

University of Glasgow
Academic Standards Committee: 14 November 2008

**Departmental Programmes of Teaching, Learning and Assessment:
Responses to the Recommendations Arising from the Review of
Aerospace Engineering held on 10 May 2008**

The Review Panel commended the Department on the overall quality of its provision, its maintenance of standards and for its conscientious approach to the student experience and to research-led teaching. The Panel was pleased that the meetings with staff and students showed a positive atmosphere. The Panel is, however, concerned about student retention and the challenges the Department has experienced. The Panel acknowledges that steps have been taken to address student retention but was of the view that more action is needed, particularly given that it is a priority of University's Learning & Teaching Strategy. The Department also needs to review its approaches to teaching and assessment in relation to its main postgraduate taught (PGT) programme, and should bear these factors in mind when taking forward its plans to expand its portfolio of PGT programmes.

Recommendations

A number of recommendations were made to assist the Department in its evolution and development, all but one of these for the attention of the Head of Department. This report details progress on actions to address the recommendations.

It should be noted that, since the review was conducted, there has been a change in the Head of Department of Aerospace Engineering.

Recommendation 1:

The Review Panel recommends that the Department reviews the operation of the first year of the Aerospace Engineering programme to identify further opportunities to improve progression and student retention. This should include looking at how the Department might better support the student transition from school to University. The Panel observes that the development and introduction of the new Aerospace Systems degree programme will provide an opportunity to address the operation of its first year and any retention issues encountered with the Avionics degree. Such developments must be made in conjunction with the Dean's intentions to establish a common first year of teaching [Paragraph C.5.3.6]

For the attention of: The Head of Department

Response:

Following the positive feedback from students engaged in the LTDF funded mentoring scheme, the Department has reviewed its provision of pastoral support of students. Traditionally, this has been integrated with the advising system, however from session 2008-2009 the Department will be introducing a system of staff mentors, whereby all academic staff will be assigned a small number of new entrants to mentor, in particular during the crucial earlier years of the degree programmes. Mentors will liaise with year advisers as necessary, the latter retaining mainly the administrative duties associated with registration, exam boards, appeals, regulatory matters, etc.

Recommendation 2:

The Review Panel recommends that the Department:

- (i) *continues to monitor, investigate and take action in relation to courses with poor pass rates given the subsequent impact on Level 1 to Level 2 progression rates and overall retention rates.*
- (ii) *make it more transparent what its procedures are for monitoring and investigating poor grade profiles and what action has been taken as a result. [Paragraph C.3.3]*

For the attention of: The Head of Department

Response:

The Department does, and will continue to, monitor, investigate and take appropriate action in relation to courses under the control of Aerospace Engineering with persistently poor pass rates or poor feedback. A procedure is in place whereby a problem identified by the Annual Course Monitoring Committee will lead to an action on the appropriate committee member, usually the Head of Department (HoD). The HoD will discuss the matter with the relevant member of staff, and their mentor if a probationer. Such discussions will typically cover teaching methods employed, tutoring support levels, any systemic student weaknesses needing to be addressed which may be a particular factor for the course. The Maths diagnostic test was introduced due to such a perceived weakness in mathematical skills, and early indications are that it has had some effect in bringing this into sharp focus for students at an early stage. If the course is a service course, the HoD will liaise with the service department along the above lines. Indeed, currently we have a situation where 80 of the 120 credits of Level 1 teaching are service taught, either as part of a shared teaching arrangement (with Mechanical Engineering) or wholly provided by other departments. (Also see response to recommendation 12)

Recommendation 3:

The Review Panel recommends that the Department continue with the mentoring scheme and that it be made compulsory for all undergraduate students. [Paragraph C.5.2.3]

For the attention of: The Head of Department

Response:

Follow on to the mentoring scheme has been addressed in response to recommendation 1.

The student mentoring scheme as configured for the LTDF project has been superseded by a staff mentoring scheme, which runs in parallel with our advising system. This will enable mentoring of students to be extended beyond 1st year.

