College of Science and Engineering

QUINQUENNIAL REVIEW OF POSTGRADUATE PROVISION

SCHOOL OF INFORMATICS
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Review Structure and Process

Composition of the Review Panel

The Review Panel comprised

Professor Wyn Williams (School of GeoSciences and Chair of the Review Panel)
Professor Susan Eisenbach (Imperial College, London and external assessor)
Dr Jeremy Bradshaw (School of Medicine, College of Medicine and Veterinary Medicine)
Professor Rebecca Cheung (School of Engineering and Electronics, Head of Graduate School)
Jonathon Hogg (EUSA PG representative)
Professor Tony Kennedy (School of Physics, Head of Graduate School)
Professor Andrew Ranicki (School of Mathematics, Head of Graduate School)

Secretariat: Lynda Henderson (CSE Academic Affairs Officer)

Review Arrangements

The review, which was held over two days on 14th and 15th November 2007, took the form of a series of meetings with relevant individuals and groups, looking at matters concerning postgraduate research students, the provision of taught masters and finally the administration and management structures and strategic issues of the Graduate School.

Review documentation

The Review Panel considered the following documents

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Review Schedule
Quinquennial Review of Postgraduate Provision: Report
(Graduate) School Quinquennial Reviews of Postgraduate Provision
The Code of Practice for Supervisors and Research Students
The Code of Practice for Taught Postgraduate Programmes

TAUGHT MASTERS PROGRAMMES

A Completed Review Form
B Examples of Course Descriptors
C Current Programme Handbook:
  MSc Degree Guide 2007/2008
  MSc Project Guide 2007/2008
  European Masters in Informatics 2007/2008

D Examples of completed course questionnaires
E External Examiners’ Reports for the last three years
F Annual Reflective Reviews:
  Course Organiser’s Reports
G Continuing Professional Development

RESEARCH PROGRAMMES

MSc by Research
A Completed review form

MSc by Research in Neuroinformatics
B Completed review form
C External Examiner reports

MPhil/PhD
D Completed Review Form
E Sample of first year and annual reports
F Minutes of staff-student liaison committee meetings from previous years

All research programmes
G Information about transferable skills training
  Induction packs given to new students

General comments on the review process

The review was carried out under the rubric and practice recommendations approved by SPGSC in 2003. The review system is designed to look at the total postgraduate provision of a School, including all taught programmes and research degrees and the supporting managerial and administrative structures. The Review covered the period October 2002 – September 2007.

Part of the University’s strategic plan is to increase the number of postgraduate students. In view of this development, one of the aims of the review process is to help Schools take
a longer-term view of development of their postgraduate strategy, as well as providing reflection on previous and current practice.

**Overview of the School’s postgraduate provision**

The Head of School, Professor Mike Fourman, has overall responsibility for the provision of both undergraduate and postgraduate programmes in the School and the Head of Graduate School, Professor Don Sannella has delegated day-to-day management responsibility for the provision of postgraduate degrees and programmes. Dr Stuart Anderson is the Head of Teaching Organisation. Professor Bob Fisher acts as Deputy Director, Teaching Organisation with a particular remit for the strategic management of the MSc Programmes. The day-to-day management of MSc programmes is the responsibility of Programme Directors. The Head of School is supported by a team of administrators.

The average number of students registering for a PhD per annum over the years 2002 – 2007 intakes was 50. In 2003/04 the School started a steady increase in intake up to 57 students in 2005/06 and 2006/07. The majority of students are home/EU with overseas students representing approximately 30% of each intake over the last five years.

The School currently offers four traditional model taught Masters Programme – MSc in Artificial Intelligence, MSc in Computer Science, MSc in Cognitive Science and MSc in Informatics. The 24 month MSc in Informatics (European Masters) commenced in 2005/06. The School also hosts a structured MSc by Research in Neuroinformatics which is a component part of a 1 + 3 PhD model funded through the Doctoral Training Centre.
Review of Taught Masters Provision

Review arrangements

The Panel conducted group interviews with the Deputy Director, the Programme Directors, the Academic Selector, staff involved in teaching and students.

General administration of programmes

The Programme Directors were responsible for the academic management of the programmes. An appointed Academic Selector is responsible for the admissions and selection of students to the traditional model taught master programmes. A Project Organiser is responsible for the academic management of the dissertation component of these programmes. The Programme Directors for the EuMi and the MSc by Research in Neuroinformatics were responsible for the admissions and selection of students to their programmes. A Deputy Director of Informatics Teaching Organisation had been appointed to have a strategic overview of the operation of the programmes, to develop new programmes and to provide support to the Programme Directors. Two MSc Directors of Studies have been appointed to provide pastoral care and advice to students and there was a group of Specialisms Advisors to assist students with choices of courses and academic issues. The School’s Teaching Organisation was utilised for the administration of the programmes.

Programme Review

MSc in Artificial Intelligence, MSc in Computer Science, MSc in Cognitive Science and MSc in Informatics

The four master programmes operate as a suite with common courses and access to a broad range of option courses. Students are required to follow major and minor specialisms within their designated degree. Students are permitted to change designated degrees up until the June of the academic year if there are sound academic reasons and the student had meet the academic criteria (including the requirements for the specialisms). There were currently 12 specialisms available with some such as robotics being more popular than others.

Much of the organisation of the ‘on programme’ aspects of the programme such as timetabling and examinations had been integrated within the Teaching Organisation since the set up of the programmes. With the restructuring of the College Office all aspects of the administration and control of the programmes will transfer to the Teaching Organisation. There was an Industrial Advisory Board which met once a year to consider teaching, academic content such as specialisms themes, programme reviews and
knowledge transfers opportunities. Wherever possible the expertise of the Board is used as guest speakers.

The programmes had been running successfully for a number of years but in the last few years fluctuations in numbers of students actually turning up to commence study have become very marked. The School have not been able to readily identify any one factor except perhaps the costs of UK programmes for overseas students but they were going to investigate this more closely over this academic session. This year a particular effort had been made by the admissions administrator to increase the level of one-to-one communication with applicants during the selection and admission process. Initial observations were that this had made it easier to estimate the numbers of actual students who would turn up. The target for intake was 150 and it was felt that this was achievable with current resources. However this would be considered to be the maximum capacity, with the limiting factors being lab space, PC desk space and available staff to supervise dissertations.

Students are required to take two research courses IRR Informatics Research Review and IRP Informatics Research Proposal and start the process of selecting their project at the beginning of semester 2. Students are required to select four possible projects in order of preference (including their own project proposal if they wish). The Project Organiser will allocate each student a project and supervisor on the basis of the student’s preference and staff expertise/academic loading. All students are allocated two dissertation supervisors. To monitor progress and to assist with identifying problems students are required to make a presentation about their project to a group of students and supervisors in July.

There were currently around 50 academic staff available for supervise students. Although there was no official minimum or maximum numbers each supervisor could have it was usual to have no more than 4 students unless there were specific academic reasons. In many cases the second supervisor was a Postdoc or a senior PhD student. This helped to spread the work load and gave students access to a wider range of academic input. It was also beneficial to the careers of the junior staff and PhD students. The School was looking at the issue of group projects but still had to satisfactorily address the issues around assessment and student contribution.

