

## Oxford University Department of Materials Academic Committee

**DMAC 40 Minutes of the Academic Committee** held at 2.00 pm on Monday 26<sup>th</sup> February 2007 in the Wolfson Meeting Room.

**Present:** CRMG, KAQOR, DJHC, MRC, AJW, JMS, AOT (Chair).

**In attendance:** ICS (Secretary), MJC (Items 5,6&10), LJFJ (Item 10).

### 1. Apologies

There were no apologies for absence.

### 2. Minutes of DMAC 39 (DMAC 40/1)

The minutes of DMAC 39 were accepted.

### 3. Shortened Minutes

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

### 4. Matters Arising

#### 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.

**In progress: AOT**

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

#### \*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, and has been briefed by AOT and will produce a final version for DMAC in wk7 TT08.

**Action: AARW**

#### \*From DMAC 37

**Minute 4ii 2<sup>nd</sup> Year Polymers** JCCU reported that past exam questions do not reflect the lecture notes for 2<sup>nd</sup> year Polymer courses, in particular Mechanical Properties of Polymers, and that current 3<sup>rd</sup> year students intended to avoid questions on this material. AJW reported that the question on viscoelasticity on Paper 3 in 2006 had been popular and marks were not out of step with marks on questions on other courses, and thus did not reflect the concerns of the current 3<sup>rd</sup> year students. JMS noted that the course may have moved on and that past exam questions may not necessarily reflect the current course content. Subsequent discussion with HEA indicates that this is not the case. A working party (AARW (chair), HEA and BG) has been set up to review all polymers teaching in the undergraduate programme. The working party will report to DMAC by TT07.

**Action: AARW**

***Minute 10iv External Examiners' Reports (DMAC 37/8)***

(a) Total Scaling.

AOT suggested that to facilitate continuity and consistency of examination procedures, Academic Administration should provide the incoming Chair of Examiners each year with a briefing during Michaelmas Term. He will explore this with the Chairman of Examiners and then Faculty. The incoming and outgoing Chairmen of Examiners have responded positively to this suggestion. A paper will be presented to Faculty in due course.

This has been approved by Faculty. Action completed (AOT).

**\*From DMAC 38*****Minute 7v Part II Examiners' responses to the External Part II Examiner's Report***

*MS Part II page limit* It was agreed that a detailed discussion on the issue of a page limit for these should be held over to a future DMAC meeting.

[Note added. ICS will look at the practices for Chemistry Part II and make a proposal.]

**Action: ICS**

*MS Part II Project Management* It was agreed that the External Examiner's concerns that management of MS Part II projects was properly described for assessment should be met by ICS, as Part II Coordinator, providing guidance to students on making proper use of the fourth Project Management form which requires a free-text report.

**Action: ICS/SGR**

*MS Part II Supervisor's Reports* CRMG noted that, in contrast to Prof Derby's report, a previous external examiner had strongly guided the Examiners to remove consideration of the supervisor's report from the Part II assessment. SGR has specifically requested that supervisors are asked how much help they gave the student. AOT noted that PRW has also asked for guidance on how much time the supervisor should spend advising the student on the thesis. DMAC agreed that the supervisor's form should allow the supervisor to link the amount of help given to the student to the efficiency of a student, e.g. the student has received a greater amount of help because he has been efficient and well organised.

[Note added. Oxford supervisors of externally placed students will be requested to incorporate comments from the external supervisor.]

**Action: SGR/ICS/LJFJ**

***Minute 9 MS1 Polymers & Composites Course Content (DMAC 38/6)*** AOT noted that the lecturer and CRMG had met and had agreed that there was too much material in the Polymers & Composites course. CRMG agreed that material on the mechanics of fibre reinforcement is given elsewhere and should be removed from the course, but felt that material on non-polymer composites should not be removed because it is not given elsewhere. AOT will ask a working group, comprising HEA and AJW or RIT, to discuss the course material and provide feedback to DMAC at its meeting in week 7 of HT i.e. well before the course is given in TT.

