

SENATE

Draft Minutes of Meeting held on 9 December 2015

Present: The Provost, Professor James Stirling (Chair); Professors Anandalingam, Cilliers, Gibson, Green, Magee (Tony), McCoy, McGregor, Nash, Parry, Smith, Wright; Associate Professor Miraldo; Drs Archer, Buluwela, Craig, Fobelets, Gounaris, Kingsbury, Mr Lupton (representing Professor Screamton), Mr Tebbutt; Mr San (Student Representative); with Mr Neilson (College Secretary and Registrar), Mr Pateman (Academic Registrar) and Mr Monk (Assistant Registrar).

Apologies: Professors Autio, Gardner, Magee (Jeff), McClure, Riboli, Richardson, Screamton, Welton; Mr Guo and Ms Sandon-Allum (Student Representatives).

2034 Salutation

The Provost welcomed Professor Sue Gibson to her first meeting as Acting Vice Provost (Education) and Professor Tony Magee to his first meeting as Deputy Director of the Graduate School.

2035 Minutes

The Minutes of the meeting of the Senate held on 21 October 2015 were confirmed.

2036 Matters Arising

Minute 2019 (7 (i)) : Information and Communication Technologies Annual Report

Reported: (i) That Departments had been experiencing delays in the encoding of lectures recorded via the Panopto lecture recording software, in part due to data storage capacity issues.

(ii) That a new Panopto externally hosted (cloud) service was due to go live over the Christmas break which included the hosting of all existing recordings on the new service. The agreement with Panopto for this service allowed for storage of recordings without any restrictions. The ICT recommendation was to retain recordings for the duration of the course plus one year, that being in accordance with JISC retention guidance for all final versions of taught course materials. Initially ICT would retain Panopto recordings in perpetuity and would seek to implement an archiving policy once the new hosting arrangements had proven themselves. It was not envisaged that this would create any immediate operational difficulties for the College. In addition, as part of the original contract due diligence ICT had carried out a security review of the cloud offering and found no areas of concern.

2037 Provost's Business

Received: A Report from the Provost (**Paper Senate/2015/18**).

(1) Organisational Culture and Gender Equality Study

Reported: (i) That the College had commissioned an independent research project, led by Dr Alison Phipps, Director of the Centre for Gender Studies at the University of Sussex, to study how the organisational culture of Imperial impacts on gender equality. The study would

look at both staff and student communities, and would begin by reviewing the College's institutional policies and procedures during the Autumn term, moving on to interviews and focus groups with staff and students in the New Year. There would be multiple ways for staff to participate and share their views over the course of the project.

(2) Director of Strategic Planning

Reported: (i) That Dr Malcolm Edwards had accepted appointment as Director of Strategic Planning with effect from 1 January 2016.

(ii) That Dr Edwards was joining the College from the University of Cambridge, where he has held the role of Head of Planning and Resource Allocation since 2012. In that role he oversaw the continuous review of the University's Resource Allocation Model and led the introduction of new Project Boards to improve the governance of the University's capital planning process. Prior to this Dr Edwards was Secretary of the School of Clinical Medicine at the University of Cambridge from 2005-2012. He has also worked at the University of Manchester, UMIST, Aston University and the University of Oxford.

(3) Changes to Faculty of Medicine Education Office

Reported: (i) That Professor Desmond Johnston had taken up appointment as Vice Dean (Education) in the Faculty of Medicine, with effect from 19 October 2015. As Vice Dean (Education) Professor Johnston would be responsible for undergraduate and postgraduate education and activity related to the Lee Kong Chian School of Medicine. Professor Johnston would be supported by two Associate Deans, as detailed below.

(ii) That Mr Martin Lupton had accepted appointment as Associate Dean and Head of the Undergraduate School of Medicine.

(iii) That Dr Jane Saffell had accepted appointment as Associate Dean for Science and Postgraduate Education, with responsibility for undergraduate science programmes (outside MBBS) and continuing strategic leadership of postgraduate taught programmes.

(iv) That following Professor Johnston's new appointment, Professor Simon Taylor-Robinson had accepted appointment as interim College Consul until 31 August 2016, the date when Professor Johnston's role as Consul would have ceased. A new Consul election would be held at the start of the summer term.

(4) HE Green Paper: Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice

Reported: (i) That since the Senate last met, the Government had published a Green Paper outlining its proposed next steps for Higher Education reform and to consult interested parties on the proposals. The proposals within the Green Paper may, if implemented, have significant implications for the College.

(ii) That the Strategic Planning Division was currently working on a draft College response to the consultation which would be circulated to Heads of Department in time for comment before the consultation period closed on 15 January 2016. The Strategic Planning Division's summary of the Green Paper was included as Appendix 1 to the Senate's paper, for information.

(5) Nurse Review of Research Councils

Reported: (i) That since the Senate last met, the Government had also published the independent review conducted by Sir Paul Nurse of the UK research councils. The review made recommendations for how research councils could evolve to support research in the most effective ways. The aim of the review was to ensure that the UK continued to support world-leading science and invested public money in the best possible ways. As with the

Green Paper, the outcomes of the Nurse Review would likely have implications for the College which would require further consideration.

(ii) That the recently published Spending Review and Autumn Statement 2015 described the Government's plans to take forward the recommendations of the Nurse Review. The Government would, subject to legislation, introduce a new body – Research UK – which would work across the seven Research Councils. The Government would also look to integrate Innovate UK into Research UK in order to strengthen collaboration between the research base and the commercialisation of discoveries in the business community. Innovate UK would retain its clear business focus and separate funding stream.

