Ollscoil Mhá Nuad

Maynooth University

QUALITY IMPROVEMENT AND ASSURANCE

QUALITY IMPROVEMENT PLAN

DEPARTMENT OF THEORETICAL PHYSICS

ACADEMIC YEAR **2018/2019**

Date   5th February 2021

This plan was approved by the Department of Theoretical Physics at a Staff Meeting held on 29th January 2020.

Institutional/Strategic Recommendations

Number	Recommendation	Additional PRG Comments	Our response
S.1	To systematically review student learning journeys at Faculty level to optimize the provision and student experience.	The multitude of possible paths to a degree makes it difficult to notice and deal with omissions or overlaps. If that huge variety of choice is to be kept then at least the most common paths ought to be mapped and checked for consistency.	This requires a response at Faculty level, especially for General Science. In our view the wide range of choice available in MH201 is a strength of the programme.
S.2	To engage with equality & diversity issues at both Faculty and Departmental level.	The lack of female students and staff is very concerning, and a targeted action plan ought to be developed. One item on such an action plan could be e.g. the creation of a women students' forum to network, support each other, and exchange ideas. Another idea might be, potentially in association with appropriate University offices for Equality and Diversity, to introduce a Women in Science lecture or seminar series that includes a separate presentation in which the speaker recounts her career journey	There is a group working on a Women in Science lecture series and support the development of a wider action plan, but this would require resources to be allocated at both Faculty and University level. A SALI Professorship would be a valuable part of such a programme, but this would require University-level support. We have made a conscious effort to increase the number of female seminar speakers, and in the last year have recruited two female PhD students.

		in science and how she managed to overcome challenges.	
S.3	For the University to continue with their good practice of providing training for Heads of Departments.		Agreed.
S.4	For the University to support the change-over of the Department's PC systems from Slackware to an easier-to-maintain Linux distribution like e.g. Ubuntu.		Some help was given for this through secondment of a staff member from Engineering. The Department still does not have any long-term computer support, which is a significant problem for us.
S.5	For Human Resources and the Department to continue their dialogue on best practice regarding the employment of occasional staff.		Since the Quality Review the University introduced wide-ranging changes in employment practice which included better contracts and limits on workload for PG students. We support these moves, although they have increased the pressure on our budget.
S.6	For the University's Alumni Services to help the Department to keep track of and engage with their alumni.	For example, female alumni could be a great help in supporting the Department's strategy on equality and diversity.	This would be helpful, but we do not know whether Alumni Services have the resources needed.

Recommendations to the Department

Number	Recommendation	Additional PRG Comments	Our Response
U.1	To support the students' learning progress by online programme handbooks or pages.	This is helpful for passing on information not just to students, but also to staff, especially new staff.	We agree with this suggestion. After discussing with staff and students we agreed not only to make an online handbook as proposed but also create a summary version as a hard copy to be given out to students at the start of each year. This was done in time for the start of academic year 2019/20 and proved popular, especially with first-year students.
U.2	To address the teaching overload by exploring further opportunities of collaboration with related disciplines.	More collaboration with both the Mathematics Department and the Department of Experimental Physics could be mutually beneficial. The panel got the clear impression that the Department has tried collaboration in this direction. A more systematic approach	We continue to explore ways of collaborating on teaching with a view not only to reduce teaching loads but also to increase flexibility and choice for students. We have made good progress with the Departments of Mathematics and Experimental Physics. In the longer term we feel that a more fundamental review of

		should probably come from the Faculty of Science level.	the science programmes may yield further improvements. We also see an advantage in working more closely with Experimental Physics generally, on teaching and in areas such as public engagement.
U.3	To engage with the University's Digital Strategy as appropriate for the discipline.	Most of the Department's teaching uses chalk and blackboard for sound pedagogical reasons, which is good. Nevertheless, the Department should be open-minded about new technology and its use for teaching, especially for large classes. Likewise, it should consider offering blended learning opportunities.	We continue to develop innovative ways of teaching, through greater use of digital media and other resources, greater use of the University's Virtual Learning Environment, and more varied methods of teaching delivery.
U.4	To engage with the University's IT systems to save time for research and other activities.	The Department spends unnecessary effort on some IT solutions that could easily be adopted from the University's central IT service. For example, there is no need for the Department to run its own mail server provided they could use Linux clients to connect to the University's system via IMAP and SMTP servers.	These points are well made. It is not a good use of our limited resources to duplicate central services unnecessarily and accept that in the long term running our own mail server is not sustainable. There are some tasks however for which we do need to maintain our own Linux cluster and some specialist software thereon.

U.5	To improve the Department's workflow procedures by creating and maintaining a Departmental Administration Handbook.	This can be a digital resource. It should be a reference for staff and would be essential if new staff had to be inducted. It would also prevent issues due to a single point of failure in case of illness or absence of current staff.	We accept the need for an Administrative Handbook for the Department. We have started compiling the material for one, but it is not yet ready.
U.6	To systematically record workload allocation within the Department.	The transparent recording of workload allocation is not just good practice, but it also facilitates hand-over during changes of leadership and prevents a single point of failure.	We do now have a system for recording workload. It is currently limited to undergraduate teaching duties but we plan to expand it to encompass research student supervision, administration, and external activities such as outreach.
U.7	To re-consider the viability of specific programmes, in particular low-recruiting MSc programmes, and potentially discontinue those in favour of more taught elements for PhD students.	The Department excels in the quality of its provision for PhD students and should build on that strength, especially if expected MSc recruitment does not come to pass.	We are monitoring our taught MSc recruitment which is a difficult area for us because of the lack of funding opportunities for students, and the strong competition in the Dublin area. In addition to our PhD programme We have seen an opportunity in our MSc by Research programme which has a smaller taught element, and which is popular with good students. For academic year 2019/20 we received two IRC studentships for such programmes

			and another in 2020/21. As things stand, however, modules for PhD students do not attract FTE allocations so the system would not reward us for doing this.
U.8	To continue to engage with the University's Admissions Office for recruitment and outreach, especially with the Science Outreach Officer.		We have expanded our engagement with the University in the way suggested. We have dramatically increased the number of public talks given to schools and other public audiences, and more material in the media (including radio and online resources); see also below. Recruitment into first year Mathematical Physics has increased in 2019/20 and we hope this trend will continue.
U.9	To link with Science Education staff in the Department of Education for the purposes of liaison with schools and taking advantage of research into science education and gender equality.		This is an important point and we agree that much more has to be done to address the gender imbalance problem in theoretical physics. We undertake to look seriously at this over the next review period.

| U.10 | To continue their awareness-raising work and to excite passion for their discipline at school level. | | Engagement with schools audiences is a central part of our strategy. We will continue to run our annual Particle Physics Master Class, which has proved extremely popular, as well as further increasing the number of events we run for school students, which also draw in large audiences. In 2021 we introduced a plan for an Astrophysics & Cosmology Master Class but it has been postponed owing to the Covid-19 pandemic. Such events serve to raise the profile not only of physics as a discipline but also of Maynooth University generally. |