

# Imperial College London

## Faculty Education Committee (FEC) Faculty of Engineering

Wednesday 25 May 2016

### Confirmed Minutes

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#### Present

Dr Lorraine Craig (Chair)	Associate Dean (Learning & Teaching)
Prof Peter Lindstedt	College Consul
Dr Rafael Palacios	Aeronautics undergraduate representative
Prof Sergei Chernysenko	Aeronautics postgraduate representative
Prof Martyn Boutelle	Bioengineering undergraduate representative
Dr Darryl Overby	Bioengineering postgraduate representative
Prof Nina Thornhill	Chemical Engineering undergraduate representative
Dr Mike Templeton	Civil Engineering undergraduate representative
Prof Bassam Izzuddin	Civil Engineering postgraduate representative
Dr Peter McBrien	Computing undergraduate representative
Dr Fariba Sadri	Computing postgraduate representative
Dr Lorenzo Picinali	Design Engineering undergraduate representative
Dr Mike Streule	Earth Science and Engineering undergraduate representative
Dr Kristel Fobelets	Electrical Engineering undergraduate representative
Prof Andrew Holmes	Electrical Engineering postgraduate representative
Prof Jason Riley	Materials postgraduate representative
Bojan Cvijan	Registry (representing Sophie White)
Richard Martin (for items 1-4)	Faculty Operating Officer
Dr Phil Power (Secretary)	Education Manager

#### Observers

Valerie Johnson (item 3)	OE Senior Change Manager
James Balloch (item 3)	Interim Academic Registrar

#### Apologies

Prof Jeff Magee	Dean
Prof Peter Cheung	Vice-Dean (Education)
Sophie White	Registry
Prof Kang Li	Chemical Engineering postgraduate representative
Dr Martyn McLachlan	Materials undergraduate representative
Dr Mike Bluck	Mechanical Engineering undergraduate representative
Chun-Yin San	ICU Deputy President (Education)
Pari Singh	Student Representative (UG) - CGCU
Rachael Shuttleworth	Student Representative (UG) - RSMU
Andreea Funie	Student Representative (PG) – GSU
Dr Elizabeth Hauke	Centre for Culture, Languages and Communication
Dr Daniel Mortlock	Director of Ancillary Mathematics

## 1 Welcome and Apologies

The chair welcomed attendees to the meeting and apologies, as above, were noted. Dr Lorraine Craig noted the papers of the meeting were very long and confirmed that she was looking at ways they could be appropriately shortened for future meetings.

## 2 Minutes of the previous meeting

The committee approved paper EEC.2015.16, the minutes of the March meeting.

### **3 Operational Excellence**

The committee received a briefing regarding Operational Excellence from Valerie Johnson (Senior Change Manager) and specifically the Student Information Management Programme from James Balloch (Interim Academic Registrar), the slides were included as paper EEC.2015.17.

James Balloch informed the committee that the intention was that the current curriculum would be represented within the new student system (Banner by Ellucian) by Autumn 2016, with a revised curriculum for undergraduates starting in October 2017 (resulting from module harmonisation work) following by September 2017.

Prof Peter Linstedt noted that there was a considerable degree of scepticism within the academic community about whether the system would operate as intended, but was very supportive of the dialogue work planned to understand the way in which departments currently operate.

## **ITEMS FOR CONSIDERATION**

### **4 New Programme Proposals**

#### **4.1 MRes Molecular Science and Engineering**

The committee considered paper EEC.2015.18, a proposal from the Department of Chemical Engineering to develop a MRes Molecular Science and Engineering programme for launch in October 2017.

Prof Claire Adjiman, co-director of the Institute of Molecular Science and Engineering (IMSE), on behalf of the Department of Chemical Engineering, presented the proposal and noted that positive feedback had been received from four referees which confirmed there was a clear market need for the programme and that it achieved a good balance between physical science and engineering. Prof Adjiman noted that the referees had expressed concern that the intended workload was high, but confirmed it was in line with the College's credit guidance and that it will be monitored once the programme begins.

Prof Adjiman noted that the proposal had been submitted to the Programmes Committee for their next meeting the following day and internal and external feedback had been received which would be acted upon.

The committee recommended the proposal to the Programmes Committee for approval.

#### **4.2 BSc Medical Sciences with Biomedical Engineering (Outline proposal)**

The committee considered paper EEC.2015.55, a proposal from the Department of Bioengineering to develop a BSc Medical Sciences with Biomedical Engineering programme for launch in October 2017. Prof Martyn Boutelle, on behalf of the Department of Bioengineering, presented the proposal and highlighted that the programme will offer a unique opportunity to provide future medical doctors with biomedical engineering skills.