2038 Vice Provost's Business

Received: A Report from the Vice Provost (Education) (**Paper Senate/2015/19**).

(1) Imperial Success Guide

Reported: That following the successful launch of the Imperial Success Guide in October 2014 – an online resource aimed at helping undergraduate students make a successful transition to the College – new content had been created and added to the site for postgraduate research students. Promotion of the Success Guide had taken place at the Freshers' Fair and PGR student events. This academic year the focus would be on developing content for postgraduate taught students.

(2) Education Day 2016 – Transformative Learning

Reported: (i) That this year's Education Day would be held on Wednesday 16 March 2016, 12:30 - 5:30pm. The chosen theme was 'Transformative Learning' and would explore how the experience of learning at university can and does transform individuals.

(ii) That following last year's successful collaboration the Educational Development Unit was working closely with Imperial students and the Imperial College Union (ICU) to plan and facilitate the event, which would also include students sharing their expectations and experiences of transformative learning.

(iii) That the programme and booking details would be made available shortly via the Educational Development Unit website.

(3) Imperial Award

Reported: That a small-scale pilot for a new Imperial Award was now underway. The Award had been designed to recognise students who could evidence the ways in which their engagement in curricular, co- and extra-curricular activities has transformed their understanding, attitudes and skills in relation to key graduate attributes. Work was being undertaken in partnership with the ICU. There were currently 54 students and 36 tutors participating. The Award steering group was aiming to produce an interim assessment of the pilot for the Vice Provost's Advisory Group for Education (VPAGE) in February 2016.

(4) Placement Internship, Research and Volunteering Working Group Update

Reported: (i) That the Placement, Internship, Research and Volunteering Opportunity Working Group, chaired by the Director of the Careers Service, had liaised with Registry over the summer to understand how best to determine how many students had engaged in such activities, as this information was not centrally recorded.

(ii) That at re-enrolment in October 2015, continuing undergraduate students were directed to a two-question survey on the subject. The survey could not be made compulsory because the new registration system was not yet in place, and therefore the return had been

disappointing, at 25%. It had, however, provided some interesting information, including that:

- First year students were more likely to do seasonal summer work or volunteering rather than an internship in their first vacation;
- Female students were more likely to have volunteered or undertaken seasonal /part time work than male students;
- Overseas students were more likely to undertake a non-degree related internship and less likely to have engaged in volunteering than home or EU students;
- 227 students undertook a UROP programme during the summer but only 4.8% returned to College with a PhD offer;
- Of the 251 who undertook an embedded placement as part of their degree programme 57.8% returned to work with a job offer;
- 71.9% of the students who took part in the survey returned to College feeling that they had improved their technical/transferable skills.

(iii) That the Director of the Careers Service would be working with Registry to embed the survey in the new re-enrolment system. It was envisaged that a compulsory survey would ensure resources were focussed where needed. Analysis of the results would inform Widening Participation activities and would determine what students were gaining by engaging in this activity.

2039 National Student Survey (NSS) 2015

Received: A summary of the results of the National Student Survey 2015 (**Paper Senate/2015/20**).

Reported: That the results of the National Student Survey (NSS), now in its eleventh year, had been published in September.

Noted: (1) That the Provost's Board had recently agreed that the existing approach to improving the College's NSS performance through the updating and compiling of Departmental action plans into an overall College plan was in need of review.

(2) That the Departmental action plans in response to feedback received from the NSS had led to some incremental improvement in certain aspects of the student experience but that the rate of improvement did not always appear to correlate with the amount of effort invested by the College and its Departments in the action planning process and resulting initiatives.

(3) That following discussions with Faculty Deans the Provost's Board had taken the decision to set up a working group, convened by the Vice Provost (Education) and including Faculty Vice-Deans for Education and representatives of the ICU. The purpose of the group was to discuss the College's approach to the student experience, share best practice and develop College-wide proposals for significantly improving performance. The group would also consider the effectiveness of the action planning process and possible alternative mechanisms that could be used to respond to issues raised within the NSS. The first meeting of the working group was scheduled for 8 December 2015, with a further meeting due to take place on 15 December 2015.

2040 Imperial College Union NSS Response 2015

Received: The Imperial College Union (ICU) NSS Response 2015 (**Paper Senate/2015/21**).

Reported: That the ICU NSS Response 2014 had been themed around provision of quality feedback to students. The NSS Response 2015 was themed around the importance of nurturing and building upon students' enthusiasm for their chosen subject.

Considered: The recommendations highlighted in the ICU NSS response.

Noted: That discussion of the recommendations contained within the ICU Response focussed in particular on the recommendations regarding the current College policy in respect of the penalties for late submission of assessed work, and the timeliness and quality of feedback provided to students.

Agreed: That the College would continue to work with the ICU to review and implement the recommendations from the ICU NSS Response 2015.

2041 Postgraduate Research Experience Survey (PRES) 2015

Received: A summary of the results of the Postgraduate Research Experience Survey 2015 (**Paper Senate/2015/22**).

Reported: That the results of the Postgraduate Research Experience Survey (PRES) for the College had been published in July 2015 with benchmarking data provided in October. PRES was a biennial national survey of postgraduate research students (PhD, EngD or MD(Res)) hosted by the Higher Education Academy. The 2015 survey was open at the College from Monday 2 March until Thursday 14 May 2015 and it was the fourth time that the College had participated in the survey

Noted: That Departments had been sent their individual results and the full benchmarking data during the summer. The majority of Departmental action plans in response to the results had been reviewed by the Postgraduate Research Quality Committee in November 2015. The Quality Assurance and Enhancement Committee would consider a summary of the Departmental action plans together with the benchmarking data in January 2016.