Noting that the Department's complete polymers teaching provision was now under review, this action was superseded following discussion at DMAC 39 where it was agreed that subject to approval by RIT, the Material on the mechanics of fibre reinforcement would be removed. BG should be informed once RIT's views are known. RIT concurred with DMAC. Action completed (ICS)

***Minute 14iii Chairman's Report – Other*** The MPLS division have requested that departments introduce exit points at year 3 for all four year programmes. We currently have a year 3 exit

point of unclassified BA honours for MS, but nothing in place for MEM. AOT noted that this is strictly a matter for the E(M)EM Standing Committee, but would like DMAC to provide the Standing Committee with a steer. DMAC considered that an unclassified BA honours would be an appropriate year 3 exit point for MEM, and AOT/KAQOR/ICS will put this suggestion to the Standing Committee when the issue appears on its agenda.

Year 3 exit point for MEM has been approved. Action completed (AOT/ICS)

### **From DMAC 39**

**\*Minute 3i Report from Chair of JCCU – 1<sup>st</sup> year Introduction to Computing practical** 1<sup>st</sup> year students feel that the Introduction to Computing practical is in need of improvement or extension, particularly in the use of Excel related to later practicals. The practical is taken by PJW who splits the cohort into two groups and takes each for one afternoon. AOT noted that there is more time available on the timetable for the practical, and that it may be possible to ask OUCS to put on an Excel course specifically for 1<sup>st</sup> year Materials students. AOT further noted that some students also say that they are being taught material that they already know, and hence there appears to be a broad range of knowledge amongst incoming undergraduates. DMAC suggests inviting PJW to a JCCU meeting to discuss the practical.

**Action: AOT/LJFJ/AZ**

**\*Minute 3ii Report from Chair of JCCU – 3<sup>rd</sup> year options class feedback** 3<sup>rd</sup> year students feel that they are receiving insufficient feedback through marking of work for options classes. DMAC noted that students often hand work in with too little time for marking before the class. The issue of size of class was discussed: DMAC felt that this should be left to the discretion of the lecturer as some options are suited to small groups and some to larger groups with longer classes.

DMAC concluded that a minimum provision of feedback should be that where work is set and required to be submitted in advance of the class then it is expected that the lecturer provides feedback on the scripts prior to the class (this may be by handing out marked scripts at the commencement of the class). The lecturer can impose a deadline for submission to allow sufficient time for feedback to be provided. AOT will prepare a formal form of words.

**Action: AOT**

**Minute 9ii OSCEQ Results (DMAC 39/3) – MPS Divisional results** Arising from the discussion of the OSCEQ results DMAC agreed that Tutors/Senior Demonstrators should place more emphasis on writing skills in all work. DMAC suggested that writing skills is raised at the Tutors' Committee, incorporating feedback from the Queen's/Mansfield/Corpus Christi essay writing trial, to discuss if the issue can be dealt with within the tutorial system or whether the Department needs to make a formal provision. The Tutors' Committee should report back to DMAC in TT07.

**Action: LJFJ/Tutor's Committee**

Further to the discussion at DMAC 39 questionnaire returns from Materials Science students are now available (DMAC 40/2). There were 6 returns from MS students. Responses were negative on questions related to workload, motivation and enthusiasm, suggesting that only the weaker, less motivated students have responded and therefore that the results are likely to be distorted.

OLI is proposing to bring the timing of the questionnaire forward to HT which may result in a greater number of responses from MS Part II students who will be less fully occupied with writing their theses.

**\*Minute 15 Marking of Characterisation and Modelling Options Modules** Faculty has come to a decision on these matters (see minutes of Faculty HT07). Action completed (AOT/JMS)

*\*Minute 16i Any Other Business – Practical Questionnaire* The questionnaire is ready for implementation at the end of HT07. Action completed (ICS/AJW)

## 5. Recruitment & Widening Participation

### i. Schools Liaison Officer Annual Report (MJC) (DMAC 40/3)

MJC highlighted new activities during the past year:

- A symposium on materials science in the GCSE curriculum was held. As a result the UK Centre for Materials Education (UKCME) is running a project to provide GCSE level material in specific areas identified by teachers.
- Dave Hutton (supporting MJC 2 days/week in areas of curriculum development) has been working on a new departmental website for schools teaching materials.
- MJC has been in discussion with a small number of companies with the aim of trying to develop some marketable resources for schools, e.g. ferrofluids and plasticine/sand blends for mimicking the mechanical properties of steels.

