

## **Engineering Studies Committee**

Wednesday 13 November 2013  
3.00pm  
Drawing Room, 170 Queen's Gate  
South Kensington Campus

### **Minutes**

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**Present:** Professor O Matar (Chairman), Dr L Craig, Dr C Ford, Professor L Gardner, Dr A Horsfield, Dr P Leever, Professor P Lindstedt, Dr P McBrien, Mr J Murphy, Dr R Palacios Nieto, Ms L Richardson, Dr M Tang, Professor N Thornhill.

**In attendance:** Dr K Fobelets, Professor M Sloman [for item 6], Mr D Surtees (Secretary).

**Apologies:** Professor T Green, Professor R Jardine, Miss N Kempston, Mr C Love, Dr E Price-Davies.

#### **Agenda Item**

#### **1. Constitution and Terms of Reference**

**1.1** The Committee received the Constitution and Terms of Reference of the Committee for 2013-14 [Paper A].

**1.2** It was reported that Professor Lindstedt will act as Deputy Chairman.

#### **2. Minutes**

**2.1** The minutes of the meeting held on 22 May 2013 were confirmed.

#### **3. Matters arising**

**3.1** There were no matters arising.

#### **4. Chairman's Actions**

**4.1** It was noted that the Chairman approved modifications to the Joint Mathematics and Computer Science MEng and BEng degree programmes [Paper B].

**4.2** It was noted that the Chairman approved a proposal from the Department of Computing to combine the assessments for M1P1 (Analysis) and M1P2 (Algebra) into a single assessment; and to combine M1GLA (Geometry and Linear Algebra) and M1M1 (Mathematical Methods) into a single assessment. [Paper B].

**4.3** It was noted that the Chairman approved a proposal from the Department of

Computing to for allocation of extra ECTS for UROP projects [Paper B].

## **5. Representation on Senate**

**5.1** It was reported that the Committee is currently represented on Senate by the Chairman: Professor O K Matar. Other members of the Committee, Professor D Humphris, Professor L Gardner, Professor D Wright and Ms N Kempston are also members of Senate.

## **6. Second Stage Review of 'with Nuclear Engineering' courses**

**6.1** The College's quality assurance procedures require that all newly established degrees be reviewed in the second or third year following their introduction by a sub-committee comprising members of the "parent" Studies Committee responsible for the approval process. The second stage review is the final stage of the approval process which begins when a new degree is proposed.

**6.2** A sub-committee of the Engineering Studies Committee reviewed the "with Nuclear Engineering" courses on 24 May 2013. The sub-committee for the review comprised Professor Morris Sloman (College Consul, Internal Chair); Dr Mick Jones (College Tutor); Dr Lorraine Craig (DUGS, Department of Earth Science and Engineering); Professor David Weaver (External, University of Birmingham); Mr Doug Hunt (ICU Deputy President Education).

**6.3** The Panel met with Directors of Undergraduate Studies from the 3 Departments of Materials, Mechanical and Chemical Engineering, selected staff involved in teaching the modules and a number of third and fourth year students from the 3 Departments doing "With Nuclear Engineering" MEng Degrees.

**6.4** The Committee considered the report of the Sub-Committee [Paper C], and the response to the report from the Centre for Nuclear Engineering. The Chairman of the Review outlined that the major issue with the course was that there was no single person or department which took ownership of the course. The Review's main recommendation was that a single Department and an appointed person should have overall ownership and coordination responsibility for the courses, with suitable administration support. This arrangement could also deal with career advice. This responsibility could possibly be located within the Centre for Nuclear Engineering.

**6.5** The Review also recommended:

- Lectures should normally not last more than 50 minutes without a break;
- Pre-requisite requirements should be clearly defined for each module with required reading lists for students who may not have taken pre-requisite courses.
- Module leaders must make sure there is coordination of learning outcome, lecture content etc. when there are multiple lecturers per module, particularly external lecturers.
- All modules should include a combination of lectures and tutorial/problem classes with appropriate feedback. Suitable resources e.g. GTA support must be provided for this.
- A common support environment for access to lecture notes, problem sheets etc. with a single logon for all modules would be preferable to the disparate individual Departmental ones, although coordination by one person would overcome this.
- A suitable interdisciplinary group project should be offered to students taking a "With Nuclear Engineering" Course.
- More consistency in examination structure and length, between

Departments, would be preferable, although this may be difficult to implement, due to differences in Departmental examination policies.