The Panel noted that the information available to the students via the web pages on course availability and choice was not that easily understood. It was suggested that it would be useful to link the major and minor options on the long course list posted, perhaps by using colour linkage, so that the recommended groupings were more obvious.

Concerns expressed by the External Examiners around the definition and marking of dissertation were being addressed and a new marking procedures which included a moderation level had been utilised for the most recent cohort.

The Panel noted that there had been an increase in the numbers of students being awarded Diplomas and in the numbers of students submitting appeals. Again there did not appear
to be any one easily identifiable factor but with the increase numbers of students the level of diversity in academic background and achievement had become more variable. The supervisors were extremely supportive of the masters projects and all welcomed the opportunity to supervise masters students. They felt that master projects were excellent ways to develop research in small areas, as part of a bigger research project or to provide a ‘base’ component for future or existing PhD projects. Working with PhD students was particularly useful for the masters students as it introduced them to team working etc. Many of the dissertations were of an excellent standard and a significant number led to publication.

European Masters in Informatics

This was a new programme that had been developed under the Erasmus Mundus agreements in collaboration with RWTH Aachen (Germany) and University of Trento (Italy). In general students complete a full academic year in the main university, and then continue with further courses at the partner university during the second year, returning to the main university to complete their project. There are three streams: Life-Science specialisms (only available through Edinburgh – Trento), Net-Centric or Net-Centric/Media Informatics and Embedded Systems Informatics specialisms.

The programme is taken over 24 months and carries 120 ECTS credits (240 UK credits). All students are required to complete a total of 50 ECTS (100 UK credits) taught courses, including the IRR and IRP courses (each worth 5 ECTS credits) and 6 x 5 ECTS credit courses (10 UK credit courses). Students must ensure that they take one of the two programming courses. Of the 6 courses a minimum of three must come from the grouping of courses deemed as compulsory for each stream. The dissertation is worth 30 ECTS credits (60 UK credits).

The Panel noted the very complex nature of the programme and commented that the documentation submitted had been hard to follow. The Programme Director confirmed that this was a complex programme. Currently two degrees are awarded which meant that the degree requirements for each degree must be satisfied which made it even more complicated. Negotiations are in progress to set up a joint degree which will remove some of the complexity. The numbers of applications has been rising and the quality of the students selected was exceptional. The funding for overseas students is generous and is therefore attracting good quality applicants. However there is no formal funding for UK or EU students and the consortium has taken steps to build up a ‘fund’ to bring in EU students. So far three EU students have been partially funded through this route.

Despite the small numbers of students the School was supportive of the programme and felt that the programme gave the students valuable experience of two different education systems, offered the students a broad range of courses and helped the School to build on various research collaborations with the other partner universities. One EuMI student has already proceeded to PhD study and it was hoped that the School would be able to
identify more high quality students for PhD study through this route. The School would be preparing to submit a new bid for a second round of funding next year.

MSc by Research in Neuroinformatics

This 12 month programme was linked to the 1 + 3 research model operated under the Doctoral Training Centre in Neuroinformatics arrangements. Successful completion of this 12 month masters was mandatory for all students funded by the DTC. The programme was available to non-funded students as well but uptake tended to be in small numbers.

The programme consists of 3 components, a neuroscience component (hosted by the School of Medicine), an informatics and neuroinformatics component and a dissertation component. Students funded by the DTC are required to start developing a PhD proposal during the summer period of the MSc. This proposal can be an advancement of the MSc dissertation study or can be in a completely new research area.

The programme is administered by a Programme Director who is part of the DTC management team. A DTC Steering Committee ensures the integration of the DTC with the activities of the School and the External Advisory Board monitors the scope and quality of the research and gives strategic and management guidance.

Student comments

The Panel noted that the students were generally satisfied with their experience to date and appreciative of the commitment and approachability of the staff. They had had a good experience during the selection process and they noted the high level of communication with the School during the process. The majority had received a decision within 3 weeks although the process was more complicated for the EuMi programme. This was however in part due the timing of the scholarship application and award which is considered in May/June. The majority had found the induction events hosted by the University helpful and were complimentary about the level of information they had received from the University, EUSA and the School. It was suggested that it would be helpful if key staff were asked to introduce themselves and their roles at the School event. Name badges for staff would also help. None of the students knew their Student Representative. They had been allocated a student representative via an email but this had not been particularly effective and not been followed up in any way.

The students noted the intensive nature of the programme and commented that the schedule of assessments left little time to revise. It was disappointing that they were not able to take part in the School’s talks and seminar series due to scheduling clashes between the talks and their lectures. They felt that their learning experience would benefit from more team or group work perhaps during tutorials. On one occasion they had had to choose a partner for project work which was quite difficult to do as they did not know
each other. It would perhaps be beneficial if the tutor could assist in matching academic backgrounds and skills. The courses had been very good although the students would appreciate if feedback from the first assignment could be received before the second assignment hand in date. The students supported the concept of having access to marked scripts.

The students raised the issue of advance information on course descriptions and the expected level of programming skills required. It was felt that it would be very useful for this information to be readily available on the web prior to joining so that they could do preparatory work. It was also suggested that the School could provide an introductory e-learning course in the two languages to help with preparation. In addition examples of previous assignments would also be useful to help them understand what level of academic achievement and study would be required of them.

Generally they were satisfied with the level of facilities available to them however there were occasional problems with the software lab that had been designated ‘a quiet zone’. Many other students did not appear to be aware of this designation and at times students were carrying out group tasks in there. It would be helpful if clear signage was put up and a set of ‘rules’ for use laid out. Overall however there was adequate study space available. The neuroinformatics students noted that their facilities were very good but there was not a lot of opportunity to mix with the other masters’ students. There was plenty of opportunity to mix with the neuroinformatics PhD students. The students suggested that a social event mid semester one would be good to help strengthen social interaction as a cohort.

The EuMi students raised the issue of difficulties with visas. The Secretary noted that the College and the School were aware of difficulties and had worked together to provide the best level of information about the programme as was possible but ultimately the decision on visas rested entirely with the Borders and Immigration Agency. The Agency was considering each application individually which was leading to variances in the lengths of visas being granted.

The Panel **commends**:

- the quality of the MSc programmes
- the enthusiasm and commitment of the academic and administrative staff
- the quality of the students
- the enthusiasm of supervisors about masters projects
- the effective recruitment process and level of communication with applicants
- the appointment of a project organiser to coordinate the development and allocation of projects
- the well organised pastoral care provision
- the comprehensive and well written Course Organiser Reports
Recommendations:

It appeared that the students were unaware of any School guidance on feedback provision. The Panel recommends that any framework/schedule of feedback provision is included in the handbook given to students.

The Panel recommends that the School considers ways to include more organised team/group working and problem solving perhaps through the tutorial provision. This would enhance the student experience and provide additional valuable generic skills training.

