

The University of Leeds
EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2017-18

QAT Received 28/11/2018

Part A: General Information

Subject area and awards being examined

Title and Name of Examiner:

Faculty / School of:

Mathematics

Subject(s):

Statistics modules as part of:

Programme(s) / Module(s):

BS-MATH BSc Mathematics
MMBS-MATH MMath, BSc Mathematics
BS-MATH&STAT BSc Mathematics and Statistics
MMBS-MA&ST MMath, BSc Mathematics and Statistics
BS-MATH-ST BSc Mathematical Studies
BS-MATH&MUSC BSc Mathematics and Music
BS-BLGY&MATH BSc Biology and Mathematics
BS-MATH/FIN BSc Mathematics with Finance
BS-ACMATH BSc Actuarial Mathematics
BS-ECON&MATH BSc Economics and Mathematics
BS-MNGT&MATH BSc Management and Mathematics
GDP-MATH Graduate Diploma in Mathematics

Plus Industrial and International variants where applicable.

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

BSc, MMath, BSc and Graduate Diploma

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

Points of innovation and/or good practice

Please highlight areas of innovation or good practice within the programmes or processes you have been involved with in this box.
Staff are generally efficient and helpful. The procedures for providing exam papers and solutions works well. The approach to student complaints about examinations is one I have recommended to other universities and departments.

Enhancements made from the previous year

Please highlight any enhancements made to the programme(s) or processes over the past year in this box.
There have been responses to suggestions about checking of the marking of examination scripts. The organisation and timing of attending meetings at Leeds has been adjusted in consultation with all four external examiners. It is good to see some increase in real world data used in modules.

Matters for Urgent Attention

If there are any areas which you think require urgent attention before the programme is offered again please note them in this box

None

For Examiners in the first year of appointment

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

For Examiners completing their term of appointment

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

Please comment on your experience of the programme(s) over the period of your appointment, remarking in particular on changes from year to year and the progressive development and enhancement of the learning and teaching provision, on standards achieved, on marking and assessment and the procedures of the School

Standards

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

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

In general the degree programmes allow for achievements of a range of students to be distinguished.

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

The curriculum includes reference advances in statistics at an appropriate level. Advanced modules can reflect research interests of staff.

Projects allow students to apply statistical concepts to research on substantive topics.

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

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

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

I am not aware of accreditation by Royal Statistical Society

Assessment and Feedback

17.	Does the programme design clearly align intended learning outcomes with assessment?	Y / N
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Please comment on the assessment methods and the appropriateness of these to the ILOs, in particular: the design and structure of the assessment methods, and the arrangements for the marking of modules and the classification of awards; the quality of teaching, learning and assessment methods that may be indicated by student performance.

The examinations on core topics in the first and second years allow students to demonstrate knowledge of the key concepts, and provide fair opportunity for brighter students to show excellents. The range of assessment methods overall is sensible, and marking and classification is fair.

18.	Is the design and structure of the assessment methods appropriate to the level of award?	Y
19.	Were students given adequate opportunity to demonstrate their achievement of the programme aims and intended learning outcomes?	Y

Please comment on the academic standards demonstrated by the students and, where possible, their performance in relation to students on comparable courses; the strengths and weaknesses of the students as a cohort:

There is a wide range of abilities, as seen on mathematics courses elsewhere. The average standard is as can be expected in a discipline in which the best students are many times more able than the weakest, and in which there is selective entry to universities.

Please use this box to provide any additional comments you would like to make in relation to assessment and feedback:

The approach to independent marking of dissertations by two examiners, and the scrutiny expected of each examiner, could be re-considered. The practice at other universities is to have two separate initial reports, and then a joint report.

The Progression and Awards Process

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

35.	Were you satisfied with the way decisions from the School Special Circumstances meeting were communicated to the Progression and Awards Board?	Y
<i>Please use this box to provide any additional comments you would like to make on the questions above:</i>		

Other comments

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

Apologies for late submission

Name of School and Head of School (or nominee)

Title and Name of Examiner:

Subject(s):

Statistics modules as part of:

Programme(s) / Module(s):

BS-MATH BSc Mathematics
 MMBS-MATH MMath, BSc Mathematics
 BS-MATH&STAT BSc Mathematics and Statistics
 MMBS-MA&ST MMath, BSc Mathematics and Statistics
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 GDP-MATH Graduate Diploma in Mathematics

Plus Industrial and International variants where applicable.