2042 Imperial College Union PRES Response 2015

Considered: The Imperial College Union (ICU) draft PRES Response 2015 (**Paper Senate/2015/23**).

Reported: That in 2013 the ICU had published its first policy document focusing on issues concerning Postgraduate Research students in response to the PRES 2013. The 2015 PRES response set out the ICU's latest policy recommendations on key issues affecting the experience of doctoral researchers at the College and would form the basis of the ICU's Postgraduate Research agenda for the next two academic years.

Noted: That the ICU Response contained a series of policy and strategy recommendations for the College to consider on three specific topics: *Providing safety nets to world-class research supervision*, *Building a safe and professional working environment*, and *Growing our students and fostering vibrant communities*. These areas were considered by the ICU to be foundational to the doctoral researcher's time at the College.

Agreed: That the College would continue to work with the ICU to review and implement the recommendations from the ICU PRES Response 2015.

2043 Academic Standards Framework

Received: A paper from the Vice Provost (Education) and the Academic Registrar (**Paper Senate/2015/24**).

Reported: That the Senate had endorsed a proposal from the Academic Standards Framework Steering Group to establish a new academic governance structure for the

College with effect from January 2016 (SM 2021 of 21 October 2015 refers). The Steering Group had since refined the proposal considered at the previous Senate meeting.

(1) Academic Governance

Reported: That the proposed academic governance structure diagram (Appendix 1A of the Senate's paper) outlined the proposed committees that would have responsibility for managing academic quality and standards.

Noted: (i) That it was proposed that, at a College level, the Quality Assurance & Enhancement Committee (QAEC) would continue to report directly to Senate. Reporting via QAEC to Senate would be a new Programmes Committee (PC) with responsibility for the approval of new programmes and major modifications to existing programmes. Oversight of research programmes would be devolved, via QAEC, to the Postgraduate Research Quality Committee (PRQC). QAEC would also be responsible for oversight of the new format Faculty Education Committees.

(ii) That at a Faculty level, the proposed new Faculty Education Committees (FECs) for Engineering, Medicine, Natural Sciences, the Business School and the School of Professional Development would bring together many of the responsibilities currently devolved to the Faculty Studies Committees, Faculty Teaching Committees and Master's Quality Committees. Each Faculty may choose to devolve some areas of responsibility to sub-committees, which may be structured at the discretion of the Faculty (e.g. taught/research or undergraduate, taught postgraduate, postgraduate research or clinical, non-clinical, postgraduate etc.).

(iii) That at a Department level, it was expected that Department Teaching Committees and other structures would report to and communicate with relevant committees within the Faculty structure as appropriate to ensure effective governance and oversight.

(iv) That the Admissions Networks would also report directly to QAEC and were intended to facilitate discussion specifically related to Admissions policy and process.

(v) That the broad responsibilities of each committee were set out in the schedule of delegation (Appendix 1B of the Senate's paper). This schedule outlined the level of authority which may be executed at each level of the governance structure. Where a final authority had chosen to delegate the approval and execution of a decision or process, the final authority still retained the ultimate accountability and responsibility for that decision or process. Decisions made by the delegated authority would therefore always be reported to the final authority, this may be by way of an annual report. If a specific decision was potentially contentious, the delegated authority was expected, exceptionally, to refer this up to the final authority for decision.

(vi) That the terms of reference for the three main committees, QAEC, FEC and Programmes Committee were attached as Appendix 1C, 1D and 1E respectively of the Senate's paper. The constitution and membership details were also provided, except for the FEC where Faculties would be able to define their own membership within a framework which included student representation and central College representation for academic quality and standards matters. The ability to define its own constitution permitted Faculties the flexibility to address local and specific needs.

(vii) In order to ensure that the College continued to meet its responsibilities for the management of academic standards and quality, the Steering Group had agreed that the Registry would:

- Set dates for Senate, QAEC and the Programmes Committee annually by the end of the spring term so that FEC secretaries could set their committee dates accordingly, in order that the committees could report to one another in a timely manner (taking into account the deadlines for papers);
- Provide FECs with an annual quality assurance schedule of business and provide FECs with relevant reports/papers in support of this;
- Provide FECs with templates for agenda, cover pages and minutes;
- Provide training and advice to FEC secretaries and Chairs on academic standards and quality matters.

(viii) That a number of transitional arrangements were also approved by the Steering Group to cover the period whilst the new arrangements were embedded as detailed in Appendix 1F of the Senate's paper.

Approved: (i) On the recommendation of the Academic Standards Framework Steering Group, the new academic governance structure, as outlined in Section 1 and Appendix 1A of the Senate's paper, with effect from 1 January 2016.

(ii) On the recommendation of the Academic Standards Framework Steering Group the schedule of delegation, the terms of reference of the Quality Assurance and Enhancement Committee, Faculty Education Committees and Programmes Committee and the transitional arrangements during 2015-16 and 2016-17, as outlined in Section 1 and Appendices 1B-1F of the Senate's paper, also with effect from 1 January 2016.

(2) Regulations

Reported: (i) That in order to work towards the stated objective of establishing a single set of regulations for all taught programmes by 2017-18, the Steering Group had convened a workshop on credit and modules in late November, including external speakers, to advance discussion and to seek to establish consensus on a common module size for the College.