The School should address the issue of the ‘quiet lab’ and take steps to ensure that this functions as a quiet working area.

The Panel noted the enhanced information provision and recommends that the inclusion of advanced information on programming skills to facilitate student preparation would be a very constructive addition to the overall recruitment and induction provision. In the longer term the introduction of an e-learning package/course should be considered.

The Panel recommends that the School revisits the presentation of the course information on the web. The Panel did not find the current listing particularly that easy to follow. The Panel recommends that the major and minor courses for each specialism are more clearly linked on the listing so that the students can identify a clear pathway to follow. The advance publication of course descriptors would assist the students to choose their specialism pathway.

Although there were weekly meetings between staff and student representatives it was clear the PG students did not know who the PG student representatives were. The Panel noted the combination of UG and PG representation/issues at these meetings which was an effective means to share expertise and ensure continuity. The Panel recommends however that PG representatives in each specialism should be elected during the course induction period. The names and role of these representatives should be clearly advertised on the main programme webpage and the email channels available for communication should be improved. It is suggested that the School liaise with EUSA regarding possible training for new representatives.

The students commented that the current timetabling restricted their ability to attend the School’s seminar series that run throughout the academic session. Although the Panel appreciates the intensive nature of the programmes and timetabling limitations, it urges
the programme team to consider how this option could be accommodated to enhance the overall learning experience.
Review of Provision of Research Degrees

Review arrangements

The Panel conducted interviews with a group of postgraduate supervisors and a group of postgraduate research students.

The findings of the Panel have been incorporated under the following broad headings: general, recruitment and admissions, student progression and supervision, completion rates and student comments.

General comments

The Panel found that the quality of the provision of research training was of a high standard however there still appeared to be some variations in the applications of procedures for monitoring student progress and feedback mechanisms across the Institutes within the School.

Recruitment and admissions

The selection process for research students had been streamlined and was now administered by the Graduate School Administrative Secretary. Each Institute had appointed PhD selectors to review all applications for that Institute. The secretary received, checked and posted all applications on the School’s internal online systems. The Institute’s PhD selectors were notified and all staff were updated when new applications were available. All staff had access to the lists of applications. The selector made the initial academic review of the application, discussed the application with the potential supervisors and returned a recommendation to the Graduate School. The School now had clearly defined selection criteria that were published on the web site. The new system was working well, with improved decision times and communication with applicants. The information available to students on the web pages had been greatly improved.

The School had steadily increased the annual intake of students and it was believed that current facilities would be able to support further, modest increases. The staff felt that the process of allocating students and funding was fair and made effective use of the funding available across all the Institutes. The Graduate School’s strategy to actively support new and younger members of staff by prioritising them for allocation of students and funding was appreciated by the staff. The biggest limitation to expanding and maintaining numbers was the current level of ‘open’ funding which left little available to support good overseas students.
Applications numbers had peaked in 2004/05 and were now back at the same level as 2003/04. However the standard of applicants had remained high. One of the priorities was to secure more funding to attract more talented overseas students. The School was currently working with SHEFC on a pooling arrangement for computing that could potentially provide additional money for studentships.

Student Progression and Supervision

The School had a review framework for students to evaluate performance however it was clear that this was not universally applied across the Institutes. In particular the School recommends that the First Year Report is carried out at 9 months. While some Institutes follow this there appears to be supervisors and Institutes who only carry out the first year review at or after the 12 months period. This meant that problems were highlighted very late on in the process and could lead to an extension of the probationary period for the student. The practice of review committees had however become standard across the Institutes and was supported by the staff as an effective means of review.

There did not appear, from the paperwork provided, to be a School defined ‘model’ for conducting annual reviews and consequently there was considerable variance as to how this was done with some Institutes using presentations and written submissions and others using written submissions only.

The School had appointed a tutor with pastoral care duties as required by the College Office. This new role was designed to provide confidential assistance to students with problems that could not, or was not appropriate to, be resolved within the supervisory arrangements. Additional support was given to the pastoral tutor by a second tutor who was a member of the opposite sex to ensure that cultural sensitivities of the students were respected.

Completion Rates

Few students submitted their thesis at 36 months. The majority appeared to submit their thesis somewhere between 42 and 48 months. It was a firmly held view amongst the supervisors that no project should be expected to complete within the University’s expected length of 36 months. It was common practice not to assign a student with a defined project on entry and to permit the students 12 months to develop a variety of avenues before defining the full project at the 12 month first year review. This was viewed by the supervisors as very valuable for the student in developing skills and to ‘find their feet’. The Panel enquired how the issue of funding for this additional time was resolved. Some supervisors indicated that if they were aware of the student’s funding arrangements they would try to assist with finding additional funding. It appeared however to be assumed to be the student’s responsibility to support themselves for the additional time even if their funding had ceased after 36 months and there was no School
policy to provide funding for non research council funded students for the additional time.
The supervisors were supportive of their students undertaking tutoring and demonstrating duties as they felt that this developed skills necessary for the student’s career and gave them excellent experience. There was no set requirement for the students to undertake these duties and the supervisors considered that most students appeared to be well aware of their project workload to be able to judge how much to take on. All of the supervisors helped their students to plan their workload. The allocation of duties was under the control of the Teaching Organisation and this appeared to be efficiently administered.

The supervisors however were not supportive of the concept of permitting students to take time out to undertake internships or other research opportunities, work experience or other activities. Most expressed the view that this was detrimental to the PhD and that it was not always in the best interest of the student in the long run eg not being able to complete within the maximum period. Some supervisors would only support this if the research or work carried out could be directly related to the PhD and could contribute to the thesis.

Student Comments

The students had chosen to come to Edinburgh because of the reputation of the School. All had found the application process straightforward and timely. The interaction with staff both administrative and academic during the process had been good. One student had taken additional English language tuition on arrival and had found the courses provided by IALS to be excellent. All the students had found the staff to be very approachable and the students who had undergone the new induction process had been impressed with the depth of information and the training provision that had been laid on.

All of the students felt that the length of time taken to define the project after they had arrived had a significant downside as they had limitations on how long they could afford to fund study. The majority felt that it was better to be focused on the topic area more quickly to prevent ‘drift’ and over run beyond their funding. The students’ expectation was to complete at 36 months and 3 months i.e. around 39-40 month mark. Some of the senior students were working as part time RA to fund their additional time and some of the senior students had positions/employment to go to so now had very definite times for completion. Many students found funding their studies difficult beyond the period of scholarship, and had not been informed at the time of applying that a degree of self-funding might be required. It was remarked upon that in some cases the students had felt obliged to put the preparation of papers for publication for the benefit of the School before their thesis which had led to them having to then extend their studies even further.

Some of the students felt that they had been pressurised to take on demonstrating and tutoring duties and had been required to do more than they felt that they should have done. However no student in their third year was required to take on demonstrating duties which was a good policy. The TO provided a list of opportunities but it would be helpful
if the deadline for expressing interest was more clearly advertised. There did not appear to be any formal requirement for students to undertake the University’s training course for demonstrators. Each course organiser outlined what was required and provided the marking criteria etc. The students did not receive any formal feedback on their performance.

