### Imperial College London

# MASTER'S QUALITY COMMITTEE (BUSINESS, ENGINEERING & PHYSICAL SCIENCES)

The minutes of the Master's Quality Committee (Business, Engineering & Physical Sciences) held on Friday 16<sup>th</sup> May 2014

#### **Present:**

Dr David McPhail, Graduate School Deputy Director & Department of Materials (Chair)

Dr Simon Archer, College Tutor

Professor Alessio Corti, Department of Mathematics

Ms Boshuo Guo, GSU Deputy President

Professor Andrew Holmes, Department of Electrical and Electronic Engineering

Professor Debra Humphris, Vice Provost (Education)

Professor Howard Johnson, Department of Earth Science & Engineering

Ms Nat Kempston, ICU Deputy President (Education)

Dr Pat Leevers, Department of Mechanical Engineering

Professor Stefan Maier, Department of Physics

Dr Marco Mongiello, Business School

Dr Darryl Overby, Department of Bioengineering

Dr Fariba Sadri, Department of Computing

Professor Richard Thompson, College Consul for Natural Sciences

Dr Nick Voulvoulis, Centre for Environmental Policy

Ms Sophie White, Senior Assistant Registrar (Quality Assurance)

#### In attendance:

Professor Bikash Pal, Department of Electrical and Electronic Engineering (for item 4.1)

Professor James Sefton, Business School (for item 5.1)

Mr Daniel Smith, Assistant Registrar (secretary)

#### **Apologies:**

Mr Mohammad Ahmadzadeh, Student Representative for Engineering

Dr Laura Barter, Department of Chemistry

Mr Max Boleininger, Student Representative for Physical Sciences

Professor Sergei Chernyshenko, Department of Aeronautics

Professor Lesley Cohen, Department of Physics

Dr John Gibbons, Department of Mathematics

Professor Sue Gibson, Director Graduate School

Professor Bassam Izzuddin, Department of Civil & Environmental Engineering

Professor Richard Jardine, College Consul for Engineering & the Business School

Professor Kang Li, Department of Chemical Engineering

Mr Ruxandra Luca, Student Representative for the Business School

Mr Dean Pateman, Academic Registrar

Mr Andreas Thomik, GSU President

Professor Denis Wright, Director of Student Support

#### 1. Welcome and Apologies

Dr David McPhail welcomed members to the meeting and apologies, as listed above, were noted.

2. Minutes Paper A

The Committee approved the minutes from the Master's Quality Committee (Business, Engineering & Physical Sciences) held on Friday 21<sup>st</sup> March 2014.

#### 3. Matters arising from the Minutes

It was noted that the following actions from the meeting were in progress. All other items were completed. There were no further matters arising from the minutes.

Further to Minute 3.4, it was reported that Mr Pateman, Academic Registrar had discussed this with Professor Humphris, Vice Provost (Education) and it was agreed that no further action was necessary.

Further to Minute 19.3, it was reported that Mr Pateman discussed the matter with the Business School and a new external examiner was to be asked to provide an independent judgement.

#### 4 New Programme Proposals

4.1 MSc in Future Power Networks (Department of Electrical and Electronic Engineering)

The Committee considered a proposal from the Department of Electrical and Electronic Engineering to introduce a new MSc in Future Power Networks with effect from October 2015.

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- **4.1.1** Professor Bikash Pal presented the proposal to the Committee. The Committee heard that a number of our competitor institutions were already offering programmes in this area and that there was an increasing global demand for power engineers.
- **4.1.2** Professor Pal explained that there would be a close relationship with industry and that the programme included guest lecturers drawn from industry.
- **4.1.3** The Committee recommended that the department consider moving the examination dates closer to the term in which the relevant module is studied. Professor Pal further explained that it was logistically possible for modules studied during the autumn term to be examined in January instead of Spring and agreed to consider this.
- 4.1.4 Professor Pal explained that the flexible assessment structure for modules on the MEng Electrical & Electronic Engineering programme made it difficult to apply mandatory coursework to all core modules. The Committee noted that the department intended to review this situation in 2-3 year times and the Committee recommended that the department consider addressing this then.
- 4.1.5 The Committee noted that the Senate had recently approved a new minimum English Language requirement for all programmes and it was noted that the programme specification would be amended accordingly.

