

SENATE

Minutes of Meeting held on 12 December 2012

Present: The President & Rector, Sir Keith O’Nions (Chairman), Professors Dallman, George, Gooderham, Griffiths, Humphris, Leatherbarrow, Magee, Riboli, Smith, Wright; Drs Albrecht, Archer, Bradley, Broda, McCoy, McGarvey, Pike, Rogers; Mr Hunt (Student Representative); with Mr Wheatley (Academic Registrar), Ms Richardson (Deputy Academic Registrar) and Ms Penny (Senior Assistant Registrar).

Apologies: Professors Alford, Autio, Belvisi, Haigh, Kelleher, Matar, Richardson; Dr McPhail; Mr Beaumont.

In attendance: Mr Neilson

Present by Invitation: Mrs Shorley (for Minute 1691)

1687 Minutes

The Minutes of the meeting of the Senate held on 31 October 2012 were confirmed.

1688 Matters Arising

There were no matters arising in the Minutes not covered elsewhere in the agenda.

1689 President & Rector’s Business

Received: A Report from the President & Rector (**Paper Senate/2012/20**).

(1) Imperial College PhD Scholarships

Reported: (i) That the Senate had been informed at its October 2012 meeting that the Management Board had agreed that an elite College PhD Scholarship Scheme should be established. The Scheme provided the most talented students from around the world with the opportunity to apply for one of 50 highly-competitive scholarships in science, engineering, medicine or business.

(ii) That further information for students on the Scheme, including details of the selection process, was now available at: www.imperial.ac.uk/phdscholarshipscheme. Information for staff was provided at: <http://www3.imperial.ac.uk/researchstrategy/funding/phdscholarships>.

(iii) That the scholarships were available from July 2013.

(2) Provost

Reported: (i) That Professor James Stirling CBE FRS had accepted appointment as Imperial’s first Provost, taking up the position by August 2013. The new role had been created following the changes to Imperial’s leadership model announced in April 2012.

(ii) That the Provost would be responsible for the delivery of the College's core mission: education, research and translation, and would report directly to the President & Rector, who would give emphasis to the College's external affairs including development. The President & Rector and the Provost would together have responsibility for the strategic direction of the College.

(iii) That Professor Stirling would join Imperial from the University of Cambridge, where he had been Head of the Department of Physics from 2011. Completing doctoral studies at the University of Cambridge, Professor Stirling had joined Durham University as Lecturer in 1989 and had become Professor of Mathematical Sciences and Physics in 1992. He had been the Founding Director of the Institute for Particle Physics Phenomenology between 2000 and 2005, and from 2005 to 2008 had served as Pro-Vice-Chancellor for Research, before joining Cambridge as the Jacksonian Professor of Natural Philosophy in the Cavendish Laboratory.

(iv) That Professor Stirling had been elected a Fellow of the Institute of Physics in 1992, Fellow of the Royal Society in 1999 and was appointed a CBE for services to science in 2006. He had been a member of the Physics Sub-Panel in two RAE (2001 and 2008) and had been Deputy Chair of the 2008 panel. He was a member of the Council of the Science and Technology Facilities Council and the Higher Education Funding Council for England's Research and Innovation Strategic Advisory Committee.

(2) Awards Ceremonies

Reported: (i) That the Postgraduate Awards Ceremonies in 2013 would be held on Wednesday 1 May 2013.

(ii) That the Commemoration Day Ceremonies in 2013 would be held on Wednesday 23 October 2013.

(iii) That at its June 2011 meeting, the Senate had agreed that there should be no examinations scheduled for the Wednesday of the May ceremonies. Senate had also reconfirmed that there should be no teaching on the Wednesday morning of the October ceremonies.

1690 Pro Rector's Business

Considered: A Report from the Pro Rector (Education) (**Paper Senate/2012/21**).

(1) Development of an Education and Student Experience Strategy

Reported: That the agreement of the College Management Board was being sought to take forward a College-wide consultation in early 2013 to define a strategy for education and the student experience. The Pro Rector (Education) would consult staff, students and a range of external stakeholders when developing the strategy.

(2) Education Day 2013 - Designing for Creativity: Spaces and Curriculums

Reported: (i) That the next Education Day would take place on Monday, 22 April 2013. The event would focus on concepts of creativity from both a curriculum and spatial perspective. A range of both internal and external speakers would discuss the challenges of designing curriculums and spaces which fostered and nurtured creativity in education.

(ii) That the event would commence at 1pm with a series of short talks by speakers who would provide examples of innovative and creative curriculum designs, from within and outside Imperial. This would be followed by a round table session, where there would be an opportunity for questions and answers. The afternoon would conclude with a keynote speech from Associate Professor Daniel Tan, Director of the Centre for Educational

Development at Nanyang Technological University, Singapore.

(3) UK Quality Code for Higher Education

Reported: (i) That the Quality Assurance Agency was currently consulting on 2 further chapters of the UK Quality Code for Higher Education: Chapter B4, *Supporting student achievement*, and Chapter B9: *Complaints and appeals on academic matters*. The College would be making responses to both consultations.

(ii) That the QAA's development of the UK Quality Code should be complete by mid-2013. Consultations were due on a further 5 chapters of the Code between January and June 2013.

(4) Times Higher Education Awards

Reported: That the 2012 Times Higher Education Awards ceremony had been held on 29 November 2012. While the College had not won an award this year, it had been nominated in 2 categories: 'Most Improved Student Experience' and 'Outstanding Support for Early Career Researchers'.

(5) National Student Survey

Reported: That the 2013 National Student Survey would now open on 14 January 2013 at Imperial. The survey would run until 30 April 2013.

1691 Library Annual Report

Considered and approved: The annual report to Senate by the Director of Library Services (**Paper Senate/2011/22**).

Reported: (1) That Imperial had led the successful campaign on behalf of Russell Group universities to secure substantial reductions in the costs of licences with Elsevier and Wiley Blackwell. At a conservative estimate this had resulted in savings of around £700k for the College over 3 years and (around £20m across the sector as a whole). This success had made it easier for the College to negotiate better value deals with other publishers.

(2) That the investment made by the College in the Library continued to be reflected in the National Student Survey results. Imperial College students' satisfaction with library services had risen yet again in 2012, and now stood at 95%, 2% higher than 2011 and higher than the Russell Group and sector averages.

(3) That following a nomination by the Students' Union, the Library had been shortlisted for the Outstanding Library Team award in the 2012 Times Higher Education Leadership and Management Awards. Although the Library had not won, it was gratifying to know that the students thought so well of the services provided.

(4) That In August work had begun on the long-awaited refurbishment of the St Mary's library, part-funded by a generous donation from the St Mary's Development Trust. As well as full redecoration and replacement of unsafe fittings, flooring and lighting, the project would provide improved study space, including facilities for group study and training. The renamed Fleming Library would open in spring 2013.

(5) That in response to student feedback the College had increased Easter opening hours at the Central and Charing Cross libraries. For the first time, both libraries had opened on all the College closure days over the Easter period in 2012. In addition, 24/7 opening of the Central Library had been piloted over the summer vacation. In future opening hours of the Library over Christmas should be reviewed.

Further Reported: That Debby Shorley, Director of Library Services, would be retiring at Christmas. The Senate thanked Mrs Shorley for her valuable contribution to the College and wished her well for the future.

1692 Periodic Review of the BSc Medical Sciences with [option pathway]

Considered and approved: A Report by the Quality Assurance Advisory Committee (**Paper Senate/2012/23**).

Reported: (1) That in its review of the BSc Medical Sciences with [option pathway] the Quality Assurance Advisory Committee (QAAC) was advised by 5 assessors who had visited the School of Medicine, Faculty of Medicine on 27 March 2012.

(2) That the BSc in Medical Sciences formed Year 4 of the 6-year MBBS/BSc. It was also taken by the majority of BSc Biomedical Science students as their 3rd and final year and by students intercalating from external medical schools. All students chose one of 12 pathways which differed in the taught modules and nature of the 12-week practical project. The BSc in Medical Sciences was not subject to review by the General Medical Council.

(3) That the unanimous view of the assessors had been that the programme was extremely strong, with students being of very high calibre. Staff that ran the courses were committed to the success of the programme, which was taught at a very high level.

(4) That the review panel had however reported that although the research project was a great strength of the course there was insufficient preparation in laboratory skills for some students on some pathways. The panel had found there to be a marked difference between the preparedness of MBBS and Biomedical Science students, with MBBS students being disadvantaged. The review panel had recommended that the Faculty should review the structure of the course to ensure that all students were adequately prepared for their research projects.

