

## 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 2:00 pm on **Tuesday 20<sup>th</sup> November 2012** in the Todd–Hamied Room, Chemistry Department, Lensfield Road.

Present: Dr J Keeler (Chair), Dr M Aitken, Dr P Barrie, Professor J Morton, Mr V Oleinikovas, Dr R Padman, Professor D Ritchie, Dr N Rutter, Dr T Tiffert, Professor G Worster and Mrs E Oliver (Secretary).

Apologies: Dr A Alexandrova, Professor M Carpenter, Dr S Fulton, Dr D Good, Mr G Cottiss, Professor H Griffiths, Professor Colin Hughes, Professor I Leslie, Professor S Redfern.

This is the last meeting attended by the student members and the Committee wished to record its thanks to them for their contribution.

### **660) MINUTES**

The minutes of the meeting held on 9<sup>th</sup> October 2012 had been circulated earlier and changes to the last two paragraphs of Minute 656 had been requested. The minutes and amendments were approved.

### **661) MATTERS ARISING NOT ELSEWHERE ON THE AGENDA**

A summary sheet of action points and matters arising from the meeting of 9<sup>th</sup> October (**CM.797**) had been circulated.

#### **Minute 651.**

Communications had been received from the Faculty Board of Physics and Chemistry, and the Faculty Board of Biology, confirming that nominations for Dr J Keeler, Professor D Ritchie and Dr M Aitken should be renewed. The Council of the School of the Physical Sciences would confirm their nominations and the information would be reported to the Committee on the Membership of Committees. A further response from Biology was awaited with regards to the replacement for Professor Hughes.

**Action:** Secretary to contact the Committee of Membership of Committees.

#### **Minute 656.**

Professor Worster was convening the NST Maths Syllabus Committee.

#### **Minute 656.**

Initial discussions on Mathematics Teaching in NST were planned for early in the new year.

**Action:** Dr Keeler to confirm arrangements.

#### **Minute 657.**

Professor Ritchie reported on the discussion of the Physics Teaching Committee with regards to capacity in Part II Physics. It was felt that it would be difficult to impose a quota and, if necessary, adjustments to teaching would be looked at in order to cater for additional numbers. The Chairman noted that, currently, there appeared to be a drift towards the physical sciences and that thought might need to be given to ways of influencing the distribution – for example, to encourage further uptake of Earth Sciences.

#### **Minute 658.**

Dr Keeler had contacted the Cambridge Admissions Office with regards to gender balance in the Tripos.

#### **Minute 659.**

The Secretary had contacted the Student Registry regarding plans for refurbishment to central lecture theatres who had forwarded the enquiry to the Architect. A response was awaited.

#### **Reserved Business Item**

This item could be reported on the main agenda as no mention was made of individual names.

Following the Secretary's negotiations with the Department of Genetics and the Department of Pathology, the two Departments had agreed to change places in the rota for the Chair of Examiners for Parts IB, II and III. This meant that the Department of Pathology had nominated a Chairman of Examiners for Parts IB, II and III for 2013-14 and 2014-15; this person would be Assistant Chair in 2012-13. The Department of Genetics would therefore provide a nomination for a Chairman for 2015-16 and 2016-17 in due course. The committee recorded its thanks to the Secretary for negotiating this arrangement and to the Department of Pathology for being so accommodating.

## **662) REPORTED AND STRAIGHTFORWARD BUSINESS**

A paper of reported business had been circulated (**CM.798**). It included:

### **i. Faculty Board of Biology, Biological Sciences Committee**

Minutes of the meeting of the Committee held on 4<sup>th</sup> October 2012 (**CM.799**). The discussion on Part IB Classing, reported in Minute 458.02, was noted, and it was explained that the original proposition, and the way it is presented, was being revised. The suggestion was that candidates would be classed (and thereby ranked) within each subject, and that the overall merit would be the average of these rankings. This removes the need for a target distribution and allows for the difference between raw marks in biological and physical subjects. The committee noted that it would be pleased to consider this proposal once it had been agreed by BSC. It was queried whether an overall class was needed, but it was felt that this was the recognised University standard. It was agreed that the proposal would be best explained with some actual data and worked examples. The student member present noted that there would be student support for such a change in this area as choice of subject could be affected by perceived ease of obtaining a higher class in some subjects over others.

