

UNIVERSITY OF GLASGOW

Academic Standards Committee - Friday 26 May 2006

Departmental Programmes of Teaching, Learning and Assessment -  
Report of the Review of the Department of Physics and Astronomy  
held on Thursday 23 February 2006

Ms Helen Clegg, Senate Office

May 2006

**Review Panel**

Professor Robin Leake (Convener)	Vice Principal, Physical Sciences and Engineering
Professor Gordon Donaldson	External Subject Specialist, University of Strathclyde
Dr Martin Macauley	Senate Assessor on University Court
Dr Bob Hill	Member of Cognate Department (Chemistry)
Dr Sarah Mann	Learning and Teaching Centre Representative
Ms Helen Clegg (Panel Secretary)	Administrator, Senate Office

**Introduction**

1. *Background*

The Department of Physics & Astronomy was last reviewed internally during Session 1997-98. A Teaching Quality Assessment of Physics was undertaken by the Scottish Higher Education Funding Council (SHEFC) in July 1994, which resulted in an 'Excellent' rating. The Degree Accreditation Report from the Institute of Physics in November 2003 was also extremely positive, as was the site visit by the 'Women in Physics' Group. The Department received a rating of 5 in the 2001 Research Assessment Exercise.

2. *Documentation*

The Department had provided a Self Evaluation Report and supporting documentation in accordance with the University's requirements for the Review of Departmental Programmes of Teaching, Learning and Assessment. The Convener thanked the Department for the concise presentation and clarity of the documentation.

It was noted that the Self Evaluation Report had been sent, in draft form, to the Department's Teaching Committee, and then through the Departmental intranet for discussion by the Academic Staff Committee. Student representatives were also given the opportunity to comment. The Department was **commended** on its inclusive approach.

### 3. *Participants in the Review*

The Review Panel met with Professor David Saxon, Dean of the Faculty of Physical Sciences, and Professor John Chapman, Head of the Department of Physics. They also met with Professor Andrew Long, Chair of the Teaching Committee, who would take over from Professor Chapman as Head of Department, and Dr Stephen McVitie, Year 3 Head, who had been largely responsible for DPTLA preparation within the Department. The Panel also met with eleven key members of staff, six probationary members of staff, including one University Teacher, ten graduate demonstrator/supervisors and seven undergraduate students. There were no taught postgraduate programmes operating in the Department at the time of the Review.

### 4. *Range of Provision*

The Review Panel considered the following range of provision offered by the Department of Physics & Astronomy:

- BSc (Hons)/MSci\* Physics
- BSc (Hons)/MSci\*/MA (Joint) Physics & Other Subject
- BSc (Hons)/MSci\* (Joint) Astronomy & Other Subject
- BSc (Hons)/MSci\* Physics with Astrophysics
- BSc (Hons)/MSci\* Chemical Physics
- MSci Chemical Physics with Work Placement

Note: BSc = 4 years

MSci = 5 years, those marked \* have a 4 year accelerated option

### 5. *Overall Aims of the Department's Provision*

The overall aims of the Department's provision were stated in the Self Evaluation Report and were communicated to all students via course handbooks. The Panel considered the Department's aims to be appropriate, and consistent with the aims of the University.

#### 5.1 *Context*

It was noted from the Self Evaluation Report that fewer pupils are studying Physics at school (a 40% decrease over the last 20 years in England and Wales was cited) which had obvious implications in terms of recruitment. In addition, Astronomy is a subject not taught in schools and therefore potential students have no experience on which to base a subject choice. These factors presented clear challenges to the Department.

#### 5.2 *Service Teaching*

It was noted that service teaching was provided for students in the Faculty of Engineering in the form of a 20-credit course in Physics. Further provision was made to students from Biomedical and Life Sciences at Levels 2 and 4. The Department also contributed to two courses in collaboration with the Department of Chemistry and others.

