

The University of Edinburgh
External Examiner Report
(including postgraduate diploma and assessed coursework)
College of Science & Engineering

Name and Address of External Examiner

Professor M G Green

**Undergraduate/Postgraduate Programme**

MPhys and BSc in Physics, Computational Physics, Physics with Meteorology,
 Physics with Music, Physics and Mathematics.

Course(s) examiner: (Undergraduate only)**On what dates where you present in the University to act as External Examiner?**

18 March 2010
 7 – 9 June 2010

COLLEGE OFFICE USE

Date returned by EE:

Date entered on database:

Date given to QA Convenor:

Date response sent to EE :

Date copies to HoS & QA Rep:

The College Quality Assurance Committee (CQAC) on behalf of the Head of College, monitors that appropriate action has been taken on the External Examiner's comments. CQAC reports annually on External Examiner reports to the Senatus Quality Assurance Committee.

The report form contains six sections in each of which you are requested to provide **narrative responses**. Each section begins with a series of 'tick boxes' which are intended only as prompts of matters on which you may wish to expand.

You are asked to complete the report as soon as possible and preferably within a month of the primary (usually June for undergraduates and taught postgraduate Diploma exams and assessed coursework) Examiners' Meeting in which you were involved, and email it to: DeanQA.sce@ed.ac.uk (preferably in pdf format) or alternatively send it to:

Head of College
College of Science and Engineering
The University of Edinburgh
Weir Building
The King's Buildings
Edinburgh
EH9 3JY

Any additions or amendments you wish to make to this report after the re-sit examination period will also be welcome. Please send additional comments/dissertation reports to the above address no later than mid-October, following the examinations.

External Examiner's fees are paid annually, normally by end of August, after receipt of your completed report. Payments are made into bank accounts and authorisation must be received from College Offices by the Finance Department by the 5th of the month for payment to be made by the end of that month. If you have not received payment when expected, please contact the College Registrar at the above address.

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Please return this form by email or to Head of College of Science and Engineering, preferably by 31 July after the main diet of examinations, additional comments by 30 September after the resit diet.

1. Adequacy of information

Was the information provided adequate for the purpose of external examining? (please tick one box for each row).

	Yes	Not Entirely	Not Provided
Course handbook documentation for students	X		
*† Degree programme syllabus and specifications	X		
*course descriptions or specifications	X		
* Aims, objectives, outcomes	X		
* Description of assessment processes	X		
Availability of exam papers	X		

* if not fully covered by the handbook documentation.

† Not normally provided to externals of Service Courses for other departments

Please comment generally on the information you received. If you answered "Not entirely" above, what improvements would you suggest?

Fully adequate.

2. Types of Assessment

Were the following aspects of assessment appropriate to the course and programme aims? (please tick one box for each row).

	Yes	Not Entirely	Not Provided
Degree Examinations	X		
Class Examinations			X
Assessed coursework, e.g. essays, practicals, presentations	X		
Dissertations and projects	X		
Placements and Fieldwork			X
Oral Examinations			X
Overall mix of assessment types	X		

Please comment generally on the types, mix and weighting of assessments. If you answered "Not entirely" in question 2, what improvements would you suggest?

The types of assessment are entirely adequate for the programmes examined.

At Junior Honours level there was inadequate differentiation this year between students in the coursework marks. The cause needs to be investigated and addressed urgently.

3. Assessment Criteria (please tick one box)

	Yes	Not Entirely
Were the Marking Criteria sufficiently clear to you ?	X	
Were the marking criteria appropriate to the assessment aims?	X	
Were the marking criteria consistently applied by markers?		X

**Please comment generally on the marking criteria.
If you answered "Not entirely" in question 2, what improvements would you suggest?**

On a small sample I found one course where I thought that the marking criteria were not consistently applied and where I believe the marker was erring on the side of generosity. I asked for a small rescaling down to address this. I think that second marking should have picked this up and therefore looked at second marking processes over a larger sample of courses. While I found that there was evidence of second marking according to the School's guidelines on many courses, on a number it was not clear that it had been carried out. The School to tighten up on this aspect of marking.

I am pleased to report positively on the further steps taken to address the difficult issue of project moderation. The School has now developed an excellent set of grade descriptors for projects and, with a final step of asking all markers to confirm that the grade proposed corresponds to the corresponding descriptor, consistency across markers and from year to year will be tightly controlled.

I urge the School to continue to address the need to ensure that levels and standards are even more consistent between courses. There is still a tendency to regard some topics as intrinsically easier or more difficult than others and to use this as an explanation for high or low mean marks for some courses rather than seek other possible explanations.

4. Quality and Standards

Were the following aspects of the educational provision of appropriate quality and standards in relation to comparable institutions of which you have experience (please tick one box for each row).

	Yes	Not Entirely	Not Provided
Course aims	X		
Course Structure and content in relation to the aims	X		
† Degree programme structure	X		
Teaching Methods	X		
Students' work in relation to their level of study	X		
† Opportunities for students to develop communication and other transferable skills.	X		
Internal marking	X		
Profile of degree classification or grades	X		
Mechanisms for course monitoring and review	X		
*Project Work/Dissertation appropriate to course.	X		

* undergraduate courses only – postgraduate courses refer to form QA.EE.3b

† For service courses, this may not require response, being covered by other Examiners.

Please comment generally on the quality and standards of the educational provision. If you answered "Not entirely" above, what improvements would you suggest?

I am pleased to report that in my opinion the School has appropriate standards. Moreover my discussions with students in March showed that they also have a high opinion of teaching and opportunities for learning in the School. Mechanisms for consulting students are excellent.

5. Administration (please tick one box)

	Yes	Not Entirely
Time available for those marking	X	
Operation of the board of Examiners	X	
Quality of data presented to the Board of Examiners	X	
Handling of special circumstances, e.g. medical, at the Examiners' meeting	X	
Other, <i>please specify</i>		

**Please comment on the administration of the assessment process.
If you answered "Not entirely" in question 2, what improvements would you suggest?**

The Board of Examiners meeting ran more smoothly this year, principally, I believe, as a result of my suggestion last year that a pre-meeting be held to identify issues to be brought to the attention of the external examiners. I would suggest that two further improvements could be made, namely to have an agenda for the meeting and to reduce discussion of special circumstances for cases where they could not possibly have any bearing on the degree to be awarded, for example where a student is clearly in line for a first.

There appear to have been no errors on final examination papers in stark contrast to the high number last year. I commend the School on the measures taken to address and apparently solve this problem.

6. General Comments

The University would welcome your views on any relevant issues that you would like to address. You are not expected to cover all issues in each report. Fuller remarks in the final year of your appointment would be appreciated. In particular, you are invited to comment on:

The compatibility of standards with other institutions;

The extent to which the degrees and courses examined meet their stated aims and objectives;

Whether the standards set are appropriate for the awards, or award elements, by reference to published national subject benchmarks, the national qualifications frameworks, institutional programme specifications and other relevant information;

Whether the assessment process ensured equity of treatment for students;

The whole programme of study from first year to graduation, if appropriate;

Any cases of innovative or particularly good practice which you wish to highlight from any aspect of the provision covered above, i.e. information received, types of assessment, assessment criteria, administration or quality and standards.