### **ii. Form and Conduct Notices**

A list of Form and Conduct notices for submission to the Reporter was circulated and noted. (**CM.800**)

### **iii. Notices:**

#### **Part III and M.A.St, Astrophysics**

On behalf of the Committee, the Chairman had approved the Notice listing the Courses available for examination in 2013. The Notice had been published in the Reporter of 7th November. (**CM.801**)

#### **Part III Experimental and Theoretical Physics and M.A.St in Physics**

On behalf of the Committee, the Chairman had approved the Notice listing the Major Topics, Minor Topics and types of further work available for examination in 2013. The Notice had been published in the Reporter of 7th November. (**CM.802**)

#### **Part III Entry requirements 2013 – 14 (amendment)**

A revision to the section on Consideration of Special Cases in the above notice was proposed in order to tighten procedures. A copy of the amended notice was circulated and agreed. (**CM.803**)

### **iv. Allowances to Candidates for Examinations**

The Committee noted the list of candidates to whom allowances have been made by Council in respect of examinations which were held in the Easter Term 2012:

### **Extract from The Reporter of 24<sup>th</sup> October 2012:**

The Council has made the following allowances to the candidates named below in respect of the examinations shown against their names which were held in the Easter Term 2012:

#### **Allowed the examination**

Gir, A. *K* Natural Sciences Tripos, Part IA  
Williams, J. *CL* Natural Sciences Tripos, Part IB

#### **Declared to have deserved honours**

Bransfield-Garth, C. *JN* Natural Sciences Tripos, Part IB  
Flewitt, C. *M* Natural Sciences Tripos, Part IA  
Hothersall, P. *CL* Natural Sciences Tripos, Part IB  
Lewis, R. *CTH* Natural Sciences Tripos, Part II (Chemistry)  
Nanwani, A. *JE* Natural Sciences Tripos, Part IB  
Potts, A. *T* Natural Sciences Tripos, Part II (History & Philosophy of Science)  
Readman, T. *DOW* Natural Sciences Tripos, Part IB  
Uludag, S. *DOW* Natural Sciences Tripos, Part IA  
West, H. *JN* Natural Sciences Tripos, Part IA

#### **Granted an allowance towards the Ordinary B.A. Degree**

Miles, A. *CL* Natural Sciences Tripos, Part II (Experimental & Theoretical Physics)  
Palmer, J. *CAI* Natural Sciences Tripos, Part II (Chemistry)

#### **Changes of Class**

Smith, M. *DOW* Natural Sciences Tripos, Part IA, Class I  
Fergusson, J. *M* Natural Sciences Tripos, Part IB to DDH  
Evans, N. *CL* Natural Sciences Tripos, Part IB Class II Division 2  
Kosinska, A. *M* Natural Sciences Tripos, Part IB Class II Division 1  
Mansfield, I. *TH* Natural Sciences Tripos, Part IB Class II Division 2  
Mykura, C. *F* Natural Sciences Tripos, Part IB Class II, Division 1  
Simon, D. *CL* Natural Sciences Tripos, Part II (Exp & Theo Physics) Class II, Division 1  
Marsden, A. *CAI* Natural Sciences Tripos, Part II (Chemistry) Class II, Division 1

#### **v. Redesign of NST webpages**

The development of the new University web page template would result in a re-organisation of the content on [www.cam.ac.uk](http://www.cam.ac.uk). The Committee noted that it was proposed to move the NST information on to a Falcon site which would mean that the content could be managed by either UCS or directly by the Secretary to the Management Committee. A new domain of [trijos.cam.ac.uk](http://trijos.cam.ac.uk) had been created and it was proposed that NST would use [www.natsci.trijos.cam.ac.uk](http://www.natsci.trijos.cam.ac.uk). The webpages would be restructured to comply with the new template but the content would remain as close as possible to the original. It was hoped that a prototype site would be ready by January 2013.

#### **663) ANNUAL REPORT FOR 2011-12**

A draft version of the Annual Report, which summarised the work of the Committee, was circulated (**CM.804**). The Committee was asked to send any comments by email to the Secretary so that the report could be circulated to the General Board's Education Committee and to Schools and Faculty Boards.