#### 5.3 *MSci Review*

It was reported in the Self Evaluation Report, and by the Head of Department, that the Department had recently undertaken a major restructuring exercise for the MSci degree in order for it to align with the Scottish Credit and Qualifications Framework. The

programme had previously been worth 540 credits with 70 at M level. However, the SCQF specified 600 credits with a minimum of 120 at M level for an MSci degree, and the Department restructured their programme to meet this requirement. The Head of Department explained that the extra credits had resulted from a strengthening of the Project, in line with Institute of Physics expectations, and new courses in Advanced Quantum Mechanics and Imaging & Microscopy and others. Although it was possible to fit this into the existing 4 year timeframe, it would be difficult for students, and therefore it was decided to offer the MSci as both a 4 year and a 5 year programme. Indications were that all students currently in year 1 planned to complete the programme over 5 years.

#### 5.4 *Benchmark Statement*

The Benchmark Statement for Physics, Astronomy and Astrophysics had been welcomed by the Department, and it was confirmed that the Department's aims were in line with its provisions.

#### 5.5 *Cross-Faculty Teaching*

The Panel noted the success of the 'Exploring the Cosmos' course offered to level 1 students and asked if there were plans to introduce similar courses across the Faculties. The Head of Department explained that a level 2 'Exploring the Cosmos' course had also been introduced but had been less popular. At the present time he did not consider that there was demand for further, similar, courses and that if any were introduced it was likely that they would simply attract students away from the existing courses.

#### 6. *Intended Learning Outcomes*

Intended Learning Outcomes (ILOs) for degree programmes were included in the Programme Specification for each programme. There were also specific ILOs for the courses at level 3 and above within each programme. At levels 1 and 2, courses still had 'aims and objectives' detailed – these were the predecessors of ILOs and would be replaced with ILOs.

#### 7. *Assessment*

The Department's assessment methods were varied and included class tests, laboratory assessments, coursework assignments and oral presentations, in addition to formal examinations. It was the opinion of the Panel that the care given to the assessment process was exemplary and surpassed that of other institutions – for instance, the approval of examination papers was done via a day-long visit by the External Examiner, which was highly unusual. The Department was to be **commended** on this aspect of its operation.

##### 7.1 *University Code of Assessment*

The Panel had noted concern regarding the University Code of Assessment in reports from the External Examiners. The Department had stated in the Self Evaluation Report that it, and other Departments, had expressed considerable reservations. The main criticism was that the code, based on verbal descriptors, was non-linear with respect to the traditional grades. It was hoped that the revision of the 20 point scale to a 22 point scale would reduce difficulties though it was too early to make any judgement on this. The general feeling within the Department was that the Code of Assessment was workable, but did not enhance the assessment process as precision was lost and there was believed to be a greater margin for error. To this end, projects were being double marked to ensure uniformity of approach. The Head of Department stated that the main concern was to ensure that good students were not being disadvantaged.

## 7.2 *Feedback*

Mechanisms for providing feedback to students were considered by the Panel to be generally robust and consistent. Students stated that in years 1 and 2, the amount of feedback was fairly limited, but that in years 3 and 4 it increased significantly. They also stated that, if they wanted to discuss issues further, they felt able to approach staff at any time. Feedback at all levels was considered to be given timeously – usually within 1-2 weeks.

## 7.3 *Weighting of Continuous Assessment and Examinations*

Some of the Undergraduate student group stated their opinion that labs should have a higher weighting given the amount of work involved. Most felt that some formative class tests in level 1 would also be helpful.

The staff group advised that, in the past, there had been class tests, but that these had been unpopular so the 'Mastering Physics' software had been introduced as a means of providing feedback. However, many students did not use this. The Panel heard that Freescale Semiconductor had offered prizes as an incentive to use it but staff reported that only the stronger students, who would have used it even without an incentive, took part. It was believed that the motivation for students to take part in any sort of formative assessment was very varied, and that there had to be an element of summative assessment in order for students to complete the work.

## 8. *Curriculum Design and Content*

It was stated in the Self Evaluation Report that Physics and Astronomy were subjects which involved the development of ideas and the techniques to apply them in a continuous progression from Year 1 to graduation, with courses at the higher levels building on material from the earlier courses.

### 8.1 *Review of Provision*

The Head of Department stated that the Department's provision was constantly being evaluated and improved. There had been a major revision of the MSci, as detailed above in Paragraph 5.3.

### 8.2 *Research-Led Teaching*

The Panel noted that the range of research undertaken by Departmental Staff was used as a source of material and assisted students in understanding the application of knowledge to practical situations. Project work could also be drawn from this.