Please feel free to attach additional sheets

I have been consistently impressed by the standards of teaching, learning and assessment in the School during the four years of my appointment. Of course, perfection is impossible to achieve and I have always been able to make suggestions for improvement. I have been delighted that the School has consistently and positively engaged with these suggestions and hope that staff feel that they have indeed led to improvements.

I wish the School continued success in the future.

Thank you for completing this form.

Please return it to the Head of College of Science and Engineering at the address on page 2.

The University of Edinburgh
External Examiner Report
(including postgraduate diploma and assessed coursework)

College of Science & Engineering

Name and Address of External Examiner

Professor Des McMorrow



Undergraduate/Postgraduate Programme

MPhys and BSc in Physics, Computational Physics, Physics and Meteorology,
 Physics with Music, Physics and Mathematics

Course(s) examiner: (Undergraduate only)

On what dates were you present in the University to act as External Examiner?

21 March 2011
 6-8 June 2011

COLLEGE OFFICE USE

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College of Science and Engineering
The University of Edinburgh
Weir Building
The King's Buildings
Edinburgh
EH9 3JY

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Please return this form by email or to Head of College of Science and Engineering, preferably by 31 July after the main

***diet of examinations, additional comments by 30 September
after the resit diet.***

1. Adequacy of information

Was the information provided adequate for the purpose of external examining? (please tick one box for each row).

	Yes	Not Entirely	Not Provided
Course handbook documentation for students	X		
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*course descriptions or specifications	X		
* Aims, objectives, outcomes	X		
* Description of assessment processes	X		
Availability of exam papers	X		

* if not fully covered by the handbook documentation.

† Not normally provided to externals of Service Courses for other departments

Please comment generally on the information you received. If you answered "Not entirely" above, what improvements would you suggest?

Completely adequate

2. Types of Assessment

Were the following aspects of assessment to the course and programme aims?
(please tick one box for each row).

	Yes	Not Entirely	Not Provided
Degree Examinations	X		
Class Examinations			X
Assessed coursework, e.g. essays, practicals, presentations	X		
Dissertations and projects	X		
Placements and Fieldwork			X
Oral Examinations			X
Overall mix of assessment types	X		

Please comment generally on the types, mix and weighting of assessments. If you answered "Not entirely" in question 2, what improvements would you suggest?

The types of assessment were appropriate for the programmes considered.

In an earlier report, my predecessor highlighted that there was insufficient differentiation in the coursework marks at the Junior Honours level. I think that this is potentially still a problem and should be looked at.

3. Assessment Criteria (please tick one box)

Were the Marking Criteria sufficiently clear to you ?

Yes	Not Entirely
X	
X	
X	

Were the marking criteria appropriate to the assessment aims?

Were the marking criteria consistently applied by markers?

Please comment generally on the marking criteria.

If you answered "Not entirely" in question 2, what improvements would you suggest?

The marking criteria provided by the individual examiners were on the whole adequate. However, there were examples where examiners had failed to provide sufficient information in the model answer for an objective assessment to be made. The School should ensure that all examiners provide clear and concise marking schemes.

Based on the small, random sample of scripts that I looked at, I am content that the marking criteria were applied consistently.

At the Junior Honours level I noted in the Examination Board meeting that there appeared to be a tendency for the students to score lower average marks on the core subjects than on the non-core ones. This might reflect a difference in the assessment methods – examination versus continuous assessment – but in any event the School should ensure that the assessment criteria produce consistent outcomes across all subject areas. (This problem was also identified by my predecessor.)

Two cases of rescaling of final examination marks, one minor and one significant, were discussed and agreed to. For the case of major rescaling, the School should undertake whatever steps it feels are necessary to avoid similar problems in future years.

4. Quality and Standards

Were the following aspects of the educational provision of appropriate quality and standards in relation to comparable institutions of which you have experience (please tick one box for each row).

	Yes	Not Entirely	Not Provided
Course aims	X		
Course Structure and content in relation to the aims	X		
† Degree programme structure	X		
Teaching Methods	X		
Students' work in relation to their level of study	X		
† Opportunities for students to develop communication and other transferable skills.	X		
Internal marking	X		
Profile of degree classification or grades	X		
Mechanisms for course monitoring and review	X		
*Project Work/Dissertation appropriate to course.	X		

* undergraduate courses only – postgraduate courses refer to form QA.EE.3b

† For service courses, this may not require response, being covered by other Examiners.

Please comment generally on the quality and standards of the educational provision. If you answered "Not entirely" above, what improvements would you suggest?

I consider that the School's standards conform to best practice compared with peer institutions.

5. Administration (please tick one box)

	Yes	Not Entirely
Time available for those marking	X	
Operation of the board of Examiners	X	
Quality of data presented to the Board of Examiners	X	
Handling of special circumstances, e.g. medical, at the Examiners' meeting	X	
Other, <i>please specify</i>		

**Please comment on the administration of the assessment process.
If you answered "Not entirely" in question 2, what improvements would you suggest?**

This year several significant errors occurred on the final examination papers. This is an area where the School should tighten up its practices. Individual examiners may need to be reminded of the importance of producing error-free papers, and that the external examiners are not proofreaders of last resort.

The operation of the Board of Examiners was satisfactory. The existence of the pre-Board meeting seems to have had the desired effect of allowing the main board adequate time to deal with its main objectives. The pre-Board meeting should be retained in future years.

I think that it would be possible to improve somewhat the quality of data presented to the board. For example, it is desirable for last five year's average course marks for the individual modules to be made available to the external examiners. This would better enable us to contextualise the performance in any one year against longer-term trends.

I am further satisfied that special circumstances were handled with appropriate levels of care and sensitivity.

6a. General Comments Years 1 & 2 (if applicable)

The University would welcome your views on any relevant issues that you would like to address. You are not expected to cover all issues in each report. Fuller remarks in the final year of your appointment would be appreciated. In particular, you are invited to comment on:

The compatibility of standards with other institutions;

The extent to which the degrees and courses examined meet their stated aims and objectives;

Whether the standards set are appropriate for the awards, or award elements, by reference to published national subject benchmarks, the national qualifications frameworks, institutional programme specifications and other relevant information;

Whether the assessment process ensured equity of treatment for students;

The whole programme of study from first year to graduation, if appropriate;

Any cases of innovative or particularly good practice which you wish to highlight from any aspect of the provision covered above, i.e. information received, types of assessment, assessment criteria, administration or quality and standards.

Please feel free to attach additional sheets

Overall I consider that the School's standards are in line with comparable institutes, and that the School's examination procedures deliver a robust and rigorous assessment of the students' abilities.

