

Science Studies Committee  
13 February 2013  
12.15  
The Boardroom, 58 Prince's Gate  
South Kensington Campus

### Minutes

**Present:** Professor R Leatherbarrow (Chair), Professor S Curry, Professor D Humphris, Mr D Hunt, Mr C Love, Professor A MacKinnon, Professor J Mestel, Dr E Price-Davies, Professor A Spivey, Professor R Thompson and Mr N Wheatley.

**Apologies:** Ms C Borkhataria and Professor D Wright.

**In Attendance:** Ms L McConnell (Secretary) and Ms H Kopecka.

#### 1 Apologies for Absence

1.1 Received: As noted above.

#### 2 Minutes

2.1 Approved: Minutes of the previous meeting held on the 05 December 2012 (**Paper 1**).

#### 3 Matters Arising

3.1 Received and Noted: A list of actions from previous meetings of the Committee and progress made so far to address these (**Paper 2**).

### Items for Consideration

#### 4 Update from the Pro Rector (Education)

4.1 Reported: The College is undertaking a process to develop a new Education and Student Strategy. All members of the College community are invited to contribute their ideas and comments during the first phase of this process, which is open until Tuesday 19 February 2013. The first stage of the consultation is designed to gather information, ideas and views which will inform the Green Paper, due to be presented to the March meeting of College Management Board. In April 2013, there will be an opportunity to comment on the Green Paper. Informed by responses to the Green Paper, a White Paper and implementation plan will be presented to the Management Board in June 2013. Subject to agreement, the strategy and plan will be implemented from June 2013 onwards. During this process, the Strategic Education Committee will act as the oversight group. Additional members will be co-opted, as required.

4.2 Agreed: Members of the Committee will encourage their students and departmental staff to contribute to the consultation process.

4.3 Reported: The Quality Assurance and Enhancement Committee (QAEC) is currently carrying out work to ensure the College has made progress to address the recommendations made by the QAA as a result of the 2010 Institutional Audit. In particular, the QAEC is reviewing inconsistencies in assessment practice across

All

Departments. The Committee will be informed of the outcome of the QAEC's consideration of such matters in due course.

- 4.4 Reported: The QAA have made changes to their Institutional Review processes and as such, the College is no longer required to undertake a mid-cycle review. However, in order to maintain momentum in addressing the recommendations made by the QAA, Management Board have agreed that an internal mid-cycle review should take place. The College's next QAA Institutional Review is scheduled to take place during 2016-2017.

## 5 **Senate Summary Report**

- 5.1 Received: The summary report of the meeting of the Senate held on the 12<sup>th</sup> December 2012 (**Paper 3**).

- 5.2 Noted: The Department of Mathematics have introduced an admissions test, with effect from the 2014 entry. The test will be used to inform and enhance admissions decisions made by the Mathematics Admissions Tutor and thus allow the Department to select students who are likely to perform well on their degree.

## 6 **Quality Assurance and Enhancement Committee Summary Report**

- 6.1 Received: The summary report of the meeting of the QAEC held on the 17<sup>th</sup> January 2013 (**Paper 4**).

- 6.2 Noted: The QAEC agreed that from 2013-14, academics with honorary contracts with the College will not be appointed as external examiners for the College's taught programmes. Exceptions can only be approved by the Pro Rector (Education).

- 6.3 Noted: The QAEC has approved a revised policy for the late submission of assessed work and a new policy for the preparation of model answers to questions. Subject to Senate approval, these policies will be circulated to Departments.

## 7 **Engineering Studies Committee Summary Report**

- 7.1 Received and Noted: The summary report of the meeting of the Engineering Studies Committee held on the 14<sup>th</sup> November 2012 (**Paper 5**).

## 7 **Medical Studies Committee Summary Report**

- 7.1 Received and Noted: The summary report of the meeting of the Medical Studies Committee held on the 14<sup>th</sup> November 2012 (**Paper 6**).

## 8 **Undergraduate Annual Monitoring 2011-12**

- 8.1 Considered: The undergraduate annual monitoring form from the Business School (**Paper 7**).

- 8.2 Reported: The Business School has undertaken a major review of its BEST provision and subsequent course changes will be presented to the Committee under Paper 13.