## 9. *Student Recruitment, Support and Progression*

### 9.1 *Recruitment*

#### 9.1.1 *Faculty Entry System*

It was noted that recruitment to degrees in Physics and Astronomy took place via the Faculty Entry system and, as such, students were not required to select their Honours subject until third year.

#### 9.1.2 *Recruitment Activities*

As stated in Paragraph 5.1, challenges arose from the decreasing number of school pupils opting to study Physics. The Department advised that it was involved in a number of recruitment activities, including weekend masterclasses

for 12-13 year olds, 'taster' sessions including talks and lab visits, and various events aimed at teachers of Physics. It was recognised that a high proportion of undergraduate students came from the West of Scotland and staff stated that they were trying to strengthen links with schools and teachers, whilst also recognising the need to look further afield for applicants. Ireland was being considered as a target market at present.

### 9.1.3 *Advanced Highers*

It was stated in the Self Evaluation Report that, in general, students with the Advanced Higher in Physics would not be permitted admission to year 2, as was normal practice within other institutions. The Head of Department confirmed that each case was considered individually but that, as the amount of overlap between Advanced Higher and year 1 of the degree was only around 35-40%, it was considered difficult for students to compensate for this - particularly during the already demanding period of transition between school and university. In addition, as Astronomy was not taught in schools, it was considered unwise to admit students directly to year 2 with no knowledge of the subject.

The Head of Department confirmed that there had been occasions when direct entry had been permitted, but that these had not been successful.

When raised with the student group, opinion was divided on whether direct entry to year 2 was desirable. Some students felt there would be a struggle to make up the missing components from year 1, but others stated that they would consider this to be an acceptable price to pay for reducing the programme by a year and the financial savings that would result.

The Panel **recommended** that the Department's policy on direct entry for holders of Advanced Higher be reviewed.

### 9.1.4 *Overseas Recruitment*

It was noted from the Self Evaluation Report that the Lord Kelvin Honours Programme had been launched throughout the Faculty of Physical Science, targeting students in the USA and China. The Panel wished to explore this further, as it was concerned that over-reliance on overseas markets could become problematic as those countries increased their own provision. In addition, unusually high proportions of overseas students required considerable support and this could be to the detriment of home students if staff time was being used predominantly for supporting the overseas group.

The Head of Department assured the Panel that there was no intention to source large numbers of students from these markets. He explained that there was a small pool of institutions in which the Department had contacts, and the intention was to aim to recruit only a few students from each. He acknowledged the importance of maintaining quality and standards, and stated that relationships were only being formed with institutions that were well known to the Department. It was felt that the small number of overseas students could be enriching. The staff group echoed the Head of Department's comments and advised that the Lord Kelvin programme was a Faculty-wide initiative, rather than departmental.

With these reassurances, the Panel was satisfied that the initiative was a positive one.

### 9.1.5 *Gender Balance*

It was noted that around 25% of the Department's student group was female. This was higher than the UK average, which was around 18%. The Department had been commended by the 'Women in Physics' group when it had visited in December 2004, and had been considered to be one of the most women-friendly Physics departments in the UK. The females in the student group agreed with this comment and confirmed that they were never treated less favourably (or indeed, more favourably) than their male counterparts.

## 9.2 *Student Support*

### 9.2.1 *Adviser of Studies System*

The Self Evaluation Report indicated that, on entry, all students met with a Senior Adviser of Studies and had the chance to review their initial UCAS selection prior to starting their programme. After one month, students were assigned to their own Adviser in their intended subject, who assisted with making course selections and also provided pastoral care in association with other experts within the University.

### 9.2.2 *On-Programme Support*

Once established in their chosen programme, student attendance and performance was regularly reviewed. Although attendance was not recorded at all classes, staff would try to make contact with any student who was repeatedly absent. However, staff stated that students often did not want to be contacted and did not attend meetings set up to discuss their progress. In the cases where students could be contacted and did speak with staff, it was believed that this support could make the difference between withdrawal and progression.

The department encouraged students to use the 'Mastering Physics' software to assess themselves, but encountered difficulties in that the students who could benefit most were the least likely to engage. The same was true of remedial sessions set up for students who were struggling with aspects of their course.