- There should be consistency in ECTS credits for “With Nuclear Engineering” Modules rather than leaving it up to Departments to decide.
- More effort should be made to track career placement of graduating students which might be used as an aid to recruiting potential students onto the degree in due course.

**6.6** In response to the report the representatives from the three relevant departments noted that the review was entirely fair and agreed the departments were agreed on a way forward. The recommendations have been accepted and most are currently being implemented. A new structure has been established and is based the Centre for Nuclear Engineering. A teaching champion will lead the coordination of the programmes and report to a management committee on which the Directors of Undergraduate Studies of the three departments will sit.

**6.7** It was suggested that a simple set of guidelines should be established for future courses run across departments. **ACTION:** The Chairman agreed to explore this further with a view to issuing further guidelines.

## **7. Annual Monitoring Statements**

**7.1** The Committee received Annual Monitoring Reports from the Departments of: Aeronautics, Bioengineering, Chemical Engineering, Civil Engineering, Electrical and Electronic Engineering, Earth Science and Engineering and Materials. Reports from the Departments of Computing, Mechanical Engineering and the Imperial College Business School would be considered at the next meeting of the Committee.

### **7.2 Department of Aeronautics [Paper D]**

The Committee considered the Department’s report and in particular noted the comments of the external examiners and the summary of the National Student Survey. The representative from the Department stated that one of the issues they faced in the previous year was the number of students graduating with a first class degree, nearly two thirds of the total. The Committee also noted the Department’s use of innovative teaching.

### **7.3 Department of Bioengineering [Paper E]**

The Committee considered the Department’s report and in particular noted the comments of the external examiners and the summary of the National Student Survey. Of particular concern to the Department was the lack of teaching space available, the Departments of Earth Science and Engineering and Materials had made a number of adjustments to their timetable to help accommodate the Department with this, but it was an on-going problem which would get worse next year.

### **7.4 Department of Chemical Engineering [Paper F]**

The Committee considered the Department’s report and in particular noted the comments of the external examiners and the summary of the National Student Survey. The Department had been given a target by the Faculty to improve its scores in the National Student Survey. A Director of Course Operations was appointed to assist the Director of Undergraduate Studies and this has worked well. Another issue was the large number of first and upper second class degrees awarded to students. This is largely because of high coursework marks and the Department is looking at ways to encourage staff to be more realistic in marking coursework.

### **7.5 Department of Civil and Environmental Engineering [Paper G]**

The Committee considered the Department’s report and in particular noted the comments of the external examiners and the summary of the National Student Survey.

The representative from the Department stated that while the NSS results had improved there was still work to do. The Department had also introduced a system of allowing members of staff to see their SOLE scores and a comparison to the anonymised scores of other staff. In addition failure rates had been reduced significantly over the past couple of years and are now within the College's target.

#### **7.6 Department of Electrical and Electronic Engineering [Paper H]**

The Committee considered the Department's report and in particular noted the comments of the external examiners and the summary of the National Student Survey. The Department's representative reported that a substantial change was made to third year of all degree programmes to incorporate a 6 month industrial placement as an integrated part of the MEng degrees.

#### **7.7 Department of Earth Science and Engineering [Paper I]**

The Committee considered the Department's report and in particular noted the comments of the external examiners and the summary of the National Student Survey. One of the external examiners thought it strange that the supervisor should be excluded from marking the project. This was a decision taken a number of years ago after consultation with the external examiners at the time. Supervisors are, however, invited to comment on the level of performance by the student during the project. For 2013/2014 academic year, supervisors will be asked to comment not only on the level of performance, but also to provide a grade that they feel the project should be awarded.