- 8.3 Reported: The marks for Joint Honours students were broadly in-line with previous years' examination results although the Committee noted the high percentage of first class marks awarded during 2010-11 which the Business School attributed to an excellent cohort of students. The Business School expressed concern that some Departments overturn assessment decisions made by the Business School and its external examiners. Some Departments scale student marks after they are received from the Business School and inflate marks following successful *vivas*. An example occurred this year in relation to one Joint Honours student whose marks for the Business School Project were increased

following a successful viva. This resulted in the student being awarded a 1<sup>st</sup> for their management year and subsequently, a 2:1 overall for their award.

**8.4** Reported: The Business School confirmed that where there are differences in the marks awarded by 1<sup>st</sup> and 2<sup>nd</sup> markers, the two markers meet to try and agree a mark. Where they cannot agree a mark, the paper is referred to a 3<sup>rd</sup> marker. External examiners have stated that they do not wish to act as adjudicators for agreeing marks where discrepancies between markers occur and prefer the Business School to resolve such matters themselves.

**8.5** Agreed: The Business School would develop a protocol for markers to use to record how marks are agreed when discrepancies occur.

**8.6** Reported: The School was visited by two accreditation bodies in 2012. EQUIS visited in May 2012 and have recommended that the Business School be re-accredited for a further 3 years and AACSB International visited for the first time in July 2012 and is recommending accreditation for 5 years. The School is already accredited by AMBA which means that is now triple accredited. Less than 1% of the world's Business Schools have triple accreditation.

**8.7** External Examiner Reports

Dr Julia Mundy

**8.7.1** Reported: In response to a request from Dr Mundy, the Business School agreed to provide a marks distribution list for each assessment within each course and for each course overall. Dr Mundy also requested a list of intended dates for the despatch of draft examination papers and samples of student work to which the Business School responded that this information is normally sent to externals at the beginning of the academic session but had unfortunately not been sent to Dr Mundy as she was appointed quite late in the session. The Business School apologised for this and confirmed that Dr Mundy will receive this information, in a timely manner, moving forward.

Dr Michael Pollitt

**8.7.2** Reported: Dr Pollitt remarked that the examinations process within the Business School was disorganised and that he was "drip-fed" exams to review throughout the year. When examination packs were received some did not contain examiners' reports and coursework samples were not marked on every page. To this the Business School reported that the Joint Honours and BEST programmes are administered by two different examination officers which may have contributed to the feel of being "drip-fed". The Business School will look to co-ordinate this in a better way and would ensure that examiners' comments were included within packs moving forward. The Business School also agreed that markers should indeed mark every page of course work and that where this did not occur, it would be followed up with lecturers concerned.

**8.7.3** Reported: Dr Pollitt also commented that the course work did not appear to be testing enough, in particular, course work which was undertaken by large groups of students. The Business School confirmed that they will pass these remarks to the lecturers concerned but group assessment was favoured by the School because it emulates industry. The Business School would provide a further response to Dr Pollitt in relation to their consideration of his remarks concerning the lack of individually assessed work.

**8.7.4** Reported: Dr Pollitt reported that he found it strange that undergraduate vivas were offered to borderline candidates. However, the Committee confirmed that it is College policy to viva borderline candidates.

Dr Michael Beverland

**8.7.5** Agreed: There were no particular points to respond to as the report was extremely brief.

Dr Alexandros Kostakis

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**8.7.6** Reported: Although MCQ examinations are a practical way to assess large groups of students, Dr Kostakis suggested that it would be better to reduce the MCQ component of the final exam. The Business School reported that they have reviewed the format of the examination and concluded that MCQ is the most appropriate method of assessment for the courses concerned. However, there are two new lecturers for Project Management and Finance and Financial Management and these comments will be passed on so that they can be taken into consideration when deciding the most appropriate form of assessment, moving forward.

Professor Andrew Lockett

**8.7.7** Reported: There is some disagreement between the Business School and Professor Lockett on whether student results should have been scaled. Professor Lockett expressed concern that marks awarded are too high and that the Business School have not provided a convincing argument to him for leaving marks unadjusted resulting in nearly half the candidates being awarded a first class mark for their examination. Professor Lockett remarked that the group project component was marked at the appropriate level but the discrepancy between the exam and the group project gives rise to further highlight the issue of generous marking for the exam. The Business School reported that after a lengthy discussion at the examination board, which Professor Lockett was unable to attend, it was decided not to scale the exam marks because the marks were in line with previous cohorts. In addition to this, the Business School reported that they had established a Working Group to monitor the marks awarded to students for all courses in the Business School. The Business School confirmed that they value Professor Lockett's feedback and will continue to engage in dialogue with him on this issue.