(5) That in response to this, the Faculty had reported that practical laboratory content was delivered and summatively assessed in Years 1 and 2 of the MBBS course. The amount of lab content had increased in recent years. However, this might not have been experienced by the students present at the review. The Faculty had reported that there were plans to further enhance and broaden this experience throughout the first 3 years of the MBBS/BSc. Years 1 and 2 of the MBBS/BSc were currently undergoing a formal review with the aim of integrating and assessing generic research skills in the early years of the course. The Committee had been pleased to note that this review was underway but had accepted that because of the great variety of BSc Medical Sciences [option pathway] projects, it would not be feasible to cover an exhaustive range of practical skills to take account of the needs of all students.

(6) That the review panel had commented on the considerable differences in assessment methods used in the different pathways. In some cases, student perception was that particular pathways were 'easier' than others. The panel had also found there to be procedural differences between pathways in areas such as allocation of research projects which gave rise to perceived inequalities between different groups of students. The review panel had recommended that there should be more high-level consistency between pathways so that potential inequalities were minimised.

(7) That in consideration of this, the Faculty had acknowledged that there was variety in the implementation of policies and procedures across pathways and reported that it would seek to communicate policies more effectively to Course Directors in the future and identify where new guidance was needed. The Education Committee for Year 4 had also reviewed how projects were allocated for the start of the 2012-13 session. The Faculty reported that the pathways had been encouraged to be creative and diverse in their assessment methods within the overall parameters of the programme to reflect the content of the individual modules. The students present at the review had also commented that

variety was part of the attraction of the course. Additionally, the Faculty reported that it had introduced a system for electronic submission and marking of coursework which had minimised perceived differences between courses. This had also helped to address the concerns of the panel in terms of quality and timeliness of feedback. The Faculty was also considering introducing a common examination question on data interpretation as a consistent measure across all pathways which all students would be required to answer.

(8) That the review panel had reported that there was a varied system of personal tutor support for students with Biomedical Science students retaining the same tutors throughout their course whilst the MBBS/BSc students did not. The review panel had recommended that the Faculty should review and rationalise its personal tutor systems. In response to this, the Faculty had reported that it recognised the need for a more cohesive system and that the School was undertaking a major review of its personal tutoring structures. The intention was to introduce a more structured system with timetabled meetings to ensure that students built up a strong relationship with their personal tutor.

(9) That the panel had reported that external examiner reports were not being fed back into practice or being acted upon in some cases. As a result, the panel had recommended that the Faculty should improve the process for the collection of external examiners' reports and procedures for addressing the concerns raised within them. The Committee had noted that the Faculty had worked in close collaboration with the Registry in order to develop a system to ensure that external examiner reports were collected, considered and actioned in an appropriate manner. So far this session the new system was working well but the Faculty would continue to monitor its effectiveness.

(10) That students present at the review had reported that teaching material was not always made available online. In response to this, the Faculty had reported that due to the nature of the programme there was a diverse range of teachers who were involved with its delivery (College staff, partner NHS Trust etc.). Whilst the School strived to make e-learning material available there was a degree of variability. Some lecture slides were not meant to be made available online in order to protect patient confidentiality and for pedagogical reasons. The Faculty reported that it would keep the issue under review.

(11) That the programme was taken by 3 cohorts of students: BSc Biomedical Science, MBBS and intercalated students from other institutions. Students perceived that this enhanced their experience and that they benefited from studying alongside other cohorts. However, each of these cohorts was subject to different marking schemes and the scheme for the award of honours was calculated slightly differently for each cohort. The review panel had recommended that this be reviewed to ensure parity and fairness for all students. The Faculty had replied that there were challenges in harmonising the marking schemes and the weightings of the 3 degrees. For MBBS/BSc and Biomedical Science students, the formats of examinations taken earlier in the programmes were substantially different which raised an issue of fairness. However, the Faculty was conducting an early years review to consider how the two programmes might be brought into closer alignment. It was reported that the only way to bring intercalated students into line with these 2 programmes would be to weight the honours year of all 3 programmes at 100% or else to give credit for work undertaken at the intercalated students' home universities. Neither of these options was considered acceptable to the Faculty.

Noted: That the report of this review had also been considered by the Medical Studies Committee which had noted that the review had been positive about the quality of the programme and had been satisfied with the actions being taken to address any concerns.

Agreed: That the Senate was satisfied with the outcome of the review and approved the recommendation of the Quality Assurance Advisory Committee that the Faculty of Medicine should report on developments since the periodic review in 12 months' time.

1693 Periodic Review of Research Degree Provision in the Department of Computing

Considered and approved: A Report by the Graduate School Postgraduate Research Quality Committee (**Paper Senate/2012/24**).

Reported: (1) That in its review of research degree provision in the Department of Computing the Graduate School's Postgraduate Research Quality Committee was advised by 5 assessors who had visited the Department on the 8 June 2012.

(2) That the reviewers had rated the Department of Computing 'compliant' in all Research Degree Precepts and 'compliant' overall.

(3) That the Committee had congratulated the Department on its excellent review and had noted that all minor points raised by the review panel had already been satisfactorily addressed by the Department. The panel had been impressed with the Department's extensive links with industry and its small research groups enabling students to collaborate widely on a range of innovative research areas. Students undertaking interdisciplinary cross-Faculty research were appointed a Computing supervisor as well as a co-supervisor from the other Faculty concerned. The panel had cited this as an example of good practice. It had also been reported to the panel that all cohorts had a cohort mentor, to ensure that cohort-specific issues were raised and addressed by the Department.

(4) That the review panel had found there to be an excellent research community. Students had cited the regular Friday afternoon discussion forum as an example of good practice because it provided the opportunity to make connections with other students and staff in the Department and to think beyond the box of their own research. The Department's 60-second theses presentation event had also been praised by students present at the review for the same reasons. The Committee had agreed that other Departments in the College should consider developing a similar event to promote interdisciplinary collaboration.

(5) That the Department had reported that it had recently introduced a requirement for students to submit a short monthly log of activities. Exploration of the purpose and success of this new process by the panel had revealed inconsistencies in its application. The Department had reported that it was working to resolve these issues and the Committee had asked for feedback in due course. However, this had not given the panel cause for concern because students present at the review had confirmed that they had good relationships with their supervisors and received good feedback from them. The panel had been satisfied that the Department had other mechanisms in place for checking the progress of its students, all of which were working well.

(6) That the panel had explored the reasons why the Department's completion rates were lower than the College average. London provided a wealth of opportunity for computer scientists and often good candidates were made offers of excellent job opportunities early on in their career. The panel had found that some students were tempted by this and did not complete their studies as a result. The panel had concluded that the completion rate for the Department was more than satisfactory given the circumstances explained and had noted that it was in line, if not better, than completion rates for similar programmes at other Russell Group institutions.

(7) That the role of the Graduate School's courses and their compulsory nature was discussed by the panel and the Department. Whilst agreeing that the workshops provided a good opportunity to meet students from other disciplines, some students at the review had reported that some courses were too generic to be applicable to students in the Department of Computing. The Committee had noted that the Graduate School was continually reviewing its programme of professional skills training, but that discipline-specific training should be delivered at departmental level.

(8) That students present at the review had reported that they would welcome the opportunity to attend PhD discussion forums in other Departments of the College but that they did not know of any mechanism to find out when these were taking place. Students would welcome a regular email of activities taking place within the College, which they could attend to further encourage research collaboration with other Departments. It had been noted that the Graduate School did now host a listing of symposia from across the College.

(9) That the Committee had discussed the College scholarships process and the timelines for informing candidates of the outcome of their application. The Committee had heard that the different College deadlines complicated the process and that where students were not informed promptly about whether or not they had been successful in their applications for scholarships they quite often went elsewhere.

Agreed: That the Senate was satisfied with the outcome of the review and approved the recommendation of the Graduate School Postgraduate Research Quality Committee that the Department should report on developments since the periodic review as part of the next Precept Review in 3 years' time.

1694 Periodic Review of Research Degree Provision in the Department of Mathematics

Considered and approved: A Report by the Graduate School Postgraduate Research Quality Committee (**Paper Senate/2012/25**).

Reported: (1) That in its review of research degree provision in the Department of Mathematics the Graduate School's Postgraduate Research Quality Committee was advised by 5 assessors who had visited the Department on the 5 July 2012.

(2) That the reviewers had rated the Department of Mathematics 'compliant' in all Research Degree Precepts and 'compliant' overall.

(3) That the Committee had been pleased with the positive review and had noted that the panel had reported that students were enthusiastic about their programmes and that there was a vibrant research environment. The panel had commented that the Department maintained a culture that accorded a great deal of importance to the quality of supervision, academic availability and the induction of students into their research communities. The panel had cited staff commitment to students as an example of good practice. The panel had also reported that the student handbook was well written and informative and had praised the range of seminars and reading groups available to students. The students present at the review had reported that they enjoyed the poster competition which provided an opportunity to share their research interests with peers.

(4) That the review panel had commended the creation of mini Doctoral Training Centres (DTCs) in active and emerging research areas and the formulation of research programmes around these new areas. The mini DTCs potentially had a valuable role as a template for creating future EPSRC funded DTCs in the Department. However, the panel had cautioned that the creation of such DTCs carried a danger of creating a two tier student system, with those outside the DTC feeling isolated and not so well supported.

