

## Oxford University Department of Materials Academic Committee

**DMAC 50 Minutes of the Academic Committee** held at 2.00 pm on Monday 2nd February 2009 in the Wolfson Meeting Room.

**Present:** MRC, DJHC, JTC, CRMG, PDN, JS, AOT (Chair), RIT.

**In attendance:** Karleen Dudeck (Outgoing JCCG Chair) & Geoffrey Otieno (Incoming JCCG Chair) (Items 1 & 2), David Lloyd (JCCU Chair) (Item 3), SGR (Items 1, 2, 10, 3 & 12).

**Apologies:** PJM, ICS

In order to accommodate other commitments for DL & SGR the following agenda items were taken in the sequence listed here: 1, 2, 10, 3, 12, 4, 5, 6 .... In the minutes recorded below the sequence of items follows that on the original agenda.

### 1. Welcome & thanks

The Committee welcomed the new Chair of JCCG, Geoffrey Otieno, to his first meeting and thanked Karleen Dudeck for her sterling efforts in this role over the last year.

### 2. Report from the Chair of JCCG (KD)

KD reported the thanks of JCCG for the positive developments in the provision of wifi access, printing, lockers and hot-desking at Begbroke and for the improvements to the minibus service.

JCCG are working with Ian Stone in an effort to improve the uptake by research students of teaching assistant posts for the practical classes.

There is concern that the December 2008 quarterly payments in advance of stipends for three final year DTA-supported research students were missed and that a similar omission had occurred for the September 2007 payments.

**Action: AOT to follow up with the Finance Officer**

[Note added after the meeting: Action Completed. AOT has followed up with Tim McAree and can report both that the two incidents had unrelated causes and that procedures are now in place that should prevent such problems in the future].

### 3. Report from the Chair of JCCU (DL)

During discussion of the results of the 2008 NS Survey of final year undergraduates, JCCU had identified that one possible contribution to the relatively poor scores under questions 7-9, which cover feedback, was the lack of feedback on collections. DL had followed this up with the materials undergraduate body and reported that some colleges provide substantial feedback and others very little. The newly instituted feedback classes organised by the Mansfield, Queen's Corpus Materials Group were commended, as was the feedback provided by SEH. The students contrasted the situation on collections with the detailed feedback that they had become accustomed to receiving on their mock exams whilst at school.

DMAC resolved to draw the attention of the Tutors' Committee to this issue, requesting that all colleges seriously consider providing feedback on collections and commending the efficiency of the QNS/MAN/CCC model for achieving this. **Action: LJFJ, JS to raise at TC**

JCCU were also concerned over changes to the normal schedule of lectures which resulted in a heavy lecture load towards the end of MT 08 (1st & 2<sup>nd</sup> years had commented on this) and had a

knock on effect on tutorials. AOT noted that the Tutors' Committee had also raised concerns about this, highlighting the lack of material for early tutorials if the start of term is light in lectures. He also pointed out that the Year One lecture schedule for MT08 was anomalous in that Prof Kirkland was away early in term and was unusually giving two long lecture courses; his own Thermodynamics lectures and, as sabbatical cover, Prof Cockayne's Crystallography Lectures.

DMAC agreed that it was undesirable for lectures to bunch up towards the end of term and proposed that (i) the normal lecture timetable be modified in order to give a higher weekly lecture load in the first half of each term (or part term in which lectures are given), (ii) unless an individual lecturer felt it inappropriate for a particular lecture course that the norm be to timetable lectures from a given course at two per week (possibly three per week for the courses comprising more than 8 lectures), and (iii) when a lecturer is unable to deliver part of a lecture course according to the normal timetable the default be that the lecturer concerned find an experienced colleague to take the affected lectures, and only where this is not possible would the normal timing of the lectures be altered. In all this, due care to be taken with regard to the timing of those courses that are pre-requisites for other courses.

**Action: AOT, JTC to raise at Faculty**

#### **4. Minutes of DMAC 49**

The minutes of DMAC 49 were accepted.

#### **5. Shortened Minutes**

Consideration of confidential items to be removed from the minutes to be published on the Department of Materials website.