#### **664) PART IA PRACTICAL ALLOCATION 2012**

A report on the Part IA Practical Allocation was circulated (**CM.805**); it included data on numbers taking each subject and combinations of subjects. A summary of this year's allocation together with suggestions for the 2013 process were included for the Committee's consideration.

The improvements that had taken place for this year were noted, together with the list of issues that had arisen. The Committee discussed whether asking students for an early indication of their choices would be helpful. This year the electronic registration process had taken the form of data validation but there may be potential in the future for this to include a subject level record. It was felt that although students may make a preliminary choice, time for consideration and informed specialist advice was still needed to enable them to make appropriate decisions. The suggestions proposed for 2013 were considered. It was thought useful to request those Departments who were at, or near, capacity to consider whether action needed to be taken ahead of the start of the process. Physics had already considered running an extra slot on alternate Wednesdays. This information could be collected from Departments when other Part IA information was collected.

The risks outlined in the report made clear the need for any possible extension of the allocation window and after further discussion the Committee agreed that the deadline of Tuesday at midday should be brought forward to 10.30 am. It should also be made clear to Colleges that provisional data could be entered as soon as the system was open, and amended if necessary before the deadline.

Committee members involved in Part IA confirmed that they made no use of the split of practical groups within CamTools. All departments would be asked to confirm that this refinement could be lifted which would reduce the time spent entering data into CamTools. The Committee were content with the other suggestions proposed and for the current practice of making the email feed using Lookup to be explored further with a view to moving to a direct list of Cambridge EMAILs. It was additionally noted that, as from October 2013, Part IA Evolution and Behaviour would be available as an option for the new Psychological and Behavioural Sciences Tripos and that these students would need to be included in the process. **Action:** Secretary to relay the Committee's comments to CARET and to work with CARET on the implementation of the suggested improvements.

#### **665) PART II SUBJECT ALLOCATION 2011-12**

A report on the process was circulated. (**CM.806**) The Committee noted that the process had worked well and that no changes should be required for the forthcoming allocation, although a watching brief needed to be maintained on capacity in some of the physical science subjects.

#### **666) Tripos Examinations 2011-12**

##### **i. Part IA**

Professor Michael Carpenter's report in his capacity as Chairman of Examiners in Part IA in 2011-12 (**CM.807**) had been circulated for discussion. The itemised issues and recommendations were noted: provision of CRSIDs and a CamTools site would be continued; for clarity, use of calculators (whether allowed or not allowed) should be specified in the rubric for each examination; it was disappointing to learn that the role of assessors needed clarification and it was suggested that Senior Examiners should be reminded of their role in this respect; the reported lack of consistency of disability information was indicative of the complexity of the problem and the comment would be forwarded to the Student Registry; the comparison between Part IA and Part IB class targets would be discussed in connection with

the Part IB report - the Committee felt, however, that the classing criteria was clearly explained and well publicised; the complications arising from numbers of candidates sitting examinations in college was a perennial problem that had already been referred this year to the Board of Examinations.

The Committee thanked Professor Carpenter for his report.

## **ii. Parts IB, II, III**

Professor Jenny Morton's report in her capacity as Chairman of Examiners in Parts IB, II and III in 2011-12 (**CM.808 a, b, c**) was circulated for discussion. Professor Morton drew attention to the key issues which ranged from minor to major. The process, including the use of the 'c' factor had worked well this year as the statistics presented indicated. The impact of the major issue, arising from inaccurate marks being forwarded by certain subjects, was not as severe as it could have been and the overall scaling had not been affected. With a view to ensuring that basic mistakes were avoided, a list of checks would be provided for Senior Examiners. For some, these would be obvious but they would hopefully be helpful to those new to the process. The marking process was not made easier by the short period between the last examination, and the date for submission of results, and discussion took place on whether the date of the Final Examiners' meeting could be held some days later. This would have an impact both on the Part II Subject Allocation procedure and the Part IA examination process. In the meantime it would be helpful to advise relevant parties that the dates were under discussion.