(ii) That the Steering Group had amended and approved the terms of reference and membership of the Assessment [previously called Academic Integrity] and Complaints & Appeals Task and Finish Groups. Pre-meetings with both the Chairs had taken place and the first meetings of the Groups would be scheduled to take place in January 2016.

2044 Quality Assurance and Enhancement Committee (QAEC)

Considered: A Report by the Quality Assurance and Enhancement Committee (**Paper Senate/2015/25**).

(1) Procedures for Consideration of Additional Examination Arrangements in Respect of Disability

Considered and approved: On the recommendation of the Quality Assurance and Enhancement Committee, the revised Procedures for Consideration of Additional Examination Arrangements in Respect of Disability for implementation with effect from January 2016, as outlined in section 1 and Appendix I of the Senate's paper.

Noted: That it was important for those staff involved in developing the revised procedures to monitor their implementation and the effect of the revised approach over the first year of operation.

Resolved: That a report should be submitted to the Senate in one year's time evaluating the implementation of the revised procedures and whether they continued to be fit for purpose.

(2) Suspension of Periodic Review Activity for Taught Provision

Reported: (i) That the Committee had approved a proposal to suspend periodic review activity for undergraduate and Master's level programmes during the developmental phase of the Academic Standards Framework (ASF) (academic years 2015-16 and 2016-17), as outlined in section 2 of the Senate's paper.

(ii) That the work associated with the ASF, in particular the decisions on programme structure (including module size), the credit framework, assessment and re-assessment, was likely to significantly impact on periodic reviews that were due to take place in 2015-16 and 2016-17 in particular.

(iii) That if periodic review was suspended as suggested, further consideration would need to be given to the point at which it should be re-introduced. The Committee would make a recommendation to the Senate in due course regarding the timescale for re-introducing periodic review activity for taught provision.

Noted: That periodic reviews of postgraduate research degree provision would be unaffected and would continue according to the agreed schedule.

Approved: On the recommendation of the Quality Assurance and Enhancement Committee the suspension of periodic review activity for taught provision during academic years 2015-16 and 2016-17.

(3) Strategic Approval of Programmes

(i) MSc in Healthcare and Design (Department of Surgery and Cancer)

Noted: (i) That the Quality Assurance and Enhancement Committee had approved a proposal from the Department of Surgery and Cancer for a new two year part-time MSc in Healthcare and Design, to be delivered in collaboration with the Royal College of Art, as outlined in section 3 of the Senate's paper.

(ii) That the Committee had approved the format of the collaboration with the Royal College of Art and agreed that the proposed collaborative arrangements would serve to secure the academic standards and quality of the Imperial award.

(iii) That the Committee had agreed that the programme could proceed to the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) for detailed consideration of the curriculum (SM 2048 (1.1) below refers).

(4) Working Party for Strengthening Discussion of Postgraduate Issues at Staff-Student Committees (SSCs)

Noted: (i) That the Quality Assurance and Enhancement Committee had endorsed the recommendation of the Working Party which included modifications to the Staff-Student Committee Guidelines.

(ii) That Faculty Education Managers would promote the revised guidelines for Staff-Student Committees annually.

(iii) That a report from the Working Party on the progress made to strengthen consideration of postgraduate issues would be submitted to the Quality Assurance and Enhancement Committee's final meeting of the academic year.

(5) Short Course Quality Committee

Noted: (i) That the Quality Assurance and Enhancement Committee had endorsed the decisions of the Short Course Quality Committee to approve the following Continuing Professional Development courses, with effect from 2015-16:

- (i) Health Policy Short Courses (selected modules from the MSc in Health Policy)
- (ii) Fractography and Failure Analysis and Non-Destructive Evaluation Short Courses (two modules from the MSc in Composites)
- (iii) Global Health Short Course (previously approved by the CPD quality committee)
- (iv) Genomic Medicine Short Courses (selected modules from the MSc in Genomic Medicine. Note: the collaborative modules from Brunel University and the Institute of Cancer Research can only be made available as short courses once the Memorandum of Agreement has been signed in each case)
- (v) Cardiorespiratory Nursing short courses (selected modules from the MSc in Cardiorespiratory Nursing)
- (vi) Clinical Ultrasound for Hepatologists short course
- (vii) Machine Learning, Robotics and Sensor Network Summer School (closed group, Jiangsu Province, China)
- (viii) Foundation in Chemical Engineering Winter School (closed group from Cornell University)
- (ix) Centre for Languages, Culture and Communication Evening Classes (Main Programme)

Approved: On the recommendation of the Quality Assurance and Enhancement Committee, the Continuing Professional Development courses listed above, with effect from 2015-16.

(6) Faculty of Medicine: Revolutions in Biomedicine Summer School Report 2015

Noted: (i) That the Quality Assurance and Enhancement Committee had received a report on the pilot of the Faculty of Medicine's first summer school.

(ii) That the recommendations contained within the report had been approved by the Short Course Quality Committee.

(7) Surveys

(i) UG SOLE lecturer/modules and Business School PG MODES results: Summer term 2015

Noted: That the Quality Assurance and Enhancement Committee had considered the summer term 2015 UG SOLE results for the Faculties of Engineering and Natural Sciences and the results from the Business School PG MODES survey.