#### **6. Matters Arising - that are not covered elsewhere in the minutes**

##### **A. Items from DMAC 49**

*\* Minute 4 Report from the Chair of JCCU (HB) –*

*i) Team Design Project Scheduling* JCCU was concerned that, due to concurrent commitments in Economics and Management, MEM students were disadvantaged by the timing of the Team Design Projects, even with the expected input of 75 hours reduced from 100 hours for the MS students. JCCU enquired whether the TDPs could be swapped with the Option Modules in HT. DMAC considered that the training load on the SEMs was too high at the beginning of MT to allow for these modules to be done then. DMAC agreed to investigate further with the Economics and Management faculties to determine amount of work being set so the total workload could be considered. It was discussed that it may be possible to reduce the contribution of MEM students to 50% and reduce marks proportionately but there were concerns about further reducing the Materials content in the programme.

**In Progress: AOT, PJM, ICS**

*ii) Foreign Language Provision* The Department currently funds a language option for MS students; a foundation course is studied in the first year with an assessed course continuing in the second year in place of the Business Plan. A further voluntary course is offered in the fourth year. JCCU reported that all 1<sup>st</sup> years would like the option to take a language course. DMAC considered that all 1<sup>st</sup> years should be allowed to take the language option, for which the Department would pay. However, DMAC felt it would not be sensible for 2<sup>nd</sup> year MEM students to take an additional language course, given the already heavy workload. The entry in the handbook will be revised to reflect this.

**Action: PJM**

[Secretary's Note following DMAC 49: DC has approved this suggestion, including the evening classes for those students whose timetable commitments prevent attendance during the day and subject to a firm commitment from the student to put in the required amount of study and attendance on the language course. However, at present registration on the evening (OPAL) courses is required in MT week 0, which is impractical for freshers. This problem will be explored with OU Language Centre.]

**Action: PJM**

**\*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.

**Action completed: PJM**

[Secretary's Note following DMAC49: JCCU have also expressed concern about the content and speed of 1<sup>st</sup> and 2<sup>nd</sup> 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**

**\*Minute 15 Chairman's Report, item (i) – Recording of practicals marks and lab attendance**

The improved procedures were due to be rolled out in MT 08.

**In progress: AOT**

[Secretary's note added after DMAC 50 – the draft procedure was sent out early in HT for comment by those involved ]

## **B. Items in progress from previous meetings (DMAC 27-48)**

*Comments on progress since DMAC 48 are shown in italics*

**\*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”.

**Action: CRMG**

**\*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 37**

**\*Minute 4ii 2<sup>nd</sup> Year Polymers**

DMAC 48: AOT confirmed that BJG had been approached with this request and had agreed to undertake this review. However, HEA had submitted an interim report following DMAC 47 in which she advised that she considered the 2nd Year Polymers material to be appropriate in content and that no changes were required. Revisions have been made to the 1st and 3rd Year material which HEA would like to review once examination results are known. It was queried whether HEA’s remit should cover tutorial teaching and DMAC concluded that, as HEA was conducting a large scale review of the Polymers material, tutorial teaching would be a part of this, together with the practical element. AOT advised that AJW had reported that the Polymer practicals were on a suitable pro-rata scale to fit with the lectures.

It was noted that the Polymers material was being taught by a team of 3: HEA, BJG and AARW. DMAC heard that students were now keener to take Polymers.

**Action: BJG/HEA**

**\*From DMAC 43**

**\*Minute 4i Report from the Chair of JCCU (AZ): Industrial Visits (DMAC 43/2)** CRMG agreed to explore with PJD whether an annual ‘Begbroke’ visit could be put in place that included spin-out companies and BegbrokeNano as a commercial enterprise.

**Action: CRMG**

**\*From DMAC 46**

**\*Minute 8 Employment Statistics (DMAC 46/5)** A survey of graduates taken 6-months after graduation was considered. It was noted that the report did not include any statistics for MEM

students. There was concern that the statistics showed a rate of 29% unemployment; in previous years 0% has been recorded in this category. The issue was raised as to whether or not the questionnaire had been revised leading to different types of responses being elicited from the leavers.