MJC requests ideas for new, simple experiments that could be carried out in schools.

MJC noted that he recently circulated a request for projects for the Nuffield Bursary Scheme. He had had two replies to date, but would prefer to be able to offer at least three projects. He reminded DMAC that the scheme has been an effective instrument for recruitment.

### ii. Widening Participation

AOT reported from DMAC 40/4 (see item 6) that Materials still does not have a sufficiently high proportion of applicants from the state sector (the University has a target of 62%). It was noted that this follows a national trend for cross-disciplinary subjects for which there is no A-level, and so finding a local solution to the problem is likely to be extremely difficult. It was further noted that DMAC 40/4 showed that although the proportion of applicants from the state sector is relatively low, the success rate of applicants from that sector is high, as is the proportion who achieve 1<sup>st</sup> class degrees. It was suggested that such positive data could be used as a marketing tool to improve the number of applicants from state schools.

## 6. Admissions Report (DMAC 40/4)

AOT reported that at the time of the meeting there were 31 active offers in place, and based on recent experience the Department is likely to have 28 students entering in 2007.

## 7. Degree Class Statistics (DMAC 40/5)

AOT reported that EPSC now expects teaching committees to consider degree class statistics. There is new guidance from the MPLS Division that a similar proportion of 1sts and 2is should be awarded across the Division. Based on the three most recent 5-year rolling averages AOT noted that Materials awarded slightly fewer 1sts and significantly fewer 2is proportionally than other MPLS departments, although DMAC concluded that Materials is not significantly out of step. For 2006 alone the Materials figures are similar to the MPLS Divisional averages.

AOT informed DMAC that departments are increasingly being asked to consider if there is a gender bias in their degree results. DMAC 40/5 shows no evidence of gender bias: it is encouraging to note that unlike the University and MPLS Divisional averages, in Materials there is no significant difference in the proportions of men and women who achieve 1<sup>st</sup> class degrees.

## 8. Employment Statistics (DMAC 40/6)

We have been provided for the first time with the data from the Careers Service survey of recent graduates (6 months after graduation). DMAC was pleased to note that of the substantial

number that had responded none were unemployed. The data will be built up into 5-year averages as time passes.

## 9. Maths Review

AOT reminded DMAC that a Maths Review was set up because JCCU had suggested that there was an overload, but the working party had decided that no major changes were necessary particularly in light of a more positive view at the subsequent JCCU, when the relevant lecture questionnaires were analysed. AOT reported that the most recent lecture questionnaires again contain complaints that lecturers have to lecture too quickly because of the amount of material. He further reported that the Earth Sciences students are even more concerned.

AOT will meet with the Materials maths lecturers to discuss the issue, and in particular the following proposals made by Earth Sciences:

- The teaching of partial differentiation draws on thermodynamics for its examples, so could the teaching of this applied material be left to the Thermodynamics lecturer?
- Could the revision lectures be removed from the scheme to allow the main teaching to be spread out and be given at a slower pace?

AOT will also solicit feedback from current 2<sup>nd</sup> year students and from maths class teachers/tutors.

**Action: AOT**

DMAC concluded that if lecturers feel comfortable with the status quo, in accordance with the working party's conclusion, then no further action should be taken.

## 10. SENDA (DMAC 40/7)

*[Material removed from the minutes to be published on the Department of Materials Website]*  
SENDA legislation requires departments to have anticipatory measures in place. The Department has a number of students with dyslexia and related disabilities *[Material removed from the minutes to be published on the Department of Materials Website]*.

LJFJ noted that one of the regular complaints from students (not just those with specific learning difficulties) is that lecture handouts are difficult to read, and so compliance with the proposed Department SENDA guidance in DMAC 40/7 will be of benefit to all students and not just those with disabilities.