(ii) Postgraduate Taught Experience Survey (PTES) 2016

Noted: That the members of the Quality Assurance and Enhancement Committee had agreed to consult within their Faculties to agree the PTES survey dates for the 2016 survey and that this would be approved by the Chair of the Committee in advance of the next meeting.

(8) List of Professional, Statutory and Regulatory Bodies (PSRBs)

Noted: (i) That the Quality Assurance and Enhancement Committee had received and noted the current list of active PSRBs which contained details of accredited programmes across the College.

(9) Register of Collaborative Provision 2015-16

Noted: (i) That the Quality Assurance and Enhancement Committee had received and noted the current Register of Collaborative Provision for 2015-16.

2045 Report by the Engineering Studies Committee

Considered: A Report by the Engineering Studies Committee (**Paper Senate/2015/26**).

(1) Programme Suspension

(i) Aeronautics

Considered and approved: (i) On the recommendation of the Engineering Studies Committee, the suspension of the BEng in Aerospace Engineering for the academic years 2015-16, 2016-17 and 2017-18, retrospectively with effect from October 2015, as outlined in section 1.1 of the Senate's paper.

(2) Modifications to Undergraduate Programmes and Examinations

(i) Imperial College Business School

Reported: That the Committee Chair had approved an amendment to the assessment format of the module BS0815 (Business Economics), with effect from October 2015, as outlined in section 2.2 of the Senate's paper.

(3) Renewal of Exchange Agreements

Reported: That the Engineering Studies Committee had approved the renewal of four existing exchange agreements, as outlined in section 2.3 of the Senate's paper.

2046 Report by the Medical Studies Committee

Considered: A Report by the Medical Studies Committee (**Paper Senate/2015/27**).

(1) Modifications to Undergraduate Programmes and Examinations

(1.1) BSc in Biomedical Science and BSc in Biomedical Science with Management

Reported: (i) That the Medical Studies Committee had considered and approved a proposal for major modifications to the BSc in Biomedical Science and BSc in Biomedical Science with Management, with effect from October 2017, as outlined in section 1 of the Senate's paper.

(ii) That the modifications included a change to the award titles to BSc in Medical Biosciences and BSc in Medical Biosciences with Management, respectively. The programme had been redesigned to be a flagship for the Faculty, following consultation with a range of stakeholders, including students, academic staff and prospective employers in industry. The programme had been redesigned to make optimal use of modern, blended teaching methodologies and to optimise the use of technology.

(iii) That the content of the programme had been designed to produce graduates able to address the world's great health challenges. Content was also focussed on existing strengths in the Faculty so that teaching could be research-led.

(iv) That a revised programme specification for the BSc in Medical Biosciences and BSc in Medical Biosciences with Management was provided in Appendix 1 of the Senate's paper.

Approved: On the recommendation of the Medical Studies Committee, the modifications to the BSc in Biomedical Science and BSc in Biomedical Science with Management and the change of award titles to **BSc in Medical Biosciences** and **BSc in Medical Biosciences with Management** respectively, with effect from October 2017.

(1.2) BSc in Biomedical Science (Year 2)

Reported: (i) That the Medical Studies Committee had considered and approved a proposal for major modifications to Year 2 of the BSc in Biomedical Science, retrospectively with effect from October 2015, as outlined in section 2 of the Senate's paper.

(ii) That the changes had been driven by significant concerns raised in student feedback and specifically in the National Student Survey. The Medical Studies Committee noted that the Quality Assurance and Enhancement Committee had given a clear mandate that equal attention should be paid to the existing programme alongside the substantially modified programme.

(iii) The purpose of the changes was to bring together topics of study into larger modules, in line with the approach taken in Year 1, in order to provide greater clarity and cohesion for students. The new modules would map more closely to those in Year 1. One consequence was that the volume of assessment had been reduced, which had previously been identified as an issue. The changes would also introduce new teaching in physiology and a new group-based grant proposal module.

(iv) In light of the significant need for immediate improvement identified by the NSS, the modifications were considered for implementation with immediate effect. The Committee noted that students had been consulted and were overwhelmingly supportive of the proposed changes.

(v) That a revised programme specification for the BSc in Medical Biosciences was provided in Appendix 2 of the Senate's paper.

Approved: On the recommendation of the Medical Studies Committee, the modifications to Year 2 of the BSc in Biomedical Science, retrospectively with effect from October 2015.

(2) Lee Kong Chian School of Medicine

Considered and approved: On the recommendation of the Medical Studies Committee, amendments to the LKCMedicine MBBS Assessment and Examination Strategy (Phase 1), as outlined in Appendix 3 of the Senate's paper.

(3) Amendment to the entry requirements for the MBBS/BSc in Medicine

Considered and approved: On the recommendation of the Committee the removal of the GCSE requirements (grades AAABB in any order but must include: Biology, Chemistry, English, Physics and Mathematics) for entry to the MBBS/BSc in Medicine, with effect from 2017 entry. The only GCSE requirement that would remain was GCSE English Grade B or above, which was the College-wide English language requirement.

(4) Updates from the Lee Kong Chian School of Medicine

Reported: That the Medical Studies Committee had received an update on progress on the curriculum and approved the LKCMedicine MBBS Guidelines for External Examiners. The Committee had also noted a number of very minor curricular changes and the programme's course evaluation strategy.

(5) Education Committee reports

Reported: That the Medical Studies Committee had considered and ratified the reports submitted by its various subordinate committees.

(6) Terms of Reference and Membership

Reported: That the Medical Studies Committee had approved minor changes to its membership, on the basis of staff changes.