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

BSc, MMath, BSc and Graduate Diploma

Title and Name of Responder:

Position*:

Head of School

Faculty / School of:

Mathematics

Address for communication:

School of Mathematics, University of Leeds, Leeds LS2 9JT

Email:

Telephone:

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

Completing the School response

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

Response to Points of innovation and/or good practice

We are pleased to here _____ favourable opinion of our complaints procedure, and that _____ is recommending its adoption at other institutions.

Response to Enhancements made from the previous year

We are glad to hear that changes to our arrangements for examiners' meetings, checking of marking of exam scripts, and use of real world data in statistics modules are to _____ satisfaction.

Response to Matters for Urgent Attention

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

No comments were made in this section.

Response to questions 1-7 (and related comments)

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

N/A

Standards

Response to questions 8 to 16 (and related comments)

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

We are pleased that _____ is satisfied with the standards of our statistics modules.

For clarification, our MMath and BSc Mathematics and Statistics receive accreditation from the Royal Statistical Society.

Assessment and Feedback

Response to questions 17 to 19 (and related comments)

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

_____ is broadly satisfied with our assessment methods, but makes one suggestion about the marking of dissertations. _____ recommends that the two independent examiners should complete initial reports separately, before meeting to write a joint report.

Our current practice (for example in the module MATH3001) is that the two independent markers fill out a marksheet, assigning numerical scores to the dissertation in various categories. They then meet and agree on final marks for the dissertation, and write a verbal report for feedback to the student. Both the initial independent marks and the final agreed mark are kept on record. It appears that our practice already complies with _____ suggestion. However, we would welcome any clarification as to where we can improve further, or information about cases where the above practice has not been followed.

The Progression and Awards Process

Response to questions 20-35 (and related comments)

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

We are pleased that _____ is satisfied with our progression and awards processes.

Other comments

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

The University of Leeds

EXTERNAL EXAMINER'S REPORT

ACADEMIC YEAR: 2017-18

QAT Received 03/07/2018

Part A: General Information

Subject area and awards being examined

Title and Name of Examiner:

Faculty / School of:

Mathematics

Subject(s):

Applied Mathematics modules as part of:

Programme(s) / Module(s):

BS-MATH BSc Mathematics
 MMBS-MATH MMath, BSc Mathematics
 BS-MATH&STAT BSc Mathematics and Statistics
 MMBS-MA&ST MMath, BSc Mathematics and Statistics
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 BS-MATH&MUSC BSc Mathematics and Music
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 BS-MATH/FIN BSc Mathematics with Finance
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 BS-MNGT&MATH BSc Management and Mathematics
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 GDP-MATH Graduate Diploma in Mathematics

Plus Industrial and International variants where applicable.

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

BSc, MMath, BSc and Graduate Diploma

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

Points of innovation and/or good practice

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

As this is my first year it is hard to comment on "areas of innovation", but I was pleased that I was provided with easy access to all of the examination scripts during my visit to Leeds.

Enhancements made from the previous year

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

As this is my first year I cannot really comment on "enhancements" made from last year.

Matters for Urgent Attention

If there are any areas which you think require urgent attention before the programme is offered again please note them in this box

None.

For Examiners in the first year of appointment

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

For Examiners completing their term of appointment

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

Please comment on your experience of the programme(s) over the period of your appointment, remarking in particular on changes from year to year and the progressive development and enhancement of the learning and teaching provision, on standards achieved, on marking and assessment and the procedures of the School

N/A

Standards

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

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

All the courses I was responsible for are at the appropriate level (and similar to those at comparable institutions across the UK).

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

The teaching (at least as evidenced by the examination questions) of advanced level courses is clearly influenced by the lecturers' research interests.

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

Not applicable.

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

Not applicable.

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

Not applicable.

Assessment and Feedback

17.	Does the programme design clearly align intended learning outcomes with assessment?	Y
<p><i>Please comment on the assessment methods and the appropriateness of these to the ILOs, in particular: the design and structure of the assessment methods, and the arrangements for the marking of modules and the classification of awards; the quality of teaching, learning and assessment methods that may be indicated by student performance.</i></p> <p>The assessment methods are entirely appropriate for the material.</p>		
18.	Is the design and structure of the assessment methods appropriate to the level of award?	Y
19.	Were students given adequate opportunity to demonstrate their achievement of the programme aims and intended learning outcomes?	Y
<p><i>Please comment on the academic standards demonstrated by the students and, where possible, their performance in relation to students on comparable courses; the strengths and weaknesses of the students as a cohort:</i></p> <p>In general, standards were broadly aligned with those from comparable institutions. The standard of the best final year projects was particularly impressive.</p>		
<p><i>Please use this box to provide any additional comments you would like to make in relation to assessment and feedback:</i></p> <p>No further comments.</p>		

The Progression and Awards Process

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

* The external examiners attended the Progression but not the Awards Board (although we were, of course, sent the awards paperwork for approval).

