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Sent by email to M.J.Coe@soton.ac.uk

01 September 2017

Dear Professor Coe,

Re: Institutional Response: External Examiner Annual Report 2016–2017

I am writing further to the receipt of your External Examiner's Report for the MSc in Astrophysics.

Your Report has been considered by the School in accordance with our approved procedures. I am, therefore, now in a position to respond on behalf of the Vice-Chancellor to the main points you had raised.

Issues Highlighted

1. High workload at certain times of the year for students and a lack of co-ordination in the assessment setting process with other MSc programmes
2. Informing incoming students of any necessary pre-requisite knowledge needed particularly for those students who are entering at a later stage in the programme.
3. Low MSc student performance and tensions between UG and MSc students taking the same class.
4. Student expectations of prior learning for the data analysis course.
5. Student perceptions of uneven levels of difficulty between optional modules.

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The following response has been provided on behalf of the School:

1. There are still conflicts between the undergrad (i.e. 3rd and 4th year BSc/Mphys) modules and the overall MSc programme, with intra-year coursework being reasonably balanced (i.e. across all 3rd year courses, as far as is possible given options etc.) but problems arising with the postgraduate (MSc) students suffering from a lack of inter-year coursework scheduling co-ordination (i.e. there is no discussion regarding the setting of CA work between 3rd and 4th year Module Organisers, as this has only arisen as an issue for the MSc students, who are the only ones able to select modules from both years).

The revision of the entire astrophysics undergraduate programme will hopefully address some of these issues, although PGT staff were not involved in this process so there is scope for clashes to occur. However, realistically it is never going to be possible to balance out the CA deadlines etc. across both 3rd and 4th year modules, so the School will make sure that students are made to be aware of this issue, and will keep an eye on the situation.

This issue of work loading (particularly in relation to the 20 credit core module, PXT101) was raised by the MSc Physics external examiner. The PGT co-ordinator will explore the possibility of revaluing the module at 30 credits however consideration must be given to how it may adversely affect the already-limited student choice on the more specialised MSc Compound Semiconductors and MSc Data-Intensive Physics programmes.

The potential complication regarding the impact on the new MSc programmes would apply with a revaluing of the core MSc Astrophysics module (PXT201) with regard to the new MSc Data-Intensive Astrophysics course. However, the increase of the core module to 30 credits would certainly help to reduce the work overload issue (although at the expense of module choices).

2. The revised undergraduate astronomy programme that will run in 2017-2018 (which will see new modules and a better degree of coherence and development in content from year-to-year), and this will hopefully allow us to provide an up-to-date set of pre-requisites to be provided to the students, as it was clear that the "old" modules had been allowed to deviate somewhat from the initial syllabus etc. The new modules will all come with a revised set of learning objectives, pre-requisites etc., which we can distribute to the MSc Astrophysics students on arrival. We have contact information for students who have been put in touch with us directly, but unfortunately we currently have no way to directly contact those other students who have come through the standard Admissions process and been offered places through that route.

Those students with whom we are in contact are sent the module outlines (which includes pre-requisites and other requirements) as soon as possible, and all are informed of the need to gain a level of competency in Python (as

this has been flagged up on many occasions as a very valuable skill that is not obvious to those applying from outside Cardiff University).

3. This issue of the low average pass mark (~46% for the whole group, MPhys and MSc) was raised at the Undergraduate Exam Board. Happily, the MSc students who re-sat this exam have both passed the module now (albeit with their marks capped at 50% to match the MSc pass grade requirement).
4. This module has been a source of concern for the past 2 years, and despite the remedial action taken to try and address the workload issues flagged up in 2015-2016, there remains a significant problem with the “prior knowledge” requirements. This issue was also raised by the MSc Physics external examiner, with the issue is now being addressed by more explicit flagging of the Python requirements earlier in the recruitment process, an FAQ of excellent Internet resources for students to tackle before they come to Cardiff, and one-to-one Python tuition available on request.
5. The uneven difficulty level of some of the elective modules is being addressed at the undergraduate level, with a significant revamping of the whole undergraduate astrophysics programme being undertaken this summer, so the School hopes to see improvement in the balance of these modules in 2017-2018. The discrepancy between modules with very high average marks (e.g. Commercialising Innovation) and those with low averages (e.g. Physics of the Early Universe) has been more marked this year, and this has been noted by the undergraduate teaching team.

The University is pleased to note your positive comments including:

1. your positive indications regarding the programme structure, academic standards and assessment process;
2. positive student perceptions of them programme and the preparation it provides for the next stages of their careers and of the teaching of the “Physics of the Early Universe” in particular.

I hope that you will find this response satisfactory and we thank you for your continued support of the programme.

In order to meet the expectations of the QAA Quality Code, both the External Examiner Annual Report and this Institutional Response will be published on the University website and will be available to all students and staff.

The University’s provision of the formal Institutional Response is not intended to constrain direct communication between schools and their External Examiners. Schools are encouraged to discuss with their External Examiners any matters of detail raised in their Reports and, more widely, any issues impacting on the quality and standards of awards, including possible changes to programmes.

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We are most grateful for your comments and for your support in this matter.

Yours sincerely,



Mr Simon Wright
Academic Registrar