**8.7.8** Agreed: The Committee and the Business School expressed their thanks to all the external examiners for their contribution during 2012-13.

## **9 Department of Life Sciences – Assessment of Final Year Projects**

**9.1** Considered: A report from the Working Party established by the Department in response to comments made by external examiners to revise the procedures for the assessment of final year projects and marking criteria (**Paper 8**).

**9.2** Reported: The Working Party propose the following changes to the procedures for the assessment of final year projects:

1. A new set of marking criteria has been created for the viva examination which forms part of the project. The viva will be conducted by two internal members of staff.
2. The forms used for marking projects, presentations and the viva will be amended to focus examiners on key attributes which should be graded.
3. Where there is a significant discrepancy (>10%) between project markers, a moderation panel, comprising the DUGS, Board Chairman and one other senior member of academic staff will consult with examiners to determine the source of the discrepancy and, where necessary, will provide further independent assessment of the project.

**9.3** Agreed: Amendments to the assessment procedures for final year project marking and revised marking criteria for the project viva, as described above.

**9.4** Agreed: The Department would ensure that the criteria reminded markers that their deliberations must be fully documented.

## **10 Student Surveys**

**10.1** Considered: The results of autumn 2012 SOLE (**Paper 9**).

**10.2** Reported: In general, Departments within the Faculty of Natural Sciences have lower participation rates than those in the Faculty of Engineering.

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**10.3** Reported: The Department of Life Sciences has the lowest participation rate and in general, has the lowest percentage of satisfaction in the categories of questions asked. This could probably be attributed to repercussions of the re-structure of the Department which occurred last session.

## **11 Integrated Master's Degree and Associated Bachelor's Degree**

**11.1** Considered: A note from the Academic Registrar (**Paper 10**).

**11.2** Reported: In November 2011, FoNS raised concerns with the SEC about international recognition of the MSci Degree award. It was reported that some employers and institutions, mainly in Europe and Asia do not recognise or understand the MSci as both a Bachelor's and Master's degree qualification. This has become an issue for some students wishing to undertake PhDs in Europe and also this award is not normally found on drop down menus for students when selecting the level of their award.

**11.3** Reported: In order to address this, the QAEC was supportive of the idea of having a brief descriptor on MSci and MEng degree diplomas [and transcripts] as an interim measure to address some of the problems of recognition of integrated Master's degrees and agreed the following wording for the descriptor on Integrated Master's Degree Diplomas:

### **For MSci**

The Council of the Imperial College of Science, Technology and Medicine has conferred on

Name of student

the degree of Master in Science (incorporating Bachelor's level study)

With Second Class Honours (Upper Division)

In subject

### **For MEng**

The Council of the Imperial College of Science, Technology and Medicine has conferred on

Name of student

the degree of Master of Engineering (incorporating Bachelor's level study)

With Second Class Honours (Upper Division)

In subject

**11.4** Reported: This matter has been recently considered further by the Engineering FTC. Engineering generally do not have the problem experienced by FoNS regarding international recognition because MEng is the only fully accredited qualification from professional bodies in the UK. Nevertheless, if an 'integrated' Bachelor's degree were to become available, it was agreed that MEng students should benefit too.

**11.5** Reported: The problem of how to classify an 'integrated' Bachelor degree then became an issue. Following discussion, FTC proposed to award an unclassified BEng and a classified MEng after four years as two distinct and separate degrees. This makes the awards formal and explicit, and also clearly distinguishes the regular Bachelor's degree which remains classified and which is awarded to students who transfer to the BEng programme and graduate after three years. It should be noted that in engineering, students in Earth Science and Engineering receive BSc or MSci degrees and the above proposal would apply to those degrees.

**11.6** Agreed: There was some support for separate degrees to be awarded but concern that the Bachelors award would be unclassified. The Committee was not convinced that this would solve the issue and suggested that it needed further consideration.