Other comments

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

In general, proceedings were conducted very efficiently and professionally (special thanks to _____ for handling matters so efficiently). In particular, the visit of the external examiners to Leeds for the Progression Board was very well organised. The only part of the day that didn't work well was the actual meeting itself.

I think this should have been more formally run (with a proper chair, an agenda, the key people properly introduced, etc) and allow for a properly structured discussion of each of the classes (most can be dealt with instantly, actual discussion would focus on a few unusual classes). I don't want to create extra work (or lengthen the meeting significantly) but the current procedure – which seemed to be based on the assumption that we'd automatically approve all the marks – didn't seem quite right to me.

There is a slightly similar issue with the complaints and appeals (which we are asked to take on trust) but I'm less worried about this.

Having said that, I am very impressed with all your other procedures and believe that the final outcome of the meeting was correct.

In a more detailed point, I would really like to see greater "granularity" in the mark schemes. Simply allocating, say, 10 marks to a question leaves too much scope for individual interpretation and hence too much scope for variation between markers (and possible between setter and external examiner). I would like to see a greater breakdown of marks on the examination scripts and a greater breakdown of marks (in some cases, down to individual marks) in the mark schemes next year.

Part C: School Response to External Examiner Report

Name of School and Head of School (or nominee)

Title and Name of Examiner:

Subject(s):

Applied mathematics

Programme(s) / Module(s):

BS-MATH BSc Mathematics
MMBS-MATH MMath, BSc Mathematics
BS-MATH&STAT BSc Mathematics and Statistics
MMBS-MA&ST MMath, BSc Mathematics and Statistics
BS-MATH-ST BSc Mathematical Studies
BS-MATH&MUSC BSc Mathematics and Music
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BS-ECON&MATH BSc Economics and Mathematics
BS-MNGT&MATH BSc Management and Mathematics
GDP-FIN&AC Graduate Diploma in Financial and Actuarial Mathematics
GDP-MATH Graduate Diploma in Mathematics

Plus Industrial and International variants where applicable.

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

BSc, MMath, BSc and Graduate Diploma

Title and Name of Responder:

Position*:

Head of School

Faculty / School of:

Mathematics

Address for communication:

School of Mathematics, University of Leeds, Woodhouse Lane, Leeds LS2 9JT

Email:

Telephone:

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

Completing the School response

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Response to Points of innovation and/or good practice

We are glad that _____ appreciates our recent innovation of giving external examiners access to all scripts.

Response to Enhancements made from the previous year

N/A

Response to Matters for Urgent Attention

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

No matters raised

Response to questions 1-7 (and related comments)

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

No issues raised in this section.

Standards

Response to questions 8 to 16 (and related comments)

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

We are pleased to hear that _____ is satisfied with the standard of our courses. In particular _____ highlights the influence of research interests in our more advanced courses.

Assessment and Feedback

Response to questions 17 to 19 (and related comments)

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

We are pleased to hear that _____ is satisfied the robustness of our assessment, and the performance of our cohort overall.

The Progression and Awards Process

Response to questions 20-35 (and related comments)

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

We are pleased to hear that _____ is satisfied with our procedures for progression and awards.

Other comments

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

We are pleased that _____ is satisfied with the efficiency of our proceedings. With regard to the Assessment Board, _____ feels that the meeting could have been more formally run and could have contained a more structured discussion of the marks for each module. In response to the first point, we would like to clarify that a detailed line by line discussion of marks for each module does take place at the meeting of the Examinations Monitoring Group, which takes place prior to this meeting. We agree that this meeting could be restructured. It is only during the last two years that External Examiners have attended this meeting (previously they attended the Awards Board), and as a result the content of discussions at this meeting is evolving. On the basis of these experiences we will structure the meeting differently next year.

_____ also asks for greater granularity in marking schemes. We agree that this can be a good way of maintaining consistency in marking, but do not think it is appropriate to make this a formal requirement. Lecturers were encouraged to improve granularity at the Assessment Board, and also individually as part of the exam paper review process. We will add a comment to our exam paper guidance webpage asking module leaders to aim for granularity in their mark schemes.