### 9.2.3 *Student Attendance*

It was noted that student attendance was often poor, particularly at lectures. The Head of Department stated that, at present, students had to 'sign in' when attending labs, but that recording at other classes was sporadic. The Panel acknowledged that poor attendance was a problem across the whole University, and certainly not particular to the Department of Physics and Astronomy. It was believed this was partly due to the pressures on students to take on paid employment, which could make even the most committed students struggle, but also the fact that, if students had not prepared the work for the class, they were less likely to attend. Problems were thought to arise due to students being unprepared for the transition between school and University, and between year 2 and the Honours years.

The graduate demonstrator/supervisors confirmed that attendance was often poor. In addition to causing the students to struggle, this also had an impact on the demonstrator/supervisors as they relied on the students to identify the areas they wished to work on.

The student group agreed that attendance could be better, and stated that they were less likely to go to early morning classes. They said that lab attendance was better than lecture attendance as there were usually no repercussions of

missing lectures. They agreed that a 'signing in' system could help to raise attendance, but also stated that many students would simply ask another student to sign in on their behalf.

The staff group confirmed that poor attendance was a problem that required to be addressed, given the likelihood of many of the poor attenders dropping out of study altogether. The staff and Head of Department confirmed that they were inclined to try the 'signing in' requirement and monitor its effects. The Head of Department also believed it would be helpful if there was a University-wide policy on the sanctions that could be applied for non-attendance – for instance, the refusal of credit.

It was also considered that students should not be classed as 'enrolled' until they had attended a certain number of classes, and that this policy should be adopted by the University as a whole. This policy would be particularly strong if also applied by the University of Strathclyde, and the Convener undertook to initiate discussions on the issue.

#### *9.2.4 Support for Students with Special Needs*

The staff group advised that there was a Special Needs Advisor in the Department who, as part of his remit, advised the Registrar on the arrangements required for examinations. They stated that 3-4 students each year required a separate room for examinations.

The students confirmed that the Department made every effort to assist students with special needs. However, it was noted that, for students requiring extra time in exams, they received this at the start of the exam rather than at the end, and the usual safety announcements were not read out.

Unfortunately, the Common Room and 24-hour IT lab were not accessible to disabled students. (See Paragraph 10.2.3 below).

### *9.3 Progression*

#### *9.3.1 Support for Students with Differing Abilities*

The Head of Department advised that, although Higher Mathematics was normally a requirement of entry to Physics and Astronomy programmes, some students were allowed entry via non-standard routes. However, he stated that the problems encountered depended entirely on the individual students concerned and the amount of effort made. These students would receive extra support but it was noted that, in many cases, it was the group of students in the 'middle' ability group that tended to struggle most, and these were more difficult to identify as requiring extra support.

### *10. The Effectiveness of Provision*

The Department offered evidence of the effectiveness of its provision, by means of External Examiners' comments, student feedback and the employability of graduates.

#### *10.1 Learning & Teaching*

##### *10.1.1 Integration of Classes at Level 1*

It was noted from the documentation, including student comments, that the practical lab sessions in level 1 could be better linked to lecture material. Staff advised that changes were being planned to the Physics 1 course, which would involve workshops containing a problem solving element and experimental

work. This would be piloted in Session 2006-07 and it was advised that around £15,000 was being invested in this development.

The Undergraduate student group stated that they thought the level 1 labs worked well, with clear direction and a limited amount of problem solving until they were better prepared. They also thought they tied in well to the lecture topics. They also liked the 'step by step' approach taken to labs in year 1. However, the year 3 students held the opinion that their labs tended to have too many, or too few, demonstrators available. They were happy with the teaching approach and the fact that they were required to think more independently and apply their knowledge.

#### *10.1.2 Safety Training*

The demonstrator/supervisors advised that all students were required to read the safety manuals provided and sign a declaration stating they had done so. Safety sheets were also provided for the various experiments, detailing particular hazards. However, they did not believe there were documents specific to lasers and high voltage supplies, which the Panel considered potentially very dangerous.

The students confirmed that before each lab, they were required to read the safety procedures and sign to confirm they had done so. They also stated that they were given verbal warnings with regard to radiation and lasers. Some of the students recalled being told that the lasers were low level and safe.