AOT will contact tutors to see how accurate these statistics may be, particularly regarding unemployment, as tutors are generally aware where their students end up. **In progress: AOT**

*[Secretary's Note following DMAC49 – Action completed. AOT has requested that the Tutors follow up with their students to assess movements after graduation. Further details will be advised once available.]*

**\*From DMAC 47**

**\*Minute 2 Report from the Chair of JCCG – Access to the Department Workshop** Following an action raised at a previous meeting, JCCG had drafted a proforma for applying for extended access giving details of the student, the supervisor, the project and an outline of planned workshop activities. JCCG will submit an electronic version of this. DMAC enquired as to the level of graduate students requiring extended access and whilst it was reported that this year the level had dropped due to the nature of projects undertaken, it was agreed that the procedure should be put in place to allow for an increase in the level of requests. **Action: DA**

**\*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: PJM**

**\*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 48**

**\*Minute 11 iii) Undergraduate Studies Advisory Panel** [Material removed from the minutes to be published on the Department of Materials website.]

[Further Secretary's Note following DMAC 49: The following release was issued by Undergraduate Admissions in November 2008:

*Approval of Engineering Diploma for entry qualification to Engineering Science*

*The Engineering Department has confirmed that it will accept the new Engineering Diploma for admissions purposes. This is the information which has been sent out in a press release, and which will also appear in the new prospectus:*

*"The department will accept the Advanced Diploma in Engineering (Level 3) for entry, provided candidates also obtain both an A-level in Physics and the new Level 3 Certificate in Mathematics for Engineering. These qualifications can be presented as the additional specialist learning component of the diploma. Offers will be formulated itemising performance in A-level Physics, the Level 3 certificate in Mathematics for Engineering, the Extended Project and the Principal Learning of the diploma on an equivalent basis with existing level 3 qualifications."*

*Access to HE Diploma for mature applications*

*Guidelines on the new Diploma for Access to Higher Education are being developed by the QAA. Details on the changes for the 2009 entry admissions round are available at <http://www.accesstohe.ac.uk>.]*

## **7. Student Surveys**

The Chairman commented that there had been a good response rate (17 of 25 possible) to the NS Survey of final year undergraduates and noted the good score for overall satisfaction with our programmes. He then summarised the key items of concern (NSS questions 5, 7-10, 15, 19 & 20), noting that earlier in the meeting the Committee had received from the Chair of JCCU helpful comments on the issue of feedback, and proposed that we should explore in more detail what specific aspects of these areas of concern were leading to the relatively poor opinions. After some discussion of the survey results, to this end DMAC agreed that the DoS should set up a student focus group. It was noted that the very poor response rate by Materials students to the OSCEQ survey meant it was of no value to us.

**Action: AOT, ICS**

## **8. Examination Conventions**

The Committee considered the 2007/08 Prelims Conventions and were content to recommend to the Chairman of the Moderators that these be adopted unchanged for the 2008/09 Examination. During further discussion it transpired that in recent years the Prelims Moderators had been expecting the Prelims lecturers to draft examination questions. DMAC confirmed that this was not the expectation and that, as stated in the Conventions, the Moderators were expected to draft the questions and then to consult with the lecturers on these drafts. DMAC further emphasised that it was the Moderators, not the lecturers, who were responsible for the accuracy of the final questions.

**Action: AOT to inform JLH**

The final versions of the 2008/09 FHS Conventions were provided to the Committee. The draft considered by the Committee at its MT08 meeting had not been changed in any substantial way by the Examiners.

*[Secretary's Note following DMAC 50: Action Completed (AOT). At the HT meeting of Faculty it was decided to modify the Prelims Conventions such that for 2008/09 onwards the lecturers are required to provide draft examination questions.]*

## **9. Undergraduate Joint Degree – Consultation by Division on a generic structure**

DMAC considered this paper and was content for the Division to take it forward, noting that the Department already offered one successful interdivisional joint programme (MEM) and had no plans at present to develop another.