4.1.6 Professor Pal further explained that only modules from the final year of the MEng Paper B Electrical and Electronic Engineering were shared with the MSc in Future Power Networks and that all modules were therefore at Level 7 of the National Framework for Higher Education Qualifications. Professor Pal confirmed that the pass mark for the programme was 50%.

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- 4.1.7 Professor Pal explained that whilst the proposal stated that students would "normally" require a first class Bachelor's degree as an additional entry requirement he was confident that this could be enforced. The Committee noted that if there is confidence that the requirements are met then there should be no need to make exceptions. Professor Pal agreed to remove the "normally" from the additional entry requirement.
- 4.1.8 Professor Pal explained that whilst the ECTS credit applied to the research project was greater than the credit applied to the taught element that the higher weighting of the taught element was justified. Professor Bal explained that the current industry need was for high quality engineers; the rigorous assessment and higher weighting of the taught element reflected this need.
- 4.1.9 Professor Pal further explained that it was not possible for the taught element to carry a higher number of ECTS credits as many modules were shared with the Department's other programmes. Professor Andrew Holmes, Director of Postgraduate Studies for the Department, reported that the Department were going to review the allocation of ECTS credit to postgraduate provision across the Department and it was noted that this would be addressed then.

**Action: Professor Andrew Holmes** 

4.1.10 The Committee approved the new MSc in Future Power Networks, with effect from October 2015, and agreed to recommend the programme for Senate approval.

#### **Post Meeting Note**

The proposed entry requirements to the MSc in Future Power Networks have been amended to remove the requirements regarding physics and maths. The proposed entry requirements now state: 'normally a 1st Class Honours degree in electrical and electronic engineering from a UK academic institution, or equivalent from an overseas university.'

#### 5. **Major Modifications**

#### 5.1 MSc Finance Suite of programmes (Business School)

Paper C

The Committee considered a proposal from the Business School to make various amendments to the MSc Finance suite of programmes for students beginning the programme in September/October 2014. This includes the MSc Finance, MSc Investment & Wealth Management, MSc Finance & Accounting and MSc Risk Management & Financial Engineering. It was noted that the MSc in Investment and Wealth Management and the MSc in Finance and Accounting were new programmes which would accept their first students in September 2014.

- Professor Sefton presented the proposal to the Committee. The Committee heard that the proposals were developed following a review of the current provision. Following consultation with students, staff, alumni and industry the Business School was presenting proposals to remove overlap between modules and to ensure there was a greater focus on areas which were considered of greater importance in industry.
- **5.1.2** Professor Sefton explained that to make space within the curriculum for additional modules that the hours assigned to three existing modules had been reduced.
- 5.1.3 The Committee agreed the proposed modifications to the MSc In Finance suite of programmes with effect from September/October 2014 and agreed to recommend them for Senate approval.

#### 5.2 MSc in Advanced Aeronautical Engineering (Aeronautics)

Paper D

The Committee considered a proposal from the Department of Aeronautics to make amendments to the marking scheme and programme structure of the MSc in Advanced Aeronautical Engineering for students beginning the programme in October 2014. It was noted that this programme was a new programme which would accept its first students in October 2014.

- 5.2.1 The Committee agreed the proposed modifications to the MSc In Advanced Aeronautical Engineering with effect from October 2014 and agreed to recommend them for Senate approval.
- 6. Programme Reviews

## 6.1 MSc in Computing Science and MSc in Computing (Specialisms) (Department of Computing)

Paper E

The Committee considered the programme review of the MSc in Computing Science and the MSc in Computing (Specialisms) for 2012/13. The programme was reviewed by Dr Leevers and received a rating of 'GOOD'.

- **6.1.1** Dr Leevers considered the allocation of a personal tutor to every Master's student to be an example of good practice.
- 6.1.2 Dr Leevers further noted that the timing of examinations was to be brought forward to the same term in which the module ran and suggested that it would be useful to monitor the effect on students experience and learning. The Department responded that they would report on this change during their next review and the Committee were satisfied with this response.
- 6.1.3 The Committee endorsed the rating of 'GOOD' and it was agreed the programme would next be reviewed in three years' time.

## 6.2 MSc in Analogue and Digital Integrated Circuit Design (Department of Electronic and Paper F Electrical Engineering)

The Committee considered the programme review of the MSc in Analogue and Digital Integrated Circuit for 2012/13. The programme was reviewed by Dr Gibbons and received a rating of 'GOOD'.