The Panel did not consider that the reading of manuals was quite sufficient as a means of ensuring safety, as it was possible that students may sign the declaration without having read the manuals. Therefore it was **recommended** that the Department take further steps to ensure that more explicit safety guidance be given, in addition to the provision of safety manuals, and ensure that these tightened procedures are strictly followed.

#### *10.1.3 Physics for Engineers*

The Head of Department stated that the aim of this course was to supply a course engineers wanted. The Self Evaluation Report indicated that there had been some problems with the course, but the Head of Department advised that the problems tended to correlate with the students' performance in their Engineering subjects.

The Engineers in the student group stated that the course was good but that they sometimes wondered how relevant it was to their Engineering classes. It was also mentioned that there was some repetition from Advanced Higher – possibly up to half the course.

### *10.2 Learning Resources and their Deployment*

#### *10.2.1 University Teachers*

The Department had appointed two members of staff, one half time, at the new University Teacher grade. The Head of Department stated that this had been a new experience but that the Department was enthusiastic. It was envisaged that the University Teachers would take on a greater share of teaching and, over the summer months, play a role in course development. He advised that the postholders were closely supported by the Head of the Teaching Committee and the full time post-holder also had a separate mentor. In addition, a budget for attending conferences and other events was provided for each. The Panel



**commended** the Department for the way in which it was supporting these new posts.

### 10.2.2 *Graduate Demonstrator/Supervisors*

The demonstrator/supervisors undertook demonstrating in labs and some also took tutorials. The Panel heard that they had been provided with training in Demonstrating & Teaching Skills, which took place over one afternoon. However, they had not found this to be sufficiently focused. They stated that usually there was also a session taken by the lab Head at the beginning of session, which was more useful.

The demonstrator/supervisors stated that they did not receive any formal feedback on their performance, and they would have welcomed this. They did not have an opportunity to see the feedback forms completed by students. They also stated they would like more opportunity to give feedback to students, as this was not always possible.

The Panel **recommended** that the Department devise a means of providing regular feedback to the demonstrator/supervisors on their performance, in order to encourage good practice.

The group confirmed that they did marking of student work but were given strict marking guidelines, and their marking was then moderated by a senior member of academic staff.

Whilst lecture notes were not routinely given to the demonstrators/supervisors, they tended to access them via Moodle in order to focus their labs on the lecture material where possible. However, not all lecturers placed their notes on Moodle and it was thought that the routine provision of notes would be preferable.

### 10.2.3 *Departmental Accommodation*

Panel members had the opportunity to visit the Department, located in the Kelvin Building, and tour its facilities. In general, staff and students were satisfied with the accommodation, although it was mentioned by all groups that there was a lack of rooms available for small group teaching and that these groups often had to use staff offices to meet. The student group stated that there were problems with Room 222 being excessively cold. The Self Evaluation Report indicated that this problem had been repeatedly reported but no obvious solution had been found.

The staff group agreed that the lack of small teaching rooms was a problem. This created difficulties in particular when classes were located in various venues across the campus, as there was no time to set up and clear away demonstration material for classes.

The Panel was advised that refurbishment would be taking place which would convert the existing space on Level 2 of the Kelvin Building into a much more flexible space which would be able to accommodate labs and workshops, and its flexibility meant it would be available for use for a larger portion of the year than the current layout allowed. It was hoped the new space would help to attract applicants to the Department.

With regard to the equipment available in labs, the student group did not see any need to spend a great deal of money on new, more sophisticated equipment, as the outcome of their experiments would be the same with the current equipment. However, the staff believed it was important to invest in new equipment in order to prepare students for entering industry, where this would be commonplace.

One suggestion made by the students was that a computer could be added to each lab.

The Panel visited the Common Room which was thought to be an excellent space for both learning and socialising. There was also a small study room with a supply of books for loan, which was run by students. In addition, 24 hour access was available to the IT suite, which students confirmed was very helpful. However, the Panel was disappointed to note that the Common Room and the IT suite were inaccessible to disabled students. The Head of Department confirmed that requests had been made to Estates & Buildings but that so far no resources had been available for the work. It was **recommended** that initial investigations be undertaken immediately into making both areas accessible.