(7) National Student Survey

Reported: That the Medical Studies Committee had considered the NSS results from 2014-15 and had noted action being taken in response.

2047 Report by the Science Studies Committee

Considered: A Report by the Science Studies Committee (**Paper Senate/2015/28**).

(1) Modifications to Undergraduate Programmes and Examinations

(i) Mathematics

Reported: That the Science Studies Committee had approved a proposal from the Department of Mathematics to offer an alternative assessment for students who were resitting the module M3S7 (Statistical Pattern Recognition) as the module was not running in the 2015-16 academic year, as outlined in section 1.2 of the Senate's paper.

(ii) Imperial College Business School

Reported: That the Committee Chair had approved an amendment to the assessment format of the module BS0815 (Business Economics), with effect from October 2015, as outlined in section 1.3 of the Senate's paper.

(2) Establishment and Renewal of Exchange Agreements

Reported: That the Science Studies Committee had approved the establishment of a new student exchange partnership and the renewal of an existing exchange partnership, as outlined in section 2 of the Senate's paper.

2048 Postgraduate Quality Committees

Considered: A Report by the Postgraduate Quality Committees (**Paper Senate/2015/29**).

(1) New Programme Proposals

(1.1) MSc in Healthcare and Design (Department of Surgery and Cancer)

Reported: (i) That the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) had considered and approved a proposal from the Department of Surgery and Cancer for a new MSc in Healthcare and Design in collaboration with the Royal College of Art (RCA) with effect from September 2016, as outlined in section 1.1 of the Senate's paper.

(ii) That the programme would run alongside an MRes programme awarded by the RCA. The Imperial MSc programme was intended for clinicians and healthcare professionals, whilst the RCA programme was aimed at design professionals. The majority of modules (6 out of 8) were shared between the two programmes.

(iii) The programme would be run through the HELIX Centre, a collaboration between Imperial College and the RCA. The programme would be multidisciplinary with teachers and speakers from a variety of different backgrounds in healthcare and other relevant industries.

(iv) That the programme would be offered on a part-time (2 calendar year) only basis, with 8 individual weeks of intensive training (four blocks of two weeks).

(v) That the programme had been through the normal approval process, including external review, and that the Master's Quality Committee had recommended that Senate approve the new programme with effect from October 2016.

(vi) That the programme specification for the proposed MSc in Healthcare and Design was provided in Appendix I of the Senate's paper.

Approved: On the recommendation of the Master's Quality Committee, the introduction of the MSc in Healthcare and Design with effect from October 2016.

(1.2) Postgraduate Certificate, Postgraduate Diploma and MSc in Patient Safety (Department of Surgery and Cancer)

Reported: (i) That the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) had considered and approved a proposal from the Department of Surgery and Cancer for a new Postgraduate Certificate, Postgraduate Diploma and MSc in Patient Safety with effect from October 2016, as outlined in section 1.2 of the Senate's paper.

(ii) That the programme would be aimed at clinicians, pharmacists and NHS managers amongst other healthcare professionals.

(iii) That the programme would be offered on a part-time (2 calendar year) only basis. All students would register in the first instance for the Postgraduate Certificate.

(iv) That the programme specification for the proposed PG Cert, PG Dip and MSc in Patient Safety was provided in Appendix II of the Senate's paper.

(v) That the programme had been through the normal approval process, including external review, and that the Master's Quality Committee had recommended that Senate approve the new programme with effect from October 2016.

Approved: On the recommendation of the Master's Quality Committee, the introduction of the Postgraduate Certificate, Postgraduate Diploma and MSc in Patient Safety with effect from October 2016.

(1.3) MSc in Translational Neuroscience (Department of Medicine)

Reported: (i) That the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) had considered and approved a proposal from the Department of Medicine for a new MSc in Translational Neuroscience from October 2016, as outlined in section 1.3 of the Senate's paper.

(ii) That the World Health Organisation had declared neurological diseases a global emergency and the programme would therefore be well placed to produce scientists able to address the crisis. The UK government was placing a greater focus on mental health and translational research would allow new medications and treatments to be developed to tackle the ever increasing number of cases of neurological disease.

(iii) That the final proposal reflected changes made to the programme which included amendments to the programme and module learning outcomes, assessment weighting and variety of summative assessments as well as the academic and English Language entry requirements. These changes had been made at the request of the Master's Quality Committee.

(iv) That the programme would be offered on a full-time (1 calendar year) basis only.

(v) That the programme specification for the proposed MSc in Translational Neuroscience was provided in Appendix III of the Senate's paper.

(vi) That the programme had been through the normal approval process, including external review, and that the Master's Quality Committee had recommended that Senate approve the new programme with effect from October 2016.

Approved: On the recommendation of the Master's Quality Committee, the introduction of the MSc in Translational Neuroscience with effect from October 2016.

(1.4) 4 Year PhD Programme in High Performance, Embedded and Distributed Systems (Department of Computing)

Reported: (i) That the Postgraduate Research Quality Committee had considered and approved a proposal from the Department of Computing for a new 4 Year PhD programme in High Performance, Embedded and Distributed Systems (HiPEDS) from October 2016, as outlined in section 1.4 of the Senate's paper.

(ii) That the 4 year PhD programme would replace the existing 1+3 programme in HiPEDS, which commenced in October 2014.