#### **7.8 Department of Materials [Paper J]**

The Committee considered the Department's report and in particular noted the comments of the external examiners and the summary of the National Student Survey. The undergraduate labs continue to be improved with the piloting of electronic marking of lab manuscripts and the introduction of superdemonstrators. The Department noted the need to ensure that external examiners comments examination papers are responded to.

### **8. Reorganisation of Undergraduate Courses and Examinations**

#### **8.1 Department of Bioengineering**

**8.1.1** The Committee **approved** a proposal to establish an exchange agreement with the University of Melbourne, Australia [Paper L].

**8.1.2** The Committee **approved** a proposal to introduce a reading week [Paper M].

#### **8.2 Department of Computing**

**8.2.1** The committee **approved** a proposal for modifications to the first, second and third years of the Joint Mathematics and Computer Science degree programmes [Paper N].

**8.2.3** The committee noted that the Department had approved changes to the Machine Learning & Neural Computation course [Paper O].

#### **8.3 Department of Earth Science and Engineering**

**8.3.1** The Committee **approved** a proposal to change the Scheme for Award of Honours [Paper P].

#### **8.4 Department of Materials**

**8.4.1** The Committee noted that the Department has made an amendment to the third

year of its MEng in Biomaterials and Tissue Engineering programme. The module MSE 307 Engineering Alloys is no longer compulsory and students can now select other options instead. This reflects the changing focus of research in biomaterials.

## **9. Periodic Review of Undergraduate Teaching in the Department of Civil and Environmental Engineering – Progress Report**

**9.1** The Committee received a progress report on action since the Periodic Review of Undergraduate Teaching in the Department of Civil and Environmental Engineering was considered by the Committee [Paper Q].

**9.2** It was reported that the main issue was the very high failure rates for three years running. The Department had previously put in place measures to address this problem and failure rates have now fallen to more moderate levels.

**9.3** The Department had been advised to take part in TOLE and it was reported that they have now fully engaged with this. In addition all tutors get more detailed information on their personal tutees.

**9.4** There has also been an effort to introduce more of a community spirit within the Department and to break down barriers between staff and students. Additionally a new Undergraduate Office has been established which has made it easier for students to get advice and the information they need.

**9.5** The number of students participating in surveys has increased. The feedback from students on the changes made have been very positive.

## **10. Appointment of Examiners**

**10.1** The Committee considered and approved the appointment of external examiners for undergraduate degrees in 2013/2014 [Paper R].

## **11. Good Practice Highlighted During Periodic Reviews 2012/2013**

**11.1** The Committee considered and noted a paper detailing examples of good practice highlighted within individual periodic reviews [Paper S].

## **12. Re-sit Examinations and Supplementary Qualifying Tests (SQTs)**

**12.1** The Committee noted that the Senate has approved new policy guidelines to come into effect from October 2013 [Paper T].

## **13. Programme Specifications**

**13.1** The Committee noted that at the last QAEC meeting it was noted that departments had not been routinely keeping their programme specifications up to date and there needed to be more focus on ensuring this happened in future. It was agreed that all Course Organisers should be reminded by the Graduate School Master's Quality Committees and the Faculty Studies Committees of the importance of keeping these documents up to date.

## **14. Survey Results**

**14.1** The Committee noted the Spring survey results for SOLE and Summer survey results from SOLE and TOLE [Paper U].

**15. Senate Executive Summary**

**15.1** The Committee noted the Executive Summary of the meetings of Senate held on 8 May 2013 [Paper V] and 19 June 2013 [Paper W].

**16. QAEC Report**

**16.1** The Committee noted the Report by the Quality Assurance and Enhancement Committee [Paper X].

**17. Science Studies Report**

**17.1** The Committee noted the Report by the Science Studies Committee [Paper Y].

**18. Medical Studies Committee Executive Summary**

**18.1** The Committee noted the Executive summary of the meeting of the Medical Studies Committee held on 4 June 2013 [**Paper Z**].

**19. Dates of next meetings**

Wednesday 12 March 2014  
Wednesday 21 May 2014

**20. Any other business**

**20.1** The Committee **approved** a proposal to establish an exchange agreement between the Department of Electrical and Electronic Engineering and the School of Engineering and Applied Sciences at Harvard University.