I am satisfied that every effort has been taken to ensure the fair and equitable treatment of all students.

The staff of the School involved in teaching and the examination process should be congratulated for their high degree of professionalism, and for a highly satisfactory outcome as measured in the performance of the students.

6b. General Comments Years 3, 4 and Masters (including UG Year 5 and MSc)

Please feel free to attach additional sheets

Thank you for completing this form.

**Please return it to the Head of College of Science and Engineering at the address on
page 2**



THE UNIVERSITY *of* EDINBURGH

**College of Science
and Engineering**

**External Examiner Report Form
Undergraduate and Postgraduate Taught Provision**

Notes for the External Examiners

Completion of report

Thank you for acting as an External Examiner. The University values and takes seriously External Examiners' reports. Please complete a separate form for each Board of Examiners with which you have been involved. In accordance with the UK Quality code Chapter B7: External Examining, this form requests your comment and recommendations on the assessment process. If there is insufficient space for your comments in any section please continue on a separate sheet. Please do not identify individual students or members of staff in this report.

Where to send your report

Where possible, please email your completed report by 31 July, for Undergraduate Taught provision, 30 November, Postgraduate taught provision to: deanqa.sce@ed.ac.uk

If only a hard copy is possible please send it to:

Dean of Quality Assurance
College of Science and Engineering
University of Edinburgh
Weir Building
The King's Building
West Mains Road
Edinburgh
EH9 3JY

Concerns

Should you wish to comment in confidence to the Head of College, please do so in a separate letter. If the College response does not satisfy your concern, please comment to:

Assistant Principal for Academic Standards and Quality Assurance
The University of Edinburgh
29 Buccleuch Place
Edinburgh EH8 9JS

The Assistant Principal will respond in writing, outlining any actions to be taken as a result. If you

have a serious concern relating to systemic failings with the academic standards of a programme or programmes and have exhausted all procedures internal to the University, you may invoke the Quality Assurance Agency's concerns scheme or inform the relevant professional, statutory or regulatory body.

Fee Payment

External Examiners' fees are paid annually, after receipt of your completed report. The University's Finance Department will make payment into your bank account by the end of the month provided that they have received authorisation from College Offices by the 5th of that month. If you have not received payment when expected, please contact the relevant College Office.

Guidance Documents

- University's Taught Assessment Regulations

<http://www.docs.sasg.ed.ac.uk/AcademicServices/Regulations/TaughtAssessmentRegulations.PDF>

- University's Code of Practice on External Examining

<http://www.docs.sasg.ed.ac.uk/AcademicServices/Quality/QA/Ext%20examiners/CoPEXternalExaminers.pdf>

Action Route for Report

The Dean of Quality Assurance is responsible for receiving this report and monitoring that appropriate action is taken. The report will also be seen by the Head of School or their representative for comment. The College Quality Assurance Committee monitors that appropriate action has been taken on External Examiners' comments and considers comments and recommendations from reports. The Committee provides an annual report on External Examiner reports to the Senate Quality Assurance Committee.

Dissemination of the Report

In addition to the action route described above, External Examiners' reports or summaries of their key themes form part of the material for the University's periodic internal subject reviews, and may be made available to appropriate professional, statutory or regulatory bodies. Students have the right to view External Examiners' reports on request to their School, with the exception of any confidential reports made directly, and separately, to the Head of the College or the Assistant Principal Academic Standards and Quality Assurance.

External Examiner Report Form

1. Name and address of External Examiner

Professor Des McMorrow



2. Programme(s) examined

BSc and MPhys in Physics, Computer Science and Physics, Mathematics and Physics

3. Course(s) examined

4. Dates of visits

12 April 2013

4-6 June 2013

5. Year of examiner (please tick according to the number of years you have examined the programme/course)

Year 1

☐

Year 2

☐

Year 3

☒

Year 4

☐

Year 5

☐

6. Provision of information Did you receive adequate and timely information about:	
The programme and supporting documentation, including relevant regulations?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Marking schemes, including the University Common Marking Schemes: http://www.ed.ac.uk/schools-departments/registry/exams/regulations/common-marking-scheme	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Draft examination papers	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Assessed work examples, including borderline candidates and those awarded distinction?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Arrangements for meetings of Boards of Examiners?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

7. Please provide comment and/or recommendations regarding provision of information. If you answered 'no' to any of the question, please state the reason why.

The information provided was in general both adequate and timely.

However, there was a specific issue with the poor reproduction of model answers for some of the examination papers (Classical electrodynamics Condensed Matter Physics, Modelling and Visualisation in Physics Nuclear Physics) which made it difficult to assess those papers. A related issue was annotation by internal vetters on some model answers, again detracting from their legibility.

For the pre-board meeting in the spring it would be helpful if prior to our arrival in Edinburgh the School could provide a list of what actions had been taken in response to our comments on the draft examination papers.

8. The assessment process	
Was the level of assessment appropriate to the programme?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were the assessment methods appropriate to the programme?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Was the marking scheme appropriate to the assessment?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were you able to fulfil your role in relation to the coursework element of the examination?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were satisfactory arrangements made for the conduct of practical examinations, including your participation where appropriate?	YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Were the internal moderation procedures satisfactory?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

Was the standard of marking satisfactory?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Was the feedback provided to students of sufficient quality?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

9. Please provide comment and/or recommendations regarding the assessment process

Overall I am positively impressed by the efforts made by the School to put in place a range of assessments that are a robust and fair test of the students' understanding and achievements.

One specific issue raised by myself (and other external examiners) is the structure of some level 10 and 11 examination papers. For these, the students are required to answer two out of three questions. Designing an examination paper that can cover the entire course in just three questions is a considerable challenge to my mind, and the evidence is that this often results in questions that are overly long, complex and inhomogeneous. A better approach might be to require the students to answer three from five – I have suggested this in my previous two reports.

As far as feedback to the students is concerned, the Exam Feedback Forms are an appropriate tool both for the External Examiners and to inform students of the general performance in exams.

10. Board of Examiners meetings - arrangements

Were you invited to attend the meetings of the Board(s) of Examiners?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were you given sufficient notice of the meetings of the Board(s) of Examiners?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
If the Board of Examiners was not convened, were you satisfied with the alternative arrangements?	YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
If you were unable to attend the Board of Examiners meeting in person but participated by other means, were you satisfied that arrangements allowed you to contribute fully?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

11. Please provide comment and/or recommendations regarding arrangements for meetings of the Board of Examiners

The arrangements for the BOAs continue to improve year on year. This year the main senior and junior honours boards in Physics were run with great efficiency and fairness.

12. Board of Examiners meetings – operation

Were assessment processes, including the operation of the Board(s) of Examiners, carried out in accordance with the University's	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
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regulations and procedures?	
Were procedures governing special circumstances, academic misconduct(?) and borderline performance considered fairly and equitably, applying University regulations?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were you satisfied with the recommendations of the Board(s) of Examiners?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

13. Please provide comment and/or recommendations regarding the operation of Board of Examiners meetings

At this stage, it is difficult to think of ways to improve the operation of the BOA meetings.