All were supportive of the training opportunities that were available to them either through the School or by providers such as Transkills. They all felt that they were supported by their supervisors and the School to take part in courses, weekly seminars and external conferences. There was some confusion however about the process to apply to the Graduate School for additional funding to attend overseas conferences etc.

They had regular meetings with their supervisors and all were happy with the level of interaction. However they felt that the formal review processes could function better than they currently did as they received variable levels of feedback from these meetings. There could be a standard process to supply feedback from the review committee. A thesis outline is reviewed at the end of the second year but in some cases no schedule or plan of action was formally defined or agreed at this review. The students were working on the schedules that they had created themselves. None of the students were aware that the School submitted an annual progress report about them to the College Office and none of them had ever seen a completed form.

The facilities provided to them were good and they had a dedicated work study room and access to common room/kitchen areas. Some of the Institutes operated a ‘morning coffee’ system were students and staff were able to meet informally. However nearly all pointed out that it was hard after the first year to meet and socialise with other students in the School. This was particularly true for the Neuroinformatics who were a small grouping of students and staff. Although this grouping worked very well together and it was a very supportive environment it did not by its nature encourage interactions with other groupings of students at the PhD level. The School was very ‘Institute centric’, which was understandable in terms of research but this should not be a ‘barrier’ to integration with other students in the School.

The issue of computing support was raised. It was acknowledged that if you had a straight forward problem the ICS team were very helpful however the support team only operated office hours and could be quite ‘stubborn’ over supporting specialised software installed by students. It appeared to the students that if they had to install specialised software because of the demand of their project then the student was expected to sort any problems themselves.

The Panel commends the approachability of the academic staff as indicated by the students’ comments.

The Panel commends the quality and commitment of the students.
The Panel **commends** the School for the new centralised recruitment process and high level of communication with applicants

The Panel **commends** the level of facilities and supervisory support for the students

The Panel **commends** the School for their engagement with Transkills to develop new School specific courses and for the level of encouragement that the students were given to attend courses, seminars and conferences.

**Recommendations:**

The School’s stated procedure to review progress at 9 months was not rigorously adhered too. The Panel **requires** that a clear and robust procedure for First Year Review is defined that ensures that the initial progress review is carried out at 9 months. This issue **must be addressed** prior to the next round of performance reviews.

The Panel also **requires** that criteria for the conduct of Annual Reviews **must** also be defined to ensure consistency of rigour of the review, improve the level of constructive feedback to the students and improve the level of fairness of treatment across the Institutes. The Panel **recommends** that the School consults with the Schools of Engineering and Electronics and GeoSciences who have well defined review procedures.

The level and effectiveness of feedback to research students was not consistent across the Institutes. The Panel **recommends** that the School defines criteria/principles to guide the provision of feedback and look to ensuring that feedback is routinely carried out at the formal review milestones.

The Panel **recommends** that the School requires all research students to undertake the University’s Teaching and Demonstrating course prior to taking becoming a tutor. The School should investigate developing mechanisms to feed back comments on performance to the research students.

The Panel **recommends** that the School investigates the level of computer support for specialised software not standard to the School’s provision.

The Panel **recommends** that the School should look at ways to facilitate increased social and informal interaction and contact between students across the Institutes.
Management and operation of Graduate School

Operation of the Graduate School Structure

The overall responsibility for the School lies with the Head of School. The responsibility for the management of the Graduate School is the remit of the Head of Graduate School who had specific responsibility for research students. A Deputy Director of Teaching had been appointed to oversee the running and developing of taught masters programmes. The day to day administration of the taught masters is the responsibility of the MSc Programme Directors and the day to day responsibility for the management of research degree provision lay with the individual Heads of the Institutes. The School’s Teaching Organisation now manages all aspects of the administration for the taught programmes.

Administrative Structure

The School had recently developed its administration structures to reflect the new College Office strategy. The masters programmes, including recruitment, were now entirely under the control of the Teaching Organisation. This was felt to be a good move in terms of being able to look after the students. The Graduate School would be responsible for the administration of the research degrees.

The administration staff worked well together and all were aware of each others role so could assist or cover if required. The School had learnt the hard way about the importance of continuity of work and the spread of know-how and steps were now being made to ensure that procedures documents were prepared and that recruitment to posts was carried out to allow some cross over. The working relationship with the academics was on the whole good although there were still inconsistencies in practice and approach across Institutes. The move into the new building and the concentration of staff and students into one area would help to improve internal communications. The administration of research students would be centralised at this time as well which will help to eliminate differences in practice. The adoption of updated procedures now allowed the Graduate School to be more proactive in the management of procedures such as annul progress monitoring and the appointment of examiners.

Representatives from the administration staff were full members of the Teaching Committee and the Graduate School Committee and were able to contribute to the development of policy and procedures in the School. In the DTC the whole team, including the academic and administration staff, had weekly management meetings.

The School had formal systems for pastoral care and both the research and taught provision had named ‘director of studies’ roles. The TO and the Graduate School staff were available to give advice and sort problems, particularly in the first few months of the students time in Edinburgh. It was now practice for the Graduate School Administrative Secretary to meet with each PhD student on arrival to go through the
procedures, what to do and who to contact etc. As the DTC grouping of students was small the secretary had a high level of contact with the students.

The major problems raised by the administrative staff were lack of coherent, quality university management and student record information, reporting systems eg examination results that were overly complicated simply because of the lack of joined up systems, the provision of suitable sized lectures theatres and lack of clarity of function between Registry fees section and the University’s Finance Section. It was acknowledged that many of these issues should be addressed by the implementation of EUCLID.

**Head of Graduate School and Head of Teaching Organisation**

The Panel conducted an interview with the Head of Graduate School and the Head of the Teaching Organisation.

Although the concept of a Teaching Organisation had existed in the School for a long time no sense of ‘community’ had developed and the research groups had been managed quite separately. The School had restructured to six Institutes with PGR teaching within the Institute under the umbrella of the Graduate School. Considerable effort had been put in to generate a sense of community and this was now beginning to develop across the teaching, administration and research. There had been initial resistance to establishing standardised practices but gradually this has been overcome and it was anticipated that the administration of research students would become completely centralised with the move to the new building.

The first area that had been tackled was recruitment and new streamlined procedures had been introduced in both taught and research to improve the turn around times and the student experience. There was still work to be done as application numbers and conversion from unconditional firm to student was still uneven and unpredictable. The exact reasons for this were unclear and further work will be focused on determining trends, student profiles and how to improve conversion from UG to PG. The School would be working closely with Student Recruitment and Admissions and the International Office to increase the numbers of EU and overseas students. The School was also looking at the idea of ‘student ambassadors’ who could help to attract potential students when they returned to their home country. The School was in the fortunate position of having a good spread of country source so they were not overly vulnerable to political and economic changes and trends in any one country. They would aim to maintain this diversity.