(5) That the panel had reported that Dr J Gibbons currently carried out the duties of both DPS and PG Tutor, although some research sections had their own PG Tutor. Combining these roles was currently viable and the panel had praised Dr Gibbons for the high level of dedication to his work. It had recommended however that it would not be reasonable to expect one person to continue to take on such a demanding role in the future, especially given the projected increases in research student numbers. In light of these comments, the Committee had agreed that the Department should consider appointing separate members of staff to both roles when Dr Gibbons stepped down. In addition to this, the Committee had proposed that the Department might wish to consider appointing a new person to take on part of Dr Gibbons' current role for succession

planning.

(6) That the panel had reported that the Department did not assign separate academic mentors to its students; instead each student was appointed a second supervisor. Students present at the review had confirmed that they were happy that these arrangements worked well and that they knew where to go should they have a problem. The panel had been satisfied that this arrangement worked well for the Department and did not make a recommendation for change.

(7) That the review panel had considered the material covered by the PG Committee. Whilst the panel had been able to confirm that this Committee met regularly and was properly constituted, it had recommended that other matters such as admissions, induction, registration, transfers, external examiners, assessment, complaints, training, proposals and completion rates etc. should be discussed at PG Committee meetings. The panel had suggested that one way to achieve this might be to ask the DPS to present an overview of these matters to the Committee as a standing agenda item. The panel had also recommended that PG student representatives should be invited to attend the meetings to ensure student opinion on these matters was given due consideration and that issues students felt unable to raise directly with the DPS/PG Tutor could be discussed. In this case, agenda items involving named students would need to be considered as reserved business. The Department had responded to these recommendations by confirming that it hoped to ensure that the suggested changes were implemented before Christmas.

(8) That the review panel had found a good deal of scepticism amongst academic staff about the merits of Precept 9 on the grounds that 9 months was far too early to make an assessment of research potential. The Committee had discussed a change to Precept 9 proposed by the Department but had agreed that the precept should remain unchanged to allow the new processes to become more established. It had also been noted that the College had not received any complaints about the new process from students. In discussion with the Committee, the Department had accepted that the 9-month early stage assessment was becoming more embedded.

(9) That the panel had also recommended, after discussions with students present at the review, that the Department should consider preparing better careers advice for its students and develop better alumni networking opportunities.

Noted: That finally the student representative on the panel had reported that he had found participation in the review difficult given that he was an undergraduate medical student who had stepped in at the last moment when no ICU sabbatical officers had been able to attend. In light of this comment, the Committee had agreed to support the appointment of a PG sabbatical officer.

Agreed: That the Senate was satisfied with the outcome of the review and approved the recommendation of the Graduate School Postgraduate Research Quality Committee that the Department should report on developments since the periodic review as part of the next Precept Review in 3 years' time.

1695 Quality Assurance Advisory Committee

Considered: A Report by the Quality Assurance Advisory Committee (**Paper Senate/2012/26**).

(1) Committee Name and Terms of Reference

Considered and approved: Amendments to the name, Terms of Reference and membership of the Quality Assurance Advisory Committee, as outlined in Appendix 1 of the Senate's paper, with immediate effect. Henceforth the Committee would be named the Quality Assurance and Enhancement Committee as quality enhancement was a key

feature of the Committee's work. Amendments to the Terms of Reference clarified the Committee's role which now included responsibility for setting and overseeing the procedures for developing the College's Key Information Sets (KISs).

(2) Periodic Review

Considered and approved: Revised Procedures for the Review of Departmental Research Degree Provision, as outlined in Appendix 2 of the Senate's paper, with immediate effect.

Noted: That Departments would be asked to respond to time-limited themed questions as part of their submissions for research degree periodic review. There was an error in the Senate's paper regarding the themed questions that would be asked for reviews taking place during 2012-13; the themes would be the first year student experience, student involvement in quality enhancement and welfare, student retention and progression, and links with industry/future employers. Supervisor workloads and maintaining student-supervisor contact were not themed areas as noted in the paper but would instead be incorporated into the main body of all research degree reviews.

Reported: That the Committee had also approved amendments to the periodic review schedule and had agreed that following the successful pilot last session, a student representative should continue to be included on the panel for all periodic reviews. The Committee had agreed that undergraduate student representatives might need additional support when acting as panel members for postgraduate reviews.

(3) External Examiners

Reported: That the Committee had considered the undergraduate external examiner summary report 2011-12 and the taught postgraduate external examiner summary report 2010-11. As was the case last year, external examiners reported that the quality and standards of the degree programmes at Imperial compared favourably to other institutions within the UK and in some cases the standards were noted as being above those of students studying at other institutions of which external examiners had experience. It was largely felt that programmes continued to be coherently structured and appropriately taught for the level and subject area. The Committee had agreed that the Studies Committees and the Master's Quality Committees should consider the relevant external examiner summary reports.

Undergraduate External Examiner Summary Report 2011-12

Reported: (i) That the Committee had been pleased that there were fewer College-wide themes that needed to be addressed this year and had commended those Departments where external examiners had listed items of good practice. The Committee had noted that external examiners had praised the variety of different assessment methods used by Departments and the course design and curricula. External examiners in 5 Departments had cited the processes used to moderate marks as an example of good practice.

(ii) That the Committee had noted that external examiners in 4 Departments had reported that scripts had been poorly annotated. Reasons why marks were awarded and how they were agreed between markers had not always been clear. These types of issues had been raised by external examiners in 7 Departments in 2010-11 and had also been raised last year by Master's external examiners.

(iii) That in response to this, the Committee had agreed to make an amendment to the external examiner report template to clarify that external examiners were asked to comment on whether double marking had taken place on the *sample* of scripts they have been sent. The Committee had also agreed that the Registry would send those Departments whose external examiners had reported these issues a copy of the College's protocol for double marking. The Registry would also develop a checklist for Departments to use prior to sending scripts to externals. The checklist would serve as a reminder to

Departments to ensure that evidence of double marking was present and that where markers did not agree on marks initially an explanation of how the final mark had been agreed was provided.

(iv) That in response to comments from external examiners in 2 Departments who had expressed concern with arrangements for the conversion of marks awarded to students from institutions abroad, the Committee had agreed that those Departments should be asked to look again at the methods used for such conversions.

(v) That external examiners in 3 Departments had reported that they had not been provided with marking schemes/criteria or model answers to questions. Other externals had received model answers but had recommended that there should be a standardised format for these. The clarity of model answers provided to external examiners and students and the provision of marking criteria to externals had both been issues raised by external examiners in 7 Departments in 2010-11. Since consideration of the 2010-11 reports, the Committee had undertaken work to develop a policy on the provision of model answers to questions (this policy was currently being considered by the Faculties). However, it was clear that external examiners should be provided with model answers to questions and marking criteria. Those Departments whose external examiners had reported that they had not received these items would be reminded of this requirement.

(vi) That of the 17 Year 6 reports received for undergraduate medicine, 6 external examiners had reported that the repeated use of the same patients for different cohorts of students for the same clinical examinations held on different days/times could potentially give some students an unfair advantage. In response to this, the Faculty of Medicine had confirmed that it was making greater use of simulation for patient diagnosis testing and was trying to increase the pool of patients. The Committee had been satisfied that the Faculty of Medicine was taking appropriate action to address these concerns.

Taught Postgraduate External Examiner Summary Report 2010-11

Reported: (i) That the Committee had been pleased to note the variety of good practice highlighted within the taught postgraduate external examiner reports, in particular, that the support and pastoral care provided by Departments to their students was good. However, the Committee had noted that there were more College-wide themes to address this year than last year.

(ii) That external examiners for 18 Master's courses had reported issues relating to marking including that there was little evidence of double marking and that the marking criteria were not being consistently applied. These types of issues had been raised in last year's Master's reports (2009-10) by external examiners for 8 programmes. Undergraduate external examiners had also raised these types of issues in their reports on the 2010-11 and 2011-12 sessions. The Committee had agreed actions to address this, as outlined in the report on undergraduate external examiner reports.

(iii) That although course content had been praised by some Master's external examiners, external examiners for 12 courses had raised issues in this area. These had included that students lacked knowledge about core subject areas and in particular, that course choice was too wide which resulted in some students not being able to undertake projects in their chosen specialism. The Committee had been happy that the Master's Quality Committees had ensured that individual Course Organisers had satisfactorily responded to individual external examiners who had raised these matters. The Committee had agreed that option choice was important because it allowed students to specialise and pursue their own interests. No further action from the College was required.

(iv) That external examiners for 13 courses had commented that they had not been given adequate time to review scripts. Issues concerning information sent to external examiners were noted across 6 Master's programmes in 2009-10. The Committee had agreed that quite often this type of complaint coincided with the departure of a key member of

academic or administrative staff or as a result of rapid expansion of courses. The Graduate School had been fully aware of such issues and as a result the periodic review procedures had been amended to ensure that Departments were now asked to comment on succession planning and the resilience of their courses.