In terms of the workload for external examiners, I believe it would be desirable to compress the meetings into two rather than three days, but I appreciate that this may not be achievable in practice.

14. Academic Standards

Are the programme and its component parts consistent with the degree aims and objectives, current, and aligned with the relevant subject benchmark statement? http://www.qaa.ac.uk/AssuringStandardsAndQuality/subject-guidance/Pages/Subject-benchmark-statements.aspx	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were you consulted on or kept informed of the introduction of new courses or other changes to the curriculum?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Are there any areas you would like to comment on regarding the requirements of relevant professional bodies? University of Edinburgh professional bodies database: http://www.scripts.sasg.ed.ac.uk/academicservices/ROPSARB/ROPSARBsearch.cfm	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A <input type="checkbox"/>

15. Please provide comment and/or recommendations regarding the requirements of relevant professional bodies.

It is important that the structure and delivery of the courses are compliant with the requirements of the Institute of Physics. This is not something that we had the time to consider in detail, but I believe the School has undergone re-accreditation recently.

16. Assessment

Are the assessment criteria, marking schemes and arrangements for classification set at the appropriate level?

YES ☒ NO ☐ N/A ☐

Are standards and student performance comparable to those of other institutions of which you have experience?

YES ☒ NO ☐ N/A ☐

17. Please provide comment and/or recommendations regarding academic standards. Please include where relevant comment/recommendations regarding any PSRB requirements.

Overall, I believe that the standards and student performance match or exceed those of other institutions with which Edinburgh would want to be compared. In some cases, particularly theoretical physics, I consider that the attainment level of the students is higher than that achieved in many other peer institutions.

This year in senior honours there was a notable increase in the number of first class degrees awarded. My judgement is that this properly reflects the capabilities and achievement of the students and does not represent a reduction in standards. Both the students and the School are to be congratulated.

18. Collaborative elements: standards

If any of the candidates being assessed for a University of Edinburgh degree undertook part of their course/programme at another institution, were academic standards in this element comparable to those at the University of Edinburgh?

YES ☐ NO ☐ N/A ☒

19. If relevant, please provide comment and/or recommendations regarding standards in collaborative elements of the course/programme

N/A

20. Issues raised in previous reports

Have issues raised by you in previous reports been addressed, or are being addressed, to your satisfaction?

YES ☐ NO ☒ N/A ☐

21. Please provide comment and/or recommendations regarding issues raised by you in previous reports

The School has shown itself to be receptive to my comments and recommendation raised in previous reports. The one exception is perhaps the restructuring of the level 10 and 11 papers as described in section 9 above.

22. Programme development

Please describe or list good practice and innovation in learning, teaching and assessment which you have observed as External Examiner and which it would be valuable to draw to the attention of the wider University and to external audiences

It is worth drawing attention to the MPhys projects which are regularly of a very high quality.

This results from a high degree of engagement from the staff, in terms of offering interesting projects, and from the students who are motivated to put in all of the hard work.

The assessment process is particularly well thought through and delivers fair outcomes

23. Within the stated programme aims and outcomes, what recommendations, if any, would you make to enhance the student learning experience on the programme?

On the basis of our annual meeting with the undergraduates (in the period prior to the examinations), and from the examination process itself, I note the following:

- Student engagement. Overall the students reported that they felt very engaged in the course, which is generally corroborated by the outcomes. They also reported that they were generally happy with the balance between the different components of the course, i.e. labs, lectures, etc. One potential issue here is a tendency for a fraction of the students to disengage with specific courses, and this tends to propagate from year to year.
- Course structure. Again overall satisfaction here, although some students - those on the Mathematical/Theory degrees – complained that they were forced to miss out on core courses such as Thermodynamics and Condensed Matter. This should be looked at.
- Options choice. Some students reported that they would have benefitted from more guidance in choosing course options, including better interaction with the personal tutors.

This year a report was drafted of the meeting between the external examiners and the students. With the agreement of the students (and after their names are removed) it might be useful to distribute this feedback to the academic staff as it contains some insightful comments.

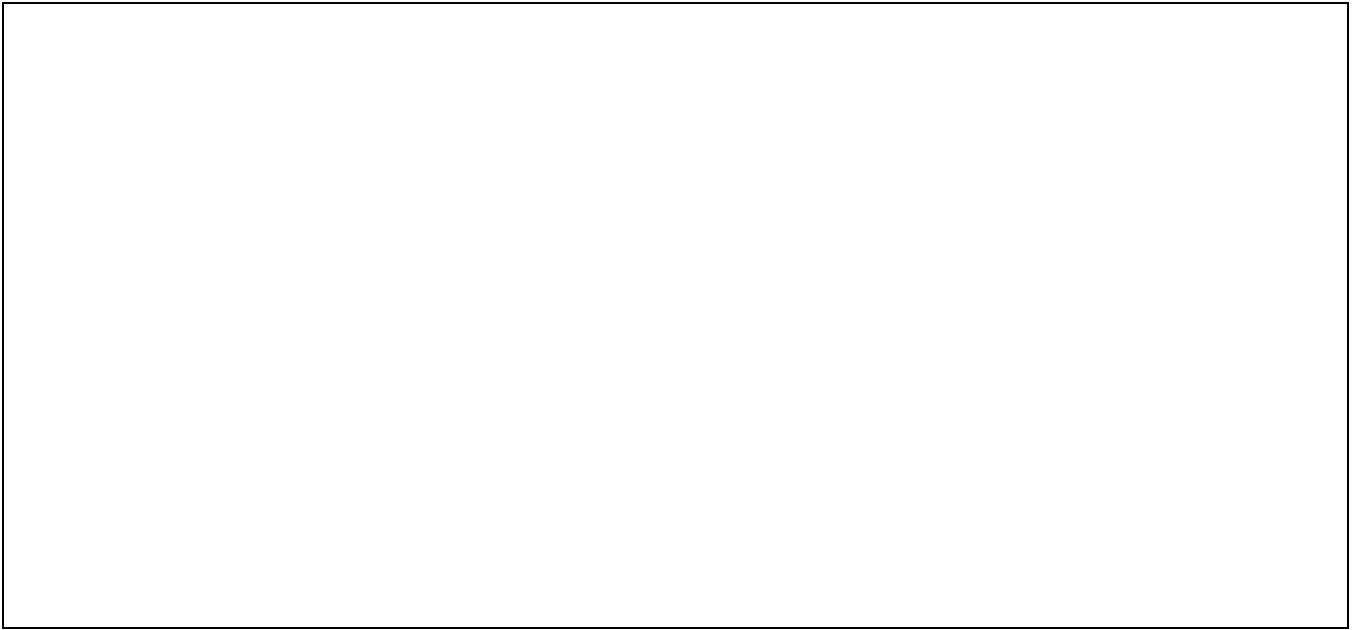
24. Overview of term of office

On completion of your term of office, please provide an overview, including recommendations where relevant. [Relates only to external examiners in their last year of appointment.]