One particular issue was the reduction of funding for students through ORS studentships and the CTA funding scheme that replaced the MTP scheme. The low numbers of ORS places had made it much more difficult for overseas students to find funding and had limited the School’s ability to attract the best students. The School felt that the way in which the CTA funding had been introduced had been detrimental to the School as they felt that they had contributed the most to the bid and had had the highest number of
existing MTP arrangements. They felt that the new arrangements had meant that they had received less of the overall (increased) pot than they had received before the increase.

The School had looked at developing collaboration on degrees with overseas universities but so far the experience had been mixed. For example a venture with the British University of Dubai to set up a centre of study for Net centric Informatics had not been a great success. However the link with Stanford had been successful and had generated a steady stream of excellent students. The School was currently working on a taught masters programme delivered jointly with Beihang University in China. The principles had been agreed and the actual details of delivery were now being worked on. The students would be matriculated as University of Edinburgh students and complete their taught component here but undertake their dissertation in China. They would be awarded a single degree from the University of Edinburgh. The School also intended to make a new bid for the continuation and development of the EuMi degree as it attracted excellent students. It was hoped that the new bid would lead to an increase in the numbers of scholarships available for the tripartite agreement.

The School had secured funding through a commercialisation project to look at group projects connected with industry. At present around 10 – 15% of projects were in collaboration with industry. They would also look for opportunities for projects linked with other Schools for example biology or e-science. The director of commercialism was talking to companies and the School was looking to approaching the financial sector in Edinburgh as well. Pilot schemes had been introduced to video and audio record lectures and iPOD distribution of course material for potential development of CPD activities.

The second major problem that the School was looking at was the submission rates. There was a low number of students submitting at 36 months. The Panel noted that the supervisors believed strongly that projects could rarely be done in anything less than 48 months. The Graduate School was working hard to improve the completion rates through the supervisors training and improved monitoring processes. The anticipated centralisation of the administration of research students would also help to focus on completion times. The Panel noted that the lack of funding for this imposed additional time was a very serious matter and could cause financial hardship to the students. There also appeared to be a high level of unfairness in the system with the students being funded by research council grants having favourable funding arrangements. The Panel questioned whether it was realistic to expect the student to find the additional funding for a year when the University’s expected completion time was 36 months. The message from the students had been very clear that they had expected to be completed by 40 months at the latest.

It was clear that the School’s practice was to bring students in without a clearly defined project plan. Definition of a project could take up to 12 months with students following various different strands of investigation. The Panel noted that the students had expressed the view that earlier and timelier focus on the definition of the project would be beneficial and would help to prevent ‘drift’. This view was in direct contrast to the views expressed by the supervisors who saw the process of investigation as “very valuable for the student
in developing skills and to ‘find their feet’”. The School should perhaps look to make more use of school funded defined projects, which were advertised on the web page. This is common practice in the Schools of Chemistry and GeoSciences and had proved to be an effective way of attracting good quality students and improved completion rates.

The external assessor indicated that a similar culture had prevailed in her department. However the implementation of a more rigorous monitoring and review regime had dramatically improved submission rates without any detrimental effect on the pass rates for the students, the quality of the thesis or the department’s reputation.

There appeared to be inconsistencies in the rigour and the application of the process for monitoring across the Institutes and this needed to be addressed. The proposed move to centralised administration was an ideal opportunity for the School to look to strengthening the processes. The Head of Graduate School confirmed that they intended to tighten up on the review processes and the introduction of a second year poster presentation stage was being considered. A new process of collective review had been introduced and this was proving to be effective. All Institutes were required to hold an annual review meeting to discuss the progress of each research student, problems and possible resolutions. These meetings were attended by the supervisors, the Institute Director and the Head of Graduate School. The Institute Director was responsible to ensure that problems and solutions identified were addressed.

Although it was School procedure to review at 9 months this was not rigorously adhered to by all the Institutes. There needed to be a clearer procedure that ensured that the review of carried out at 9 months when there was still time for remedial action before the First Year Report. The extension of the probationary period should be seen as a last resort not just the means to give time for remedial action. This will allow decisions to be made within the 12 month framework which was better for the student. The Panel noted the School-wide Poster Jamboree which included a poster competition; this was seen as an excellent way for assessment of progress to be made and to give the student a wide range of feedback.

The external assessor advised that the School looked to develop an additional step. At the beginning of the third year the student should have some form of completion strategy meeting with a nominated member of staff from the School. In preparation for the meeting the student would be required to provide a plan of work complete with time estimates, a thesis outline such as a ‘contents page’ and possibly a draft abstract of the aims of the project. The student would also be asked to provide a short statement on their planned career path i.e. industry/commerce (or other form of paid employment) or research stating if in academic institution or in commercial or consultancy environment with an indication of length of existing funding and any availability of future funds.

The nominated member of staff would discuss the student’s submission with the supervisors to determine how realistic the plans were before meeting with the student. An action plan tailored to the student’s ambitions should be formulated including a set timetable for completion within the student’s expectations, identification of any career
training and development needs such as interview skills, commercialisation awareness, entrepreneurship etc, and also identification of any additional support mechanisms such as pastoral care or career advice that needed to be put in place.

This would likely lead to the School identifying two streams of students

- non – academic career PhDs – these students will need to have a solid schedule to get to submission by 36 months or as soon after as possible
- academic career PhDs – these students should have a plan adjusted to be achievable within their funding; overrunning the funding was not acceptable

This had proved to be very effective in her institution and had helped students to focus constructively on what still needed to be done in their research and also on what they were going to do after their degree. It could also have the additional knock-on benefit to the School of giving them a better idea of where their students were going so that they could use this to inform the development of the transferable skills training provision.

The Panel noted that the students had raised the issue of feedback. Both masters and research students had expressed concerns about the level of feedback. There appeared to be no consistency in practice in the provision of feedback. This had led to the students getting variable quality and levels of feedback and in some cases no formal feedback at all.

The Head of Graduate School acknowledged that the School was weak on formal staff student liaison opportunities for research students. There was a staff/student liaison committee but this was not operating as effectively as it should do. However the School felt that the informal process of feedback worked very well. In terms of the masters students the students had good opportunity to feedback through questionnaires and there was a weekly meeting with UG and PG students.

**Research and Generic Skills Training**

The School was working with Transkills to develop bespoke courses for PhD students. The first one of these ‘Managing your PhD’ had run the week prior to the Quinquennial Review. The reports from the students who had attended had been positive. The School also supported the Thesis Workshop for 3rd year students.

The supervisors and the students were all supportive of this initiative and of the range of generic courses provided by Transkills. The Transkills Unit had reported that the introduction of the bespoke courses had generated more interest and greater attendance in the Transkills programme of generic courses from students in the School of Informatics.
Head of School

The Head of School has overall responsibility for the management of the School and the undergraduate and postgraduate provision. He is supported by the Teaching Organisation and a team of senior academics including the Head of Graduate School and the Head of Teaching Organisation.

The School was now working as a more cohesive group and was benefiting from standardised administration and School and University wide training. However it was recognised that differences still existed in practices across the Institutes and this was being addressed. The Head of Graduate School had done an extremely good job in creating a community culture and with the move to the new building and the centralised administration consistency in practice was expected to improve.