(v) That external examiners for 10 courses had reported that the quality of feedback to students was inadequate. Last year external examiners for 6 courses had reported that feedback should be improved. The Committee had been satisfied that the Master's Quality Committees had already ensured that individual Departments had taken appropriate action to address this issue and had agreed that no further action by the College was required at this stage.

(vi) That external examiners for 10 courses had reported issues relating to the conduct of Boards of Examiners' meetings. The Committee had noted that the Registry was currently reviewing the procedures followed at Boards of Examiners' meetings across College.

(vii) That in response to external examiners for 7 courses who reported examples of inconsistencies in the quality of student supervisors, the Committee had agreed that the Master's Quality Committees should ask those Course Organisers whose external examiners had commented on the poor quality of supervisors to recommend that the Education Development Unit's course in supervision was completed by the relevant members of staff.

(viii) That external examiners for 6 Master's courses had reported instances of grade inflation. This issue had been raised last year by external examiners for 12 courses. As a result, the QAA had asked the Master's Quality Committees (and the Studies Committees) to ensure that Departments were taking appropriate action to address this issue and had received reports from the Graduate School and the Studies Committees on this. The Committee had noted that the action undertaken during last session to address these matters was not yet likely to be reflected in the reports of external examiners. The Committee would review whether similar issues were raised in next year's external examiner reports.

(4) QAA Institutional Audit 2010: Mid-cycle Follow-Up Report

Reported: (i) That the Committee had considered progress made so far to address the recommendations made by the QAA as a result of the College's 2010 Institutional Audit. The Committee had noted that some work was still being undertaken including:

- (a) A review of the differences in undergraduate year weightings;
- (b) Revisions to the College policy on penalties for the late submission of assessed work;
- (c) A review of re-sit opportunities available to undergraduate and postgraduate students;
- (d) Revisions to the College policy on the provision of model answers to questions;
- (e) A review of course approval procedures to ensure adequate consideration of e-learning materials.

(ii) That additionally, the Registry was undertaking a review of the conduct of Boards of Examiners' meetings and student representation on departmental-level Committees.

(iii) That the Committee had noted that the QAA would be publishing the revised Chapter B10 of the UK Quality Code for Higher Education: *Management of Collaborative Arrangements*, in December 2012. The Committee had agreed to establish a Working Party to review the College's procedures for the approval and management of its collaborative provision in the light of the revised Chapter, which would also cover placements and work-based learning. The Committee had agreed that this Working Party should also consider ways in which to increase collaborative student representation on College and departmental-level Committees and review the College's procedures for the

approval of PRIs.

(5) Quality Assurance of Undergraduate Courses in the Centre for Co-Curricular Studies

Reported: (i) That the Committee had considered the undergraduate annual monitoring report from the [former] Department of Humanities for the 2011-12 session. An extract of the Committee's consideration of the reports of external examiners on the 2011-12 session was attached to the Senate's paper.

(ii) That the Committee had approved the Board Chair and external examiners for undergraduate courses in the Centre for Co-Curricular Studies for the 2012-13 session.

(6) UK Quality Code for Higher Education

Reported: (i) That the Committee had noted that the QAA had recently published Chapter B5: *Student Engagement*, Chapter B11: *Research Degrees* and Part C: *Information about Higher Education Provision* of the UK Quality Code. The Committee had considered reports on the implications of these Chapters for the College and had agreed actions to ensure compliance.

(ii) That in response to the publication of Chapter B11, and in order to ensure that the College was providing an appropriate quality of training to research students who taught, the Committee had agreed to establish a Working Party to review existing arrangements for the training of GTAs and make recommendations for change, where necessary.

(iii) That the Committee had noted that a report on the implications of Chapter B3: *Learning and Teaching*, which had also now been published, would be presented in due course. Members of the Committee had also been invited to comment on the new draft Chapter B4: *Supporting Student Learning*.

(7) External Examiners Serious Concerns Policy

Reported: That the Committee had approved changes to the College's taught course external examiner serious concerns policy and the taught course external examiner report templates.

(8) Student-Led Activities

Reported: That the Committee had received an update from the Student-Led Activities Working Group and had agreed that a review of the current Procedures for the Approval of Student-Led Activities should take place once a completely new student-led project had fully progressed into the field. The Working Party had considered whether extra ECTS credits could be awarded for these essentially non-academic activities and had agreed that this would not be appropriate. The Working Party and the Committee had noted that the Imperial College Union (ICU) and the Registry were currently considering how students undertaking volunteer activities might be formally recognised. The Committee had agreed to revisit the issue of recognition of student-led activities once the Registry and ICU had advanced their work.

(9) Examination Disturbances

Reported: That the Committee had agreed amendments to the *Notes for the Guidance of Invigilators* regarding examination disturbances. The default position in the event of an evacuation from an examination because of a fire alarm was now that examination scripts should be left in the examination venue rather than taken by students with them.

(10) Monitoring Student Attendance on Placements and Field Trips

Reported: That the Committee had agreed principles for how the College should address the requirements of the UK Border Agency regarding the monitoring of students on placement or field trips. The Registry would now draft a policy/procedure which would be circulated to Departments in due course.

(11) Key Information Sets

Reported: That the Committee had approved the College's Key Information Sets (KISs) Policy and Procedures. The Pro Rector (Education) and the Committee would provide reports to Senate on the College's KIS submissions and Council would be kept informed of developments in this area via the regular reports it received from Senate. Reports on the KISs would also be received by the Management Board.

(12) Good Practice Knowledge Base

Reported: That the Committee had been informed that the Quality Assurance Agency was in the process of constructing a good practice knowledge base which would bring together all the features of good practice identified in its reviews. Each feature of good practice would be linked to the corresponding evidence which would enable users to quickly identify good practice in areas of interest.

1696 Engineering Studies Committee

Considered: A Report by the Engineering Studies Committee (**Paper Senate/2012/27**).

(1) New Course: MEng Computing (Computational Management)

Reported: (i) That the Committee had considered a proposal to reintroduce the MEng Computing (Computational Management) degree programme which had previously been phased out in 2009.

(ii) That the Committee had heard that the Department of Computing offered an integrated programme of MEng degrees comprising a general MEng Computing degree and several streams. All streams shared a common core that was taught in the first 2 years.

(iii) That one such stream, MEng Computing (Computational Management), had been phased out in 2009. At the time there had been very little uptake of the course and most of the key modules offered on the stream had been due to be phased out because of staff retirements. However since this date specialist courses in this area had been reintroduced and staff expertise had been re-established. The Department had also received several requests from existing students to reintroduce the stream.

Approved: On the recommendation of the Committee, the reinstatement of the MEng in Computing (Computational Management) with immediate effect.

(2) New Collaboration between Department of Computing the Royal College of Art

Reported: (i) That the Department of Computing wished to propose a new collaboration with the Royal College of Art (RCA). The proposal concerned offering joint group project work and selected taught modules to students on the Department's MEng courses and the RCA's MA in Service Design.

(ii) That a similar proposal for Department of Computing Master's students had also been approved by the Graduate School's Master's Quality Committee (Business, Engineering & Physical Sciences) and would be considered by the Senate later in the meeting.

(iii) That for the joint projects assessment would be made by a joint panel including the

RCA and Imperial co-ordinators but individual assessment of RCA and Imperial students would be made by the respective institutions in accordance with their assessment procedures. It was proposed to offer the joint projects with effect from 2012-13.

(iii) That up to 20 undergraduate and Master's students from the Department of Computing would be invited to participate in specific lectures from the RCA's Service Design series including 'Introduction to Service Design', 'Human Centred Design Practice', 'Human Computer Interaction', 'Service Mapping' and 'Blueprinting' with effect from 2012-13. Up to 20 students from the RCA's MA in Service Design would be invited to participate in either the Department of Computing's 'Introduction to Computing' lectures or alternatively a bespoke short programme on computing from 2013-14.

Approved: On the recommendation of the Committee, the collaboration between the Department of Computing and the RCA.

(3) Reorganisation of Undergraduate Courses and Examinations

(i) Aeronautics

Reported: That the Committee had approved the renewal of 7 of the Department of Aeronautics' exchange partnerships, as outlined in section 2.1 of the Senate's paper.

(ii) Bioengineering

Reported: That the Committee had approved a proposal to amend the Scheme for the Award of Honours for the BEng and MEng courses in Bioengineering and had also approved the renewal of 3 of the Department's exchange partnerships, as outlined in section 2.2 of the Senate's paper.

(iii) Chemical Engineering

Reported: That the Committee had approved the renewal of 4 of the Department of Chemical Engineering's exchange partnerships, as outlined in section 2.3 of the Senate's paper.

(iv) Civil and Environmental Engineering

Reported: That the Committee had approved the renewal of 9 of the Department of Civil and Environmental Engineering's exchange partnerships, as outlined in section 2.4 of the Senate's paper.