Recommendation 4:

The Review Panel recommends that the mechanism for providing student feedback on assessed work be reviewed to ensure that work is returned and feedback provided within timescales that support student learning and not be held back from students unnecessarily. [Paragraph C.3.6]

For the attention of: The Head of Department

Response:

The Department has sought clarification from the External Examiner regarding the retention of assessed material, and been informed that only samples of such material need be retained for QA purposes. Staff have therefore been informed that there is no barrier to returning assessed material to students in a timely fashion in addition to other feedback mechanisms which they currently provide.

Recommendation 5:

The Review Panel recommends that the approach to teaching on the MSc Programme in Space Mission Analysis and Design be reviewed so that it better supports student learning and that it is appropriate to postgraduate level study, whilst recognising the logic of incorporating appropriate Honours modules into MScs. [Paragraph C.6.1.4]

For the attention of: The Head of Department

Response:

The teaching and assessment scheme for the MSc has been reviewed in response to student feedback, and now includes an element of continuous assessment. The feedback has been more positive as a result of the changes. Course content from two Honours modules - Spaceflight Dynamics 4 and Spaceflight Dynamics 5 - is "reused" in the MSc programme. This is necessary as the two courses provide the required foundations in orbital mechanics and spacecraft attitude dynamics, upon which second semester courses rely. However, the assessment of these two courses is more demanding, and therefore appropriate, for the graduate students.

In terms of assessment method, the Spaceflight Dynamics and Spacecraft Systems courses have not been modified, and are each 100% assessed with a 2 hour exam. Mission Analysis and Design 1&2 have been merged into a single 20 credit course which is now assessed 100% as an individual project. Previously both courses were 100% assessed by a 2 hour exam.

Recommendation 6:

The Review Panel recommends that the assessment methods employed in the MSc in Space Mission Analysis and Design programme be broadened so that there is less reliance on examinations and that more varied assessment methods appropriate to postgraduate study are employed. [Paragraph C.3.4]

For the attention of: The Head of Department

Response:

Addressed in response to recommendation 5.

Recommendation 7:

The Review Panel recommends that the Department: explore with undergraduate students ways to improve attendance at tutorials; consider English language ability when recruiting international GTAs; provide GTAs with guidance on the approach to be taken during tutorials to student engagement and participation. [Paragraph C.6.1.5]

For the attention of: The Head of Department

Response:

The Department is in the process of reviewing the current arrangements for tutorial provision and attendance. This will involve liaising with service departments in some cases, with discussions being conducted over the coming months. The issue will also be raised at the first meeting of the SSLC of the new session. Staff recruit the most appropriate GTAs for the particular courses which they run, and typically meet with them prior to commencement of the course to discuss their requirements. All of our GTAs should have a level of English at least commensurate with the IELTS standard, however the English language abilities of GTAs will vary slightly from year to year, depending on the profile of graduate students/assistants in the Department at any given time. Staff are aware that they should consider this aspect prior to requesting the support of GTAs.

Recommendation 8:

The Review Panel recommends that the Department identifies a 'champion' to progress the development and rollout of Moodle within the Department, with relevant support and guidance from the Learning and Teaching Centre. . [Paragraph C.6.2.2(v)]

For the attention of: The Head of Department
Director of the Learning and Teaching Centre

Response: Head of Department

There has been some limited use of Moodle within the Department, and a member of staff has been identified as a champion to promote its further use by staff, and as our liaison with the LTC. Earlier attempts to expand its use were constrained by difficulties associated with IT support. Staff currently make extensive use of course web pages to provide students with access to course materials and information, and we have had no adverse correspondence from students regarding the current arrangements.

Response: Director of Learning and Teaching Centre

The Director of the Learning and Teaching Centre has been in contact with the Head of Department and is aware that a 'champion' has been appointed. The Director of the Learning and Teaching Centre has advised the Head of Department of the online guidance and face-to-face support available to assist the champion to progress the Department's development of the use of Moodle. Links to the following sources of information have been provided.

