

EXTERNAL EXAMINER REPORT FORM 2022

External examiner name:	Anne Skeldon		
External examiner home institution:	University of Surrey		
Course(s) examined:	Mathematics part B, Mathematics and Statistics part B		
Level: (please delete as appropriate)	Undergraduate		

Please complete both Parts A and B.

Part A				
	<i>Please (✓) as applicable*</i>	Yes	No	N/A / Other
A1.	Are the academic standards and the achievements of students comparable with those in other UK higher education institutions of which you have experience? <i>[Please refer to paragraph 6 of the Guidelines for External Examiner Reports].</i>	Yes		
A2.	Do the threshold standards for the programme appropriately reflect the frameworks for higher education qualifications and any applicable subject benchmark statement? <i>[Please refer to paragraph 7 of the Guidelines for External Examiner Reports].</i>	Yes		
A3.	Does the assessment process measure student achievement rigorously and fairly against the intended outcomes of the programme(s)?	Yes		
A4.	Is the assessment process conducted in line with the University's policies and regulations?	Yes		
A5.	Did you receive sufficient information and evidence in a timely manner to be able to carry out the role of External Examiner effectively?			To some extent
A6.	Did you receive a written response to your previous report?		No	
A7.	Are you satisfied that comments in your previous report have been properly considered, and where applicable, acted upon?	Yes		
* If you answer "No" to any question, you should provide further comments when you complete Part B.				

Part B

In your responses to these questions, please could you include comments on the effectiveness of any changes made to the course or processes in response to the COVID-19 pandemic where appropriate.

B1. Academic standards

- a. How do academic standards achieved by the students compare with those achieved by students at other higher education institutions of which you have experience?*

Students have a large range of options to choose from across the full breadth of mathematics. Individual options are mostly assessed by a single examination in Trinity term, this year conducted in-person. Overall, the performance suggests that the academic standards are high and at least comparable with other institutes of which I have experience.

- b. Please comment on student performance and achievement across the relevant programmes or parts of programmes and with reference to academic standards and student performance of other higher education institutions of which you have experience (those examining in joint schools are particularly asked to comment on their subject in relation to the whole award).*

Overall, student performance was in line with previous years. Some examination papers were very challenging resulting in the need for substantial scaling.

B2. Rigour and conduct of the assessment process

Please comment on the rigour and conduct of the assessment process, including whether it ensures equity of treatment for students, and whether it has been conducted fairly and within the University's regulations and guidance.

This is my second year as external examiner. Last year, the constraints of COVID meant that there was only a limited opportunity for oversight, and I was not able to see all aspects of the assessment process. This year, it was good to see a return to prior practices, so it was possible to see the full marking process, including seeing marked scripts and evidence that marks had been checked. I was also able to track through how marks were entered on spreadsheets and uploaded to the final system.

It was good to see that a mechanism had been put in place to prevent recurrence of an error that occurred last year due to mis-sorting of a spreadsheet.

The exam boards were conducted with rigour. Careful thought was given to appropriate scaling of each module, the marks and award classification for each student were considered in a fair and equitable manner and took into consideration mitigating circumstances.

B3. Issues

Are there any issues which you feel should be brought to the attention of supervising committees in the faculty/department, division or wider University?

There are two areas which I would like to flag.

First, with regard to errors on exam papers. Mathematics is a subject in which every symbol, every word can be important and it is very hard to eliminate all errors. Errors on examination papers can result in some questions becoming non-sensical or impossibly hard. Although every effort was made by the examination board to compensate for errors, errors can cause substantial

distress to students and disproportionately affect some students. While I think it would be very difficult to construct a process in which all errors are eliminated, here are two suggestions to mitigate / minimise their impact in future.

- (i) Return to allowing examiners in the exam hall to enable students to raise issues during the exam. Of course, there needs to be a process where any corrections are communicated to any individuals not taking the exam with the main cohort, but this should be feasible. My prior experience suggests this is a process which substantially reduces the distress caused by errors in exam papers.
- (ii) The reinforcement of the importance of the setting / checking process and of keeping to deadlines, ideally from the Head of School. Quite a few of the exam papers were sent to external examiners' very late. Late setting of exam papers puts additional pressure on everyone and perhaps results in rushing of the setting / checking process which may allow more errors to slip through.

Second, some examination papers required substantial scaling. In mathematics it can be particularly challenging to set an examination paper on which there is sufficient material for students with more limited understanding of the subject to pass, while at the same time differentiating students at the top end. However, the consequence of substantial scaling is that results become quite sensitive to the way the mark scheme is applied (+/-1 mark has a big effect) and that, for students, marks can appear to be only weakly related to their perceived performance. Thus, from a robustness and from a student learning point of view, it would seem to me that it would be preferable for exam marks to require fairly minimal scaling. The return to closed book examinations next year and the consequent increase in "bookwork" questions on examination papers may help resolve this. Nevertheless, if not already done, I encourage the Department to monitor scaling longitudinally to identify if there are any systemic problems where some options repeatedly require substantial scaling.

B4. Good practice and enhancement opportunities

*Please comment/provide recommendations on any **good practice and innovation relating to learning, teaching and assessment**, and any **opportunities to enhance the quality of the learning opportunities** provided to students that should be noted and disseminated more widely as appropriate.*

It is good to see the robust process in place to ensure anonymity of students. In general, practices are in line with practices elsewhere in the mathematics community.

B5. Any other comments

Please provide any other comments you may have about any aspect of the examination process. Please also use this space to address any issues specifically required by any applicable professional body. If your term of office is now concluded, please provide an overview here.

Signed:	Anne Skeldon
Date:	31/08/2022

Please ensure you have completed parts A & B, and email your completed form to: external-examiners@admin.ox.ac.uk AND copy it to the applicable divisional contact set out in the guidelines.