(v) Computing

Reported: That the Committee had approved the renewal of 3 of the Department of Computing's exchange partnerships, as outlined in section 2.5 of the Senate's paper.

(vi) Earth Science and Engineering

Reported: (a) That the Committee had approved the renewal of a collaborative module partnership between the Department of Earth Science and Engineering (ESE) at Imperial and the Department of Earth Sciences at University College London (UCL). The collaboration provided undergraduate Geology and Geophysics students at Imperial with the opportunity to undertake a range of earth science modules at UCL. 16 undergraduate students in ESE at Imperial had taken UCL modules in the last 5 years. Students from ESE who were permitted to take part in UCL courses were carefully monitored by the ESE Academic Tutor.

(b) That the Committee had also approved the renewal of the Department's exchange

partnership with Université Denis Diderot, France.

(vii) Electrical and Electronic Engineering

Reported: That the Committee had approved the renewal of 3 of the Department of Electrical and Electronic Engineering's exchange partnerships, as outlined in section 2.7 of the Senate's paper.

(viii) Materials

Reported: That the Committee had approved the renewal of 4 of the Department of Materials' exchange partnerships, as outlined in section 2.8 of the Senate's paper.

(ix) Mechanical Engineering

Reported: That the Committee had approved the renewal of 5 of the Department of Mechanical Engineering's exchange partnerships, as outlined in section 2.9 of the Senate's paper.

(x) Faculty of Engineering

Reported: That the Committee had approved the renewal of the Faculty's exchange partnership with the University of California.

(4) Annual Monitoring Statements

Reported: (i) That the Committee had received annual monitoring forms, incorporating the 2011-12 external examiner reports, from all Engineering Departments together with an annual monitoring report for the Business School undergraduate programmes and the external examiners' reports for ancillary Mathematics teaching. The departmental representatives had summarised the key points from the reports. The Committee had looked in particular at the comments of external examiners and the responses of the Departments to issues raised. The Committee had also noted each Department's response to the National Student Survey.

(ii) That the Minutes of the Committee's discussion of the annual monitoring and external examiners' reports would be provided at the February Senate meeting.

(5) Survey Results

Reported: That the Committee had considered the results of the Summer SOLE Survey and the National Student Survey.

(6) Appointment of External Examiners for 2012-13

Reported: That the Committee had approved nominations for Board Chairs and external examiners for the 2012-13 academic session.

1697 Science Studies Committee Report

Considered: A Report by the Science Studies Committee (**Paper Senate/2012/28**).

(1) Grade Monitoring – Multiple Choice Question (MCQ) Examinations

Reported: (i) That the Committee had received a report from the Business School on the findings of its internal review of the level of difficulty and suitability of Multiple Choice Question (MCQ) examinations.

(ii) That In its review the Business School had considered data from Boards of Examiners'

meetings held in the last 10 years. The findings of the review had suggested that there was in fact a downward trend in average marks awarded for MCQ examinations. The Business School had confirmed that students were not provided with examples of previous MCQ examination questions and that a second academic was responsible for reviewing the content of each MCQ examination to ensure that duplication of questions between years was avoided as far as possible. All MCQ examinations were negatively marked. The Business School had reported that while it would not be extending its use of MCQ examinations, it was content that this type of assessment was suitable for programmes which already used it.

(iii) That the Committee had been satisfied with the Business School's review of its MCQ examination provision and had endorsed the Business School's findings that there was no evidence of grade inflation as a result of MCQ examinations.

(2) Appointment of External Examiners for the 2012-13 Session

Reported: That the Committee had approved the appointment of Board Chairs and External Examiners to act for BSc and MSci degrees within the Faculty of Natural Sciences and programmes within the Business School for the 2012-13 session.

(3) Student Surveys

Reported: That the Committee had considered the results of TOLE 2012, Summer SOLE 2012 and the National Student Survey 2012.

(4) Undergraduate Annual Monitoring 2011-12

Reported: (i) That the Committee had considered the 2011-12 undergraduate annual monitoring forms for the Departments of Physics and Chemistry. The annual monitoring forms for the Business School, the Department of Life Sciences (Biology and Biochemistry/ Biotechnology) and the Department of Mathematics would be considered at the next meeting of the Committee.

(ii) That the departmental representatives had summarised the key points from their reports, including changes made to their programmes, management structures and personal tutoring systems and an evaluation of examination results and standards. The external examiner reports and departmental responses to them had also been considered. The Minutes of the Committee's discussion of the annual monitoring reports were attached to the Senate's paper.

(iii) That the Committee had considered the 12 month periodic review follow up report from the Department of Physics and had been satisfied that the Department had now addressed the comments made by the periodic review panel. The Department had reported that it had reviewed changes to its professional skills training with a view to making provision more evenly distributed across the years. The Department had so far made no changes to Year 1 but would continue to review this provision for Years 2, 3 and 4. More detailed marking schemes had been introduced for the assessment of laboratory work and the Department had also confirmed that it would be implementing changes to its personal and academic tutoring schemes during 2012-13 to address concerns raised by students at the review that there was inconsistency in the quality of tutorials.

(iv) That the Committee had also received the annual report from the Joint Management Committee for the BSc in Physics and Music Performance and an updated list of Royal College of Music staff responsible for teaching on this programme. In addition the Committee had received a list of staff at Canterbury Christ Church University responsible for teaching on the new BSc Physics with Science Education programme.

(5) Minor Amendments to Existing Courses

(i) Department of Chemistry

Reported: That the Committee had approved amendments to the year weightings for the BSc Chemistry with Management programme to take effect for October 2013 and had approved a pilot placement in the third sector for one Year in Industry student in 2012-13. This particular student would be placed at the Imperial Hub, a registered charity in England and Wales which worked in collaboration with Imperial's Outreach Office.

(ii) Business School

Reported: That the Committee had approved a proposal to withdraw the Project Management course, part of the Joint Honours 'with management' programmes, and replace it with a new course in Sustainable Business, to take effect for October 2013.

(iii) Department of Life Sciences

Reported: That the Committee had approved a change to the title of the module 'Parasitism and Other Life Strategies' on the BSc in Biology to 'Parasitology' and had approved the module's new course content, to take effect for April 2013.

(6) Model Answers to Questions

Reported: (i) That the Committee had heard that as a result of feedback received in last year's external examiner reports the Senate had agreed that QAAC should explore developing a College policy for preparing model answers to examination questions.

(ii) That members had considered a proposal from QAAC for a College-wide policy but had suggested revisions to this.

(7) Approval and Renewal of Exchange Partnerships

Reported: (i) That the Committee had approved the renewal of 12 exchange partnerships in the Department of Chemistry, 9 exchange partnerships in the Department of Physics, 7 exchange partnerships in the Department of Life Sciences and 3 exchange partnerships in the Department of Mathematics, as outlined in section 7 of the Senate's paper.

(ii) That the Committee had also approved a new exchange partner for the Department of Mathematics, École polytechnique fédérale de Lausanne, Switzerland.

(8) Good Practice

Reported: That the Committee had received the annual report on good practice highlighted by periodic reviews reported to the Senate during 2011-12. The Committee had agreed that the Department of Civil and Environmental Engineering's first year undergraduate autumn term personal tutor report form was an example of good practice.

(9) Key Information Sets (KISs)

Reported: (i) That the Committee had noted that the College's KISs had now been published on the Unistats website. It was reported that there were 2 main points to note: that Imperial students had a lower percentage of satisfaction than students at other Russell Group institutions when the NSS questions relating to assessment and feedback were compared; and that, in general, Imperial compared favourably with other Russell Group institutions in terms of the numbers of hours students spent in scheduled teaching and learning activities.

(ii) That the Committee had noted that HEFCE would be visiting the College on the 22 and 23 January 2013 to audit the College's KIS data. Those Departments which had been selected as part of the HEFCE audit trail would be notified by the Registry in due course.

1698 **Medical Studies Committee Report**

Considered: A Report by the Medical Studies Committee (**Paper Senate/2012/29**).

(1) Revised Procedure for the Assessment of Fitness to Practise Medicine

Reported: That the Committee had approved substantial revisions to the College's Procedure for the Assessment of Fitness to Practise Medicine to bring it in line with the General Medical Council's (GMC) *Medical Students, Professional Values and Fitness to Practise*. The revisions had also been informed by feedback from 2 recent College Fitness to Practise panels. The revised procedure reduced the number of panel members to seven and proposed the appointment of a standing Chair, normally the Clinical Dean. The Committee had noted that continuity of membership of the panel would be desirable where possible. The new procedure also made available to the panel a wider range of potential outcomes, in line with GMC guidance.

Approved: On the recommendation of the Committee, the revised Procedure for the Assessment of Fitness to Practise Medicine.

Agreed: That the revised Procedure should be recommended to Council for introduction with immediate effect.