My considered opinion is that the School of Physics and Astronomy at Edinburgh University manages its examination processes to the highest possible standards.

Throughout my time as External Examiner I have been impressed by the dedication and professionalism of everyone involved, both academic and support staff.

Students attending Edinburgh are well served by the examinations and can be assured that when they graduate their degrees are of equal value to other leading academic institutions in the UK.





THE UNIVERSITY *of* EDINBURGH

**College of Science
and Engineering**

**External Examiner Report Form
Undergraduate and Postgraduate Taught Provision**

Notes for the External Examiners

Completion of report

Thank you for acting as an External Examiner. The University values and takes seriously External Examiners' reports. Please complete a separate form for each Board of Examiners with which you have been involved. In accordance with the UK Quality code Chapter B7: External Examining, this form requests your comment and recommendations on the assessment process. If there is insufficient space for your comments in any section please continue on a separate sheet. Please do not identify individual students or members of staff in this report.

Where to send your report

Please email your completed report to: deanga.sce@ed.ac.uk

Please return reports covering Undergraduate Taught provision by 31 July

Please return reports covering Postgraduate Taught provision by 30 November

Electronic copies are preferred, but hard copy reports can be sent to:

Dean of Quality Assurance
College of Science and Engineering
University of Edinburgh
Weir Building
The King's Building
West Mains Road
Edinburgh
EH9 3JY

Concerns

Should you wish to comment in confidence to the Head of College, please do so in a separate letter. If the College response does not satisfy your concern, please comment to:

Assistant Principal for Academic Standards and Quality Assurance
The University of Edinburgh
29 Buccleuch Place
Edinburgh EH8 9JS

The Assistant Principal will respond in writing, outlining any actions to be taken as a result. If you have a serious concern relating to systemic failings with the academic standards of a programme or programmes and have exhausted all procedures internal to the University, you may invoke the Quality Assurance Agency's concerns scheme or inform the relevant professional, statutory or regulatory body.

Fee Payment

External Examiners' fees are paid annually, after receipt of your completed report. The University's Finance Department will make payment into your bank account by the end of the month provided that they have received authorisation from College Offices by the 5th of that month. If you have not received payment when expected, please contact the relevant College Office.

Guidance Documents

- University's Taught Assessment Regulations

<http://www.docs.sasg.ed.ac.uk/AcademicServices/Regulations/TaughtAssessmentRegulations.PDF>

- University's Code of Practice on External Examining

<http://www.docs.sasg.ed.ac.uk/AcademicServices/Quality/QA/Ext%20examiners/CoPEXternalExaminers.pdf>

Action Route for Report

The Dean of Quality Assurance is responsible for receiving this report and monitoring that appropriate action is taken. The report will also be seen by the Head of School or their representative for comment. The College Quality Assurance Committee monitors that appropriate action has been taken on External Examiners' comments and considers comments and recommendations from reports. The Committee provides an annual report on External Examiner reports to the Senate Quality Assurance Committee.

Dissemination of the Report

In addition to the action route described above, External Examiners' reports or summaries of their key themes form part of the material for the University's periodic internal subject reviews, and may be made available to appropriate professional, statutory or regulatory bodies. Students have the right to view External Examiners' reports on request to their School, with the exception of any confidential reports made directly, and separately, to the Head of the College or the Assistant Principal Academic Standards and Quality Assurance.

External Examiner Report Form

1. Name and address of External Examiner

Professor George Lafferty, School of Physics and Astronomy, University of Manchester, Manchester M13 9PL

2. Programme(s) examined

BSc and MPhys degrees in Physics and Astronomy

3. Course(s) examined

4. Dates of visits

11 April 2014

4 – 6 July 2014

5. Year of examiner (please tick according to the number of years you have examined the programme/course)

Year 1	<input checked="" type="checkbox"/>	Year 2	<input type="checkbox"/>	Year 3	<input type="checkbox"/>	Year 4	<input type="checkbox"/>	Year 5	<input type="checkbox"/>
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6. Provision of information

Did you receive adequate and timely information about:

The programme and supporting documentation, including relevant regulations?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
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Marking schemes, including the University Common Marking Schemes: http://www.ed.ac.uk/schools-departments/student-administration/exams/regulations/common-marking-scheme	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
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Draft examination papers	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
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Assessed work examples, including borderline candidates and those awarded distinction?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
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Arrangements for meetings of Boards of Examiners?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
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7. Please provide comment and/or recommendations regarding provision of information. If you answered 'no' to any of the question, please state the reason why.

Information was provided to me as and when needed. I was kept informed about when I should expect draft examination papers and when my feedback would be expected. Overall I think the system was fine.

8. The assessment process

Was the level of assessment appropriate to the programme?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
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Were the assessment methods appropriate to the programme?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
---	---	-----------------------------	------------------------------

Was the marking scheme appropriate to the assessment?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
---	---	-----------------------------	------------------------------

Were you able to fulfil your role in relation to the coursework element of the examination?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	N/A <input type="checkbox"/>
---	---	-----------------------------	------------------------------

Were satisfactory arrangements made for the conduct of practical examinations, including your participation where appropriate?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>
--	------------------------------	-----------------------------	---

Were the internal moderation procedures satisfactory?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Was the standard of marking satisfactory?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Was the feedback provided to students of sufficient quality?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

9. Please provide comment and/or recommendations regarding the assessment process

Assessment methods include written examinations for lecture courses and continuous assessment for laboratory and projects. The quality of the assessment seems to be generally very good overall. Such a mix of methods, with emphasis on formal examinations to assess learning outcomes for lecture courses, and more weight in the overall assessment in later years of the degree from continuously assessed project work, is entirely appropriate for degree programmes in physics.

10. Board of Examiners meetings - arrangements

Were you invited to attend the meetings of the Board(s) of Examiners?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were you given sufficient notice of the meetings of the Board(s) of Examiners?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
If the Board of Examiners was not convened, were you satisfied with the alternative arrangements?	YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
If you were unable to attend the Board of Examiners meeting in person but participated by other means, were you satisfied that arrangements allowed you to contribute fully?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

11. Please provide comment and/or recommendations regarding arrangements for meetings of the Board of Examiners

Arrangements for the meetings seemed fine. For Board meetings without much business I was briefed beforehand and was able to join by Skype, which worked very well. I attended personally for the principal Board meetings.

12. Board of Examiners meetings – operation

Were assessment processes, including the operation of the Board(s) of Examiners, carried out in accordance with the University's regulations and procedures?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were procedures governing special circumstances, academic misconduct(?) and borderline performance considered fairly and	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

equitably, applying University regulations?	
Were you satisfied with the recommendations of the Board(s) of Examiners?	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

13. Please provide comment and/or recommendations regarding the operation of Board of Examiners meetings

In my view, the examiners dealt fully and fairly with the business, taking plenty of time to look at individual students whose results put them close to borderlines for progression or degree classes. Comments from external examiners, who had inspected students' work, were taken into account. Where there were mitigating circumstances, all relevant factors were weighed in the decisions.