- 6.2.1 Dr Gibbons considered the spread of teaching methods which were appreciated by the students and praised by the external examiner to be an example of good practice. Dr Gibbons also considered the detailed handbook to be exemplary. Dr Gibbons did not recommend any follow up action.
- The Committee endorsed the rating of 'GOOD' and it was agreed the programme would next be reviewed in three years' time.
- 6.3 MSc in Control Systems (Department of Electronic and Electrical Engineering)

  The Committee considered the programme review of the MSc in Control Systems for 2012/13. The programme was reviewed by Dr Mongiello and received a rating of 'GOOD'.
- **6.3.1** Dr Mongiello considered the wide choice of projects and supervisors available to be students to be an example of good practice.
- Dr Mongiello noted that the procedures for placements were adapted from the procedures in place for undergraduates and suggested that specific procedures were developed for Master's levels students. The Department responded that they would draft appropriate procedures and the Committee noted that it is not necessary to distinguish between undergraduate and Master's level procedures as long as the procedures are compliant with the UK Quality Code.
- 6.3.3 The Committee endorsed the rating of 'GOOD' and it was agreed the programme would next be reviewed in three years' time.
- 6.4 MRes in Nanomaterials (Department Chemistry)

Paper H

The Committee considered the programme review of the MSc in Nanomaterials for 2012/13. The programme was reviewed by Dr Voulvoulis and received a rating of 'GOOD'.

- **6.4.1** Dr Voulvoulis considered the opportunity for students to discuss their research project at a fully-funded conference in America to be an example of good practice as well as the opportunity for students to visit state-of-the-art research laboratories in industry and academia.
- 6.4.2 Dr Voulvoulis noted that the department may wish to consider improvements to their handbook and website and the Department responded that they would update both of these. The Committee were satisfied with this response.
- 6.4.3 Dr Voulvoulis further noted that the Department may wish to review the potential for Elearning. The Committee noted that the Department had not addressed this action in their response and recommended that the Department consider this.
- 6.4.4 The Committee endorsed the rating of 'GOOD' and it was agreed the programme would next be reviewed in three years' time.
- 6.5 MRes in Photonics (Department of Physics)

Paper I

The Committee considered the programme review of the MSc in Photonics for 2012/13. The programme was reviewed by Professor Li and received a rating of 'GOOD'.

- Professor Li considered the frequency with which new modules were introduced in Paper I order to ensure the programme was up-to-date to be an example of good practice.

  Professor Li did not recommend any follow up action.
- The Committee endorsed the rating of 'GOOD' and it was agreed the programme would next be reviewed in three years' time.

# 6.6 MSc in Theory and Simulation of Materials (Department of Physics) The Committee considered the programme review of the MSc in Theory and Simulation

of Materials for 2012/13. The programme was reviewed by Professor Holmes and received a rating of 'GOOD'.

- Professor Holmes noted several examples of good practice including the provision of dedicated facilities to concentrate the students into their own 'home'. Professor Holmes also noted that the Department provide problems to interview candidates in advance of the interview to provide a springboard for technical discussion and conducted exit interviews as an additional feedback mechanism.
- **6.6.2** Professor Holmes did not recommend any follow up action.
- The Committee endorsed the rating of 'GOOD' and it was agreed the programme would next be reviewed in three years' time.

#### 7. External Examiner reports for 2012-3

Paper K

The Committee considered reports from External Examiners for the 2012-3 session.

#### 7.1 MSc in Composites

The Committee noted the report from Professor Stephen Ogin. Professor Ogin was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

- **7.1.1** Professor Ogin considered the opportunity for external examiners to observe the literature review presentations and the project oral presentations to be an example of good practice as it provided useful insights into the progress of the student cohort.
- **7.1.2** Professor Ogin noted that students did not have a personal tutor. The Department responded that this role was currently provided by the Programme Director but that the possibility of personal tutors for MSc students was being considered.
- **7.1.3** Professor Ogin further noted that there were occasional inconsistencies in the presentation of aggregate marks. The Department responded that they have requested all markers present marks in the same format.
- **7.1.4** The Committee agreed that they were satisfied with the Department's response.

#### 7.2 MSc & Diploma in Biomedical Engineering

The Committee noted the report from Professor Timothy Watson. Professor Watson was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were good.