(2) Update from the Lee Kong Chian School of Medicine (LKCmedicine)

Reported: (i) That the Committee had received an update on the Singapore project. The project team had finalised the content and teaching methods for Phase 1 of the joint NTU/Imperial MBBS and the programme had also now received approval from the Singapore Medical Council.

(ii) That the Committee had approved the General Regulations for the LKCmedicine MBBS, which were attached to the Senate's paper, and had endorsed a proposal for the establishment of a student medical society at the School. An agreement had been reached that LKCmedicine students would be entitled to associate membership of the Imperial College Union.

Approved: On the recommendation of the Committee, the General Regulations for the LKCmedicine MBBS, which would commence in August 2013.

(3) Annual Monitoring Reports 2011-12

Reported: That the annual monitoring reports for the MBBS; BSc in Medical Sciences with [option]; BSc in Biomedical Science and BSc in Pharmacology and Translational Medical Sciences; and the Business School had been considered by the Committee. The reports incorporated the Heads of Year reports. A summary of points outlined in the reports was provided in the Senate's paper.

(4) External Examiners

(i) Appointment of External Examiners

Reported: That the Committee had approved the external examiners and the Chairs of the respective examination boards nominated for 2012-13. The Committee had also ratified action taken by the Chair to approve outstanding nominations for 2011-12. One external examiner had been approved for an exceptional 5th year to provide continuity and to support an entirely new cohort of external examiners for the Graduate Entry year.

(ii) Consideration of 2011-12 External Examiner Reports

Reported: (a) That the Committee had heard that the Education Committees for Years 3, 5 and 6, Year 4, and Biomedical Science had considered the external examiner reports from the 2011-12 session. The Minutes of the Education Committees' discussions were appended to the Senate's paper. The Committee had noted that frequent reuse of patients in the clinical examinations had been queried. The Education Committee (Years 3, 5 and 6) would explore this issue further although there was no evidence that this gave any student an unfair advantage. There was also a concern raised about the provision of information to external examiners. Access was provided to all online materials but the Faculty would take further steps to ensure that examiners were aware of this.

(b) That the external examiner reports for Years 1, 2 and the Graduate Entry Programme would be considered at forthcoming Education Committee meetings and reported to the February Medical Studies Committee meeting.

(iii) Actions arising from 2010-11 External Examiner Reports

Reported: That the Committee had received a report on actions taken in response to trends that had been identified in the external examiner reports from 2010-11 and had been satisfied that appropriate actions had been taken.

(5) Update on the 2010 MBBS Periodic Review

Reported: That the Committee had received an update on the implementation of recommendations made in the 2010 MBBS periodic review. Improving feedback and pastoral care remained priorities for the Medical School and significant progress had been made in both of these areas. A new personal tutor system, piloted in 2011-12, had now been rolled out to all Year 3 students. It was envisaged that this would have a positive impact on feedback to students. Also, all students in Year 6 were now receiving detailed feedback on their Year 5 clinical examination performance in personalised sessions. Library facilities continued to be enhanced and overseas tuition fees, which had been discussed in the review, remained frozen. The Committee had been satisfied that appropriate action had been taken.

(6) National Student Survey Results 2012

Reported: That the Medicine courses had experienced a disappointing fall in overall satisfaction in the 2012 National Student Survey. This seemed to be related in part to significant upheaval in the NHS in the London region and other London Schools had also been affected. Three 'town hall' events had been held to seek the views of the students, to solicit their suggestions and to understand their priorities for improvement. An action plan was being formulated on the outcomes of the events, which would be communicated to students in due course.

(7) SOLE and TOLE

Reported: (i) That the Committee had considered the SOLE and TOLE results from 2011-12. Performance in Dermatology was variable and the Oncology SOLE remained disappointing. These issues were actively being addressed by the Head of Quality Assurance and Enhancement and the Quality Assurance and Enhancement Manager.

(ii) That for TOLE, participation rates in Medicine were the lowest in College. It was hoped that this would be improved as the Registry and Faculty worked more closely to ensure that Medicine Spring SOLE and TOLE were released on the Student Viewpoint System at the same time.

(8) Preparation of model answers to examination questions

Reported: That the Committee had considered a paper from the QAAC on the preparation of model answers to examination questions. It had noted that the proposals broadly aligned with and complemented the Faculty's Undergraduate Assessment Strategy. There was however a concern about providing 3 years of model answers to students, which would be fed back to QAAC.

1699 Report by the Graduate School

Considered: A Report by the Graduate School (**Paper Senate/2012/30**).

(1) New Courses

(i) MSc in Data Science and Management

Reported: (a) That the Master's Quality Committee (Business, Engineering & Physical Sciences) had received a proposal from the Business School to introduce a new MSc in Data Science and Management with effect from October 2013. The course would be offered on a full-time basis only and would attract a premium fee.

(b) That the Committee had noted that the course would be 'owned' and run by the Business School but would involve collaboration with the Department of Computing.

(c) That the Committee had heard that the motivation behind the establishment of the course was that there was strong market demand. It was also noted that the course would build on the Business School's reputation for providing world-class Master's programmes relevant to business. The programme would have a distinctly Imperial favour, being a collaboration between departments which combined the College's existing expertise in data science with opportunities to apply this in various finance, business and policy settings.

(d) That the course would consist of a mixture of compulsory and optional modules plus a consulting project and management report or a project.

(e) That students would be given the opportunity to take in-year re-sits in September for courses taught by the Business School. Re-sits for courses taught by the Department of Computing would take place the following academic year.

Approved: On the recommendation of the Committee, the introduction of the MSc in Data Science and Management with effect from October 2013.

(ii) MA/MSc in Global Innovation Design

Reported: (a) That the Senate had been informed at its October 2012 meeting that the Master's Quality Committee (Business, Engineering & Physical Sciences) had received a proposal for a new 2-year double Master's (MA/MSc) programme in Global Innovation Design (GID) delivered by the Department of Mechanical Engineering in collaboration with the Royal College of Art (RCA). The programme would include placements at the Pratt Institute, New York, USA and Keio University, Tokyo, Japan. On successful completion of the course students would receive an MSc from Imperial and an MA from RCA.

(b) That the Strategic Education Committee had given initial strategic approval for the collaboration in January 2012, subject to detailed consideration by the Master's Quality Committee (BEPS). The programme had first been discussed at the MQC (BEPS) meeting in May 2012 when the external reviews of the programme had also been considered. A revised proposal, together with a discussion document concerning the award designation, had been further considered at the MQC (BEPS) meeting on 24 September 2012. Several amendments to the proposal had been suggested by the MQC.

(c) That since that date the programme had completed the RCA's validation process. As part of this process the RCA had approved the recommendations of the MQC (BEPS) including that there should be a re-sit/referral opportunity available to all students on the course as was the case with all Imperial awards.

(d) That as part of their approval the RCA had also stipulated that the additional entry requirement for the programme should be amended from a first to an upper second class honours degree. Chair's Action had been taken at Imperial to approve this amendment on behalf of the MQC (BEPS).

(e) That it was proposed that the RCA would be the lead institution and that RCA regulations should take precedence. A Memorandum of Agreement had been drawn up which ensured that where RCA regulations were not compatible with those of Imperial safeguards had been put in place. The Memorandum of Agreement had been accepted by the RCA except for Section 14: Confidential Information which are subject to continuing negotiation. Schedule 1: Programme Specification was also not currently available as this was in the process of being finalised by the RCA.

(f) That Senate had approved the academic content of the programme at its October 2012 meeting. Senate was now asked to consider the draft Memorandum of Agreement for the MA/MSc in Global Innovation Design.

(g) That the exchange agreements were also in progress and the expectation was that these would have been sent to Pratt and Keio for review by 12 December 2012.

Confirmed: The introduction of the MA/MSc in Global Innovation Design with effect from July 2013 subject to the satisfactory completion of the Memorandum of Agreement with the RCA.

(2) New Collaboration between Department of Computing and Royal College of Art

Reported: (i) That the Department of Computing wished to propose a new collaboration with the Royal College of Art (RCA). The proposal concerned offering joint group project work and selected taught modules to students on the Department of Computing's MSc in Computing Science, MSc in Computing (Creative Industries), MSc in Computing (Distributed Systems) and MSc in Computing (Software Engineering) and the RCA's MA in Service Design.

(ii) That a similar proposal for Department of Computing undergraduate students had also been considered by the Engineering Studies Committee and approved by Senate earlier in the meeting.

(iii) That for the joint projects assessment would be made by a joint panel including the RCA and Imperial co-ordinators but individual assessment of RCA and Imperial students would be made by the respective institutions in accordance with their assessment procedures. It was proposed to offer the joint projects with effect from 2012-13.