The lack of security at Reprographics had been noted by several Senior Examiners and was a matter of concern. The student member noted that invigilators were not always proactive in putting candidates at ease – for example in the case of a fire alarm. The request for an explanation of the difference in classing in Part IA and IB was noted. It was felt that this may be explained by the fact that in Part IA the second category was undivided and that a direct comparison was therefore difficult. As discussions were taking place with regards to division of the second category and classing methods, it was possible that these discussions may result in a suggested change to the process which would remove the perceived differences. The Committee noted that no particular issues had arisen in the Part II or Part III examinations.

**Action:** Secretary to look at the possibility of changing dates for the Final Examiners' meetings and the Part II Subject allocation decisions.

The Committee thanked Professor Morton for her report.

## **iii. Statistics**

A paper showing classing of candidates in Parts IB, II and III of the Tripos compared with classes obtained in the previous year's examinations (**CM.809**) was circulated. This provided a useful indication on cohort progression. It was noted that Part III Systems Biology had a particularly high proportion of first class results and suggested that the Course Management Team should be asked to keep an eye on the number.

**Action:** Secretary to contact the Course Management Team for Systems Biology.

It was also noted that certain subjects in Part II showed aspects of grade inflation although the reasons for this was not known.

## **iv. Reports of External Examiners for the Tripos**

The majority of the reports had now been received by the Secretary and distributed to the Departments for their comments; in general, External Examiners were happy with the overall process. A summary of comments and responses would be prepared for the next meeting.

**667) NST Examination Web pages (CM.810), Penalties for late submission (CM.811), Guides for Senior Examiners for Part IA (CM.812), Part IB (CM.813), Parts II and III (CM.814), and Administration Timetable (CM.815)**

The revised Guides were circulated and the Committee was asked to approve the web pages, Guides and Appendices. The Examination webpages were noted, together with the proposed change to penalties for late submission. This essentially confirmed that zero marks would be awarded if a substantial piece of work was not submitted by the deadline. There was some doubt that all pieces of work were covered by the wording proposed and this should be reviewed.

**Action:** Secretary to check consistency for other pieces of submitted work and amend the text accordingly.

**Action:** Committee members were asked to send any comments on the Guides and Appendices to the Secretary.

The Administration Timetable, which provided a timetable of events occurring during the examination process, was noted.

**668) Chairmen of Part IA and Part IB,II,III Examiners from 2018**

A draft rota was circulated with proposals for Departmental rotation of the roles of Chairmen of Examiners for Part IA, and Parts IB, II and III from 2018 (CM.816). The current rotation of Chairmen of Examiners for the Faculty of Biology was circulated to help inform discussion (CM.817). The Committee was asked to comment on this proposal prior to further discussion at School Committees and Faculty Boards. It was explained that the proposed draft had been based on the previous rota and with reference to numbers of academic staff in each Department. Not all contributing Departments had been included. The Committee raised no objections to the draft as presented, but agreed that further discussion was needed by the Biological Sciences Committee and the Physical Sciences Undergraduate Education Committee. The rota needed to be viewed in conjunction with other rotas including those for Senior Examiners. In due course the draft rota could return to the Committee for further comment.

**Action:** Secretary to forward the draft rota to the School committees.

**669) National Student Survey 2012**

Data and anonymised student comments specific to Natural Science Tripos subjects were circulated. (CM.818) The General Board's Education Committee had requested that the data be considered and a brief response provided. It was suggested that it might be appropriate to consider the following: were the data as expected? Were they consistent with other internal findings? Did the data highlight or reinforce any areas for concern and if so, did the Committee intend to investigate or address these issues? The Committee was particularly encouraged to look at the questions where the scores were not so high and consider what improvements might be made.

The Committee agreed that, on the whole, most respondents in Natural Sciences were content. It was noted that the results on the clarity of marking and assessment information remained low but thought that this may indicate that student expectation based on their experience of A level is so different from that at University level. Feedback was similarly rated low and was consistent with the national response. There appeared to be variation in some scores which would have been based on the same information. Students were asked about their course as a whole and it was therefore difficult to pinpoint responses to particular years or subjects in some cases. Overall, the Committee felt that the big picture was positive and that students were being offered something that is of reasonable value. The Committee was asked to consider the points raised and forward their comments to the Chairman who would summarise them and

present the findings to the next meeting. This would be in time for comments to be forwarded to Educational and Student Policy in Lent Term.

**Action:** Members of the Committee to consider the points raised and forward comments to the Chairman ahead of the next meeting.

