

## Oxford University Department of Materials Academic Committee

**DMAC 58 Minutes of the Academic Committee** held at 2.00 pm on Monday 10 May 2010 in the Wolfson Meeting Room.

**Present:** Dr A. Taylor (AOT) (Chair), Dr J. Czernuszka (JTC), Dr J. Smith (JaMS), Dr S. Benjamin (SCB), Dr R. Todd (RIT), Professor C. Grovenor (CRMG).

**In Attendance:** Mrs C. McDonald (CM) (Secretary).

### 1. Apologies and Welcome

Apologies from Dr P. Nellist (PDN).

The Chair welcomed CM.

### 2. Report from the Chair of JCCU (CB)

CB reported:

- a. An improvement in the turn around time in the marking of practical reports, which was welcomed.
- b. In addition to the Teaching Excellence Award, the JCCU Best Lecturer competition will be taking place this term.
- c. A new lecture questionnaire has been approved by the JCCU, and will be distributed and trialed this term.

CB brought a proposal to the DMAC for the introduction of timetabled revision classes for Options courses. The committee noted that there is an anomaly in that collections are provided for General Papers, but not for Option Papers, but did not agree that a scheduled revision class would best meet the needs of the students. It was agreed that providing a small selection of questions and answers for options courses, which would provide specimens for of the different styles of questions that come up in options papers would be useful. CRMG offered to compile a selection of questions and answers. CB undertook to follow up on this issue at JCCU.

**Action: CRMG, CB**

### 3. Report from the Chair of JCCG (PK)

PK reported on the graduate response to the proposed increase in graduate fees. Graduates were of the opinion that the proposed increase could address the anomaly between the duration of studies and the duration of fee liability, but that the increased fee should be relative to the resources being used by the graduate. Graduates felt that the increase would have a negative effect on the recruitment of self-funded students. The committee advised PK that all points are still under discussion, and the wide-ranging ramifications are being carefully considered.

PK reported that he is working with Paul Warren to provide clearer guidance about available software on the Department website.

#### 4. Minutes of DMAC 57 (DMAC 58/1)

The minutes of DMAC 57 were accepted as a true record.

#### 5. Shortened Minutes

There were no confidential items to be removed from the minutes of DMAC 57 prior to publishing them on the Department of Materials website.

#### 6. Matters Arising that were not specific Agenda items:

##### \*From DMAC 57

**\*8. (i) Reports from Academic Committee** Advance notice had been given that a review of teaching over the whole University was in the early stages of consideration. This catalysed a discussion of the Department's teaching requirements and led to the question in respect of tutorial/class provision, 'do we over-teach?' The Committee wondered if students would prefer fewer assignments, using the time released to answer those assignments in more depth. It was decided to explore this question in the first instance at Tutors' Committee, recognising that data on the actual amount of tutorial teaching delivered by each college and the extent to which Tutorial Fellows were teaching more than their college stints would be an important input to the discussion.

**Action: JaMS, AOT**

#### In progress from previous meetings:

##### \*From DMAC 56

**\*Minute 4i Practical Class Marking** The JCCU were also concerned over the different styles of marking. The Committee felt there was a pedagogic argument to allow staff to mark practicals as they saw appropriate. However, students' expectations regarding different marking styles needed to be managed better. This could be covered in the briefings given by the PCO and SDs, was already included in the new 'Teaching, Study Skills & Learning Development' workshop, and AOT agreed to add a paragraph to the Handbook.

**Action: AOT**

**\*Minute 10 National Student Survey** Recognising the importance of not over interpreting the results from a survey which sampled only 12 students, albeit 50% of the cohort, the Committee noted with satisfaction that scores on several questions had improved significantly. However they had worsened regarding the clarity/provision of marking criteria and the promptness of feedback. Clearly one reason for the low score on the latter could be traced to the current issue of slow turn-around in the marking of practicals. The Committee agreed with the Chairman's suggestion that this year we solicit further information on the underlying reasons for the low scores on these two questions by an e-mail survey of all current students.