(iv) That up to 20 undergraduate and Master's students from the Department of Computing would be invited to participate in specific lectures from the RCA's Service Design series including 'Introduction to Service Design', 'Human Centred Design Practice', 'Human Computer Interaction', 'Service Mapping' and 'Blueprinting' with effect from 2012-13. Up to 20 students from the RCA's MA in Service Design would be invited to participate in either the Department of Computing's 'Introduction to Computing' lectures or alternatively a bespoke short programme on computing from 2013-14.

Approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences), the collaboration between the Department of Computing and the RCA.

Noted: That a collaborative agreement, covering both the undergraduate and Master's elements of this collaboration, would be signed with the RCA.

(3) Change of Award Title - MRes in Chemical Biology of Crop Sustainability and Protection

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences), the change of award title of the MRes in Chemical Biology of Crop Sustainability and Protection in the Department of Chemistry to MRes in Plant Chemical Biology: Multidisciplinary Research for Next Generation Agri-Sciences with effect from October 2013.

Noted: That the new name would better reflect the students' perception of the course and increase visibility and awareness of the programme to potential students.

(4) Course Suspensions – MSc in Computing for Industry and MSc in Computing (Performance Modelling)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences), the suspension of the MSc in Computing for Industry and the MSc in Computing (Performance Modelling) in the Department of Computing for the 2013-14 academic year whilst the Department considered consolidating and restructuring their MSc courses.

(5) Withdrawal of Courses

(i) Institute of Clinical Sciences – MRes in Integrative Biomedical Sciences

Considered and approved: On the recommendation of the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development), the withdrawal of the MRes in Integrative Biomedical Sciences in the Institute of Clinical Sciences with effect from October 2013.

(ii) Department of Medicine - MSc in Integrative Neuroscience

Considered and approved: On the recommendation of the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development), the withdrawal of the MSc in Integrative Neuroscience in the Department of Medicine with effect from October 2013.

(iii) Business School – Distance Learning MBA

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences), the withdrawal of the Distance Learning MBA in the Business School with effect from October 2013.

Noted: That the Business School was intending to introduce a new programme to their MBA portfolio in October 2014 which would include flexible and blended learning.

(iv) PhD in Insect Biotechnology – Collaborative Programme

Considered and approved: On the recommendation of the Postgraduate Research Quality Committee, the formal withdrawal of the College from the PhD in Insect Biotechnology collaborative programme with immediate effect.

Noted: That there were no Imperial PhD students registered on this collaborative programme and the majority of academic staff previously associated with the programme were no longer in post.

(6) Major and Retrospective Course Modifications

(i) Department of Surgery and Cancer – MEd in Surgical Education

Reported: (a) That the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) had considered a proposal from the Department of Surgery and Cancer for a change to the assessment and the addition of new modules to the MEd in Surgical Education, retrospectively with effect from October 2012.

(b) That the change in assessment involved the introduction of a dissertation progress report which would be weighted toward the final dissertation mark. This would be assessed by means of coursework to be submitted at the beginning of June in the final year of the course.

(c) That the request to add new modules was in respect of existing modules from the MSc in Health Policy which would be offered as new optional modules as part of the MEd in Surgical Education. Students following the MEd were required to take one optional module. The Committee was assured that the new modules were equivalent to optional modules on the current programme in terms of ECTS, assessment and academic vigour.

(d) That the external examiners were supportive of both of the above changes and student consent had been collected by the Department.

Approved: On the recommendation of the Committee, the proposed amendments to the MEd in Surgical Education, retrospectively with effect from October 2012.

(ii) Department of Surgery and Cancer – MSc in Surgical Science

Reported: (a) That the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) had considered a proposal from the Department of Surgery and Cancer for the addition of an alternative timetable for the 2-year part-time version of the MSc in Surgical Science, with effect from October 2012.

(b) That the course was currently delivered full-time over 1 calendar year and part-time over 2 calendar years where the part-time students completed 70% of the taught course in Year 1 and 30% of the taught course in Year 2. They completed their written examinations at the end of Year 2. The Department had proposed an alternative part-time option which would allow part-time students to complete the whole of the taught course in Year 1 and undertake the associated examinations at the end of Year 1. This was in response to the changes in surgical education in the UK.

(c) That students following this proposed new timetable would normally have collected all relevant clinical/surgical data required for their dissertation by the end of term 1 in their 2nd year. In certain specific circumstances when the student's external surgical institute (work place) related to the student's surgical specialty and research project, the Department had requested that the remaining time allocated could be completed at the external institute, where the student would concentrate on the collation, interpretation and statistical analysis of the data collected, together with writing and preparing their dissertation for submission.

(d) That in such circumstances, the Committee had been assured that the Department would counsel the students appropriately and that regular contact would be maintained with the course director whilst at the external institution.

(e) That the external examiners had been supportive of the change and student consent had been collected by the Department.

Approved: On the recommendation of the Committee, the proposed amendment to the

MSc in Surgical Science, retrospectively with effect from October 2012.

(iii) Educational Development Unit – Postgraduate Certificate in University Learning and Teaching

Considered and approved: On the recommendation of the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) revisions to the progression rules for the award of the Postgraduate Certificate in University Learning and Teaching, outlined in Appendix III of the Senate's paper, with immediate effect.

(iv) Business School – MSc in Finance and MSc in Risk Management & Financial Engineering

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences), a proposal from the Business School to amend the assessment for the Advanced Options Theory elective on the MSc in Finance and the MSc in Risk Management & Financial Engineering, retrospectively with effect from October 2012.

Noted: That the students on the course had been consulted about the change.

(7) Changes to College Regulations

(i) Regulations for the award of Taught Master's Degrees, Postgraduate Diplomas and Postgraduate Certificates

Considered and approved: On the recommendation of the Master's Quality Committees, the amendments to regulations 1.3 (Entrance Requirements) and 1.4 (Registration) of the Regulations for the award of Taught Master's Degrees, Postgraduate Diplomas and Postgraduate Certificates, outlined in the Senate's paper, with immediate effect.

Noted: That the revisions clarified that students registered for an Imperial College award could not simultaneously undertake stand-alone modules from that course which might be available through the School of Professional Development for credit towards the Imperial College award and that students who were granted credit towards an Imperial College award under College APL arrangements were not entitled to a pro rata reduced fee.

(ii) Regulations for the Award of MPhil – Attendance and Course of Study

Reported: (a) That following the introduction of direct PhD registration, the Postgraduate Research Quality Committee had proposed revisions to the regulation concerning maximum MPhil registration to allow students who transferred from PhD to MPhil following their late stage review time to write up their work for the MPhil degree.

(b) That at present the College's Academic Regulations required all full-time MPhil students to submit their thesis for examination within 24 months of the date of their initial registration. This did not allow sufficient time for students who were transferred following the late stage review (at either their 1st or 2nd attempt) to write up their work for the MPhil award.

Approved: On the recommendation of the Committee, the proposed revision to regulation 4.11 of the Regulations for the Award of PhD and MPhil, outlined in the Senate's paper, with immediate effect. This clarified that where a full-time student had had their registration transferred from PhD to MPhil following a late stage review they should normally complete the MPhil within 3 to 6 months of the date of the late stage review.

Agreed: That a similar amendment should also be made to regulation 4.13 of the Regulations for the Award of PhD and MPhil to make clear that where a part-time student had had their registration transferred from PhD to MPhil following a late stage review they

should normally complete the MPhil within 9 months of the date of that late stage review.

(iii) Requirements applicable to Theses submitted for the Degrees of MPhil, PhD and MD (Res)

Considered and approved: On the recommendation of the Postgraduate Research Quality Committee, the removal of the requirement in the Regulations for the Award of MPhil and PhD, the Regulations for the Award of PhD and MPhil and the Regulations for the award of MD(Res) for students to provide an extra loose copy of the abstract when submitting their thesis, with immediate effect.

(iv) Revisions to Procedure for Appointment of Examiners for Research Degrees (MPhil, PhD, MD(Res) & EngD)

Reported: (a) That following the introduction of direct PhD registration, the Postgraduate Research Quality Committee had proposed revisions to the Procedure for Appointment of Examiners for Research Degrees (MPhil, PhD, MD(Res) & EngD).

(b) That the proposed revisions included mention of the early stage assessment and late stage review and additionally incorporated the changes to the training for new staff post-CASLAT.

Agreed: That a minor amendment should be made to the statement in paragraph 4 of the revised procedure that staff appointed as internal examiners should ideally have completed CASLAT or the Postgraduate Certificate in University Learning and Teaching. This statement should be amended to clarify that staff should ideally have completed CASLAT, the Postgraduate Certificate in University Learning and Teaching or equivalent training provided by the College.

Approved: On the recommendation of the Committee, the revisions to the Procedure for Appointment of Examiners for Research Degrees (MPhil, PhD, MD(Res) & EngD), outlined in Appendix IV of the Senate's paper, with immediate effect subject to inclusion of the amendment to paragraph 4 discussed.