Prof Boutelle noted that the programme was still undergoing development and consultation with the Faculty of Medicine, in particular with regard to the timelines for assessment activities. Prof Boutelle also noted that the programme would be operated by the Department of Bioengineering, rather than the School of Medicine.

The committee supported the ongoing development of the programme and requested that the completed proposal be presented at the next meeting.

### **5 Major Modifications to Existing Programmes and Changes to Schemes for Award of Honours**

## **5.1 MSc Biomedical Engineering**

The committee noted paper EEC.2015.19, a proposal from the Department of Bioengineering to adjust the assessments of three modules on the MSc Biomedical Engineering programme with effect from October 2016, which had been approved by the Programmes Committee.

## **5.2 Sustainable Development suite of Programmes – Civil Engineering**

The committee noted paper EEC.2015.20, a proposal from the Department of Civil and Environmental Engineering to suspend the suite of Sustainable Development programmes from October 2016, which had been approved by the Programmes Committee.

## **5.3 MSc Computing (Secure Software Systems)**

The committee considered paper EEC.2015.21, a proposal from the Department of Computing to change the programme title of the MSc Computing (Secure Software Systems) to MSc Computing (Security and Reliability) for students starting their studies in October 2017.

The committee recommended the proposal to the Programmes Committee for approval.

## **5.4 MSc Computing (Artificial Intelligence) and MSc Computing (Machine Learning)**

The committee considered paper EEC.2015.22, a proposal from the Department of Computing to merge the MSc Computing (Artificial Intelligence) and MSc Computing (Machine Learning) to a new programme MSc Computing (Artificial Intelligence and Machine Learning) for students starting their studies in October 2017. Dr Fariba Sadri noted that students currently studying the two programmes combine many modules which reflects the external environment.

The committee recommended the proposal to the Programmes Committee for approval. The committee noted that a Programme Specification in the current format for the new programme would need to be prepared prior to submission to the Programmes Committee.

## **6 Additional Entry Criteria**

### **6.1 MSc and MRes programmes in Department of Computing**

The committee considered paper EEC.2015.23, a proposal from the Department of Computing to use GRE scores as an additional entry requirement for MSc and MRes programmes.

Dr Sadri noted that GRE scores were widely used for postgraduate applications, particularly in the USA but also in the UK for applications to Business Schools, including Imperial.

Dr Sadri also noted that applications for taught postgraduate studies in the Department of Computing had already exceeded 2,000 for 2016/17 entry, with the current entry criteria of a first class degree and substantial computing experience, so additional metrics were needed to assess students from a wide variety of institutions. An internal entry exam was not considered desirable.

Dr Sadri further noted that the department had been requesting GRE scores from applicants on a voluntary basis for two years. Using the information the department had been able to draw a correlation between GRE scores (which were unknown to admissions tutors) and applications which had received an offer.

Dr Sadri confirmed that all students (including those from the UK) would be required to submit their first attempt GRE score for application for 2017 onwards and that the score would be used to provide a normalised criteria for all applicants. Dr Sadri noted that the \$200 fee and wide availability of the test were not considered to be barriers to entry.

Dr Sadri confirmed that initially applicants will require a quantitative score higher than 159 and a verbal score higher than 145. Changes to these requirements will be brought to the Faculty Education Committee for approval.

Dr Craig informed the committee that the proposal had been previously discussed at the former Master's Quality Committee (Business, Engineering and Physical Sciences) in May 2015,

whereupon it had been deferred until an institutional review of additional entry requirements at postgraduate level had been conducted (actioned to Prof Humphris and Dean Pateman). Given that this work now formed part of the remit of the Academic Standards Framework Task and Finish Group on Admissions Dr Crag suggested the proposal was discussed by this group.

The committee were interested in the proposal to use GRE scores within the Department of Computing and felt that this could be extended to other departments in the future.

The committee endorsed the principle of using GRE scores as a trial for MSc and MRes programmes in the Department of Computing, subject to discussion/approval via the Admissions Task and Finish Group on Admissions.

## 7 Exchange Partnerships

### 7.1 MA/MSc Global Innovation Design – Pratt Institute

The committee considered paper EEC.2015.24, a proposal from the Dyson School of Design Engineering to renew the partnership with the Pratt Institute for students on the MA/MSc Global Innovation Design.

The committee approved the exchange partnership.