(iii) That the Postgraduate Research Quality Committee had also approved the alternative milestones outlined in the proposal document which varied from the standard PhD milestones in order to align with the four year training schedule. The alternative milestones were agreed on the basis that the PhD programme consisted of a highly structured first year, resembling an MRes programme, which enabled the Early Stage Assessment to occur at 12 months. The Committee had emphasised that the College requirement for final thesis submission within 48 months of initial registration remained unchanged.

Approved: On the recommendation of the Postgraduate Research Quality Committee, the introduction of the 4 Year PhD programme in High Performance, Embedded and Distributed Systems (HiPEDS) with effect from October 2016.

(2) Major Programme Modifications

(2.1) MSc in Management (Imperial College Business School)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the modifications to the MSc in Management including the withdrawal of modules, introduction of new modules and adjustments to the credit value of modules, retrospectively with effect from October 2015, as outlined in section 2.1 and Appendix IV of the Senate's paper.

(2.2) MRes in Fluid Dynamics Across Scales (Department of Aeronautics)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) a reduction to the weighting of the research project for the MRes in Fluid Dynamics Across Scales programme, retrospectively with effect from October 2015, as outlined in section 2.2 of the Senate's paper.

(2.3) MSc in Economics and Strategy for Business (Imperial College Business School)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the modifications to the MSc in Economics and Strategy for Business, including changes to the credit value and assessment methods of two modules, retrospectively with effect from October 2015, as outlined in section 2.3 of the Senate's paper.

(2.4) MSc in Management (Imperial College Business School)

Considered and approved: (i) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) a modification permitting students taking the module BS0940 (Study Abroad) to transfer the credit for use as part of the Imperial award for the MSc in Management programme, retrospectively with effect from October 2015, as outlined in section 2.4 of the Senate's paper.

(2.5) Full-time MBA (Imperial College Business School)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) modifications to the assessment methods of two modules for the full-time MBA programme, retrospectively with effect from October 2015, as outlined in section 2.5 of the Senate's paper.

(2.6) MSc in Finance and Accounting (Imperial College Business School)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the modifications to the MSc in Finance and Accounting including the separation of one module into two separate modules and adjustments to the credit value of three further modules, retrospectively with effect from October 2015, as outlined in section 2.6 and Appendix V of the Senate's paper.

(2.7) MSc in Finance [suite of programmes] (Imperial College Business School)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the introduction of a written examination to the module BS1130 (Insurance) and the introduction of coursework to the module BS1128 (Numerical Finance) which were available as elective modules on the MSc in Risk Management and Financial Engineering, MSc in Investment and Wealth Management and MSc in Finance and Accounting programmes, retrospectively with effect from October 2015, as outlined in section 2.7 of the Senate's paper.

(2.8) MSc in Computing [specialisms] (Department of Computing)

Considered and approved: On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) a change to the award title of the MSc in Computing (Computational Management Science) to **MSc in Computing (Computational Management)** and a change to the award title of the MSc in Computing (Visual Information Processing) to **MSc in Computing (Visual Computing and Robotics)**, with effect from entry in October 2016, as outlined in section 2.8 of the Senate's paper.

(2.9) MEd in Surgical Education (Department of Surgery and Cancer)

Reported: (i) That the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) had considered and approved a proposal from the Department of Surgery and Cancer to modify the MEd in Surgical Education including the introduction of a Postgraduate Diploma in Surgical Education and further modifications to the programme structure in order to align it with the Faculty of Medicine taught postgraduate modular framework, including the introduction of two new modules for the Postgraduate Diploma stage.

(ii) The introduction of the Postgraduate Diploma was intended to provide medical professionals with greater flexibility whilst studying the programme. The Postgraduate Diploma would enable students to leave the programme with a formal qualification at an earlier stage whilst also enabling them to resume study on the programme when most convenient for them.

(iii) That the Postgraduate Diploma programme would be offered on a part-time only basis (minimum 10 months, maximum 24 months).

(iv) That a revised programme specification for the MEd in Surgical Education, including the proposed Postgraduate Diploma, was provided in Appendix VI of the Senate's paper.

Approved: On the recommendation of the Master's Quality Committee, the modifications to the MEd in Surgical Education and the introduction of the Postgraduate Certificate in Surgical Education, with effect from October 2016.

(3) Programme Suspensions and Re-openings

Considered and approved: (i) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the suspension for one academic year of the MSc in Computing for Industry [4 Year part-time, October start] and the MSc in Computing (Distributed Systems) (Department of Computing), with effect from entry in October 2016, as outlined in section 3.1 of the Senate's paper.

(ii) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the suspension for one academic year of the MSc in Actuarial Finance [1 Year full-time and 2 Year part-time] and the Postgraduate Certificate and Postgraduate Diploma in Actuarial Finance (Imperial College Business School), with effect from entry in October 2016, as outlined in section 3.2 of the Senate's paper.

(iii) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the suspension for one academic year of the MSc in Engineering Geology for Ground Models suite of programmes (Department of Civil and Environmental Engineering), with effect from entry in October 2016, as outlined in section 3.3 of the Senate's paper.

(iv) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the suspension for one academic year of the MSc in Petroleum Geophysics [1 Year full-time] (Department of Earth Science and Engineering), with effect from entry in October 2016, as outlined in section 3.4 of the Senate's paper.

(v) On the recommendation of the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) the suspension for one academic year of the MRes in Clinical Research (Clinical Research Design and Management) [1 Year full-time and 2 Year part-time] (Department of Medicine), with effect from entry in October 2016, as outlined in section 3.11 of the Senate's paper.