## **10. Proposed Revision to 3<sup>rd</sup> Year Option Scheme**

SGR spoke to his paper, itself prompted by a discussion at Faculty in 2008, which outlined a means by which greater freedom of choice in the 3<sup>rd</sup> year Materials Options could be reintroduced. The proposal to reorganise the existing three 18h blocks of lecture courses per term into nine 12h freestanding lecture courses, to add one new 12h lecture course and to deliver five of these courses in each of MT & HT was warmly received and approved unanimously. Normally, students would be expected to study three of five courses each term, which is equivalent to the current Materials Options load of 36 hours of lectures per term.

After some discussion DMAC concluded that the following five courses be offered in HT and hence be available to both MS & MEM: Adv Eng Alloys & Composites; Metals & Alloys - processing, joining & shaping (previously melt processing + manufacture with metals & alloys); Semiconductor Devices (previously Optoelectronics + Semicon Devices); Biomaterials & Natural Materials; and Advanced Polymers.

After significant discussion of alternative means of assessment, and noting that at present 50% of the MS overall degree mark is derived from coursework, it was decided to propose to Faculty that the revised options be examined by means of two 3h open book written papers, one covering the MT courses and the other the HT courses. Each paper would be divided into five sections, one per 12h lecture course, and each section would comprise two questions. Candidates would be instructed to answer one question from each of any three sections and a fourth question drawn from any one of the same three sections. [AOT note added after meeting: a slightly more flexible alternative, that would accommodate those students who elected to attend four 12h courses, would be 'four questions drawn from at least three sections'].

Subject to Faculty's endorsement of this decision the following points were noted:

- (i) To introduce the revised scheme for 2009/10 would require the written consent of all MS & MEM students who had already embarked on their FHS.
- (ii) Subject to comments from Prof Pettifor and others in the MML, DMAC favoured adopting an extended version of the existing 8h PGR lecture course on Bonding & Structure as the 'new' 12h course.

**Action: AOT**

*[Secretary's Note following DMAC 50: Initial Action Completed (AOT). Faculty has approved the change in principle, for launch in 2010/11, and will consider the course content in detail at its TT09 meeting.]*

During the discussion of this item it was decided that if the revised scheme were adopted it would be timely to review our provision under the following courses: Semiconductor Devices, Optoelectronics, Electroceramics, Materials for Nanoscale Information Storage and Functional Nanomaterials. Together these comprise 36h of lectures and DMAC considered that some rationalisation might lead to a leaner, 24h variation. This would release 12h of teaching time which

might, for example, be assigned to a new 3<sup>rd</sup> year option on 'Energy Materials' (likely to include a significant nuclear component). A working party chaired by Jason Smith and comprising all the lecturers who give the abovementioned courses will be set up once Faculty's decision on the revised options scheme is known. **Action: JS, ICS**

### **11. Scheduling of Lectures**

This item was fully covered under item 3, matters raised by JCCU.

### **12. Word limit on Part II theses**

The Chairman of FHS Examiners for 2007/08 had suggested that DMAC revisit the question of whether we should reduce the word limit for the Part II theses. At its MT08 meeting DMAC declined to revisit this issue since it had only recently discussed it extensively: a discussion which led to the introduction in 2007/08 of a 120 page limit in addition to the 15,000 word limit and to the sharing of the Part II External Examiner role by both of our External Examiners. However Faculty at its MT08 meeting requested DMAC to reconsider this matter. There was detailed discussion of the accompanying paper that had been written by ICS in his capacity of Part II Organiser. Attention focussed in particular on the data in the graph of page count versus mark awarded, which showed that the introduction of a page limit had not impacted on the distribution of marks and that although the page counts were quite variable the highest was 104, rather than pushing to the limit of 120 pages. The Committee requested that a similar plot be compiled to show the distribution of the word count before and after the introduction of the page limit and that both plots be provided to Faculty at its HT meeting. DMAC resolved to recommend to Faculty that the page limit be reduced to 100 and, subject to the distribution revealed by the word count plot, the word limit to 12,000.