The maximum number of masters students the School could recruit would be 150. Natural steady growth was proving to be unpredictable but the School was following various initiatives to increase the scope for recruitment such as the venture with Beihang University for a split site masters. Expansion beyond 150 would be limited by resources for projects although the School had started to look at group projects. The School had met the University’s target for the balance of UG to PG with the current intake levels.

In terms of recruitment to PhD the School’s strategy was to ensure the quality of the student and ‘fit’ to the research interests and supervisor. Where the ‘fit’ is not as good as it should be the School is encouraging a ‘strategy of networking’ so that the details of a good student are passed on promptly to alternative potential supervisors. It is expected that each supervisor has a minimum of one PhD student per year. New members of staff get priority in terms of funding for studentships. This does not however compromise the principle of best ‘fit’.

The School employs a straightforward work load model for taught programmes which is based on the expectation of 2-1.5 courses and 4 – 5 projects per member of staff. The model does not include PhD supervision which was covered by a separate model base. The exact ratio for each individual member of staff is adjusted to take into account administrative duties etc.

The development of taught masters was research lead and the emphasis was on providing the students with the opportunity to prepare well for a PhD. The financial model for the masters suite had two aims – to provide a cost effective means to create and transfer knowledge and to add to the research activities in terms of research output and secondly to increase revenue. The School would be looking at developing more collaboration with other Schools and Institutions to develop combined degree ventures. Internally there was possible scope for combined degrees with mathematics or sociology for example.

Funding for scholarships was a problem for both masters and research particularly as they were trying to increase overseas student numbers. Recruitment for research students is
now far more competitive globally and the number of students with home government funding has decreased. The School was working hard to establish links with the top Chinese universities but converting this into student numbers was proving difficult. The Chinese did not want to pay the full fee and expected discounts. They had started to develop similar initiatives in India but this again was proving difficult as the USA was the preferred destination for students.

An Alumnus Officer had been appointed to develop a strategy to capitalise on the potential of past students returning to study. The Officer would be concentrating on developing the UG alumni but would be looking at PG students as well. The Business Development Team was responsible for taking the research out to industry and to develop links for sponsorships, joint projects etc. The Head of School believed that this was beginning to develop usefully.

The Panel enquired about the School’s policy on staff training. All supervisory staff were required to undertake the University supervisors training. New supervisors were required to act as second supervisors initially to gain experience. Supervisors with limited experience were always paired with a more senior second supervisor. The School had a formal appraisal system and the Institutes operated some form of staff mentoring.

The Panel noted that the number of appeals had been increasing. The School had recently appointed a Pastoral Care Tutor whose role was to act as advisor to research students. The appointment of DoS academics at taught masters was long established. The Panel noted that with the numbers of research students currently studying in the School the workload of the new tutor may become substantial. The Head of Graduate School was the main contact for handling appeals and the Head of School felt that the HoGS handled the appeals very well and in a supportive manner. Only a small number had had to be referred to the Head of School.

Although the School supported the College Office restructuring the Head of School had some concerns with particular aspects. He felt that it was important at PG level for there to be close academic input in the recruitment process. There was a high level of knowledge required about overseas qualifications, the reputation and standing of different institutions. He felt that with the restructuring and the new business practices emanating from EUCLID that the School could become disassociated from the process.

The move of taught masters to the Teaching Organisation reflected the School of Informatics structure anyway and they had found this structure the most efficient way to support the students while maximising efficiency in delivery of courses. It was particularly good in supporting students as it gave PG students access to introductory courses at UG level as well as master level courses and gave UG students the opportunity to take higher level courses in specialised areas.
The Panel **commends** the commitment, enthusiasm and professionalism of the administrative staff and the School practice to involve administrative staff in policy and strategic development.

The Panel **commends** the strong Teaching Organisation structure.

The Panel **commends** the interesting and imaginative initiatives that were being implemented to increase student recruitment.

**Recommendations:**

The Panel **noted** with concern the predominance of the culture in the School that PhDs take up to the maximum period irrespective of the University’s expected completion date of 36 months. The Panel was particularly concerned that the students might have to find an additional 12 months of funding, for which they were unaware at the time of application. The Panel did not consider that the apparent expectation that it was entirely the student’s responsibility to fund the additional time was an acceptable expectation nor did the Panel believe that this was sustainable in today’s global education environment.

The Panel **noted** that this culture appeared to be at odds with the expressed view of the students to complete close to the 36 month prescribed period.

In order to look to addressing this issue the Panel **recommends** the following:

The Panel **asks** the School to formally review its current practice of recruiting students without a clearly defined project plan and allowing definition of a project to take up to 12 months. The School is required to submit a formal Report to the Panel.

During this review the Panel suggests that the School considers the following:

- setting a maximum time period of 6 months to define the project plan/outline
- increased use of defined and funded advertised projects
- requiring a training schedule to be developed at 6 months that would be integrated across years one and two; not front loaded in the first year
- a formal entry interview with the student to establish the student’s career aspirations and expectations on completion time. These expectations then used as the guiding principles to setting the project plan and training agenda
- All students (with the exception of DTC students) are registered on a 36 month PhD programme. The University levies tuition fees annually for three years. The School is allocated income on the basis of this three year fee. The School receives no additional income for the period between 36 months and 48 months. Is the School practice of supporting 48 month submissions leading to a misbalance of
fee income to School resource expenditure on full facilities, full supervision and full overhead costs?

The Panel recommends that the School investigates mechanisms to secure funding for students who are required to have to continue with full study after 36 months. The School is recommended to consider award funding for publication of papers as is practice in the School of GeoSciences as one example. (Additional funding would not apply where the overrun is due to unsatisfactory academic performance or where the student has voluntarily undertaken other activities that have led to the delay in completion).

In the meantime, the Panel recommends that, if the expectation of the School is that no project can be completed in less than the maximum period of study, then the School’s practice must be transparent and published to potential students in advance of application and the acceptance of the offer.

If the School wishes to continue to support the 48 months then the Panel recommends that they take formal steps to adopt the 1 + 3 model as standard. It should be noted that this would allow the School to receive revenue for the full fours years. However the Panel does recommend that the School considers carefully the implications of four years fees on the attractiveness of the degree(s) to potential students and overseas governments given the increase in global competition and improving provision in many other developed countries. If the 1+ 3 is adopted as the standard degree then the School’s funding must cover the four years.

To assist with timely completion the Panel recommends that the School considers adopting the additional year three review stage (or a variation of) suggested by the External Assessor. This will assist the students and the supervisors to focus on what is still needed to be completed and identify potential problems earlier.

The Panel noted that in reality it was the informal mechanisms for research student representation liaison that were working well and that the formal mechanisms were ineffectual. While not wishing to enforce unnecessary bureaucracy or to break existing working systems the Panel would recommend that the School reviews it current formal processes for staff/ student liaison to ensure that the committee can operate effectively and contribute to the development of the research training provision.

