

GENERAL BOARD OF THE FACULTIES

COMMITTEE OF MANAGEMENT FOR THE NATURAL SCIENCES TRIPOS

Minutes of a meeting of the Committee of Management for the Natural Sciences Tripos held at **2.15pm** on **Tuesday 4 February 2003** in the Board Room of the Board of Graduate Studies.

Present: Dr J Keeler (Chairman), Dr W Allison, Dr S Hand, Dr N Holmes, Dr K Johnstone, Dr J Miller, Dr K Plaisted, Dr J Riley, Dr J Secord, Dr B Shachar-Hill, Mr K Shiels, Dr I Wilson, Dr N Woodcock, Dr MG Worster, Mr J Zwart and Dr MG Russell (Secretary).

Apologies: Professor TW Clyne, Dr A Findlay.

121. MEMBERSHIP OF THE COMMITTEE

A current list of members was received (**CM.167**) and the new members (including student members) were welcomed. Dr Plaisted is a new member of the Committee under category (a), in her capacity as representative of the Faculty Board of Biology, to serve until December 2005. Dr Secord is a new member of the Committee under category (a), in his capacity as representative of the Department of History and Philosophy of Science, to serve until December 2005. Dr Holmes is a new member, co-opted by the Committee to represent the teaching programmes of the Faculty of Biology, to serve until December 2003.

122. MINUTES

The minutes of the meeting held on 19 November 2002 were approved, subject to noting that Dr K Johnstone had been present.

123. MATTERS ARISING

i. Selection criteria for entry to read Part II and Part III Astrophysics (minute 112)

At their last meeting, the Committee expressed concern over the advertised criteria for entry to the Part III Astrophysics course. The revised criteria are now available on the NST website and were received by the Committee for information (**CM.168**). The Committee noted that the revised entry more accurately reflected the standards expected of students.

124. REPORTED AND STRAIGHTFORWARD BUSINESS

i. Preliminary Reading List for the Natural Sciences Tripos

The revised reading list was received for information (**CM.169**).

ii. Reporter Notice: revision to class list

A Notice in the Reporter, dated 15 January 2003, was received for information (**CM.170**).

iii. Revised NST website and Director of Studies mailing list

The Committee noted that the website has undergone significant revision and now included a section specifically for Directors of Studies and that the new URL for the site is <http://www.cam.ac.uk/natscitripos>

The Secretary reported that he was in the process of setting up a Directors of Studies mailing list, to be operated through the website. The list would be populated with names and email addresses from CAMCORS. **The Committee agreed that the list should in the first instance be an open list (i.e. any members of the group can post to the list) but that the emails should be monitored.** The Committee may consider restricting the list, or creating an additional list, in future for its activities and to communicate directly with Directors of Studies for information and consultation.

iv. Natural Sciences Open Days 2003

The Secretary reported that the Open Days will be held on 3-4 July 2003 in the Small Examinations Hall on the New Museum Site (this is a change of venue from last year). Further details were available on the NST website and a copy of this webpage was received for information (CM.171).

The Committee noted that the Open Days would be held in parallel with Open Days for Medicine and Veterinary Medicine), which are being co-ordinated through the office of the Faculty of Biology (and other Open Days and Departments will be invited to include a scheduled event lasting 30-45 minutes, which may be a tour of the Department, a sample lecture or another relevant activity. The Committee specified that such activities should be presented in both the morning and the afternoon.

125. CLASSING IN PART IA OF THE TRIPOS

At their last meeting, the Committee agreed to consider whether classing should be continued for Parts IA and IB of the Tripos. A paper (CM.172), by the Chairman and Secretary, outlining some of the issues relating to classing in Part IA was received for the Committee's consideration, along with a copy of the marking scheme (also available on the NST website) adopted by the Examiners and data illustrating variation in class distribution in Parts IB and II of the Tripos.

The Committee focussed its attentions on the value and process of classing at Part IA. During extensive discussion, the following points were noted:

the status quo

- + the current system had operated for a number of years, was robust and relatively transparent and allowed valid comparison between subjects and between years;
- it was unclear whether the drive for the abolition of classing was primarily due to strong objections to the adjustment of marks, or to the (relatively meaningless) further interpretation of detailed marks in defining a class;