**In Progress: AOT**

**\*Minute 14 Prelims course - Introduction to Error Analysis** After some discussion, the Committee agreed that a small number of introductory lectures could be removed from the first year course to allow the provision of a 2h course on Error Analysis. JaMS agreed to consult with PRW and offered to teach such a course.

**Action: JaMS, AOT**

*[Secretary's note: action completed (JaMS, AOT)]*

##### \*From DMAC 55

**\*Minute 7 Consequences of failure of more than half of the written papers in FHS examinations** A proposal will be put to Faculty that to graduate with an honours degree in a Materials programme a candidate must pass at least half of the written papers.

**Action: AOT**

**\*From DMAC 54**

**\*Minute 11 Synopsis for New Yr 3 Option Prediction of Materials Properties (DMAC 54/5)**

FG presented a revised synopsis for the proposed new Option on Prediction of Materials Properties. The key amendments are (i) the removal of material on vibrational spectra as this topic is not covered from an experimental point of view elsewhere in the degree, and (ii) the removal of the lecture on Current Challenges which was felt to be too advanced.

It was noted that students will not have had any prior teaching on phonons (Lecture 6) and inelastic scattering (Lecture 7), and very little background on optical spectra (lectures 10 & 11). FG reassured DMAC that course was not intended to be about solid state physics theory, but aimed at relating modelling to experiments and about what can and cannot be done to inform experiments using the modelling techniques described.

Some concern remained about the volume of material in the course given the amount of necessary new introductory material, but DMAC approved the revised synopsis in general and asked FG to prepare a more detailed plan, for consideration in Trinity Term, bearing in mind the advice provided by DMAC and the Electrical and Magnetic Properties Review Group. CRMG, as Teaching Mentor, will offer to look at a draft set of notes / handouts for one of the lectures to provide guidance.

**Action: FG/CRMG**

[Secretary's Note following DMAC 54: JaMS has offered to share with FG his experience in working up the Yr 2 Quantum & Statistical Mechanics course.]

**\*Minute 17 Chairman's Report** It has been suggested by one member of staff that CAD should be included in the Engineering Drawing provided for 1st year Materials UGs. DMAC were supportive of this suggestion. Paul Bailey (Eng. Sci.) could make a five-hour CAD course available, but as an addition to the current five-hour manual drawing course rather than as a replacement for it. AOT will follow this up further.

**Action: AOT**

**\*From DMAC 53**

**\*Minute 6 Annual Report on PGR Matters – Admissions, Provision, Progression and Completion (DMAC 53/2)**

Completion: Oxford's completion statistics are not good within the national picture. Materials' statistics are not good in the MPLS context. There is no obvious grouping of students within the Department that is taking longer to complete. The HoD and AOT will, on behalf of DMAC, survey supervisors on why particular students might have taken longer than 4 years. **Action: AOT/CRMG**

**\*From DMAC 49**

**\*Minute 8 Examiners' Reports – Prelims** It was noted that on MS2 there were very few attempts to the questions on Electronic Properties, and that those were poor. It was believed that, historically, this has not been a popular area for students in examinations. As an important role of the Prelims examination is to provide evidence of understanding of the subject matter, there was some concern that preparedness for the electronic properties elements of Year 2 core papers was not being demonstrated. DMAC considered that it was not necessarily that students did not understand the subject matter, as mechanisms such as tutorials were in place throughout the course to enable tutors to monitor basic understanding, rather that this area was less inter-related to other subject areas so, given the format of the papers, the students chose to avoid answering those questions. Having discussed a couple of possible solutions, such as splitting the papers into sections, or alternating a question on Kinetic Theory with a Physics-based question each year. DMAC concluded that further data should be established to determine the exact trend in uptake of questions before proposing any further action. Statistics from the previous four years are to be collated for this, and to identify whether or not there are similar trends in other areas.

[Secretary's Note following DMAC49: JCCU have also expressed concern about the content and speed of 1st and 2nd year Electrical Properties courses. A working group will be set up to examine Prelims and core FHS provision in this area.]