14. Academic Standards

Are the programme and its component parts consistent with the degree aims and objectives, current, and aligned with the relevant subject benchmark statement? http://www.qaa.ac.uk/AssuringStandardsAndQuality/subject-guidance/Pages/Subject-benchmark-statements.aspx	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>
Were you consulted on or kept informed of the introduction of new courses or other changes to the curriculum?	YES <input type="checkbox"/> NO <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Are there any areas you would like to comment on regarding the requirements of relevant professional bodies? University of Edinburgh professional bodies database: http://www.scripts.sasg.ed.ac.uk/academicservices/ROPSARB/ROPSARBsearch.cfm	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> N/A <input type="checkbox"/>

15. Please provide comment and/or recommendations regarding the requirements of relevant professional bodies.

Most of the degree programmes are accredited by the Institute of Physics. With joint honours (e.g. Physics and Music) at BSc level, there is insufficient space in the degree programme to cover all requirements in physics for accreditation.

16. Assessment

Are the assessment criteria, marking schemes and arrangements for classification set at the appropriate level?

YES ☒ NO ☐ N/A ☐

Are standards and student performance comparable to those of other institutions of which you have experience?

YES ☒ NO ☐ N/A ☐

17. Please provide comment and/or recommendations regarding academic standards. Please include where relevant comment/recommendations regarding any PSRB requirements.

As far as I can judge from inspection of examination scripts and project reports, and from speaking to a number of undergraduate students, the academic standards in Physics at Edinburgh are among the best in the country.

I would flag two areas for the School to consider, where changes might lead to higher academic standards in the degrees.

(i) For students who spend one year of their degree programme abroad, there is no contribution of marks to the overall degree mark. In my (limited) experience this is unusual. I have direct knowledge of several physics departments, including my own, where marks from abroad count in the final degree mark, both for Erasmus-exchange students and for those who study in English in North America or elsewhere. Students abroad may achieve higher standards if their marks count towards their degree.

(ii) There seems to be little or no opportunity for students to have interviews that count for assessment. Most departments of physics use interviews to aid assessment for laboratory and project work. Such interviews, in addition to helping improve assessments, help students develop important skills and provide an opportunity for academics to give frank, on-the-spot feedback to students on their performance.

18. Collaborative elements: standards

If any of the candidates being assessed for a University of Edinburgh degree undertook part of their course/programme at another institution, were academic standards in this element comparable to those at the University of Edinburgh?

YES ☐ NO ☐ N/A ☒

19. If relevant, please provide comment and/or recommendations regarding standards in collaborative elements of the course/programme

N/A

20. Issues raised in previous reports

Have issues raised by you in previous reports been addressed, or are being addressed, to your satisfaction?

YES ☐ NO ☐ N/A ☒

21. Please provide comment and/or recommendations regarding issues raised by you in previous reports

N/A

22. Programme development

Please describe or list good practice and innovation in learning, teaching and assessment which you have observed as External Examiner and which it would be valuable to draw to the attention of the wider University and to external audiences

I would commend the Physics Skills modules, which help consolidate students' learning and understanding in all areas of physics. Such "general physics" papers enhance the quality and value of the physics degrees from Edinburgh.

23. Within the stated programme aims and outcomes, what recommendations, if any, would you make to enhance the student learning experience on the programme?

The learning experience for the students is already very good. I have no suggestions.

24. Overview of term of office

On completion of your term of office, please provide an overview, including recommendations where relevant. [Relates only to external examiners in their last year of appointment.]



This is a 2014/15 UG report for the School of Physics and Astronomy, College of Science and Engineering.

This report corresponds to the first year of your appointment.

This report was submitted on 04-Jun-2015.

Programmes examined

UTPHYSB: Physics (BSc Hons)

UTPHYSM: Physics (MPhys)

UTPHYME: Physics with Meteorology (BSc Hons)

UTMPHYPHYM1F: Physics with Meteorology (MPhys)

UTPHAMU: Physics and Music (BSc Hons)

UTCOPHB: Computational Physics (BSc Hons)

UTCOPHM: Computational Physics (MPhys)

UTMPHYPHY1F: Physics with Year Abroad (MPhys)

Courses examined

PHYS10026: Atomic and Molecular Physics

PHYS11040: Biological Physics

PHYS09057: Computer Modelling

PHYS10100: Data Acquisition and Handling

PHYS09060: Electromagnetism

PHYS09050: Foundations of Electromagnetism

PHYS09051: Foundations of Quantum Mechanics

PHYS09054: Fourier Analysis

PHYS09055: Fourier Analysis and Statistics

PHYS11011: Group Project

PHYS10099: Introduction to Condensed Matter Physics

PHYS11044: Lasers and Applications

PHYS10035: Modelling and Visualisation in Physics

PHYS11041: Nuclear Physics

PHYS11053: Nuclear Astrophysics

PHYS10090: Numerical Recipes

PHYS11042: Particle Physics

PHYS10042: Physics Skills

PHYS11018: Physics Skills (MPhys 5)

PHYS09058: Quantum Computing Project

PHYS09053: Quantum Mechanics

PHYS10043: Quantum Physics

PHYS10096: Relativity, Nuclear and Particle Physics

PHYS09056: Research Methods in Physics

PHYS10084: Science Education Placement: Physics

PHYS10086: Senior Honours Project (Physics & Astronomy) Semester 1

PHYS10087: Senior Honours Project (Physics & Astronomy) Semester 2

PHYS10097: Soft Condensed Matter Physics

PHYS10095: Solid State Physics

PHYS11024: Statistical Physics

PHYS10046: Team Review Project

PHYS09061: Thermal Physics

PHYS09021: Thermodynamics

External Examiner



Prof Stewart Clark, , Durham University

Key Contact

██████████, School of Physics and Astronomy

██████████@ed.ac.uk

Academic Response Coordinator

Professor Judy Hardy, School of Physics and Astronomy

0131 650 6716

j.hardy@ed.ac.uk



1) Provision of Information

1.1) Did you receive adequate and timely information about the programme(s) and/or courses, including supporting documentation?

Yes.

1.2) Did you receive adequate and timely information about draft examination papers, coursework or feedback?

Yes.

1.3) Did you receive adequate and timely information about assessed work examples, including borderline candidates and those awarded distinction?

Yes.

1.4) Did you receive adequate and timely information about arrangements for meetings of Boards of Examiners?

Yes.

1.5) Did you receive adequate and timely information about the introduction of new courses or other changes to the curriculum?

N/A

Your theme commendation for Provision of Information:

The information I received concerning the degree structure, courses, exams, etc were all fine. Just one request for improvement: I need a longer time between receiving the exam papers for review and the meeting in Edinburgh to discuss them. This year I received the papers on Fri 27 March for a meeting on Mon 30 March. At least a week, preferably two, is required. Also, would it be possible to obtain feedback on which comments or recommendations I make on the exam papers are carried out?