adjustment of raw marks in individual subjects

- + the adjustment of raw marks (in its current form) provided strong calibration for the subsequent tracking of cohorts through the Tripos and that any alternative would need to provide a measure of performance for comparison and progression;
- + to achieve mark comparison between subjects, some adjustment of raw marks would be required;
- + the adjustment of raw marks to give parity between subjects was important to prevent students having any misconceptions over their relative performances in subjects which may be assessed and marked very differently; loss of parity may lead to an increase in students making subject choices based solely on their mark, particularly if some subjects gave significantly higher numbers of firsts;
- if there was no adjustment of marks to allow direct comparison between subjects, Tutors and Directors of Studies would need notes of interpretation (*i.e.* class distributions or class boundaries) for each of the subjects of the Tripos, which may be confusing;
- the adjustment of raw marks to fit the required class distribution and marking boundaries may not accurately reflect the assessment or assessment practice;
- the adjustment of raw marks by piecewise linear scaling (the current method) may distort individual candidates' performances and lead to differences in interpretation to ones that the raw marks may have provided.;

use of an aggregate mark

- + the purpose of Part IA of the Tripos was to expose students to broad areas of science, and that a combined assessment of performance (through a class or aggregate mark) was therefore appropriate;
- + some form of aggregate (or average) mark was required to prevent students from focussing only on those subjects they are likely to proceed in
- the *distribution* of marks (within a single subject) had a significant impact on the aggregate mark; subjects that used a broader range of marks would have more effect on the overall position of candidates in an order of merit list;
- individual marks may possibly be combined in other ways to take into account of variations in marking distributions and ranges;

the use of classing

- assigning classes may not necessarily provide additional information to marks in individual subjects;
- + a class may be determined by method that is relatively meaningless, but imparts a strong psychological incentive (or result) on candidates;
- + classes could be assigned to each of the subjects, rather than an overall class (*cf* Part IA of the Modern and Medieval Languages Tripos)
- + College Tutors and Directors of Studies require some indication of relative and overall performance and ability; classing was also used in references by Colleges;
- if classing were to be discontinued, an alternative scheme of defining a “pass” and a “pass with honours” would need to be determined; this could be based on passing an aggregate mark threshold, passing thresholds in many (or all) of the individual subjects or left to the Examiners to scrutinise individual cases. Those subjects using a broader range of marks would have more impact on these candidates in all cases;

other points

- poor performance of students in individual subjects was not a bar for further study at Part IB (except for Part IB Mathematics) and that decisions regarding student progression was largely the responsibility of individual Directors of Studies;
- there were separate issues to be addressed:
 - retention of class distribution quotas (or not)
 - retention of fixed class boundaries (or not)
 - combining separate subject marks (or not) and how this may be achieved
 - assigning classes to individual subjects, to Part IA of the Tripos as a whole, neither or both
 - what information would need to be provided in College markbooks for accurate interpretation of the marks

The Committee agreed that the Chairman and Secretary would consult with the Draftsman to produce a number of options for further consideration at their next meeting. It was further noted that Faculty Boards would be consulted before any proposals were finalised.

126. EXAMINATIONS 2002: REPORTS OF THE CHAIRMEN OF EXAMINERS

i. Part IA

The minutes of the first meeting of the Senior Examiners were received for information (CM.173). Dr Shachar-Hill reported that the meeting was straightforward, but that further discussion questioning the merits of classing took place.

ii. Parts IB, II, II (General) and III

The minutes of the first meeting of the Senior Examiners were received for information (CM.174). Dr Miller reported that the meeting was straightforward and that the new marking schemes were adopted. He further noted that steps had been taken to ensure that consolidated markbooks for Parts II and III of the Tripos would be compiled in an appropriate format.

127. ADMISSION REQUIREMENTS FOR PART IA PHYSICS

A late revision to the undergraduate prospectus for 2004-5 states that students may read Part IA Physics providing that

either they have read A-level Mathematics *and* A-level Physics

or they have read A-level Mathematics *and* A-level Further Mathematics, providing that it has a substantial element of mechanics.

Dr Needs, Secretary to the Teaching Committee of the Department of Physics had confirmed to the Secretary that the Teaching Committee had considered and agreed to this change and this was confirmed by Dr Allison at the meeting. **The Committee agreed that other publicity should be revised (i.e. website, Open Days) in the light of this change.**

128. PART II PHYSIOLOGY AND PART II PHYSIOLOGY AND PSYCHOLOGY

A letter, dated 23 January 2003, from the Acting Head of Department and additional supplementary notes of explanation will be circulated at the meeting (**CM.175**), outlining a proposal to rationalise the number of examination papers in NST Part II Physiology and its overlapping subjects. Overall, the number of papers produced by the Department will decrease from ten to seven, with no changes to the content of the courses. Additional changes to project submissions were proposed. **The Committee, for its part, approved the proposed changes and the publication of a suitable Notice.**

129. DATE OF NEXT MEETING

The next meeting shall take place at **2:15 pm** on **11 March 2003** in the Old Schools Meeting Room. **Please note the change in venue for this one meeting, and that entry would be more convenient by the door near the rear of the Senate House.**