

## COMMITTEE OF MANAGEMENT FOR THE NATURAL SCIENCES TRIPOS

Unconfirmed minutes of a meeting of the Committee of Management for the Natural Sciences Tripos held at **2.00pm** on **Tuesday 3<sup>rd</sup> February 2009** in Pathology Seminar Room, Tennis Court Road.

Present: Dr N Holmes (Chairman), Professor T W Clyne, Dr S Dalziel, Dr P Dupree, Professor H Griffiths, Professor R Horgan, Dr J Keeler, Dr M Mason, Professor A Mycroft, Mr A Norman Dr R Padman, Professor S Redfern, Dr S Russell, Professor J Secord, Professor D Ward, Miss S Zhang and Mrs E Oliver (Secretary).

Apologies: Dr P Barrie, Dr R Preece

In attendance: Dr P Rubery (item 462), Prof S Oliver (item 463)

An updated list of members was circulated (**CM.516**). The Chairman welcomed the new junior members; Miss Xiao (Sophia) Zhang, from Gonville & Caius College, as the biological sciences junior member and Mr Andrew Norman, from Pembroke College, as the physical sciences junior member. These appointments were approved by the Committee.

The extension of Mr Patrick Barrie's appointment until December 2011 was noted.

### 460) MINUTES

The minutes of the meeting held on Tuesday 25<sup>th</sup> November 2008, were approved. The response from Mr Michael Dixon (**CM.518**) regarding the increased numbers of students taking examinations in College was not deemed to fully address the matter of concern. It was accepted that procedural matters were in place to deal with such eventualities but the increase of overall numbers was felt to be a strategic matter of examination procedure governance. Delays in return of scripts in previous years had caused significant problems and it was felt that Colleges should be mandated to return scripts on the day of the examination. It was agreed that the Committee's concern should be made known to the Pro-Vice Chancellor for Education, Professor John Rallison and to the Senior Tutors' Committee.

**Secretary to write to Professor Rallison and Senior Tutor's Committee.**

### 461) MATTERS ARISING NOT ELSEWHERE ON THE AGENDA

There were no additional matters arising.

### 462) REPORTED AND STRAIGHTFORWARD

A paper of reported business was circulated (**CM.519**).

- The Minutes of the Biological Sciences Committee: 27<sup>th</sup> November 2008 (**CM.520**) were noted.
- The Minutes of the Part III Systems Biology Planning Group: 22<sup>nd</sup> January 2009 (**CM.521**) were noted.
- The amendments to Regulations approved by Chairman's action were noted.
- The Preliminary Reading List 2008-9 (**CM.522**) was approved with one minor change.
- The Senior Examiners' Interim Meetings Reports, Part IA (**CM.523**), Parts IB, II and III (**CM.524**) were noted. The Chairman of the Part IA Examiners raised the question of the participation of a Computer Science Senior Examiner given the inclusion, this year, of Computer Science as a full option. Discussions had been had with the Computer Science Tripos Part IA Senior Examiner and the Computer Laboratory were happy to play their part. There was some uncertainty as to the status of the Computer Science

paper. It was agreed that the General Board should decide the make-up of the Exam board and that for the future nominations should go through the normal channels. (*Note added after meeting:* After consultation with the Board of Examinations and in accordance with Statutes and Ordinances it has been agreed that the Computer Laboratory Part IA Chairman of Examiners will attend the Final Part IA Examiners' Meeting as an Assessor but will not sign the Class List.)

- Draft revised Guides for Senior Examiners for Part IA (**CM.525**), Part IB (**CM.526**), Parts II and III (**CM.527**) and Administration Timetable (**CM.528**) were circulated and comments requested.

Part IA. The text in Appendix 2 regarding the inclusion of marks for candidates from other Triposes has been modified so that relevance for each Tripos was catered for. This change was agreed.

On page 6 of the Guide more information was requested regarding definition of a recommended type-face.

**Secretary to check with Disability Resource Centre/Examinations Board.**

It was agreed that the recommendation to Senior Examiners to see proofs of papers should be made a requirement and that the text be amended to 'must arrange'. The Part IB, II and III Guides should be amended also.

On page 10 of the Guide it was agreed that marksheets should contain, as a minimum, marks for each component part and that any additional detail was acceptable but not required.

On page 11 and Appendix 2, the reference to the Ordinary degree was queried.

Although at its previous meeting the Committee had requested that allowances towards an Ordinary degree should not be made at Part IA level there was uncertainty as to whether this could be stated within the context of the University as a whole.

**Secretary to check Regulations and amend text accordingly.**

In Appendix 5, spelling corrections were noted.

Part IB. Some concern was expressed that the wider discussion on Part IB had not yet been held but it was agreed that, in any case, changes would not be implemented for the current academic year. It was suggested and agreed that these discussions should be held at the next meeting of the Management Committee (on 3<sup>rd</sup> March) when the Chairman of the Part IB Examiners would be present.

It was agreed that Page 6 and Page 11 of the Guide should be amended in line with the Part IA Guide. On Appendix 2, the reference to Ordinary degrees also needed clarification and possibly bringing into line with Part IA.

In Appendix 5 the inclusion of marks from other Triposes required clarification.

**It was agreed that the Chairmen of Part IA and Part IB should review and align the three documents according to the comments made.**

- Part II revised information for students (**CM.529**)  
**Committee members were asked to email any suggestions for changes to the Secretary.**
- Undergraduate Prospectus entry  
Members of the Committee were thanked for their comments.
- Allowances to candidates for examinations  
A recent Reporter entry for a Part IB candidate was noted.