2) The Assessment Process

2.1) Was the level of assessment appropriate to the Scottish Credit and Qualifications Framework level of the programme(s) or courses?

Yes.

2.2) Were the assessment methods appropriate to the programme(s) or courses?

Yes.

2.3) Were the internal moderation procedures satisfactory?

Yes.

2.4) Was the marking, including the process of arriving at the final marks, fair and consistent?

Yes.

2.5) Was feedback provided to students helpful and appropriate?

Yes.

2.6) Were the processes for assessment and determination of the award(s) fair and sound across the provision?

Yes.

2.7) Were satisfactory arrangements in place to enable you to fulfil your role in relation to the coursework element of the assessments?

Yes.

2.8) Were satisfactory arrangements in place for the conduct of practical assessments, including your participation, where appropriate?

N/A

Your theme commendation for The Assessment Process:

The level of the courses and manner in which they are assessed are all to a very high standard. The methods are all appropriate (a nice balance of exams, project/lab work, weekly homeworks, etc). This gives an excellent overview of the all round ability of the students. However, when marking exams I'd like to see the range of average marks between courses come a little closer. At the moment average class marks for modules vary from 50's to 80's so bringing the outliers in a bit would be better. This gives the impression that, within a given year, there are "easy" and "difficult" courses which there really shouldn't be; courses at a given level should all be approximately the same standard. Also, the distribution of marks in some modules (eg. experimental physics) is rather narrow. The full range of marks should be used; the best students should be able to get up to 100% in such assessments (and, of course, the opposite for weaker performing students).



3) Board of Examiners Meetings

3.1) Was the operation of the Board of Examiners carried out in accordance with the University's regulations and procedures?

Yes.

3.2) Were procedures governing special circumstances, academic misconduct and borderline performance considered fairly and equitably, applying University regulations?

Yes.

3.3) Were you satisfied with the decisions of the Board of Examiners?

Yes.

3.4) If you were unable to attend the Board of Examiners meeting in person but participated by other means, were you satisfied that the arrangements allowed you to contribute fully?

N/A

Your theme commendation for Board of Examiners Meetings:

I attended the BoE meetings; I found that the discussions were appropriate and very careful attention was applied to all students, in particular those students at borderlines and those with special circumstances. I have just one suggestion; there were times when the recommendation for students with special circumstances was that it was particularly considered if at borderline or if a module was failed. This is fine at final degree classification, but I would like to make sure that for progression students it is clear that consideration of special circumstances is carried forward to future BoE meetings where the student may be at a borderline at that point.

4) Academic Standards

4.1) Are the courses and its component parts consistent with the degree aims and objectives, relevant and up-to-date, and aligned with the relevant subject benchmark statement?

Yes.

4.2) Are the programme(s) and its/their component parts consistent with the degree aims and objectives, relevant and up-to-date, and aligned with the relevant subject benchmark statement?

Yes.

4.3) Are the standards set for the award(s) consistent and appropriate?

Yes.

4.4) Are you satisfied the requirements of relevant professional bodies are being met?

Yes.

4.5) Were the assessment criteria, marking schemes and arrangements for degree classifications appropriately applied?

Yes.

4.6) Are standards comparable to those of other institutions of which you have experience?

Yes.

Your theme commendation for Academic Standards:

The academic standards are very high, comparable to that at the UK's best Universities, and I'm pleased to see that there are a significant number of students achieving very high marks in their work. The Physics department is attracting excellent students and they are performing very well in an excellent degree structure.

The Physics Department offers a large number of flavours of Physics degrees (eg. theoretical, mathematical, computational, with maths, with music, with meteorology, etc) but a few of those degree programmes only have a small number of students per year which carried a significant administrative and teaching load. This is not a criticism, just an observation.



5) Issues raised in previous reports

5.1) Have issues raised in previous external examiner reports been addressed, or are being addressed, to your satisfaction?

Yes.

Your theme commendation for Issues raised in previous reports:

This is my first year as external examiner so have no comments here.



6) Programme Development and Enhancement

6.1) Please describe or list good practice and innovation in learning, teaching and assessment that you have observed as External Examiner that would be valuable to draw to the attention of the wider University.

Your commendation:

I find that there is a good balance of assessment activities such as exams, projects, lab work, tutorials, etc that is completely appropriate for the type of degrees being offered. I have no major changes or recommendations to make in this regard.

6.2) Within the stated programme aims and outcomes, what recommendations, if any, would you make to enhance the student learning experience on the programme?

Your suggestion:

In discussions with various members of staff, it was indicated that students possibly felt that they were not getting as much feedback as they would have liked. It might be worth seeing if the current feedback structures are fulfilling the requirement.



7) Term of Office

7.1) If this is your first year in this appointment, do you consider you received an effective induction?

Your comment:

Yes.

7.2) If this is your last year of appointment, please provide an overview of your term of office, including recommendations, where relevant.

Your comment:

N/A.



This is a 2015/16 UG report for the School of Physics and Astronomy, College of Science and Engineering.

This report corresponds to the second year of your appointment.

This report was submitted on 18-Jul-2016.

Programmes examined

UTPHYSB: Physics (BSc Hons)

UTPHYSM: Physics (MPhys)

UTPHYME: Physics with Meteorology (BSc Hons)

UTMPHYPHYM1F: Physics with Meteorology (MPhys)

UTPHAMU: Physics and Music (BSc Hons)

UTCOPHB: Computational Physics (BSc Hons)

UTCOPHM: Computational Physics (MPhys)

UTMPHYPHY1F: Physics with Year Abroad (MPhys)

Courses examined

PHYS10026: Atomic and Molecular Physics

PHYS11040: Biological Physics

PHYS09057: Computer Modelling

PHYS10100: Data Acquisition and Handling

PHYS09060: Electromagnetism

PHYS09050: Foundations of Electromagnetism

PHYS09051: Foundations of Quantum Mechanics

PHYS09054: Fourier Analysis

PHYS09055: Fourier Analysis and Statistics

PHYS11011: Group Project

PHYS10099: Introduction to Condensed Matter Physics

PHYS11044: Lasers and Applications

PHYS10035: Modelling and Visualisation in Physics

PHYS11041: Nuclear Physics

PHYS11053: Nuclear Astrophysics

PHYS10090: Numerical Recipes

PHYS11042: Particle Physics

PHYS10042: Physics Skills

PHYS09058: Quantum Computing Project

PHYS09053: Quantum Mechanics

PHYS10043: Quantum Physics

PHYS10096: Relativity, Nuclear and Particle Physics

PHYS09056: Research Methods in Physics

PHYS10084: Science Education Placement: Physics

PHYS10086: Senior Honours Project (Physics & Astronomy) Semester 1

PHYS10087: Senior Honours Project (Physics & Astronomy) Semester 2

PHYS10097: Soft Condensed Matter Physics

PHYS10095: Solid State Physics

PHYS11024: Statistical Physics

PHYS10046: Team Review Project

PHYS09061: Thermal Physics

PHYS09021: Thermodynamics

PHYS11055: Geometry and Physics of Soft Condensed Matter

PHYS11054: Advanced Materials Physics

PHYS10106: Nuclear and Particle Physics



PHYS11052: Quantum Condensed Matter Physics

PHYS09025: Experimental Physics (CP10)

PHYS09049: Experimental Physics

PHYS11016: MPhys Project

PHYS11049: MPhys Project Presentation

External Examiner

Prof Stewart Clark, , Durham University

Department Of Physics, University Of Durham, Science Labs, South Road, Durham, , DH1 3LE

+44 (0)191 334 3572

x.x.xxxxx@xxxxxx.xx.xx

Key Contact

██████████, School of Physics and Astronomy

██████████@ed.ac.uk

Academic Response Coordinator

Prof Judy Hardy, School of Physics and Astronomy

0131 650 6716

j.xxxxx@xx.xx.xx



1) Provision of Information

1.1) Did you receive adequate and timely information about the programme(s) and/or courses, including supporting documentation?

Yes.

1.2) Did you receive adequate and timely information about draft examination papers, coursework or feedback?

Yes. Your commendation:

This is a great improvement on last year when I was given very little time between received the exam papers and having to comment on them. This year the time was appropriate.

1.3) Did you receive adequate and timely information about assessed work examples, including borderline candidates and those awarded distinction?

No. Your issue:

I did not receive the marks spreadsheet until just before the main Board of Examiners' meeting despite being in the department from mid-morning the day before. Therefore while looking at exam scripts, projects, lab work, etc I had no idea which students were on borderlines. This means I was unable to give more informed opinion about borderline students during the main meeting.

1.4) Did you receive adequate and timely information about arrangements for meetings of Boards of Examiners?

Yes.

1.5) Did you receive adequate and timely information about the introduction of new courses or other changes to the curriculum?

Yes.

2) The Assessment Process

2.1) Was the level of assessment appropriate to the Scottish Credit and Qualifications Framework level of the programme(s) or courses?

Yes.

2.2) Were the assessment methods appropriate to the programme(s) or courses?

Yes.

2.3) Were the internal moderation procedures satisfactory?

No. Your issue:

It was satisfactory in all but a few occasions. In particular the computational module where the average mark was almost 90%. The assessment mechanism needs changed next year so that the full marking range is used and brought into line with other modules. It is unfair to students not taking this module who are assessed in a (satisfactory) manner. Additionally, the modules assessed by the marking of reports (e.g. lab modules), although averaging at about the right place have a very narrow distribution. This means that the best students doing experimental work cannot gain mark as high as a student doing mathematical modules (similar for give lower marks to weaker lab students).

2.4) Was the marking, including the process of arriving at the final marks, fair and consistent?

Yes. Your suggestion:

Fair and consistent, except for the issues raised in 2.3.

2.5) Was feedback provided to students helpful and appropriate?

Yes.

2.6) Were the processes for assessment and determination of the award(s) fair and sound across the provision?

Yes. Your suggestion:

As requested above, I need to know which students are on borderlines well in advance of the main examiners meeting so that I can look through their work and have a more informed judgement on advising the outcome.

2.7) Were satisfactory arrangements in place to enable you to fulfil your role in relation to the coursework element of the assessments?

Yes. Your commendation:

The project reports are of very high quality and consist of a very broad range of topics from which the students can choose. I was impressed with the level of achievement of the students - I think a highlight of the degree. I hope the students also think so!

2.8) Were satisfactory arrangements in place for the conduct of practical assessments, including your participation, where appropriate?

Yes. Your suggestion:

As stated above, using the full width of marking criteria is necessary, particularly to allow excellent lab-based work to be marked on a par with the excellent mathematical work assessed by traditional exams.



3) Board of Examiners Meetings

3.1) Was the operation of the Board of Examiners carried out in accordance with the University's regulations and procedures?

Yes. Your commendation:

I was very pleased to see that, during the examiners' meeting, each student was given the appropriate consideration and that borderline/special circumstance cases were discussed at length so that I was convinced that the correct decision was made in each case.

3.2) Were procedures governing special circumstances, academic misconduct and borderline performance considered fairly and equitably, applying University regulations?

Yes. Your commendation:

Yes, see above.

3.3) Were you satisfied with the decisions of the Board of Examiners?

Yes. Your commendation:

In all cases I was satisfied that the student was considered in a fair, unbiased manner and that the correct decision was obtained

3.4) If you were unable to attend the Board of Examiners meeting in person but participated by other means, were you satisfied that the arrangements allowed you to contribute fully?

N/A

4) Academic Standards

4.1) Are the courses and its component parts consistent with the degree aims and objectives, relevant and up-to-date, and aligned with the relevant subject benchmark statement?

Yes. Your commendation:

The level of the work was whole appropriate for each class/year with a clear set of aims and learning outcomes. The content of the courses were relevant and formed the syllabus that I would expect to see in a high quality Physics department.

4.2) Are the programme(s) and its/their component parts consistent with the degree aims and objectives, relevant and up-to-date, and aligned with the relevant subject benchmark statement?

Yes. Your commendation:

The structure and contents of the degrees are of a very high quality, with a very broad width of subject areas combined with advanced topics that is appropriate and expected for a high quality degree.

4.3) Are the standards set for the award(s) consistent and appropriate?

Yes.

4.4) Are you satisfied the requirements of relevant professional bodies are being met?

Yes. Your suggestion:

Yes, in that the Physics degrees contain the the of material at the expected level to be accredited by the IoP (I assume you are - I didn't ask).

4.5) Were the assessment criteria, marking schemes and arrangements for degree classifications appropriately applied?

Yes.

4.6) Are standards comparable to those of other institutions of which you have experience?

Yes. Your commendation:

The degrees awarded are of a very high standard, which are at the level I would expect from an internationally leading Physics department.



5) Issues raised in previous reports

5.1) Have issues raised in previous external examiner reports been addressed, or are being addressed, to your satisfaction?

Yes. Your suggestion:

I would like to see a wider use of the marking range in some of the modules. It appears difficult (impossible?) for the best students in lab work to get as high a mark as those in theoretical subjects.



6) Programme Development and Enhancement

6.1) Please describe or list good practice and innovation in learning, teaching and assessment that you have observed as External Examiner that would be valuable to draw to the attention of the wider University.

No comment

6.2) Within the stated programme aims and outcomes, what recommendations, if any, would you make to enhance the student learning experience on the programme?

No comment



7) Term of Office

7.1) If this is your first year in this appointment, do you consider you received an effective induction?

No comment

7.2) If this is your last year of appointment, please provide an overview of your term of office, including recommendations, where relevant.

No comment