#### *10.2.4 New Lecturer Programme*

The Probationary Staff group stated that they had generally found the New Lecturer training useful, although not entirely applicable to the teaching of science subjects. However, of particular value was the emphasis on self-reflection, and the feedback provided from teaching observation.

The Panel heard that all Probationary Staff were assigned a mentor who would observe their teaching and with whom they met every 8 weeks. The group stated that they received a good deal of support from colleagues. They also stated that they benefited from a reduced teaching load during their period of probation, which was extremely welcome.

#### *10.2.5 Physics 1P*

As the number of students taking this course had decreased significantly, the Panel questioned whether it was still viable. The Head of Department confirmed that this was under review in order to ascertain whether the reduction was simply a fluctuation, or a trend. He advised that if numbers were low next year, there would be an inclination to withdraw the course.

#### *10.2.6 Technical Support*

The staff group stated that technical support, although excellent in terms of quality, was currently at its lowest viable level and that it was difficult to cover absence.

### *11. The Maintenance and Enhancement of Standards and Awards*

The Self Evaluation Report indicated that standards were maintained using a number of methods – including detailed marking schemes to ensure consistency, and thorough moderation of examination papers by the External Examiners. The Annual Course Monitoring process also provided an opportunity to identify relevant issues and act upon them. The External Examiners also played a key role in ensuring comparability with standards and practice in other institutions. The comments and suggestions made by the External Examiners were taken seriously and often formed the basis of further discussion within the Department. Finally, the accreditation of programmes by the Institute of Physics ensured that the Department met national standards.

### *12. The Maintenance and Assurance of Quality*

The Department of Physics & Astronomy was last reviewed internally during Session 1997-98. A Teaching Quality Assessment of Physics was undertaken by the Scottish Higher Education Funding Council (SHEFC) in July 1994, which resulted in an 'Excellent' rating.

### *12.1 Quality Assurance Methods*

A variety of measures were in place with regard to quality assurance – these included the New Lecturer Programme, student feedback questionnaires, various committees, and the regular review of courses and programmes. The Department's Teaching Committee played a key role in handling issues related to teaching and learning.

### *12.2 Mechanisms for Student Input*

The main method by which students could offer their input was through feedback questionnaires, distributed at the end of each course. Class representatives could also take any matters of concern to the Staff Student Liaison Committee. The student group mentioned that any student with a concern or suggestion could also speak with the Head of Year at any time.

The student group stated that, although they were given a large number of feedback forms to complete, they were grateful for the opportunity to voice their opinions and would not wish this to be lost.

The Head of Department stated that the feedback forms did not give sufficient 'richness' of data, and advised that an evaluation strategy was being developed to improve this. He also stated that the most valuable feedback came from the Staff Student Liaison Committee meetings.

## *13. Enhancing the Student Learning Experience*

The Department offered examples of a variety of innovations it had brought into its programmes.

### *13.1 Level 2 Astronomy Weekend*

It was noted from the Self Evaluation Report, and mentioned by the undergraduate students, that level 2 Astronomy students held an annual weekend at 'The Burn' in Angus, which was intended to be an observation trip as well as a social event for both students and staff. This had been a great success and Physics students hoped to hold a similar annual event if this could be supported by the Department. The students believed that the experience of the weekend helped encourage some students to choose Astronomy as their Honours subject who would not otherwise have done so.

### *13.2 Websites*

The student group stated that there was a separate website for each level, and that these were excellent, containing past papers, course handbooks and, for some courses, lecture notes. The aims and learning outcomes were also detailed.

### *13.3 Careers Advice*

The students advised that careers advice was given in year 4. However, they held the view that it would be useful to receive advice near the end of year 2, as this was the time they had to decide on their Honours route and were beginning to think about their future career paths. They considered that even very general advice at this time would be welcome. They acknowledged that careers advice was available from the University Careers Service at any time, but not all students were good at asking for it and nothing was volunteered until year 4. The staff group advised that a system of offering advice at the end of year 2 was being piloted this year.

Although most of the students were aware that Employability training was available, few had undertaken it. However, students felt that all the important transferable skills they required were amply covered throughout their degree.