7.3 Professor Watson considered the opportunity to observe the student presentation day to be an example of good practice as it provided an excellent way to gauge the standard of the students.

Paper K

- **7.3.1** The Committee noted the report from Professor Christopher James. Professor James was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.
- **7.3.2** Professor James considered the project presentations to be an example of good practice as they were of high quality and provided a good assessment of the students' overall achievements.
- **7.3.3** The Committee noted the report from Professor Stuart Green. Professor Green was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.
- **7.3.4** Professor Green considered the integration of students into the department's research groups to be an example of good practice. Professor Green noted that this is difficult to achieve and that the department should be commended.
- **7.3.5** Professor Green noted that the absence of annotations meant that it was not always clear where marks had been awarded, particularly for borderline cases. The Department responded that new guidelines had been issued to markers and a new procedure was in place to flag-up borderline cases.
- **7.3.6** The Committee agreed that they were satisfied with the Department's response.

#### 7.4 MSc in Advanced Chemical Engineering (specialisms)

The Committee noted the report from Professor Asterios Gavriilidis. Professor Gavriilidis was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

#### 7.5 MSc in Transport

The Committee noted the report from Professor Stephen Potter. Professor Potter was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

- **7.5.1** Professor Potter considered the use of an open book assessment for the re-assessment of a failed exam for a student whose average mark was over 50% to be an example of good practice.
- **7.5.2** Professor Potter noted that he had concerns over the quality of one of the exam papers and suggested that a quality mentor should work with the person setting this paper in order to ensure that the appropriate standard was met.
- **7.5.3** Professor Potter further noted that it would be good practice to use marking guides in addition to model answers in order to provide clear criteria for the allocation of marks.

**7.5.4** The Committee noted that there was no departmental response to Professor Potter's concerns and requested that the Academic Registrar contact the Director of Postgraduate Studies and Head of Department to ensure these issues were addressed.

Paper K

#### **Post Meeting Note**

It resolved that the absence of a departmental response to the report by Professor Potter was an administrative error and that the Department had in fact provided a response which addressed all of the concerns. The full report including the Department's response will be submitted to the next Committee meeting for consideration.

#### 7.6 MSc in Petroleum Engineering

The Committee noted the report from Mr Timothy Whittle. Mr Whittle was content with the examination process, including the overall quality of assessments.

**7.6.1** Mr Whittle considered the dedication of staff, particularly during students' project work, to be an example of good practice and commended the department.

#### 7.7 MSc Analogue & Digital Integrated Circuits

The Committee noted the report from Professor Izzat Darwazeh. Professor Darwazeh was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

**7.7.1** Professor Darwazeh considered the strong and varied project portfolio across the discipline to be an example of good practice.

#### 7.8 MSc in Communications & Signal Processing

The Committee noted the report from Professor Simon Godsill. Professor Godsill was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

- **7.8.1** Professor Godsill considered the introduction of anonymised Exam Board's to be an example of good practice.
- **7.8.2** Professor Godsill noted that some of the comments regarding candidate's backgrounds prior to study were irrelevant to the discussion and that some of the decisions felt arbitrary. The Department responded that they would put in place mechanisms to neutralise the contribution of superfluous comments.
- 7.8.3 Professor Godsill further noted that there were a number of spelling and grammatical errors with draft exam papers and the department had responded that in order to reduce delays in the delivery of draft exam papers that editing was carried out only after the paper had been approved by the external examiner. The Committee recommended that departments ensure draft papers have been thoroughly checked for errors before they are submitted to external examiners.
- **7.8.3** The Committee agreed that they were satisfied with the Department's response.

#### 7.9 MSc in Control Systems

Paper K

The Committee noted the report from Dr Mark French. Dr French was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

- **7.9.1** Dr French considered the poster session to be an example of good practice.
- 7.9.2 Dr French noted that the implementation of anonymous Exam Boards needed careful consideration. Dr French was concerned that the current procedures could disadvantage the student and recommended that the project moderator need not be anonymous. The Department responded that they would consider Dr French's suggestion in conjunction with College requirements.
- **7.9.3** Dr French further noted that the moderation stage of the project needed a clear audit trail to ensure that there was documented justification. The Department responded that they would try to tackle this issue in forthcoming meetings.
- **7.9.4** The Committee agreed that they were satisfied with the Department's response.