The statistics were tabled at DMAC 50. They demonstrated (i) that the low attempt frequency on Elec Properties had occurred in most MS2 papers over the last five years and (ii) that there were certain topics on the other Prelims papers for which attempt frequency was also low. DMAC agreed to consider this in more detail at a future meeting. **Action: AOT/ICS**

[Secretary's Note following DMAC 53: A significant revision to the 1st year Electrical & Magnetic Properties course has been introduced for 2009/10. Attempt frequency for all Prelims topics will be considered again after TT10 examinations.]

**\*From DMAC 47**

**\*Minute 8 Regulation Change - Penalties for late submission of coursework and new deadline for submission of Part II theses**

This prompted a question about the Business Plans, as some students had been penalised by Proctors for missing the deadline: these students had sent work via the internal post before they left to go on the Industrial Tour. It was agreed that an explicit statement would be added to the handbook confirming that it was the student's own responsibility to meet deadlines and when submitting work to Examination Schools this should be done in person so the work can be date-stamped. DMAC asked if the submission deadline for the Business Plans could be moved to de-conflict from the Industrial Tour. PJM is to investigate dependent timeframes with the course lecturer. AOT reminded DMAC that a change in deadline would require a regulation change through Faculty. **In progress: AOT/LJFJ**

**\*Minute 9 Teaching Lab Access for Research Workers** DMAC considered the level of control that should be implemented to assist the Practical Class Technician and others in managing requests from researchers for access to the Teaching Lab. DMAC agreed that access should always be arranged in advance, that users must provide their own consumables, and that supervisors should endorse such requests, having judged whether or not the researcher is competent in using the necessary equipment. Pre-arranged and planned access should negate the need for out-of-hours access, and access during afternoon undergraduate practicals should be actively discouraged. All usage must be subject to having satisfied the PCT that adequate training has been received. A well-equipped metallographic outfit, including resources, is available at Begbroke and when access to the teaching lab is not possible / convenient suitably trained researchers should be referred there in the first instance. A proforma is to be drafted explicitly stating these rules. Any exceptional requests and/or difficulties are to be referred to CRMG. **Action: AOT**

[Secretary's Note following DMAC 49: Faculty were informed at the meeting in MT08. A proforma is to be drafted.]

**\*From DMAC 32**

**\*Minute 11iv Report from the Faculty - Guidance to Supervisors** AOT and CRMG will adapt the guidance from the EPSC. Andrew Watt, as part of his CDF duties, will assist in taking this forward, has been briefed by AOT and will produce a final version for DMAC in wk7 TT08. **In progress: AARW**

[Secretary's Note following DMAC 47: Update from AARW – he would still like to do this but workloads have prevented him from meeting the above deadline.]

**\*From DMAC 27**

**\*Minute 4 Report from JCCU Chair - Practical Classes** Possibility of submitting reports in word-processed format. JMS has provided a lead on information on software for the detection of plagiarism. AOT is investigating its use and attended a half-day workshop on plagiarism in June 2006. AOT noted that EPSC has now produced some guidance on plagiarism.

AOT reported that the University is now trialling plagiarism detection software called "Turnitin" in two departments (Law and Computing).

DMAC 45: AOT reported that MPLS had agreed to take forward his request that they ask for a progress report on this trial.

DMAC 48: AOT reported that the students had conducted their own survey to investigate whether or not the students would like to submit practical reports electronically. The results showed an equal split between those who would prefer to submit reports in a word-processed format and those who would prefer to continue with hand-written reports. DMAC was concerned that an electronic format could increase the risk of "cut and paste" plagiarism. DMAC also considered that there was benefit to be gained in completing hand-written exercises prior to examinations.

Whilst it was agreed that Turnitin would prove invaluable for large pieces of work, DMAC held the view that the markers could detect any similarity in reports within the year group, although admittedly not against previous years. It was agreed that any decision regarding electronic submission of reports should only be considered once further detail is known about "Turnitin". AOT advised that no update had been received from Division. CRMG will follow-up with the Proctors for details of progress with "Turnitin".