### *13.4 Moodle*

Not all students were aware of Moodle, as it was not in use at all levels at present. However, the year 1 students stated they were using it in their other subjects and would like to use it more in Physics. It was hoped it would be actively used. When asked if they would like lecture notes to be made available via Moodle, the students said they would like them to be available after the lecture, but not before, as this would give students encouragement to miss classes. They felt that simply reading the notes was not as valuable as hearing the lecture.

The staff group advised that Moodle was being piloted with year 2 only at present. However, it was hoped that it would be available to all students by next session. Staff believed Moodle was a useful system with a good deal of potential, but stated that it was not particularly user-friendly. A basic guide to its use was being developed by the Department with assistance from GUIDE.

### *13.5 Peer Mentoring*

The staff group advised that a system of peer mentoring was being introduced and that nine volunteers from year 3 had come forward. However, it was not yet known what the uptake would be from level 1 to take advantage of the system.

The students had also organised 'peer interaction' at level 1 and the staff stated that the Department would try to support this if it proved successful.

## *14. Summary of Key Strengths and Areas to be Improved or Enhanced in Relation to Learning and Teaching*

### *Key Strengths*

- The Department demonstrated a cohesive, consultative approach and staff showed a strong commitment to the success of the Department
- A number of learning and teaching innovations had been employed
- Staff were reported by students to be approachable and supportive
- The recruitment activities being undertaken showed a proactive approach to securing the Department's future

### *Areas to be Improved or Enhanced*

- Extra emphasis needed to be placed on training in relation to safety issues

## *15. Conclusions and Recommendations*

### *Conclusions*

The Panel concluded that the Department's provision was of a high quality overall, and in particular wished to commend the Department on the following points:

- its inclusive report to preparing the Self Evaluation Report (Paragraph 2)
- its extremely thorough assessment process and the care given to quality assurance in this area (Paragraph 7)
- the way in which it was supporting the new University Teacher posts (Paragraph 10.2.1)

*Minor Points for Consideration by the Department*

- The Panel wished to draw the Department's attention to several minor points which it may wish to consider:
- Review of the physics component of the 'Physics for Engineers' course, to ensure it retains relevance and does not unnecessarily repeat Advanced Higher material
- The potential of offering an 'Away Weekend' for Physics students in conjunction with the Physics Society
- Provision of careers advice towards the end of Level 2

*Points for Wider Discussion*

The Panel wished to draw attention to several issues that were deemed to be of wider relevance than to the single Department:

- There was still concern over the operation of the Code of Assessment
- Difficulties in contacting some early first year students led to the general conclusion that students should not be considered to be fully registered until they had attended, and contributed to, a certain number of tutorials
- The view was taken that a University-wide policy should be considered regarding sanctions that could be used to discourage non-attendance
- The issue of subject-specific interests required to be raised with the organisers of the New Lecturer Programme

*Recommendations:*

The recommendations interspersed in the preceding report, and summarised below, are made in the spirit of encouragement in order to enhance the already high standards of the Department of Physics & Astronomy. The recommendations have been cross-referenced to the corresponding sections of the report, and are ranked in order of priority.

1. It was **recommended** that initial investigations be undertaken immediately into making the student Common Room and the IT Suite accessible to students with disabilities (Paragraph 10.2.3)

**Action: Head of Department; Territorial Vice-Principal**

2. The Panel **recommended** that the Department take further steps to ensure that more explicit safety guidance be given, in addition to the provision of safety manuals, and ensure that these tightened procedures are strictly followed (Paragraph 10.1.2)

**Action: Head of Department**

3. The Panel **recommended** that the Department devise a means of providing regular feedback to the demonstrator/supervisors on their performance, in order to encourage good practice (Paragraph 10.2.2)

**Action: Head of Department**

4. The Panel **recommended** that the Department's policy on direct entry for holders of Advanced Higher be reviewed (Paragraph 9.1.3)

**Action: Head of Department**

Departmental Programmes of Teaching, Learning and Assessment - Report of the Review of the  
Department of Physics and Astronomy held on Thursday 23 February 2006

*Prepared by: Janet Fleming, Senate Office*

*Last modified on: Tuesday 16 May 2006*