### 7.2 MA/MSc Global Innovation Design – Keio University

The committee considered paper EEC.2015.25, a proposal from the Dyson School of Design Engineering to renew the partnership with Keio University for students on the MA/MSc Global Innovation Design.

The committee approved the exchange partnership.

### 7.3 MEng Chemical Engineering with a Year Abroad - Carnegie Mellon University

The committee considered paper EEC.2015.26, a proposal from the Department of Chemical Engineering to renew the partnership with Carnegie Mellon University for students on the MEng Chemical Engineering with a year abroad.

The committee approved the exchange partnership.

## 8 Survey Results

### 8.1 Undergraduate SOLE Survey Results

The committee considered paper EEC.2015.27, the results of the undergraduate spring term 2015 SOLE lecturer and module surveys. Members noted that the participation had dropped from the 2015 survey in five departments and felt that this may have been due to the shortened term.

### 8.2 Postgraduate SOLE Survey Results

The committee considered paper EEC.2015.28, the results of the postgraduate spring term 2015 SOLE lecturer and module surveys. Members noted that the participation had dropped from the 2015 survey in five departments and the participation rate was less than 50% in four.

Members felt that the shortened term and coursework deadlines were factors which effected participation, but noted that a number of departments still managed to achieve high participation rates. It was felt more investigation was needed to understand participation trends.

**Action: Tom Bond**

Members of the committee also noted that the reports for the Business School's survey were very informative and that endeavours should be undertaken to present SOLE and PGSOLE results in this format.

**Action: Phil Power**

### 8.3 Student Experience Survey Results

The committee considered papers EEC.2015.29 and EEC.2015.30, the results of phases 1 and 2 of the Student Experience Survey. The committee also noted paper EEC.2015.31 the action plan written by support services in response to the survey results.

Members of the committee noted that participation in both phases of the survey were very low and expressed concern about any conclusions drawn from the results.

## **9 Accreditation Reports**

### **9.1 IOM3, RAeS and IMechE Accreditation visit to the Department of Aeronautics (December 2015)**

The committee considered paper EEC.2015.32, an accreditation visit report from IOM3 regarding the MSc Composites programme in the Department of Aeronautics.

The committee also considered paper EEC.2015.33, an accreditation visit report from RAeS regarding the undergraduate and taught postgraduate programmes in the Department of Aeronautics.

The committee noted the accreditation that the visit report from IMechE from December 2015 is still awaited.

### **9.2 JBM accreditation visit report for Undergraduate and Taught Programmes in the Department of Civil and Environmental Engineering (October 2015)**

The committee considered paper EEC.2015.34, an accreditation visit report from JBM (on behalf of ICE, IStructE, CIHT and IHE) regarding the undergraduate and taught postgraduate programmes in the Department of Civil and Environmental Engineering.

### **9.3 EAB accreditation visit report of Undergraduate and Taught Postgraduate Programmes in the Department of Bioengineering (October 2013)**

The committee considered paper EEC.2015.35, an accreditation visit report from EAB (on behalf of IET, IMechE, IOM3 and IPEN) regarding the undergraduate and taught postgraduate programmes in the Department of Civil and Environmental Engineering.

### **9.4 IChemE accreditation visit report of Undergraduate Programmes in the Department of Chemical Engineering (March 2014)**

The committee considered paper EEC.2015.36, an accreditation visit report from IChemE regarding undergraduate programmes in the Department of Bioengineering.

## **10 External Examiner Appointments and Reports**

### **10.1 External Examiner Appointments Due to Expire 2015/16**

The committee noted paper EEC.2015.37, a list of external examiner appointments due to expire at the end of the 2015/16 academic year.

The committee also noted that nominations to fill the vacancies need to be submitted to Registry no later than 1 September 2016.

### **10.2 Outstanding External Examiner Appointments 2015/16**

The committee noted that there are no outstanding external examiner appointments for the 2015/16 academic year.

### **10.3 Outstanding External Examiner Reports 2014/15**

The committee noted paper EEC.2015.38, a list of outstanding external examiner reports for the academic year 2014/15.

The committee requested clarification regarding what action was available if an external examiner does not submit their report.

Action: Phil Power

### **10.4 Summary of Undergraduate External Examiner Reports 2014/15**

The committee considered paper EEC.2015.39, the external examiners' summary report on undergraduate programmes for the 2014/15 academic year.

#### **10.5 Summary of Master's External Examiner Reports 2014/15**

The committee considered paper EEC.2015.40, the external examiners' summary report on Master's programmes for the 2014/15 academic year.