The Panel were concerned that some aspects of the examinations and marking procedures for the MSc by Research in Neuroinformatics were not fully compliant with University’s regulations. The Panel recommends that the Teaching Organisation reviews the practices to check on compliance.
The Panel noted the very valuable and extensive contribution of the current masters Programme Director however the Panel understood that he was nearing the end of his term in office. The Panel recommends that the School begins to consider the succession arrangements to allow a reasonable period of crossover and continuity of the extensive knowledge that the current programme director had built up.
Summary and Recommendations

The members of the Panel enjoyed working with the School of Informatics over the two-day period of the review. They found the School staff helpful and responsive. The Panel was satisfied with the operation of the Graduate School, together with the quality of teaching and of the students. The Panel would like to make special mention of Don Sannella, Head of Graduate School and Douglas Armstrong, MSc Programme Director, for their hard work to develop strong administrative structures, both informal and formal to support the training provision.

Commendations

In particular, the Panel commends the School of Informatics:

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| 1. | • the quality of the MSc programmes  
|   | • the enthusiasm and commitment of the academic and administrative staff  
|   | • the quality of the students  
|   | • the enthusiasm of supervisors about masters projects  
|   | • the effective recruitment process and level of communication with applicants  
|   | • the appointment of a project organiser to coordinate the development and allocation of projects  
|   | • the well organised pastoral care provision  
|   | • the comprehensive and well written Course Organiser Reports |
| 2. | The Panel commends the approachability of the academic staff. |
| 3. | The Panel commends the quality and commitment of the students. |
| 4. | The Panel commends the School for the new centralised recruitment processes for research students and the high level of communication with applicants |
| 5. | The Panel commends the level of facilities and supervisory support for the students |
| 6. | The Panel commends the School for their engagement with Transkills to develop new School specific courses. |
| 7. | The Panel commends the commitment, enthusiasm and professionalism of the administrative staff and the School practice to involve administrative staff in policy and strategic development |
| 8. | The Panel commends the strong Teaching Organisation structure |
| 9. | The Panel commends the interesting and imaginative initiatives that were being implemented to increase student recruitment |
**Recommendations**

The Panel makes the following recommendations:

**To the School:**

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<td><strong>4.</strong> The Panel noted the enhanced information provision and <strong>recommends</strong> that the inclusion of advanced information on programming skills to facilitate student preparation would be a very constructive addition to the overall recruitment and induction provision. In the longer term the introduction of an e-learning package/course should be <strong>considered</strong>.</td>
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**Research degree provision**

| **7.** The School’s stated procedure to review progress at 9 months was not rigorously adhered too. The Panel **requires** that a clear and robust procedure for First Year Review is defined. This issue **must be addressed** prior to the next round of performance reviews. |
| **8.** The Panel also **requires** that criteria for the conduct of Annual Reviews **must** also be defined to ensure consistency of rigour of the review, improve the level |
of constructive feedback to the students and improve the level of fairness of treatment across the institutes.

9. The level and effectiveness of feedback to research students was not consistent across the Institutes. The Panel **recommends** that the School defines criteria/principles to guide the provision of feedback and look to ensuring that feedback is routinely carried out at the formal review milestones.

10. The Panel **recommends** that the School requires all research students to undertake the University’s Teaching and Demonstrating course prior to taking becoming a tutor. The School should investigate developing mechanisms to feedback comments on performance to the research students.

11. The Panel **recommends** that the School investigates the level of computer support for specialised software not standard to the School’s provision.

12. The Panel **recommends** that the School should look at ways to facilitate increased social and informal interaction and contact between students across the Institutes

**Management and operation of Graduate School**

13. The Panel **asks** the School to formally review its current practice of recruiting students without a clearly defined project plan and allowing definition of a project to take up to 12 months. The School is **required** to submit a formal Report to the Panel.

14. The Panel **recommends** that the School investigates mechanisms to secure funding for students who are required to have to continue with full study after 36 months.

15. In the meantime, the Panel **recommends** that, if the expectation of the School is that no project can be completed in less than the maximum period of study, then the School’s practice **must** be transparent and published to potential students in advance of application and the acceptance of the offer.

16. If the School wishes to continue to support the 48 months then the Panel **recommends** that they take formal steps to adopt the 1 + 3 model as standard. However the Panel does **recommend** that the School considers carefully the implications of four years fees on the attractiveness of the degree(s) to potential students and overseas governments. If the 1+ 3 is adopted as the standard degree then the School’s funding **must** cover the four years.

17. To assist with timely completion the Panel **recommends** that the School considers adopting the additional year three review stage (or a variation of) suggested by the External Assessor.
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School of Informatics

Response to Quinquennial Review Recommendations

The School thanks the Panel for the commendations contained in its report, and for the constructive nature of its recommendations. We respond to each of the recommendations below, in the order in which they appear in the report.

**Taught Masters provision**

1. The Panel **recommends** that the School revisits the provision of feedback to students. As there appears to be no School guidance on feedback provision the Panel recommends that a framework/schedule of feedback provision is devised and included in the handbook given to students.

   *(This misquotes the recommendation in the report, which said that students appear to be unaware of School guidance on feedback provision.)* The existing policy, which is that feedback should normally be provided within two weeks of submission, will be included in the MSc handbook. There is an ongoing problem of adherence to this policy, and this will continue to be pursued with the members of staff concerned. We are reviewing our approach to assessment and coursework will be included in that review. We believe our students are required to do too many assessments. If we reduce the number of assignments we can work to improve the timeliness and quality of feedback.

2. The Panel **recommends** that the School considers ways to include more organised team/group working and problem solving perhaps through the tutorial provision.

   We are investigating the provision of group projects that could be undertaken by several students. We are also considering having a tutorial group that runs through the entire year to support the IRR and IRP courses, and this may be an appropriate forum for such activities.

3. The School should **address** the issue of the ‘quiet lab’ and to take steps to ensure that this functions as a quiet working area.

   *There are designated quiet labs on Appleton Tower level 5 that are clearly labelled as such. We will ensure that such notices are clear and prominent. Our experience is that students enforce such policies themselves. This issue arises primarily from a decision to reorganise the labs to increase space in quiet labs – it took students some time to realise the change had taken place. The quiet labs are quiet now.*
4. The Panel noted the enhanced information provision and recommends that the inclusion of advanced information on programming skills to facilitate student preparation would be a very constructive addition to the overall recruitment and induction provision. In the longer term the introduction of an e-learning package/course should be considered.

*We have plans to prepare an online version of our “Introduction to Java Programming” course. This should be available for 2008-9 intake.*

5. The Panel recommends that the School revisits the presentation of the course information on the web. The Panel recommends that the major and minor courses for each specialism are more clearly linked on the listing so that the students can identify a clear pathway to follow. The advance publication of course descriptors would assist the students to choose their specialism pathway.

*We agree that the course information on the web is in need of improvement and will try to make it clearer. This specific suggestion is one possible improvement that we will consider.*

6. The Panel recommends that PG representatives in each specialism should be elected during the course induction period. The names and role of these representatives should be clearly advertised on the main programme webpage and the email channels available for communication should be improved. It is suggested that the School liaise with EUSA regarding possible training for new representatives.