#### 7.10 MSc in Environmental Technology

The Committee noted the report from Mr Anthony Jackson. Mr Jackson was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

- **7.10.1** Mr Jackson considered the revised format for collating the comments of internal markers to be effective and helpful in explaining the criteria use for assessment.
- **7.10.2** Mr Jackson noted that there needed to be a consistency in the marking of small group seminars across different subjects and the Department responded that procedures were in place to ensure consistency across subjects.
- **7.10.3** The Committee noted the report from Professor Michael Blowfield. Professor Blowfield was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

#### 7.11 MRes in Bioimaging Sciences

The Committee noted the report from Professor Stephen Faulkner. Professor Faulkner was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

**7.11.1** Professor Faulkner considered the marking schemes for the project and coursework to be an example of good practice and commended the Department.

#### 7.12 MSc & MRes in Advanced Computing

The Committee noted the report from Professor Peter Flach. Professor Flach was content that the examination process, including the overall quality of assessments, was appropriate and that the academic standards achieved by students were high.

### 8. Chair's Report

Paper L

The Committee noted actions taken by the Chair since the last meeting.

#### 9. Senate Executive Summary

The Committee noted that the latest executive summaries from Senate were available at: Senate Executive Summary.

#### 10. QAEC Summary Reports

The Committee noted that the latest Senate reports from QAEC were available at: QAEC Executive Summary.

#### 11. Any Other Business

#### 11.1 English Language Requirements

The Committee noted that changes to the College's English Language requirements had been approved by Senate with effect from 2015-6 entry. It was further noted that the Home Office had recently announced that they would not be renewing the licence with ETS to act as a supplier of Secure English Language Tests for the purpose of student visa applications under Tier 4. The licence expired on 5th April 2014. ETS run the TOEFL test which they had now also withdrawn. Students who had taken a TOEFL test prior to the 5<sup>th</sup> April 2014 Home Office decision could use their TOEFL score as evidence of English Language and for visa purposes for a further two years.

#### 11.2 Special Cases for Admission

The Committee noted that Ms Mel Peter, Senior Assistant Registrar (Admissions), had raised concerns regarding delays from committee members to approve Special Cases for Admissions. Committee members were reminded of the importance of responding to these special cases for admission as soon as possible.

#### 11.3 Suspended Programmes

The Committee noted that following discussion at Senate it had been agreed that programmes which have been suspended before they have run will need to seek reapproval from the MQC and Senate before they can be re-instated. A brief re-approval procedure would be drawn up.

- 11.3.1 The Committee noted that this would not affect suspended programmes which have been run in previous years. Suspended programmes which have been run in previous years will currently only need to seek re-approval after three years of suspension. Established programmes which have been suspended for more than three consecutive years must follow the new programme approval process prior to re-introduction.
- **11.3.2** The Committee noted that affected programmes which have recently been suspended included:
  - PG Cert & PG Diploma in Actuarial Finance: approved to start in September
     2014 but suspended for one year.
  - MSc in Data Science & Management: approved to start in September 2013 but suspended for one year.

#### 11.4 Revisions to Periodic Review and Programme Monitoring

The Committee were reminded that the deadline for submitting feedback regarding proposed changes to periodic review and programme monitoring procedures was Friday 16<sup>th</sup> May and that any additional comments should be submitted to Richard Monk, Assistant Registrar.

### 12. Dates of next meetings 2013/14

Friday 11<sup>th</sup> July 2014, 10:00-13:00, Ballroom, 58 Prince's Gate

#### 12.1 Dates for meetings in 2014/15 are as follows:

Tuesday 04 November 2014, 10:00-13:00, Council Room, 170 Queen's Gate Tuesday 13 January 2015, 10:00-13:00, Ballroom, 58 Prince's Gate Tuesday 24 March 2015, 10:00-13:00, Council Room, 170 Queen's Gate Tuesday 26 May 2015, 10:00-13:00, Ballroom, 58 Prince's Gate Tuesday 30 June 2015, 10:00-13:00, Council Room, 170 Queen's Gate

#### **Reserved Areas of Business**

#### 13 Special Cases for Admission

Paper M

The Committee noted that there had been thirteen special cases for admission since the last meeting, eight of which had an outcome of 'Approved'. Four decisions were still pending and one decision had not been approved. The Committee had no comments regarding the decisions.