc in Applied Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
The Mathematics degree programme is of a good standard in line with other institutes in the sector. There are sufficient educational challenges to the students. There are also opportunities for the students to work in groups and develop other skills.	
Where relevant, does the programme meet the requirements of the Professional Statuary Regulatory Body (PSRB) or accrediting body	Yes
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
There are various assessment types as part of the degree, including closed book exams, coursework and presentations. All these are appropriate for a mathematics degree.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
The use of blackboard for checking exam papers seems to be working well, and staff did their best to make it clear which papers i should check. On the whole the exam papers were good, but as is the case everywhere, sometimes errors creep into the papers.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes

Did you consider that the marking was consistent and fair?	Yes
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
The marking was good, and on the projects, any differences in marks are well resolved. The exam papers now include external examiner comments which were useful, but some did not note the question number with the comment which was a bit unhelpful. They would say 'In part (a)...' and you have to guess which question it is referring to.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	Yes
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	No
For study abroad, were the procedures for credit and grade transfer applied fairly?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

The Board of Examiners meeting was very well run and conducted in a fair manner.

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
The degree programmes at Imperial are in line with the industry standard for mathematics degrees in the UK.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
The exam paper comments for the external examiner is a good practice to continue. The project are always of the highest quality and are a delight to moderate. The move away from scaling all exams as standard is a good move, and although it will take a few years for everyone to adjust to this when setting exams, the long term benefits will become evident.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
Since I began my External Examining duties at Imperial 4 years ago, I think the processes have improved quite a lot, and I'm now very happy with how they work on the whole. As I noted earlier in my report, dealing with errors found in exam papers at the time of the exam should be something that Mathematics looks at and agrees on. Communicating this to students will then take away their anxieties when they think they find an error in exams. I'm very interested in the developments at Imperial on the use of Large Language Models to give feedback to students, and I think this will be an interesting area going forward.	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	
Only 1 comment here, I think it would be good when splitting the students into groups, to have more than 1 female student in each group. i appreciate this will not always be easy to do, but it might help to make them feel more equalized in the groups.	

Final Exit Report:

For those in their final year of tenure only, please provide an overview of your term of office, including: Any changes in standards of student performance over time Major developments in provision...
When I started it was during COVID, and last year we had a marking boycott, hence this year is probably the first 'normal year' I have presided over. Ive have seen many improvements in

the running of the programmes, including the information which is provided to external examiners.

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Chris Hallsworth and his team are doing a great job in managing the Mathematics undergraduate degree programmes.
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Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.
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Name and Position of Departmental Respondent:	
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Date:	
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External Examiner Report (2023/24)

Name of External Examiner	Matthias Troffaes
Name of Programme	Mathematics (section Probability & Statistics) Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
Imperial continues to provide an extremely strong, coherent, and broad program in probability and statistics. The modules on offer reflect modern practice. Electives cover areas that are relevant to both future employment and further research. The program is challenging, and encourages students to give their best. Compared to other institutions, the program is one of the best in the UK. I commend the joint mathematics & computing degree (JMC). Finally, I was also extremely impressed by the final year projects, which stimulates students to do their own piece of research. All in all, I'm impressed with how the curriculum is managed and developed by the department.	
Where relevant, does the programme meet the requirements of the Professional Statutory Regulatory Body (PSRB) or accrediting body	N/A
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
Assessments comprise mainly in-year course work, standard style examinations, and project type work. A worry around course work are the high average marks. Whilst marks are still high, this is addressed by the department by limiting the amount of course work to a reasonable level, and this is a reasonable solution. Examinations run well. A concern that arose is that many students appear to defer their first attempt, as could be clearly seen from the scatterplots for all exams that I looked at. It seems this may be a "cultural" after effect of Covid, where students believe they have the right to defer exams regardless of circumstances. The department is aware of this and is seeking to address the issue. I encourage a stricter and clearly communicated policy on self-certification. Project work is marked by two independent markers. The overall mark is then obtained from those marks (and marking reports) through a committee. I like that the committee can look at all reports in context to arrive at a final mark, and not necessarily takes an average. This embodies excellent practice. There is a worry about high project marks (at least in probability & statistics). However, when I looked at the projects themselves, I found myself in agreement, as they were of stunning quality at the upper end.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes

Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes
Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I note that there was an access issue at the beginning to access the scatterplots and tables, however this was eventually resolved after a few hours. It would be great for future years if externals were to have correct access before arriving at Imperial. I note the project data was provided but it wasn't quite in the same format that could be compared with other exam marks. I also would like to have seen the project marks included in the scatterplots. I strongly commend the department's system for providing feedback to students after the exams. So, all in all, data provision was improved this year compared to last year, however some small improvements are still possible.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners ?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
The meeting ran efficiently. The algorithm for determining classifications at the borderline continues to work well, saves considerable time, and seems overall fairer than systems where individual candidates are discussed by the board (as I believe was the case a few years ago).	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
* The running, marking, and moderation of projects. * Exam quality. * Student feedback.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	

- * Address the large number of students submitting mitigating circumstances forms just to defer and spread exams.
- * Communication of errors during exams: from talking with students, I suggest not to communicate errors during exams as it can be inconsistent across rooms, and stress inducing especially for weaker students. Instead, simply deal with errors during the marking stage. You can communicate to students that if they believe there's an error in a question they can note it and try answer to the best of their ability without wasting time.
- * Monitor project marks. Moderation across research groups?
- * Monitor exam length (not necessarily duration). Though exams are of extremely high quality, the amount of material that students need to write seems generally on the high side relative to the duration of the exams (at least when compared with my own institution).

Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.

EDI is addressed appropriately as far as I could tell.

Final Exit Report:

For those in their final year of tenure only, please provide an overview of your term of office, including:

Any changes in standards of student performance over time

Major developments in provision...

Standards of student performance have been largely consistent across modules. Major developments during my tenure were (i) implementation of the algorithm for degree classification, (ii) moving away from default scaling, (iii) addressing the impact of high coursework marks, (iv) improvement of project allocation by not putting the entire burden on the student. The department has always been very considerate and reasonable towards any recommendations that I have made. I wish the department all the best for the future!

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Once again I've been extremely impressed with the professionalism and dedication of all staff involved with this years process and also with the responses to comments over the years. The department has a huge attention to detail, and takes active steps to ensure fairness in all their assessment procedures. I also enjoyed the opportunity the department gave us to talk with the undergraduate students. I thank all staff that we've been involved with, especially Chris Hallsworth, Helen Haines, Ioanna Papatsouma, and Mikko Pakkanen.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Oscar Bandtlow
Name of Programme	MSc Applied Mathematics Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	N/A
Did the response address your comments adequately?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
This was my first year.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
Where relevant, does the programme meet the requirements of the Professional Statutory Regulatory Body (PSRB) or accrediting body	N/A
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes

Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Oscar Bandtlow
Name of Programme	BSc/MSci Mathematics (inc. pure), BSc Mathematics with Applied Mathematics/Mathematical Physics, BSc with Mathematical Computation, BSc Mathematics with Statistics, BSc Mathematics with Statistics for Finance, BSc Mathematics, Optimisation and Statistics,

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
I received timings for boards very late; but this may be due to the fact that this is my first year with communications about timings having been sent out before I was appointed.	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	N/A
Did the response address your comments adequately?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
The curriculum is well-aligned with sector expectations. The standard of assessment is high overall, offering suitable educational challenges to students.	
Where relevant, does the programme meet the requirements of the Professional Statutory Regulatory Body (PSRB) or accrediting body	N/A
Please provide any specific comments with regards to your response above?	
Please comment with regards the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
The assessment strategy is in line with other UK HE institutions I am familiar with, either as an external or as a member of staff.	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes

Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
I was very impressed by the quality of the third and fourth year projects.	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date:

External Examiner Report (2023/24)

Name of External Examiner	Tiziano De Angelis
Name of Programme	Mathematics and Finance Faculty of Natural Sciences Mathematics

Programme Information & General Administration

Did you receive/ were you give access to the relevant documentation for the programme such as programme specification/module descriptors/ programme handbook, or updated versions where relevant	Yes
Did you receive details of timings for moderation/Boards of Examiners	Yes
As appropriate, did you have access to the Virtual Learning Environment/ relevant online systems for this academic year?	No
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
access to virtual learning environments was not needed	

Response to last year's annual report

In addition to the University summary reports, did you receive a formal response to your annual report from last year from the programme team/department?	Yes
Did the response address your comments adequately?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Programme and Curriculum Design:

Please provide comments regarding the curriculum, considering (where appropriate); • Expectations of the sector with regards to subject matter (core programme), currency and relevance • Breadth of programme beyond core material (such as elective modules) • Suitability of the learning outcomes • Coherence of the structure and student development through the programme • Whether the programme offers appropriate educational challenge to students • How has consideration of environmental sustainability has been embedded in the programmes (where relevant) • Development and opportunities for student entrepreneurship and co-creation	
This is a very well-designed programme. The syllabi of taught courses cover a broad spectrum of relevant topics in mathematics and finance. The programme is run efficiently and it is very successful	
Where relevant, does the programme meet the requirements of the Professional Statutory Regulatory Body (PSRB) or accrediting body	N/A
Please provide any specific comments with regards to your response above?	
Please comment with regards to the assessment strategy for the programme, considering the types of assessments and their suitability for the level and field of the study, assessment load across modules and overall for the programme.	
Effective, fair and well balanced across different courses	

Assessment Setting:

Did you receive draft assessment for comment and approval?	Yes
Did you receive a satisfactory response to any comments that you made?	Yes
Did you consider the nature and level of the assessment to be fit for purpose, for example pitched at the appropriate FHEQ level and differentiates candidates across the full range of grades?	Yes
Were you provided any model answers or marking criteria in relation to the assessment?	Yes
Please provide any further information with regards to your response, particularly if you have not been able to answer 'yes'.	

Marking, Moderation and Feedback

In considering the range of assessment across the programme including coursework, examinations, practical or other forms of assessment:	
Did you receive an appropriate sample across the grade profile for consideration?	Yes
Did you see evidence of the full marking and moderation process? For example, evidence of second marking, internal moderation etc.	Yes
Did you consider that the marking was consistent and fair?	Yes

Was the justification of marks clear, including where markers have differing initial outcomes?	Yes
Was the feedback to students clear and appropriate (identification of strengths and weaknesses, nomenclature in line with the marks awarded etc.)	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Placement Learning and Collaborative Provision

The University offers opportunities for learning away from the University across a range of programmes. If this is available on a programme for which you are examiner, this should have been advised. If you are unsure, please contact the programme/department team for further information.	
In regard to study taken away from the University, for example as part of a placement, study abroad or in another institution, was the process managed appropriately?	N/A
For study abroad, were you provided with a list of partner institutions and the template study abroad plan?	N/A
For study abroad, were the procedures for credit and grade transfer applied fairly?	N/A
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Board of Examiners Meeting:

When considering the administration and operation of the Board of Examiners:	
Was the meeting conducted in line with the University's Conduct of Boards of Examiners?	Yes
Did the Board consider relevant modules analytics, such as across the year or in comparison to previous years?	Yes
Were the University regulations applied correctly, fairly and appropriately?	Yes
Were borderline candidates considered in a fair and equitable manner?	Yes
Was due consideration given to those candidates that had accepted mitigating circumstances?	Yes
Did you consider that the grade profiles were representative, and in line with similar levels of achievement in other degree awarding bodies?	Yes
Overall are you satisfied with the process and outcomes for this Board of Examiners?	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	

Overview, Recommendations and Good Practice:

Overall Confidence Statements with regards to provision in 2023/2024	
In my opinion, Imperial College London is maintaining the threshold academic standards set for its awards in accordance with the FHEQ and relevant Subject Benchmarks Statements.	Yes
In my opinion the assessment process measures student achievement rigorously and fairly against the intended learning outcomes of the programme and is conducted in line with the University's policies and regulations.	Yes
In my experience the academic standards and the achievements of students are comparable with those in other degree awarding bodies.	Yes
Please provide any further information with regards to your response, particularly if you have not been able answer 'yes'.	
Comments regarding good or innovative practice, recommendation for enhancements	
Please outline any examples of good or innovative practice in learning, teaching and assessment you would like to highlight with regards to these programme(s):	
Please outline any recommendations or suggestions for enhancement you would like to make with regards to these programme(s):	
Where possible, please outline any specific comments that you have with regards to Equality, Diversity and Inclusion. For example, are you able to identify any steps taken by the programme team in the recruitment, design, management, assessment and outcomes for the programme.	

Any additional comments

Please provide any further comments that you wish to make about the provision at the University over academic year 2023.2024.

Department Response to report

In the box below, please provide the response to the report, with particular attention to any areas in which the examiner has raised concerns.

Name and Position of Departmental
Respondent:

Date: