

The University of Edinburgh

**Internal Periodic Review
School of Physics & Astronomy
PGR Provision**

7th & 8th March 2023

Contents

Contents.....	2
Executive summary	3
Key Commendations.....	3
Key recommendations.....	3
Commendations, recommendations and suggestions	4
Section A – Introduction	8
Scope of review.....	8
Section B – Main report.....	10
1 Strategic overview	10
2 Enhancing the student experience	11
3 Assurance and enhancement of provision	17
Appendices.....	18
Appendix 1: Range of provision considered by the review	18
Appendix 2 – University remit	18
Appendix 3 Additional information considered by review team.....	19
Appendix 4 Number of students.....	19

Executive summary

This report comprises the outcomes from the Internal Periodic Review of PGR provision in the School of Physics & Astronomy.

The review team found that the School has effective management of the quality of the student learning experience, academic standards, and enhancement and good practice.

The report provides commendations on the School's provision, recommendations for enhancement that the School will be asked to report progress on to the Senate Quality Assurance Committee and suggestions on how to support developments.

Key Commendations

The review team commend the School for the strong community that has been created in the School, the positive aim to increase and diversify its PGR community and the overall commitment of both academic and professional services staff to provide a positive and well-supported student experience which is evident in many ways across the School.

Key recommendations

The top three recommendations identified by the review team for the School to prioritise were:

- The review team **recommend** that the School seeks clarity of the exact requirements of SUPA, and then review its provision of SUPA courses and explore additional ways in which the requirements may be met.
- The review team **recommend** that the School reviews its package of support and training available to the PGR community in their role as TAs.
- The review team **recommend** that the School reviews the accounting of supervision hours in the WAM to ensure it reflects the frequency of contact described to students, and that the School reviews its staffing strategy to ensure that growth in the PGR population can be properly supported by commensurate growth in staff and resources.

Commendations, recommendations and suggestions

Commendations

Key strengths and areas of positive practice for sharing more widely across the institution.

No	Commendation	Section in report
1.	The review team commend the School, and in particular Paul Clegg and Liz Paterson, on the exemplary approach to the review. The review team was impressed by the timely preparations, high quality report, the organisation of the review days, and the engagement of the staff and students who participated.	1
2.	The review team commend the sense of community that is evident within the School, and the efforts of staff and students to create and sustain this community.	1
3.	The review team commend the aim to grow the PGR community and its intentions to do this through diverse means.	1
4.	The review team commend the School's focus on timely completion of the PhD programmes.	1
5.	The review team commend the robustness of the supervision and annual review process, and the consistency it offers to students throughout their programme.	2.2
6.	The review team commend the practice of allocating a pastoral contact to each student, with the staff member being outside of the institute in which the student is enrolled.	2.3
7.	The review team commend the accessibility of senior staff and supervisors which has created an approachable and open environment for students.	2.4
8.	The review team commend the School on their commitment to EDI training.	2.5
9.	The review team commend the Institute for Astronomy for using anonymised recruitment to seek a more diverse profile of applicants/students.	2.5
10.	The review team commend the focus on career and industry throughout the duration of the programme.	2.6
11.	The review team commend the opportunity to continue for 3 months in a half grade 7 research role & half grade 6 teaching role to bridge the gap between their studies and the next stage of their career.	2.7
12.	The review team commend the School on providing all PhD students with a laptop of their choice at the start of their programme, and an iPad for those involved in teaching.	2.8

Recommendations

Areas for development and enhancement – progress to be reported.

Priority	Recommendation	Section in report	Responsibility of
1.	<p>Remit Item 1: SUPA arrangement The review team recommend that the School a) clarifies with SUPA exactly what the requirement is; b) whether the hours undertaken by students need to be formally assessed; and c) clearly communicates the requirements with students and staff.</p> <p>The review team recommend that the School reviews its offering through SUPA and, if necessary, improves the available selection to ensure students can undertake technical training that is relevant to their discipline.</p> <p>The review team also recommend that the School explores new ways for the SUPA requirements to be met, such as capitalising on training that students already undertake as part of their development (e.g. teaching assistant, equality, diversity and inclusivity training).</p> <p>The review team recommend that the School review its approach to professional skills training (which may require collaboration with SUPA) and recommend that the School reviews its use of language around professional skills and “soft skills”.</p>	2.1	School
	<p>The review team recommend that the School review its approach to professional skills training (which may require collaboration with SUPA) and recommend that the School reviews its use of language around professional skills and “soft skills”.</p>	2.6	School
2.	<p>Staff/student development The review team recommend that the School reviews its package of support and training available to the PGR community in their role as TAs.</p> <p>The review team recommend that the School offers annual reviews to TAs in their capacity as staff members, and also recommend that the School arranges an annual training event to continue to strengthen the skills of the cohort.</p> <p>The review team recommend that the School encourage students to undertake the teaching qualification available to them (EdTA).</p> <p>The review team recommend that there is an increased increment to reward the lead TA role in recognition of their additional responsibility.</p>	2.7	School

3.	<p>Strategy The review team recommend that the School reviews the accounting of supervision hours in the WAM to ensure it reflects the frequency of contact described to students.</p> <p>The review team recommend the School reviews its staffing strategy to ensure that growth in the PGR population can be properly supported by commensurate growth in academic staff, professional services staff and available estate and resources.</p> <p>The review team recommend that the College processes the recruitment requests of the School in timely manner and ensures the Professional Services team are properly equipped to match the School's strategic ambitions.</p>	1 1 1	School School and College College
4.	<p>Remit Item 2: Diverse Recruitment The review team support the practice of anonymised recruitment, and recommend that the School examine if this is achieving its aims, and if so, refine and roll-out this practice across institutes.</p> <p>The review team recommend that the School work with other Schools within the College to consider outreach opportunities across related subject areas.</p>	2.5	School School and College
5.	<p>Pastoral Care / Student Support The review team recommend that the School develops its pastoral care arrangement and continues it formally beyond the first year.</p> <p>The review team also had some suggestions to improve the mechanism, including improved signposting of pastoral care.</p>	2.3	School
6.	<p>Student Voice The review team recommend that the School seek to remind students of the formal channels of feedback available to them, such as the SSLC.</p> <p>The review team recommend that the School should allow for a form of anonymous reporting to encourage students to come forward if they are experiencing issues with their supervisor and have concerns about how to address this.</p>	2.4	School
7.	Resources/Estate	2.8	Estates

	<p>The review team recommend that the Estates team work with the School, especially as refurbishment work is carried out at the Royal Observatory, to ensure that available space is optimised and any short-medium term pressures can be offset with access to other areas of the campus and/or facilities so that students are not negatively affected</p> <p>The review team recommend that the Hybrid Working project team consult with the School and College to better understand and meet the requirement for virtual meeting space now that hybrid working is commonplace.</p>	2.8	University (Hybrid Working project team)
8.	<p>Availability of Information</p> <p>The review team recommend that the School reviews and updates programme material and student information on its webpages and handbooks to ensure it is accurate and properly signposted.</p>	2.3	School

Suggestions

For noting – progress reporting is not required.

No	Suggestion	Section in report
1.	The review team suggest that staff in the School share course feedback with Teaching Assistants as much as possible, and that course organisers provide feedback to the TAs throughout their involvement on the course.	2.2
2.	The review team suggest that better signposting of pastoral care as a support mechanism may improve student understanding of what that role involves. The review team also suggest that a member of the pastoral support team is present at induction to explain the role.	2.3
3.	The review team suggest that the Student Support project team work with College and School staff to ensure that supervisors/pastoral support staff, working with the PGR community, have consistent messaging around the support available to students, both within their School and through the wider University.	2.3
4.	With regard to diversifying and anonymising recruitment, the review team suggest that a supplementary mechanism, such as a contextual analysis form, would give students the opportunity to elaborate on certain points of their application/experience whilst preserving anonymity.	2.5

Section A – Introduction

Scope of review

Range of provision considered by the review (see Appendix 1).

The Internal Periodic Review of the School of Physics & Astronomy in 2022/23 consisted of:

- The University's remit for internal review (see Appendix 2)
- The subject specific remit items for the review:
 - 1. Mandatory Technical and Skills Training
 - 2. Programme Structure for Diverse Recruitment
- The Reflective Report and additional material provided in advance of the review
- The meeting of the review team including consideration of further material (see Appendix 3)
- The final report produced by the review team
- Action by the School and others to whom recommendations were remitted following the review

Review Team Members

Convener Dr David Gillanders Head of Clinical Psychology School of Health in Social Sciences	Internal Professor Susan Farrington CRUK Edinburgh Centre, Institute of Genetics and Cancer, Deanery of Molecular, Genetic and Population Health Sciences
External Professor Helen Gleeson Cavendish Professor of Physics School of Physics and Astronomy University of Leeds	External Professor Paul Hewett Institute of Astronomy University of Cambridge
Administrator Sinead Docherty Academic Policy Officer Academic Services Shadowing Kate Nicholson Academic Policy Officer Academic Services	Student Anam Abbas c/o School of Engineering

The School

The School of Physics and Astronomy is one of the seven Schools within the College of Science and Engineering.

The School consists of three institutes:

- Institute for Astronomy (IfA)
- Institute for Condensed Matter and Complex Systems (ICMCS)
- Institute for Particle and Nuclear Physics (IPNP)

Physical location and summary of facilities

The School is based across the James Clerk Maxwell Building (JCMB) at the King's Buildings campus and the Institute for Astronomy (IfA) at the Royal Observatory, Edinburgh.

Date of previous review

17th & 18th November 2016

Reflective Report

The report was prepared by Paul Clegg (Director of Graduate School) and Liz Paterson (Deputy Academic Administrator)

The report reflects discussions at GradComm and the PhD Student Staff Liaison Committee. Students participated in polls featured throughout the report. There was consultation with Institute coordinators, Head of School, Director of Professional Services and Director of Quality Assurance.

Section B – Main report

1 Strategic overview

- The Graduate School within the School of Physics & Astronomy consists of around 175 PhD students across the three institutes. The School outlined their strategic aim to grow their PGR community and the review considered ways for the School to best achieve this. Discussion included approaches to building links with industry to attract applicants who are already in a career, and through diversifying the pool of candidates (remit item 2). The School does fund studentships (currently 3 per institute) and has been underwriting CDTs and studentships. The increase in undergraduate and postgraduate taught student numbers in recent years has contributed to the ability to fund the PGR cohort.
- The review team **commend** the School, and in particular Paul Clegg and Liz Paterson, on the exemplary approach to the review. The review team was impressed by the timely preparations, high quality report, the organisation of the review days, and the engagement of the staff and students who participated.
- The review team **commend** the sense of community that is evident within the School; the review team heard many examples of good practice from students across each of the 4 years of the PhD programme, including the residential trip, cake tzar Fridays and regular social events organised by both School and students. Students are appreciative of the budget allocated to them by the School to arrange and host these social, educational and community events, and there is a strong feeling that academic staff are approachable and supportive.
- Pandemic restrictions and lockdowns affected some students' ability to complete their programme in the usual timeframe. This context has affected the overall completion rate, but overall the School demonstrated a culture of encouraging students to complete within the given timeframe and not relying on an extra (unfunded) period of time. The review team **commend** this focus on timely completion.
- The review team **commend** the School's ambition to grow its PGR community and its intent to do this through diverse means, including industry collaboration and a more inclusive approach to recruitment. The School is in a strong position to achieve this and to maintain its high standards, although consideration must be given to ensuring growth is properly resourced and supported.
- The review team were uncertain about the supervision hours per student, and its reflection on the workload allocation model (WAM). The review team noticed inconsistency between the accounts of supervisory hours as presented in the Reflective Report and the number of hours given to PGR supervision in the WAM. Whilst the supervisors with whom the review team met were happy with their supervisory allocation, and indeed reported that supervision was one of the most enjoyable aspects of their role, it is important that the time commitment is accurately reflected in the WAM. If the School does increase its PGR community, it will also need to consider the resource implications of academic staff needing to cover more hours of supervision, and the increased workload for the Professional Services staff in the Graduate School.
- The review team **recommend** that School reviews the accuracy of supervision hours as captured in WAM and looks at the scalability of certain practices (i.e. recruitment and managing the student progression journey which relies on manual

work/inadequate systems) in order to ensure that growth in the PGR population can be properly supported. An increase in student numbers would also impact on the existing estate, which is already under pressure from existing staff and students.

- The review team heard that Professional Services are already struggling to deliver the work they wish to complete, with limited resources and systems that require manual input and some duplication of work. The review team **recommend** that the College processes the recruitment requests of the School in timely manner (the review team understands system issues such as P&M have had a negative impact here in recent times) and ensures the Professional Services team are properly equipped to match the School's strategic ambitions.

2 Enhancing the student experience

2.1 The approach to enhancing Learning and Teaching

- The Graduate School is a member of Scottish Universities Physics Alliance (SUPA) which requires students to undertake 40 hours of technical courses and 20 hours of professional skills training in the first two years of their programme. The School had set out "Mandatory Technical and Skills Training" as Subject Specific Remit Item 1 to be considered within this review.
- The review team heard some confusion and discrepancy in the account of SUPA requirements during the visit. The above account of 60 combined hours was detailed on the SUPA website and the review team accept that information as an accurate account of the requirements.
- Some staff and students seemed unclear on what the SUPA expectation was and the review team **recommend** that the School a) clarifies with SUPA exactly what the requirement is; b) whether the hours undertaken by students need to be formally assessed; and c) clearly communicates with students what the requirements are so that they are well informed prior to accepting a place at The University of Edinburgh. The review team heard that some international students were unaware of the SUPA requirements and, upon arriving in Edinburgh, were frustrated to discover this additional expectation was a mandatory part of the programme.
- During discussions, students displayed a lukewarm attitude to the SUPA training requirements. The perceived negatives of the training was the burden of the time commitment, and the lack of value/relevance in the courses offered by SUPA. The review team heard from students in the Institute of Astronomy that only one course was relevant to their programme, and so they were required to undertake further courses that were outside of their discipline. Students may also resort to taking courses that they studied at undergraduate level.
- There was a similar sense of ambivalence to the professional skills training, with mixed views from students as to the value it adds to their experience and skill set. However, the review team understood from their discussions with students that there is an overall willingness to undertake additional training and taught courses, as long as it adds value and it is relevant to their programme.
- The review team formed the view that the School could seek to improve the SUPA arrangement. The University of Edinburgh provides the largest number of courses in the arrangement and the review team **recommend** that the School reviews its offering

through SUPA and, if necessary, improves the available selection to ensure students can undertake technical training that is relevant to their discipline. The school provided examples of taught courses that they currently deliver that are popular with PGR students (e.g. Quantum Field Theory) and so consideration could be given as to whether these kinds of trainings can count towards the SUPA requirement.

- The review team also **recommend** that the School explores new ways for the requirements to be met; for example, teacher training could be formalised into hours which count towards the SUPA requirement. This is training that PhD students undertake as standard if working in a Teaching Assistant (TA) role and is relevant technical training for a job in academia. If this were captured in the SUPA arrangement, it would fulfil the requirements whilst also developing student skills and competency in an area directly related to their PhD performance (for those who wish to teach).
- The School presents a strong academic community, with students largely happy with the support given and opportunities available to them. Students in Astronomy were positive about their weekly reading group, which feels un-hierarchical and allows them to share thoughts, ask questions and feel encouraged by each other.

2.2 Assessment and Feedback

- During their PhD programme, students are assigned a primary and secondary supervisor, both of whom participate in the annual review. Two independent interviewers are also assigned to each student (ideally these two interviewers remain in the role throughout the entire programme). The review team **commend** the robustness of the supervision and annual review process and the consistency it offers to students throughout their programme.
- Students expressed their understanding of the University –wide challenge of obtaining feedback from students (at UG and PGT level) but expressed a wish to be given feedback on their own performance as TAs and their approach to marking. The review team **suggest** that course organisers provide feedback to the TAs throughout their involvement on the course, sharing with them relevant student course feedback.

2.3 Supporting students in their learning

- The School introduces pastoral care to students at induction, which takes place during their first week on the programme. In semester 2 of the first year, students have a one-to-one meeting with their pastoral contact to establish a relationship which students can then return to, if needed, as they progress through their programme.
- The review team **commend** the practice of allocating a pastoral contact to each student, with the staff member being outside of the institute in which the student is enrolled. This was identified by students as a practice which allowed for open conversations with staff not directly involved with the students and this was appreciated.
- The review team recommend that this pastoral care continues formally beyond the first year. Although the one to one meeting is intended to establish the relationship, it does take place early in the student journey and further checkpoints with that assigned person could be better formalised. The pastoral aspect of the student experience is expected to be picked up in later years by the supervisors and independent assessors during the annual review process.

- Some students did express uncertainty around the role of the pastoral support team. The review team understands that the arrangement is highlighted at induction and then the pastoral support team later contacts students individually to set up their meeting. The review team **suggest** that better signposting of this support mechanism may improve student understanding. The review team also **suggest** that a member of the pastoral support team is present at induction to explain the role, rather than the information being disseminated in a presentation.
- In discussions with staff, the review team heard that some staff and students were uncertain as to whether the new Student Support model that is being implemented across the University is also aimed at the PGR cohort within the School. They also appeared unclear as to whether the PGR community had access to the Wellbeing Advisor who had been appointed centrally but based in the College. Although it became clear during discussion that the student wellbeing advisor is being used by PGR students, this resource could be made clearer for all.
- The review team **suggest** that the Student Support project team work with College and School staff to ensure that supervisors/pastoral support staff, working with the PGR community, have consistent messaging around the support that is available to students, both within their School and through the wider University.
- The review team asked how students who have studied abroad for a year or a period of time re-integrate back into the School; there was a positive response to this question, with returning students taking on a mentoring role with first year students and sharing the knowledge and software skills they have gained during their time spent elsewhere.
- The review team discussed with the School the additional language skills that can sometimes be required for students whose first language is not English. Students are required to have English language qualification to join the programme, but their writing skills can sometimes require additional support. The School encourages students to undertake the IAD language courses, and encourages informal learning that can help the student improve their language skills, such as socialising with their cohort.
- The students highlighted that some information published by the School on Sharepoint and wiki was out of date or no longer applicable. The review team **recommend** that the School reviews and updates programme material and student information to ensure it is accurate and properly signposted.

2.4. Listening and responding to the Student Voice

- Students were satisfied that the School was quick to respond to issues and resolve difficulties; informal mechanisms work well and are popular. During discussions around whether students knew where to go for help and support, Paul Clegg was identified as someone who is particularly approachable and helpful, and students detailed different avenues of communication and support that they felt were available to them. The review team **commend** the accessibility of senior staff and supervisors which has created an approachable and open environment for students.
- However, more formal mechanisms and closing feedback loops risk being less well utilised. In the student meetings, there was a lack of awareness of the SSLC (the School has representatives for each cohort and had provided meeting minutes to the review team) and formal channels of feeding back to the School. The review team **recommend** that the School seek to remind students of the formal channels of

feedback available to them and highlight the SSLC as a useful mechanism that creates a dialogue with the School and can demonstrate a feedback loop with issues raised.

- During discussion with students, the review team were informed of instances (anecdotally) where supervisors had been unavailable to their student due to other work commitments, or had displayed bullying behaviour toward their students. The students in the room felt that the School had acted robustly to respond to these situations and improve the experience for the student in allocating a new supervisor.
- However, it was felt that some supervisors had a reputation for poor practice and this was not being addressed at the root with students still being assigned to these members of staff. Students described how they were checking in on peers who had been allocated to certain supervisors to see how they were coping and offer support themselves.
- Therefore, the review team formed the view that poor experiences of supervision were not always being surfaced due to worries around safety and disclosure. The review team **recommend** that senior staff in the school remain alert to areas of poor practice, are accessible to students who wish to raise concerns, and use appropriate mechanisms for staff support and management to address these issues. In addition, the review team **recommend** the School should consider a form of anonymous reporting to encourage students to come forward. The review team recognise that there are challenges affecting this, particularly in maintaining anonymity in a relatively small School, but the availability of such a mechanism could have a meaningful impact on students who are facing difficulties with their supervisor.

2.5 Accessibility, Inclusivity and Widening Participation

- The School selected as their Subject Specific Remit Item 2: Programme Structure for Diverse Recruitment and discussion with the review panel covered aspects of accessibility, inclusivity and widening participation. The review team **commend** the School on their commitment to EDI training and the requirement that all staff must undertake this training at least every 5 years.
- The School highlighted that they have made progress with gender balance, and this is in line with the wider sector. However, the proportion of female students from the UK rather than overseas remains low and remains an area of concern for the School. Part-time degrees are not in-demand although the review team highlight that if they were more readily available, the option may attract a more diverse profile of student.
- The review team heard some good examples of outreach work, such as visits to local schools and student involvement in science festivals, but did have the impression that these efforts were supervisor-driven. The review team **recommend** that efforts here are more structured and a consistent approach to outreach is demonstrated across the School and the College. College-wide outreach work has the potential to explore collaboration with other STEM subjects that tend to have more diverse cohorts; this, in turn, may assist efforts to build a more diverse student profile.
- The Institute for Astronomy (IfA) has trialled anonymised recruitment for their PhD applications. Feedback on this was largely positive, although there is a lot of manual work throughout the process to preserve anonymity. The system would need to be refined and possibly better supported by software/systems to be more efficient, but the review team **commend** the work done so far to implement this in IfA.

- The review team support the practice of anonymised recruitment, and **recommend** that the School fully evaluate its impact to ensure it is achieving its aims. Thereafter, the school could refine and then roll-out this practice across institutes. Where anonymised recruitment may become somewhat restrictive, the review team **suggest** that a supplementary mechanism, such as a contextual analysis form, would give students the opportunity to elaborate on certain points of their application/experience whilst preserving anonymity.
- Should the student population in the School become more diverse, it is important that the level of support keeps pace with the growth and changes. Staff need to be appropriately trained to best support a more diverse population, and the School will need to focus on this to ensure gaps in provision of targeted support do not emerge.
- The School promotes the PhD opportunities to students on taught programmes, and have an early closing date to manage the recruitment process. It was noted that this may be detrimental to students who are on a taught Masters programme, new to the School and unaware of the opportunities and timeline for applying.

2.6 Development of Employability and Graduate Attributes

- As previously outlined earlier in the report, the School is a member of SUPA and this required PhD students to undertake a minimum of 40 hours of advanced specialist physics studies and 20 hours of professional development training during the first two years of their PhD.
- Whilst students were overall receptive to the training requirements, even if not to the current selection of courses available to them, there was some evidence of a perception that professional development skills are of less value to students, and that the training in this is detracting from time spent on their research.
- The review team **recommend** that the School review its approach to professional skills training (which may require collaboration with SUPA) and **recommend** that the School reviews its use of language around professional skills and “soft skills”. A perceived lack of value and relevance undermines the objective of this training, and may be to the detriment of students who look to take employment in industry after their programme. Linking professional training to the Researchers Framework, for example, may help to illustrate the value and usefulness of skills outside of the PhD programme.
- Students reported that their post-PhD career and options are discussed at their annual review and the review team **commend** the focus on this throughout the duration of the programme. The School felt that students were less interested in industry-careers in the early years of their programme, but maintaining a focus on industry throughout the stages of the programme encourages students to consider their options throughout their studies.

2.7 Supporting and developing staff

- In the context of supporting PhD students in their role as Teaching Assistants, the review team **recommend** that the School reviews its package of support and training available to the PGR community.

- Students were positive about the training they received at induction, specifically mentioning the work of Dr Kristel Torokoff (Teaching Assistant Coordinator) at the induction stage. The review team note that students attend this mandatory training at the beginning of semester 1, and that there is a follow-up session in semester 2. However, students appeared to view this follow-up session as voluntary, whilst the School presented it as something that is expected of students who have a TA role.
- The review team also heard that TAs felt there was more emphasis on marking and giving feedback to students than on their teaching skills. The review team **recommend** that the School offer annual reviews to TAs in their capacity as staff members, in recognition of their roles and to better support skills development and progression throughout their PGR years. The review team also **recommend** that the School arranges an annual training event to continue to strengthen the skills of the cohort and opportunities for feedback, rather than the only training coming at the point of induction.
- The review team explored with staff and students whether PGR students were adequately prepared and trained to handle the interpersonal dimension of being a TA. For example, setting of boundaries, handling maintaining independence of the tutor as a marker, negotiating relationships with students who are relatively close to them in age, managing a range of dual relationships, (e.g. if a tutor and a student happen to be in the same University sports club). The review team **suggest** that including these interpersonal aspects of being a tutor would be a useful step for the school.
- TAs were largely unaware of the teaching qualification available to them (either through IAD or HE) and the review team **recommend** that the School actively promote and encourage this qualification.
- The review team felt that the role of a Lead TA was a good opportunity available to individuals in the cohort. However, the additional responsibilities are not compensated with increased pay; the review team **recommend** that there is an increased increment to reward the lead TA role.
- The review team **commend** the opportunity that is available to students who have recently completed their PhD; individuals from that cohort may continue for 3 months on a half grade 7 research role & half grade 6 teaching role as an ECR post doc to bridge the gap between their studies and the next stage of their career.

2.8 Learning environment (physical and virtual)

- The School is split between the James Clerk Maxwell Building at King's Campus and The Royal Observatory. Refurbishment of some buildings at the Royal Observatory is in the pipeline, and the School does have some access to the KB Nucleus which opened before Christmas 2022.
- The review team **commend** the School on providing all PhD students with a laptop of their choice at the start of their programme, and an iPad for those involved in teaching.
- Staff and students within the School raised concerns with the review team about running out of space; offices are full, social spaces are lacking and facilities are overly-stretched. The students lost their coffee room which was instead assigned to the Student Wellbeing Advisor for academic year 2022/23 and will not be given a new space until September 2023. Whilst this is a short-term issue, it negatively impacts the social interactions and sense of community for students based in the JCMB. Students also explained that they faced difficulty with booking study space as they are

competing with a growing undergraduate population and the existing space available is not keeping up with demand.

- The review team **recommend** that the Estates team work with the School, especially as refurbishment work is carried out at the Royal Observatory, to ensure that available space is optimised and any short-medium term pressures can be offset with access to other areas of the campus and/or facilities so that students are not negatively affected.
- The review team **recommend** that the Hybrid Working project team consult with the School and College to better understand the requirement for virtual meeting space now that hybrid working is commonplace. Rooms and space must be effectively utilised to allow PGR students to participate in teaching or meet taught students online in a professional capacity.

3 Assurance and enhancement of provision

The School has appropriate approaches to setting, maintaining and reviewing academic standards across postgraduate research provision. Standards are continuously reviewed through annual monitoring via Annual Programme Reviews and the School's Annual Quality Report. In addition, standards are also maintained and reviewed through effective admissions procedures, internal committee structures, moderation of student assessment, external examiner reporting and alignment with the SCQF framework and QAA subject benchmarking. Overall, the setup of School committees and exam boards is appropriate for maintaining academic standards.

The review team feel that improvements could be made to the arrangement with SUPA, as detailed in section 2.1 of this report. More engagement, if possible, may increase the value and quality of provision through the SUPA arrangement.

Appendices

Appendix 1: Range of provision considered by the review

Astronomy (PhD) (Full-time)
Astronomy (PhD) (Part-time)*
Condensed Matter Physics* (Non-UoE Lead with StA and HWU) (PhD) (Full-time)
Condensed Matter Physics (UoE Lead with StA and HWU) (PhD) (Full-time)
Data Intensive Astronomy (non UoE Lead) (PhD) - 3 Years (Full-time)
Data Intensive Astronomy (UoE Lead) (PhD) - 3 Years (Full-time)
Data Intensive Physics* (Non UoE Lead) (PhD) - 3 Years (Full-time)
Data Intensive Physics (UoE Lead) (PhD) - 3 Years (Full-time)
Physics (MPhil)
Physics (Non UoE Lead with Nagoya University) (PhD) - 3 Years (Full-time)
Physics (PhD) (Full-time)
Physics *(PhD) (Part-time)
Physics *(UoE Lead with Nagoya University) (PhD) - 3 Years (Full-time)
Soft Matter and Functional Interfaces (Non-UoE Lead with Durham, Leeds) (PhD) (Full-time)
Soft Matter and Functional Interfaces (UoE Lead with Durham, Leeds) (PhD)
Soft Matter for Formulation and Industrial Innovation (UoE lead with Durham and Leeds) (PhD with Integrated Study) (Physics & Astronomy) - 4 Years (full-Time)

*no students currently enrolled on these programmes

Appendix 2 – University remit

The University remit provides consistent coverage of key elements across all of the University's internal reviews (undergraduate and postgraduate).

It covers all credit bearing provision within the scope of the review, including:

- Provision delivered in collaboration with others
- Transnational education
- Work-based provision and placements
- Online and distance learning
- Continuing Professional Development (CPD)
- Postgraduate Professional Development (PPD)
- Provision which provides only small volumes of credit
- Joint/Dual Degrees
- Massive Open Online Courses MOOCs (even if non-credit bearing)

1. Strategic overview

The strategic approach to:

- The management and resourcing of learning and teaching experience,
- The forward direction and the structures in place to support this.
- Developing business cases for new programmes and courses,
- Managing and reviewing its portfolio,
- Closing courses and programmes.

2. Enhancing the Student Experience

The approach to and effectiveness of:

- Supporting students in their learning
- Listening to and responding to the Student Voice
- Learning and Teaching
- Assessment and Feedback
- Accessibility, Inclusivity and Widening Participation
- Learning environment (physical and virtual)
- Development of Employability and Graduate Attributes
- Supporting and developing staff

3. Assurance and Enhancement of provision

The approach to and effectiveness of maintaining and enhancing academic standards and quality of provision in alignment with the University Quality Framework:

- Admissions and Recruitment
- Assessment, Progression and Achievement
- Programme and Course approval
- Annual Monitoring, Review and Reporting
- Operation of Boards of Studies, Exam Boards, Special Circumstances
- External Examining, themes and actions taken
- Alignment with SCQF (Scottish Credit and Qualifications Framework) level, relevant benchmark statements, UK Quality Code
- Accreditation and Collaborative activity and relationship with Professional/Accrediting bodies (if applicable)

Appendix 3 Additional information considered by review team

Prior to the review visit:

- Reflective Report
- PRES analysis and summary
- Programme Handbooks
- SSLC minutes
- Statistical reports
- Quality reports 2019-2022

Appendix 4 Number of students

Entry Programme Name	2016/7	2017/8	2018/9	2019/20	2020/1	2021/2
Astronomy (PhD) (Full-time)	11	5	13	11	9	11
Condensed Matter Physics (UoE Lead with StA and HWU) (PhD) (Full-time)		7	4	9		
Data Intensive Astronomy (non UoE Lead) (PhD) - 3 Years (Full-time)				1		
Data Intensive Physics (Non UoE Lead) (PhD) - 3 Years (Full-time)				2		
Physics (Non UoE Lead with Nagoya University) (PhD) - 3 Years (Full-time)				1		
Physics (PhD) (Full-time)	27	27	23	21	22	28
Soft Matter and Functional Interfaces (Non-UoE Lead with Durham, Leeds) (PhD) (Full-time)		14	16	18	12	
Soft Matter and Functional Interfaces (UoE Lead with Durham, Leeds) (PhD)		1			0	
Soft Matter for Formulation and Industrial Innovation (UoE Lead with Durham and Leeds) (PhD with Integrated Study) (Physics & Astronomy) - 4 Years (full-Time)	1			1		1