Dr Craig suggested that a short report which collated specific concerns from external examiners (for both Undergraduate and Master's level) should be created to able mitigating actions to be tracked.

**Action: Tom Bond**

### **11. Annual Monitoring of Undergraduate Programmes (reporting on 2014/15)**

#### **Undergraduate Annual Monitoring Reports**

The committee noted paper EEC.2015.41, a paper outlining the undergraduate annual monitoring process. Dr Craig thanked the Directors of Undergraduate Studies for completing these returns on time at a busy period of the year and noted that this is the first time all departments have submitted their returns on time.

The committee considered paper EEC.2015.42, the annual monitoring report from the Department of Aeronautics. Dr Rafael Palacios noted that the report contained an action plan written in conjunction with the students and that students were asked to submit the number of hours they had spent on each piece of coursework to allow monitoring of workload to take place.

The committee considered paper EEC.2015.43, the annual monitoring report from the Department of Bioengineering. Prof Boutelle noted that the department had established a Teaching Operations Committee led by the new Head of Student Programmes to progress and resolve practical issues in a timely manner.

The committee considered paper EEC.2015.44, the annual monitoring report from the Department of Chemical Engineering. Prof Nina Thornhill thanked Richard Monk (Registry) for his help in compiling the report and noted that more blended learning was planned for the future.

The committee considered paper EEC.2015.45, the annual monitoring report from the Department of Civil and Environmental Engineering. Dr Mike Templeton noted that the appointment of teaching fellows, support for CivSoc and the creation of an undergraduate office had improved relationships with the student body.

The committee considered paper EEC.2015.46, the annual monitoring report from the Department of Computing. Dr Peter McBrien noted that some exams had been split, allowing for more revision time for some subjects and that proposed minor revisions are discussed at Town-Hall style meetings of the students.

The committee considered paper EEC.2015.47, the annual monitoring report from the Department of Earth Science and Engineering. Dr Mike Streule noted that the external examiners had commented that part of the curriculum could be updated and modernised, feedback which had been acted upon. Dr Strule also noted that the department had focused on helping the students demonstrate the range of skills they possessed when applying for jobs in a tough geoscience recruitment market.

The committee considered paper EEC.2015.48, the annual monitoring report from the Department of Electrical and Electronic Engineering. Dr Kristel Fobelets noted the improving levels of feedback being provided to the students.

The committee considered paper EEC.2015.49, the annual monitoring report from the Department of Materials. Prof Jason Riley, on behalf of Dr Martyn McLachlan noted that a specific question from an external examiner to the Vice Provost (Education) from October 2015 remained unanswered.

**Action: Phil Power/ Lorraine Craig**

The committee considered paper EEC.2015.50, the annual monitoring reports from the Department of Mechanical Engineering.

**12 Additional items to consider from the Faculty of Engineering**

There were no additional items to consider.

**ITEMS TO NOTE**

**13 Chair's Report**

No actions had been taken by the Chair on behalf of the committee since the last meeting.

**14 Quality Assurance and Enhancement Committee (QAEC) Executive Summary**

The committee noted paper EEC.2015.51, an executive summary from the Quality Assurance and Enhancement Committee.

**15 Academic Standards Framework Update**

The committee noted paper EEC.2015.52, an update on progress with the academic standards framework from the steering group.

Dr Craig noted that views will be taken from all members of the committee regarding the next group of discussions surrounding the proposed regulations.

Prof Linstedt noted that the work regarding student complaints and appeals was very welcome as the time the processes currently take is often unacceptably long.

**16 Minor Modifications to Existing Programmes and Short Courses**

The committee noted paper EEC.2015.53 regarding a process to ensure minor modifications to existing programmes and short courses were reported to the Faculty Education Committee in line with the College's procedures.

Members of the committee agreed to send minor changes which had been approved by Departmental Teaching Committees to the Faculty Education Manager on an ongoing basis who would then report them to each meeting of the Faculty Education Committee.

The committee agreed to note minor changes to existing programmes and short courses as a standing item at each meeting.

**17 Minutes of the Postgraduate Professional Development Committee (PPDC)**

The committee noted paper EEC.2015.54, the latest minutes from the Postgraduate Professional Development Committee.

**18 Additional items to note from the Faculty of Engineering**

There were no additional items to note.

**ANY OTHER BUSINESS**

**19 Dates of Future Meetings**

Wednesdays 28 September 2016, 23 November 2016, 22 February 2017 and 24 May 2017