In the opinion of the Head of the Disability Office, the proposed guidance encompasses best practice. AOT intends to ask all Materials students with dyslexia and related disabilities for their opinions, to inform further amendments to the proposed guidance.

A detailed discussion took place and DMAC approved the proposal. AOT will take this forward.

**Action: AOT**

It was noted that there is still not good communication between students, colleges and departments about the declaration of disability. Although for undergraduates it is primarily the responsibility of colleges, the Department will ask students to declare any disabilities as part of the Department induction process.

[Note added. ICS has confirmed that the current Undergraduate Student Questionnaire completed by new students at the Departmental induction already asks students if they have any disabilities, including dyslexia, and whether their disabilities have been registered.]

## 11. General Scheme for 2007/08 (DMAC 40/8)

AOT presented the draft General Scheme, and highlighted some items of note:

- DJHC is hoping that his request for sabbatical in MT07 will be approved. AIK has agreed to give Crystallography and Diffraction in that case.
- CN wishes to remain involved in teaching and so remains on the General Scheme.
- AC will give the revamped Elementary Quantum Theory & Bonding.
- AARW will give Polymer Synthesis in place of David Bucknall.
- KAQOR will be on maternity leave in MT07, and GDWS will be asked to give Introduction to Processing in her place.
- CMB will return from maternity leave in MT 07.

AOT described the draft General Scheme for the agreed new 3<sup>rd</sup> year Options arrangements which will commence in 2007/08:

- Block A. Existing options related to Block A are Melt Processing (PSG), Origins & Stability of Microstructures (KAQOR/MLG), Advanced Engineering Alloys (GDWS) and Fracture (AJW) (AC will teach within Block A). It was not clear how the existing options map into this Block of the new options scheme. AOT will ask SGR (originator of the new options scheme) to convene a meeting soon after the end of HT07 with the lecturers concerned to discuss the balance of material in Block A, and to report back to DMAC in TT07.

**Action: AOT/SGR**

- Block B. Electroceramics will be a shortened version of the existing Electroceramics & Superconductors option (Superconductors will be removed). Information Storage Materials is a straightforward match to the existing option. Functional Nanomaterials will be a shortened combination of the two existing nanomaterials options. Semiconductor Devices will be given by JaMS and PRW, the latter in place of CRMG (it was agreed that a more appropriate course title might be preferred).
- Block C. The Engineering Ceramics courses will be shortened versions of the existing options courses. The existing Advanced Polymers course will be increased to 12 hours. AOT suggested asking Paul Buckley (Eng. Sci.) to give this course with HEA. DMAC agreed and this will be considered by the polymers teaching working party. The new Biomaterials and Natural Materials course will be an extension of the existing Biomaterials option.

**12. Report from the EMS Standing Committee (SGR/LJFJ)**

There was no business to report.

**13. Report from the E(M)EM Standing Committee (AOT/ICS)**

AOT confirmed that the proposed new Microeconomics scheme and the proposed 3-year exit point for MEM have both been approved by Faculty.

**14. Reports from Divisional Committees**

**i. Academic Committee (JMS)**

The following matters were discussed at DivAC:

- A review of the workings of the MPLS Division (research, teaching, admin).
- The Five Year Plan. The 4-year DPhil is still under discussion.
- Student Numbers.

- The cost of teaching. It was clear that there had been a range of interpretations of the Divisional template for the cost of teaching exercise. Teaching in Materials and Earth Sciences has come out significantly more expensive than other MPLS departments. It is unclear how much of this higher cost is due to the economies of scale for the larger departments. AOT reported that he will discuss the issue with his counterpart in Chemistry.
- Chemistry Review. Continuation of 2<sup>nd</sup> year examinations is under discussion in Chemistry.

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

There was no new business to report.

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

There was no new business to report.

**15. Chairman's Report**

AOT reported that Nick Jelley (Physics) has been asked to set up a working party to look at a Divisional energy theme, including undergraduate teaching and the possibility of a taught Masters degree.

**16. Any Other Business**

There was no further business.

**Date of the next meeting – 2.00 pm Tuesday 8<sup>th</sup> May 2007, Wolfson Meeting Room.** The meeting closed at 5.09 pm.