**11.7** Agreed: Departments would discuss this issue with students at forthcoming Staff Student Committees.

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## **12 Re-Organisation of Undergraduate Degrees**

- 12.1 Department of Chemistry
- 12.1.1 Considered: A proposal to change year 3 examination arrangements for all courses (**Paper 11**).
- 12.1.2 Reported: Currently, students in the Department of Chemistry undertake their 3<sup>rd</sup> year exams during the second week in January and the second week in May. The Department wishes to hold all 3<sup>rd</sup> year exams in May and none in January.
- 12.1.3 Reported: This arrangement would fit better with pedagogic progression through the course by allowing students to be examined on material that has been taught in all three branches of chemistry throughout the year as an integrated whole. It would combat modularisation, allow more flexibility in terms of the proportion of courses in the core compulsory part of the course because core modules will no longer be restricted to the autumn term. The Department will also gain an extra 2 weeks of teaching time and be able to concentrate staff marking into a single time period.
- 12.1.4 Agreed: Amendments to the year 3 chemistry examination courses, with effect from October 2013.
- 12.2 Department of Mathematics
- 12.2.1 Received and Noted: Proposed changes to re-sit rights (**Paper 12**).
- 12.2.2 Reported: Currently, Maths 1<sup>st</sup> and 2<sup>nd</sup> year undergraduates are informed that they have a right to take each paper 3 times, and if they fail any number of June papers they may resit them all in September. Thus the Department have had students who fail all 8 courses, who clearly should do something else, but nevertheless take the resits to little benefit to them.
- 12.2.3 Reported: The Department propose to remove this automatic right for multiple fails. Should students fail more than 4/8 courses they may not be permitted to resit. The Department intend to have a cut-off at around 6/8. Discussions with Registry indicate that the Head of Department can ask any student who failed 8 courses without mitigating circumstances to withdraw immediately from the College without resits. No change in the regulations is required, but the Department should make sure that students are made aware of this change on entry. Only if students pass 4 courses will they be guaranteed resits for the remainder. Changes will be made from October 2013 with students having the right to appeal and mitigating circumstances will be considered as usual.
- 12.2.4 Agreed: The Department must clarify what the cut-off point is so that re-sit rules were consistently applied and clear to students. The Department would discuss this and report back to the Committee.
- 12.3 Business School
- 12.3.1 Considered: Proposals to change undergraduate Business School courses (**Paper 13**).
- Reported: The Business School has reviewed its BEST provision and hopes that the revised suite of programmes will become more appealing to Faculty of Natural Sciences students.
- 12.3.2 Reported: The BEST course will be re-named as Business for Professional Engineers and Scientists (BPES) from October 2013. There are five new modules and Project Management has been withdrawn. The new suite of courses will offer a greater range of business subjects which will be assessed by individual examination and coursework. For three courses the group project component has been removed.
- 12.3.3 Agreed: The Committee agreed changes to the BEST provision with effect from October 2013.
- 12.4 Department of Physics

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- 12.4.1 Considered and Approved: A new module called “complexity and networks” to replace “dynamical systems and chaos” with effect from October 2013 (**Paper 14**).
- 12.4.2 Considered and Approved: A new module called “introduction to plasmonics and metamaterials” with effect from October 2013 (**Paper 15**).
- 12.4.3 Considered: A note from the DUGS on transfers between degree programmes in physics (**Paper 16**).
- 12.4.4 Reported: Currently, a student who transfers between degree programmes in Physics after completing year 1 will not normally be required to undertake any uncompleted year 1 core material of the new course. This does not appear to be written down in the scheme for the award of honours which has led to some confusion amongst students.
- 12.4.5 Agreed: An amendment to the Physics Scheme for the Award of Honours, as described above, with effect from October 2013.

### 13 **Approval and Review of New and Existing Exchange Partners**

- 13.1 Received and approved: A new exchange partner for the Department of Chemistry (Australian National University), subject to the Department confirming a viable study plan and a check being made on the grade scale used at ANU (**Paper 17**).

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### 14 **Reports from Departmental Representatives**

- 14.1 Reported: The Head of the Centre for Co-Curricular Studies reported that Departments will shortly receive a briefing document outlining plans for the Horizon programme for next session.

#### **Items for Report**

### 15 **Physics and Science Education**

- 15.1 Received and Noted: The agreement between Imperial and Canterbury Christ Church University (CCCU) for the provision of the BSc Physics and Science Education has now been signed.
- 15.2 Received: A copy of the final agreement (**Paper 18**).

### 16 **Key Information Sets**

- 16.1 Noted: Amendments to the 2013 KIS submission (**Paper 19**).

### 17 **Date of Next Meetings**

- 17.1 Confirmed: The next meeting of the Science Studies Committee will take place on the 15<sup>th</sup> May 2013 at 12.15pm in the Boardroom, 58PG.

### 18 **Any Other Business**

- 18.1 The Committee extended its thanks to Laura McConnell for her contribution towards the work of the Committee.