*These reps were elected early in semester 1 but we do need to improve their visibility and training. This will be addressed as part of our review of student support that is taking place at the moment.*

**Research degree provision**

7. The School’s stated procedure to review progress at 9 months was not rigorously adhered too. The Panel requires that a clear and robust procedure for First Year Review is defined. This issue must be addressed prior to the next round of performance reviews.

8. The Panel also requires that criteria for the conduct of Annual Reviews must also be defined to ensure consistency of rigour of the review, improve the level of constructive feedback to the students and improve the level of fairness of treatment across the institutes.

9. The level and effectiveness of feedback to research students was not consistent across the Institutes. The Panel recommends that the School defines criteria/principles to guide the provision of feedback and look to ensuring that feedback is routinely carried out at the formal review milestones.
(We are addressing these three recommendations as a group.) We acknowledge that there is significant variation across Institutes in Informatics at present in the way that progress reviews are conducted. This will be addressed once we have moved into the new Informatics building, where it is anticipated that reviews will be organised by the Graduate School centrally rather than by the individual Institutes as at present. Discussion within the School is necessary to agree procedures, but there will be a clear review timetable (with the first review point at 9 months or earlier) and explicit guidelines that will take into account best practice.

10. The Panel **recommends** that the School requires all research students to undertake the University’s Teaching and Demonstrating course prior to taking becoming a tutor. The School should investigate developing mechanisms to feed back comments on performance to the research students.

   *The Informatics Teaching Organisation already requires this, see: [http://www.inf.ed.ac.uk/admin/ITO/tut-dem-jobs.html](http://www.inf.ed.ac.uk/admin/ITO/tut-dem-jobs.html) - the relevant text there is: “The TLA Centre and the School of Informatics provide the following training materials and training courses. New tutors and demonstrators are required to attend a relevant training course for which you will be paid at the demonstrator rate.” Our feeling is that although the “generic” training is useful and appropriate, we should be running some in-house training that takes account of the discipline.*

11. The Panel **recommends** that the School investigates the level of computer support for specialised software not standard to the School’s provision.

   *The specific student comment was that computing staff were not willing to support specialised software installed by students. This is an unrealistic expectation because of manpower limitations on one hand, in view of the huge range of specialised software in question, and the need to maintain a robust service on the other. Computing support policies are clearly documented and PhD students are already invited to attend meetings at which future computing support priorities are discussed.*

12. The Panel **recommends** that the School should look at ways to facilitate increased social and informal interaction and contact between students across the Institutes.

   *We are taking advantage of Roberts funding allocation to Schools to increase the frequency of events allowing interaction between research students across Informatics. This will be a particular priority once we have moved into the new Informatics building. Co-location will already be a giant step towards addressing this issue.*

**Management and operation of Graduate School**
13. The Panel asks the School to formally review its current practice of recruiting students without a clearly defined project plan and allowing definition of a project to take up to 12 months. The School is required to submit a formal Report to the Panel.

We strongly feel that learning to identify a research topic is part of research training in Informatics, and this is also the view in our peer departments within the UK and internationally. In most cases, a specific topic area is identified at the time of application for a PhD, and we supply and maintain a list of suggestions on the web. The first year is generally devoted to focussing on a specific topic within the chosen area, conducting preliminary investigations including a literature survey, and addressing any relevant training needs. The latter is more of a problem in Informatics than in most other discipline within the College: there is no generally-agreed standard for the content of a first degree in Informatics, Computer Science, Cognitive Science etc., so our intake is more diverse than elsewhere. The degree of interdisciplinarity in Informatics research is a further factor.

That said, we agree that the work of some students during the first year is less productive than it could be. To address this, and in pursuit of the aim of decreasing average time to completion and achieving the target of a defined project topic by the end of month 9 (see recommendation 7 above), we plan to introduce a more structured approach to the first year of PhD studies, with clearly-defined goals and milestones.

14. The Panel recommends that the School investigates mechanisms to secure funding for students who are required to continue with full study after 36 months.

Some funding sources already provide funding for 42 months (EPSRC DTA, our largest single funding source) or 48 months (various overseas sources). The School already provides a wide range of opportunities for PhD students to earn money by contributing to teaching or other activities, and Informatics students are generally able to find other ways of earning money. At present our PhD student numbers are strictly limited by availability of funding, and the direct consequence of providing funding for students for a longer period is to decrease PhD student numbers. We acknowledge that the situation is not ideal and our strenuous efforts to seek new funding sources will continue, but our first priority will be to find funding for increasing student numbers rather than more generously funding a smaller number of students.

15. In the meantime, the Panel recommends that, if the expectation of the School is that no project can be completed in less than the maximum period of study, then the School’s practice must be transparent and published to potential students in advance of application and the acceptance of the offer.
The School’s expectation is not that no project can be completed in less than the maximum period of study. This was never suggested, and many students submit well within this period. The actual issue here is a divergence between the expectation of students (completion within 39-40 months) and staff (completion often requiring up to 48 months). Our average time to completion is in line with that of PhD students in other 5* departments in the UK. We will make it clearer to potential students that completion typically requires more than the prescribed period. We will consider adding a sentence to funding offer letters indicating that completion within the funded period is often not achieved, and funding to cover any additional time is not guaranteed.

16. If the School wishes to continue to support the 48 months then the Panel recommends that they take formal steps to adopt the 1 + 3 model as standard. However the Panel does recommend that the School considers carefully the implications of four years fees on the attractiveness of the degree(s) to potential students and overseas governments. If the 1+3 is adopted as the standard degree then the School’s funding must cover the four years.

Funding for the 1+3 model is only available from funding agencies in a minority of special cases. We do take advantage of such funding when it is available, e.g. the Doctoral Training Centre in Neuroinformatics. We do not believe that the 1+3 model is a realistic goal in the absence of funding to cover this period.

17. To assist with timely completion the Panel recommends that the School considers adopting the additional year three review stage (or a variation of) suggested by the External Assessor.

This is a very interesting suggestion and we will consider it in designing the review framework described in response to recommendations 7-9.

18. The Panel noted that in reality it was the informal mechanisms for research student representation liaison that were working well. The Panel would recommend that the School reviews it current formal processes for staff/ student liaison to ensure that the committee can operate effectively and contribute to the development of the research training provision.

We will review these processes.

19. The Panel were concerned that some aspects of the examinations and marking procedures for the MSc by Research in Neuroinformatics were not fully compliant with University’s regulations. The Panel recommends that the Teaching Organisation reviews the practices to check on compliance.

We will review these practices and ensure that they comply with the University’s regulations.
20. The Panel noted the very valuable and extensive contribution of the current masters Programme Director. The Panel recommends that the School begins to consider the succession arrangements to allow a reasonable period of crossover and continuity.

This is in hand. We are considering moving towards having a period of overlap for all major administrative roles, including this one. With the full integration of PGT courses under the ITO we will explore the role to see if the ITO can support it more effectively and will search for candidate replacements. If ITO can take over some of the more routine aspects of the Programme Director this will make it easier to recruit a replacement.