463) **REVISIONS TO THE STRUCTURE OF PART II & III BIOCHEMISTRY (Dr Philip Rubery – by invitation)**

A proposal and supporting documents were circulated (**CM.530**). The proposed revisions were developed in response to recommendations that arose from the Learning and Teaching review and have the support of the Faculty Board of Biology. Dr Rubery described the proposals in more detail and explained that Biochemistry Part II and Part III were now completely independent of each other and of the postgraduate provision. Part II was now modular with improved timetabling of taught elements and therefore time available for projects and still retained an element of choice. Part III would include new

modules with some element of choice and a seminar series, to include landmark papers on important developments in the subject area, would be introduced. Students had been included in discussions and recommended changes had been incorporated.

The mark distribution for Part III was queried and it was noted that the project contributed 50% of the overall marks. This was above the norm for Part IIIs but was no change from the present arrangement. Students spent two terms on their project and had already carried out a project in their Part II. Projects contained several elements which were independently graded by several members of staff and included an oral examination. This system was felt to be robust and had been commended by External Examiners. Most students obtained the project of their choice and arranged it in discussion with their supervisor over the summer vacation.

It was confirmed that there would be no changes to entry requirements and that those students who wished to take Part III without having taken Part II Biochemistry, and who had an appropriate subject background and were supported by their College, could submit a case to the Faculty Board of Biology.

**It was agreed that this was a well-structured programme and the Committee supported the proposal and its recommendation to the General Board's Education Committee and the Senior Tutors' Standing Committee on Education.**

464) **PROPOSAL FOR A PART III IN SYSTEMS BIOLOGY (Prof Stephen Oliver – by invitation)**

Minutes of the Planning Group have been reported to the Committee during 2008 and a full proposal, programme specification and details of modules were circulated **(CM.531)**. The proposal has the support of the Faculty Board of Biology.

Prof Oliver provided an overview of the proposal which was unique within Cambridge and possibly nationally. It was aimed at students from across the Natural Sciences and possibly from Maths, Computer Science and Engineering. Instruction would be provided from across the Natural Sciences and Engineering and by specialists from e.g. Microsoft Research and the European Bioinformatics Institute (EBI). A brief explanation of the individual modules was provided. The introductory module would be intended for all students with the aim of exposing all students to a full range of viewpoints. Each specialist module will comprise both formal lectures and computer-based practical elements. Weekly discussion groups will include both Journal club presentations on classic papers and seminars from external speakers. A research project would run for 12 weeks in the Michaelmas and Lent terms and would be jointly supervised. One module includes a group design project to encourage teamwork which is often requested by employers. The group project will be examined by a computer simulation and a poster presentation and assessment procedures would be developed to identify the individual contributions. Candidates for entry to Systems Biology Part III from the biological sciences would need to display competence in Maths and a qualifying performance in part II examinations. An enrolment of 20 students from both backgrounds is anticipated and outside recruitment or in-service training could be possibilities for the future. The Schools of Biological Sciences and Physical Sciences would co-own the course and together with Technology have been actively involved in its planning.

Assessment of a student's level of competence in mathematics was queried given that an undivided second class is awarded in Part IA and it was explained that candidates were likely to be self-selecting. Arrangements would be made to consider special cases where appropriate.

More information was requested about the level of supervision for the research project and it was explained that a day-to-day supervisor would work with a research group leader to ensure effective supervision. Students would already have taken part in a research-related activity at Part II.

A question was raised on whether students from a physical sciences background would have the necessary essay-writing ability and it was explained that supervisions would be organised that would take account of any such difficulties.

**It was clear that considerable time and thought had been given to this proposal, which the Committee supported and recommended to the General Board's Education Committee and the Senior Tutors' Standing Committee on Education.**

The discussion on the computational aspects of this proposal raised the question of whether an overview would be helpful of how practical computational science (a.k.a. scientific computing) fitted within the Natural Sciences. It was agreed that this was a strategic issue and should be for discussion at the next meeting of the Committee.

465) **PART IA ALLOCATION PROCESS (Deferred from October agenda)**

The Colleges registered online 713 students this year for the NST; CST; Physics with Maths, and Education Studies courses. A draft report (**CM. 501**) summarised the process and gave the final course sizes per Tripos for this year and the previous two years.

Two main issues were noted and discussed.

Capacity of practical labs and rate of increase of growth in student numbers. Whilst it was accepted that there was limited control over the admissions process it was felt that the rate of increase of growth was greater than had been predicted and that this trend and its associated problems should be brought to the attention of the General Board through the Education Committee and the Undergraduate Admissions Committee. Discussion took place on whether there was room for any further increase; some practical laboratories were at or near capacity and a small number of students were unable to get places on their chosen field in Part II. The proposed move of the Department of Materials to the West Cambridge site would also impinge on timetabling and it may become necessary to review Part IA timetabling. It was reported that capacity of labs in Physical Sciences would be on the agenda for the first meeting of the new Physical Sciences Committee.

**Secretary to prepare a paper for the Education Committee and the Undergraduate Admissions Committee.**

Cost.

The annual cost to CARET for this procedure is £10-15K which is unlikely to be sustainable. It was agreed that the previous paper-based system would not be able to cope with the present numbers and that it was likely that a source of funding would need to be found from within the Schools.

466) **WORKING GROUP ON SPECIFIC LEARNING DIFFICULTIES**

The Joint Committee on Disability had requested a nomination for a representative to serve as a member of this Group. The letter and terms of reference were circulated (**CM.532**) and volunteers were requested.

467) **ANY OTHER BUSINESS**      There was no other business.

468) **DATE OF NEXT MEETING**

The next meeting shall take place at 2:00pm on Tuesday 3 March 2009 in the Pathology Seminar Room, Tennis Court Road.