*[Secretary's Note following DMAC 54: It has been reported that EdC will shortly announce its approval of the use of Turnitin for some formative assessment.]*

**7. Proposal to extend the DPhil liability beyond three years**

**DMAC 58/2**

The committee was not enthusiastic about the proposed fee increase, and noted in particular:

- a. The negative impact that the increase in fee liability might have on sponsorships and grants from overseas governments, especially in light of the fact that other institutions do not charge fees beyond year three. It is a real concern that good students might be lost to other institutions.
- b. The lack of accurate economic costing information, without which it is not possible to give proper consideration to the proposal.
- c. The significant impact the increase would have on overseas students.

**8. Part II MS projects carried out external to the Department**

**DMAC 58/3**

The Chair reminded the committee that the current guidance to Part II students that are involved in projects external to the Department is that they are required to return to Oxford 'shortly after Easter', and that this vague wording was not desirable. The committee agreed that the wording of the guidance should be changed to read that the Part II students must return to Oxford 'shortly after Easter, but not later than Monday of 0<sup>th</sup> week of Trinity Term'.

An erroneous reference to the 'Faculty of Physical Sciences' was noted in the first paragraph under the Part II section of the Special Regulations for Materials Sciences, which requires correcting. Clarification is also required of the need to seek permission from the Divisional Board for a student to carry out an external MS Part II Project.

**Action: AOT**

## 9. Resources developed by the MPLS Maths Bridging Officer

**DMAC 57/4**

- i. DMAC considered a draft document offering Maths bridging advice for incoming undergraduates. It was agreed that, given the range in ability and level of Maths knowledge of incoming undergraduates, providing bridging advice would be useful. SCB agreed to liaise with the Bridging Officer to facilitate this. AOT agreed to provide SCB with the original email from the Bridging Officer, and SCB would take it forward from there, liaising with the other MMES lecturers and the Math Classes Organiser.

The committee provided the following feedback to the proposals made in the document:

- a. the introduction would benefit from being drafted in a more inclusive manner (i.e., less A-level centric and including, in particular, the needs of IB students);
- b. the resources must be tailored to Materials and to the MMES shared course;
- c. it would be useful if the Bridging Officer could find/create a test to allow incoming students to see if they meet the standard of Maths that is required.

**Action: AOT, SCB**

- ii. DMAC considered the value to research students of introductory courses in Bayesian Statistics. The committee agreed that it would be useful to provide research students with introductory courses to statistics in general, but felt that basic statistics courses would be more useful than Bayesian Statistics.

## 10. Introductory course on Design and Construction of Common Engineering Structures

**DMAC 57/5**

DMAC considered the suggestion made by two of the 3<sup>rd</sup> year UG students that an introductory course on design and construction of common engineering structures be provided, but was of the opinion that such concepts are best explained in context, and not in a separate course. It would be difficult to create a definitive list of all concepts to be covered. Moreover, students are encouraged to find these things out for themselves. CRMG undertook to report back to the students that the proposal had been considered, but that the issue will be dealt with by tutors addressing such queries as and when they arise, rather than by the provision of a specific course. **Action: CRMG**

## 11. Report from the Tutor's Committee

There was nothing to report as the Tutor's Committee did not meet this term.

## 12. Report from Divisional Committees

It was reported that, despite the lack of support, the application fee for graduate courses has been increased from £25 to £50. The recommendation from the Graduate Admissions Committee was that one application fee of £50 would allow application to three different Programmes of Study.

Some streamlining of the Divisional committees is being introduced, which will reduce the number of committees that individuals are required to attend, and by which issues must be considered.

The annual issue of student number planning has been raised by the Division. The definitive cap, which will be in place until 2013/14, is 19,400 students. MPLS is very close to reaching its cap. The only way that the admissions numbers could be allowed to increase is to improve the completion rate for current PGR students. Materials is permitted 27 research students for 2011/12, and 28 for the three years thereafter. The Chair will continue to make a case for the need to increase the student numbers for the department. **Action: AOT**

## 13. Chairman's report

The Chair had nothing further to report.

**14. Any other business**

- i. Election of new members:  
CRMG is prepared to continue to continue to serve. If no other nominations were received at Faculty, then one new member is needed vice PDN
- ii. It was reported that the department received two additional DTA studentships from the MPLSD DTA-CASE pool. This news was welcomed.

**Date of next meeting – 2.00 pm Monday 7 June 2010, Wolfson Meeting Room**