(vi) On the recommendation of the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) the re-opening of the 1+3 programme in Bioinformatics and Theoretical Systems Biology, retrospectively for entry in October 2015, and a change of title to **Theoretical Systems Biology and Bioinformatics** as outlined in section 3.13 of the Senate's paper.

(4) Programme Withdrawals

Considered and approved: (i) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the permanent withdrawal of the MSc in Computing (Performance Modelling) [1 Year full-time], MSc in Computing (Creative Industries) [1 year full-time], MSc in Computing for Industry [4 Year part-time, January start] and the MRes in Advanced Computing (High Performance, Embedded and Distributed Systems) [1+3 programme] (Department of Computing), with effect from entry in October 2016, as outlined in section 3.1 of the Senate's paper.

(ii) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the permanent withdrawal of the MSc in Risk Management and Financial

Engineering [2 Year part-time] (Imperial College Business School), with effect from entry in October 2016, as outlined in section 3.2 of the Senate's paper.

(iii) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the permanent withdrawal of the MSc in Systems Engineering and Innovation [1 Year full-time and 2 Year part-time], MSc in Soil Mechanics, MSc in Soil Mechanics and Business Management, MSc in Soil Mechanics and Engineering Seismology, MSc in Soil Mechanics and Environmental Geotechnics, MSc in Soil Mechanics and Sustainable Development [all 3 Year part-time] (Department of Civil and Environmental Engineering), with effect from entry in October 2016, as outlined in section 3.3 of the Senate's paper.

(iv) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the permanent withdrawal of the MRes in Plasmonics and Metamaterials [1 Year full-time] (Department of Physics), with effect from entry in October 2016, as outlined in section 3.5 of the Senate's paper.

(v) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the permanent withdrawal of the MSc in Advanced Chemical Engineering [2 Year part-time] (Department of Chemical Engineering), with effect from entry in October 2016, as outlined in section 3.6 of the Senate's paper.

(vi) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the permanent withdrawal of the MSc in Communications and Signal Processing [2 Year part-time] and MSc in Control Systems [2 Year part-time] (Department of Electrical and Electronic Engineering), with effect from entry in October 2016, as outlined in section 3.7 of the Senate's paper.

(vii) On the recommendation of the Master's Quality Committee (Business, Engineering & Physical Sciences) the permanent withdrawal of the Postgraduate Certificate in Industrial Pharmaceutical Chemistry [4 Year part-time, October, January, April and July starts] (Department of Chemistry), retrospectively with effect from entry in October 2015, as outlined in section 3.8 of the Senate's paper.

(viii) On the recommendation of the Master's Quality Committee (Medicine, Life Sciences and School of Professional Development) the permanent withdrawal of the MSc in Immunology [1+3 programme, 2 Year full-time], with effect from entry in October 2016, as outlined in section 3.11 of the Senate's paper.

(5) New Student Exchange Partners

Reported: That the Postgraduate Quality Committees had approved new student exchange partners, as outlined in section 4 of the Senate's paper.

(6) Minor Modifications

Reported: That the Postgraduate Quality Committees had approved minor modifications to programmes, as outlined in section 5 of the Senate's paper.

(7) Appointment of External Examiners for 2014-2015

Reported: That the Master's Quality Committees had noted External Examiner appointments approved by the Vice Provost (Education) for the 2015-16 academic session.

(8) Final Report of the Working Party for World Class Research Supervision

Reported: (i) That the Postgraduate Research Quality Committee had considered the final report of the Working Party for World Class Research Supervision and approved the recommendations contained within the report, as outlined in section 9 of the Senate's paper.

(ii) That the report was provided in Appendix VII of the Senate's paper.

2049 Prizes and Medals Awarded

Reported: The award of prizes and medals, as detailed in **Paper Senate/2015/30**.

2050 Staff Matters

Received: A Note by the Provost (**Paper Senate/2015/31**).

2051 Appointment of External Examiners in 2015-16

Received: The names, affiliations and periods of tenure of external examiners for undergraduate degrees and Master's degrees in 2015-16 (**Paper Senate/2015/32**).

2052 Monitoring Statement for the 2014-15 Academic Year

Received: The College Monitoring Statement to the HEFCE for the 2014-15 Academic Year (**Paper Senate/2015/33**).

2053 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 candidates who have 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.

2054 Any Other Business

(i) The Provost advised that Professor Stephen Richardson, Associate Provost (Institutional Affairs), was due to retire from the College at the end of the month. It was noted that Professor Richardson had been a member of the Senate in various roles since the 2004-05 academic year, first as Head of Department, then Faculty Principal, Deputy Rector and latterly as Associate Provost (Institutional Affairs).

Recorded: The thanks of the Senate to Professor Richardson for his lengthy service and immense contribution to the work of the Senate over many years.

(ii) The Provost advised that Mr Dean Pateman, Academic Registrar, would be leaving the College at Christmas.

Recorded: The thanks of the Senate to Mr Pateman for his contributions to the work of the College, including:

- Substantial contribution to the development of the new Academic Standards Framework;
- Leadership of substantial work to improve Registry and College processes under the Student Information Management Programme;
- Active engagement externally in national forums, including with the Student Loans Company;
- Strong commitment to promoting the equality and diversity agenda at the College, in particular as Chair of the Imperial 600 Network.

2055 Date of Next Meeting

Reported: The next meeting of the Senate would take place on Wednesday 17 February 2016, in the Council Room, 170 Queen's Gate, starting at 3.00pm.