(8) QAA UK Quality Code for Higher Education: Chapter B11: Research Degrees

Reported: That in light of the recently published Chapter B11 of the QAA UK Quality Code: Research Degrees, the Postgraduate Research Quality Committee had agreed revisions to the College's research degree precepts in order to ensure on-going compliance with the Code. The revised precepts were appended to the Senate's paper.

Approved: On the recommendation of the Committee, the revised research degree precepts, with immediate effect.

(9) Precepts for Master's Level Courses

Reported: That the Senate had previously approved precepts for MRes programmes which were due to become effective from October 2013. However, the Master's Quality Committees had now approved precepts to be applied to all postgraduate Master's level programmes, which incorporated and therefore replaced the precepts for MRes programmes.

Approved: On the recommendation of the Committees, the precepts for postgraduate Master's level courses (MSc, MRes, MBA, MPH, Postgraduate Certificate & Postgraduate Diploma), with immediate effect.

(10) Renewal of Student Exchange Partners

Reported: That the Postgraduate Research Quality Committee had approved the renewal

of 3 student exchange partnerships as outlined in section 10 of the Senate's paper.

1700 Report by the Undergraduate Admissions Committee

Considered: A Report by the Undergraduate Admissions Committee (**Paper Senate/2012/31**).

(1) Introduction of an Admissions Test by the Department of Mathematics

Reported: (i) That the Department of Mathematics had proposed the introduction of an additional admissions test to assist in the selection of applicants for making an offer. The first test was scheduled to run in November 2013. This would be used to inform and enhance the admissions decisions made by the Mathematics Admissions Tutor and thus allow Mathematics to better select students who were likely to perform well on their degrees.

(ii) That the Mathematics Aptitude Test (MAT) was managed and run by Cambridge Assessment and was also used by Oxford University. Although registration for the MAT would be in mid-October, this registration was entirely separate from the UCAS application process. Imperial would continue to accept applications for Mathematics until the standard UCAS deadline of 15 January. Any applicants who had not sat the MAT when applying through UCAS and who were considered by the Department of Mathematics to be excellent applicants would be asked instead to sit one of the STEP Mathematics examinations in June (also set by Cambridge Assessment) and this examination would form a part of the condition of the offer.

(iii) That the Department of Mathematics had undertaken to make substantial efforts to alert potential applicants to the change in process over the next year.

Further Reported: That in response to a query about whether the use of 2 different tests (the MAT and the STEP Mathematics examinations) was optimal, the Deputy Head of the Department of Mathematics confirmed that the Department hoped to use only the MAT test in the longer term. However, it was noted that other institutions had also successfully adopted the 2 test route.

Approved: On the recommendation of the Committee, the introduction of an admissions test in the Department of Mathematics for 2014 entry onwards.

(2) Admissions Cycle 2013 Entry

Reported: (i) That the sector had seen a 2% rise in applications to UCAS by the 15 October 2012 on the same time last year. Since then, however, the sector had seen an 8.4% drop in applications by the end of November 2012.

(ii) That Imperial, by comparison, had seen only a very slight reduction of 0.74% (or 77 in raw applications) on the number of applications received by the end of November 2012 compared to the same time last year. As such the College had both benefited from the increase in early high quality applications and had not been overexposed to the cross-sector drop since then. It seemed likely that Imperial's good performance in various recent league tables (Guardian, Times, Sunday Times) as well as the College's high employment data statistics, made available as part of KIS, had helped the College to maintain application numbers.

(iii) That some notable trends had been the recovery in the Faculty of Engineering Home applications (+10% on 2011/12); the continued substantial drop in EU applicants across the College; and the holding-up of Overseas applications which had been 9% up on 2010/11 in 2011/12 and were only slightly down on 2011/12 this year.

(3) Admissions Cycle 2012 Entry

Reported: (i) That applications for 2012 entry had been 2% down on 2011/12, mostly due to a 6.6% drop in Medical applicants (256 applications) which was probably as a result of tuition fees and the perception of a higher financial burden for a longer Medicine degree.

(ii) That despite many Departments being able to recruit to their December target in August, there had been a greater than expected drop-out of students between August 2012 and the beginning of term, probably because of financial concerns. It was expected that most Departments would be making more offers in the next cycle to take this effect into account.

1701 Student Welfare Committee

Considered and approved: The annual report of the Student Welfare Committee for 2011-12 (**Paper Senate/2012/32**).

Reported: (1) That over the course of the year, the Committee received reports from its different constituent areas. A brief outline of these annual reports was provided in the Senate's paper.

(2) That in 2011-12, 3,080 applications for accommodation had been received from UG students (up 5% from 2010-11). There was, however, a lower translation from student applicants to College to student applicants for accommodation. In summer 2012, all late and insurance applicants had been allocated places due to the reduced number of applicants. In 2011-12, 86.7% of applicants had been offered 1 of their 5 preferences (76% in 2010-11); increasing in summer 2012 to 89.5%. In 2011-12, 164 UG applicants had rejected/cancelled an offer in halls and 0.5% of students who had accepted accommodation had failed to show up. This year, there were 263 rejections/cancellations; the no-show rate had been the same as in 2011-12.

(3) That students declaring a disability had increased from 870 in October 2011 to 997 in October 2012 (6.2% of students). This was the 6th successive year that numbers had increased. Specific learning difficulties had again accounted for over half the declarations.

(4) That the Early Years Education Centre (EYEC) had been awarded an 'Outstanding' by Ofsted. The waiting list had exceeded 100 again last year. In summer 2012, there had been 9 student parents with 8 on the waiting list. There were plans to enhance the College's nursery provision by establishing an early years education nursery at Imperial West.

(5) That during 2011-12 the ICU Student Advice Centre had advised 481 students. Proportionally more had been international students (postgraduate: 227; undergraduate: 254; international students: 258; home students: 223). In 2010-11 522 students had been seen.

(6) That in 2011-12 440 students had attended counselling, up 12% from the previous year (392). There had been a 6% increase in sessions offered from the previous year, from 1,871 in 2010-11, to 1,988 in 2011-12. The issues that students had presented with in 2011-12 had remained consistent with previous years. The highest categories continued to be depression and mood change, anxiety, academic issues and relationships.

1702 Undergraduate Examination Failure Rates 2011-12

Received: Statistics of undergraduate examination failures for session 2011-12 (**Paper Senate/2012/33**).

Reported: (1) That the statistics were being reviewed by the 3 Studies Committees which had been asked in accordance with usual practice to focus attention and discussion on

those Departments where the failure rate in a particular year of the course had exceeded 10% especially where this occurred in the second or subsequent year. This affected 2 Departments in the Faculty of Engineering in 2011-12, the Department of Civil and Environmental Engineering (2nd year failure rates) and the Department of Mechanical Engineering (1st and 2nd year failure rates). No other College Departments had failure rates exceeding 10%.

(2) That the Quality Assurance Advisory Committee had also considered the statistics.

Further Reported: That the Engineering Studies Committee would consider this data at its March meeting and would report in detail to the May Senate on the action being taken by the Departments of Civil and Environmental Engineering and Mechanical Engineering to reduce their failure rates. The relatively high number of 2nd year students in Mechanical Engineering taking re-sit examinations was also a cause for some concern.

Agreed: That in advance of the detailed report from the Engineering Studies Committee, the Senate should receive an update from the Departments of Civil and Environmental Engineering and Mechanical Engineering on their plans for addressing these matters.

1703 Staff Matters

Received: A Note by the Rector (**Paper Senate/2012/34**).

1704 Appointment of External Examiners in 2012-13

Received: The names and affiliations of external examiners for undergraduate and Master's degrees in 2012-13 (**Paper Senate/2012/35**).

1705 Register of Collaborative Provision

Received: The Register of the College's collaborative courses (**Paper Senate/2012/36**).

1706 Monitoring Statement for the 2011-12 Academic Year

Received: The College Monitoring Statement to the HEFCE for the 2011-12 academic year (**Paper Senate/2012/37**).

1707 Sessional Fees for Home and Overseas Students

Received: Details of the tuition fees approved for home and overseas students for the 2013-14 session (**Paper Senate/2012/38**).

1708 DSc Committee

Received: A Report from the DSc Committee (**Paper Senate/2012/39**).

1709 Strategic Education Committee

Received: The Executive Summary of the meeting of the Strategic Education Committee held on 22 November 2012 (**Paper Senate/2012/40**).

1710 Award of Degrees and Diplomas

Reported: That under the provisions of University of London Ordinance 9(2) and Imperial College London Ordinance B1(1), and with the terms of SM 8 of October 1998, that the Academic Registrar had acted on behalf of the Senate in approving the awards for undergraduate and postgraduate degrees for candidates who had satisfied the examiners in the examination and satisfied all other necessary requirements for the award of the

degrees, and that degrees had been conferred on these candidates, the date being as indicated on the award.

1711 Valediction

The President & Rector advised that this would be Rebecca Penny's last meeting as she would be leaving the College in February 2013. The Senate thanked Rebecca and wished her well for the future.