**Action: ICS, AOT**

### **13. Revised Lecture Synopses**

DMAC approved the revised synopses for Adv Eng Alloys & Composites and Manufacturing with Metals & Alloys. The principle change is from a 12/6 split of hours to 14/4.

### **14. English Language Provision**

DMAC noted the summary report that was the culmination of this matter and, noting that SD's were now instructed to inform the relevant Tutorial Fellow directly of any concerns they might have over a student's written English, expressed itself content with the provision.

### **15. Report from the Tutors' Committee (AOT)**

The Department's Admissions Group is considering the introduction of admissions tests. It is hoped to make a decision on this at the next meeting of the Tutors' Committee.

### **16. Reports from Divisional Committees**

#### **(i) Academic Committee (AOT)**

Assessment banding is likely to be introduced for all Grad student applications – the banding likely to be taken into account in short-listing for University & College funding. MPLSD are sceptical of the value of this, but it is supported by the other Divisions.

Departments have been requested to provide fuller information on 'teaching norms' in their handbooks. This includes tutorial contact, lecture contact etc.

Once again discussion is underway on 'Reducing the burdens on academic staff'.

The Continuing Education Dept has just presented its ten year vision document, which includes the aspiration to establish 25 new MSc programmes each with 50 part-time students enrolled.

Discussions continue over the Division's plans to establish a Graduate School, the most recent news being that the Dept of Physics has indicated that it does not support this plan. DMAC considered its view and concluded that although it was not convinced of the need for a Grad School it was content to see it established if that was the majority consensus.

Tension remains between the Division's desire to expand its research student numbers and the University's insistence on a cap on overall student numbers.

The University Education Committee (EdC, formally EPSC) has published another in its series of useful guidance notes, on the subject of Teaching & Learning. This is available at <http://www.admin.ox.ac.uk/epsc/guidance/>

### **(ii) Graduate Studies Advisory Panel (AOT)**

The Department has provided to Division research student number projections based on an average intake of 28 new students per year (this is simply the average of our intake over the last three years).

### **(iii) Undergraduate Studies & Access Advisory Panel (AOT)**

The Department has provided to Division UG number projections based on an average intake rising to 34 new students per year. 34 is simply the number of college places now available for MS/MEM, which we are more likely to be able to fill now that we are using the Open Offer scheme.

Following consultation last year on the use of bilingual dictionaries in examinations it seems likely that they will no longer be allowed. Materials was in the minority with our view that these dictionaries should be allowed.

There has been a suggestion that we move to August resits. DMAC expressed a very strong view that this would not be acceptable to the Department for its prelims resits.

## **17. Chairman's Report**

The Chairman drew the Committee's attention to (i) the essay writing competition being run by the University as a development from the new lecture series on Energy & Climate and (ii) the circular from Science Oxford requesting volunteers who would be willing to offer 1.5h 'public understanding' lectures. Staff and students as appropriate were informed by e-mail.

Following its special meeting to discuss the RAE results, and reacting to a comment by a Tutorial Fellow, DC considered whether it might be in the Department's interest if a greater fraction of tutorials were given by Grad Students and Postdocs, perhaps moving to 50% by academic staff and equivalent and 50% by temporary researchers. This idea was then considered briefly at Tutors' Committee who were happy in principle that this be explored further. Given the new push by the University & Division on reducing burdens on academic staff this is a timely topic. Although strictly a matter for colleges, such a move does have collective implications for Department & Colleges, including the Departmental admin support for recruitment, which the Tutors & DoS felt would be essential, the provision of training, the time that would be taken out from their research by the Grad & Post-doc tutors and the impact on recruitment of Grads & Post-docs to assist with Departmental teaching such as lectures, labs and schools liaison work. DMAC was content for this to be taken further, in particular to try to move to a situation where the Tutorial Fellows were not teaching above stint. Should the reduction go beyond this it was recognised that consideration

would need to be given by the Department to an equitable reduction in the additional duties taken on by ULNTF's.

**18. Any Other Business**

There was no further business.

The meeting closed at 5.25 pm.

**Date of the next meeting – 2.00 pm Monday 2<sup>nd</sup> March 2009, Wolfson Meeting Room.**