#### **670) Proposed Changes to Part IB Ecology**

The Committee was asked to consider the circulated paper **(CM.819)** which outlined proposed changes to Part IB Ecology with regards to the title of the course, the timing of the lectures and the arrangements for practical work. The Committee was content with the change of name and timetable, subject to agreement from the Biological Sciences Committee. Further work would need to be carried out in respect of the practical option proposed with regards to acceptance on the 'pink list' and provision of an alternative method of assessment to cater for students unable to attend either fieldwork session.

**Action:** Secretary to forward comments to Professor Clutton-Brock and the Secretary for the Biological Sciences Committee.

#### **671) CARET Year 1 Summary Report on Examinations**

CARET had provided a report on the Markbook project at the end of the initial phase. **(CM.820)** A summary, together with possible next steps to support the Examination Markbook system for NST, was presented. The Committee noted that, after gathering data and mapping the processes, CARET had concluded that the current use of a spreadsheet, such as Excel, was probably the only realistic mechanism to support the diversity of activity. CARET had therefore proposed to continue supporting the current spreadsheet process until major additional maintenance work was required, with a view to the support and knowledge of the process being transferred to another IT or administrative division over time. The Committee considered whether it should ask CARET to identify what changes would make the process simpler and potentially suitable for a custom software alternative. The support for the examination process was part of the intractable issue of administrative support for the Tripos. A different approach would require different support and would need consideration by and support from the two Schools in consultation with Educational and Student Policy. It was recognised that currently there was no safety net if problems arose. The Committee agreed that CARET should be thanked for their report and their offer of support for the current process which was gratefully accepted; it was hoped that elements of good practice could be drawn from their work so far and used to assist other subjects. The Committee urged the two Schools to consult with Educational & Student Policy of the subject of NST administration as a matter of urgency.

**Action:** Secretary to inform CARET, Educational & Student Policy, and the Secretaries of the Schools of Biology and Physical Sciences of the Committee's comments.

#### **672) Maintaining and enhancing the quality of supervisions**

A letter from the Chair of the Senior Tutors' Standing Committee on Education was circulated **(CM.821)** which set out recommendations for the on-going training of supervisors, and improving communication between lecturers and supervisors within Faculties and Departments. The General Board's Education Committee agreed to support the substance of the recommendations and to circulate the paper to Faculties and Departments who would be asked for a report on actions taken as part of the Annual Quality Update for 2013. The Committee noted the contents and was supportive of the intentions. It was felt that the paper may have more relevance for arts subjects, as supervisions in Parts IA and IB of the Natural Sciences Tripos were supported by handouts and the knowledge that supervisors could ask any lecturer for further information. In Part II, supervisions

tended to be arranged with those who could be trusted to support the student in the most appropriate way. Practice varied across Departments as to the training provided but there was generally strong support for the training of graduate students who acted as supervisors. It was felt that there was some uncertainty as to where the responsibility rested between the department and the college but agreed that the department should support the college in this area of provision. The Committee agreed that the main issue was to ensure that support was provided in the most appropriate manner.

#### **673) ANY OTHER BUSINESS**

A paper was tabled (**CM.822**) which proposed a change of name for Part II and Part III 'Experimental and Theoretical Physics' to Part II and Part III 'Physics'. Currently Parts IA and IB have the short title of 'Physics' and the long title for Part II and Part III was frequently modified to allow it to appear under 'Physics' in an alphabetical list. Additionally the boundary between 'theroretical' and 'experimental' physics was becoming blurred and other areas were emerging as a subject of study. The change of name would enable continuity across all years. The proposal had been discussed at the Physics Teaching Committee and with the Head of Department and students had been consulted. The Department would like the change to take effect from October 2013. The Committee was happy to agree to this straightforward proposal, subject to any Faculty or School approval. Upon completion of the approval process the Secretary would commence the process to change the regulations which would need to be submitted to the General Board's Education Committee.

**Action:** Secretary to advise the Faculty Board and the Physical Sciences Undergraduate Committee of the Committee's comments.

#### **674) DATE OF NEXT MEETING**

The next meeting would take place at 2:00 pm on Tuesday, 29th January 2013, Todd Hamied Room, Ground Floor, Department of Chemistry.