<http://www.gla.ac.uk/services/learningteaching/seminarsworkshopsandsymposia/moodleworkshopsforstaff/#d.en.10734>

<http://www.gla.ac.uk/services/learningteaching/learningandtechnology/moodle/moodlehowtos/>

Recommendation 9:

The Review Panel recommends that the Department review the appropriateness of the Head of Department chairing the Staff Student Liaison Committee, and that students are informed of post meeting actions taken in response to comments made or reasons given where action is not possible, to help close the feedback loop.. [Paragraph E.2]

For the attention of: The Head of Department

Response:

Students on the SSLC have been consulted over the chairmanship of the committee, and expressed satisfaction with the current arrangements, despite being offered the opportunity to change. Students reported their increased satisfaction regarding Departmental engagement with student issues to the RAeS/IMEchE accreditation panel during their visit in April 2008. For urgent matters, student reps are notified by e-mail of actions identified at the meeting, otherwise actions are reported at the next meeting of the SSLC.

Recommendation 10:

The Review Panel recommends that further discussions are held between the Heads of Department for Aerospace Engineering and Mechanical Engineering to explore improved use of the overall space allocation between the two departments so that the plans of the Department of Aerospace Engineering might be realised in the short term. [Paragraph C.6.2.2(iii)]

For the attention of: The Head of Department
Head of the Department of Mechanical Engineering

Response: Head of Department

Some discussion between the Departments has taken place, however joint action on this matter has been put on hold pending a Faculty review of space utilisation. The new Dean of Engineering indicated, on taking office, that a review of the system of space allocation and utilisation would be undertaken in the medium term, and some progress has been made in this regard (the proposed Faculty mechanics/structures lab in the James Watt building). At the same time the Department has sought to further optimise its space holdings, for instance by moving some laboratory activity to the Acre Rd site.

Response: Head of Department of Mechanical Engineering

Since the review took place in May 2007, a new Dean of the Faculty, Professor Frank Coton, had been appointed. As a result of his appointment talks are now ongoing about the use of space and resource allocation throughout the faculty. This has resulted in, for example, a proposal for a faculty-wide undergraduate materials testing laboratory being put forward. It is expected that as other areas of space utilisation are addressed further examples of cross faculty (and therefore Aerospace/Mechanical) consolidation and re-allocation will result. Discussion between the Departments of Mechanical Engineering and the Aerospace Engineering will continue to resolve any space issues as they arise in the context of Faculty-wide discussions.

Recommendation 11:

The Review Panel recommends that the Department investigate the inclusion of optional courses to increase the breadth of provision and address the expectation of the subject benchmark statement. [Paragraph C.1.2]

For the attention of: The Head of Department

Response:

The current system of arranging timetables departmentally across the Faculty has been a barrier to any significant expansion of options across departmental boundaries. One of the aims of the review of Faculty structure instigated by the Dean is to improve this situation. The opportunities presented by the recent appointment of new, younger academic staff has already led to an expansion of departmental options, and further developments will be considered on the basis of staff interests and workloads. With regard to non-technical courses the Department has undertaken a review of design teaching with a view to expanding on issues of quality, traceability, manufacturability and sustainability.

Recommendation 12:

The Review Panel recommends that the Head of Department approaches the Learning and Teaching Centre for support and guidance in addressing staff performance and development issues in relation to learning, teaching and assessment. [Paragraph C.6.2.1(iii)]

For the attention of: The Head of Department

Response:

The Department has a number of new, young academic staff members, all of whom have been attending the NLTP, and whose teaching is peer reviewed by their mentors. Issues associated with student feedback are discussed at the Annual Course Monitoring Review Meeting and, where negative student feedback and poor student performance are identified, the HoD will raise the matter with the staff member concerned. This is also an issue which would be raised in the annual P&DR process for staff. It should be noted that negative feedback is not always associated with deficiencies in staff performance, but often reflects the content of the more challenging course elements within the degree programmes.

However, where future ongoing staff performance issues can be identified, the assistance of the LTC will be sought.

Recommendation 13:

While recognising that the Registry does consult on the draft examinations timetable, the Review Panel recommends that the Registry, where possible, try to accommodate departments' requested changes to the examination timetable so that exams are held within a reasonable time frame that does not put excessive pressure on students. The Panel also recommends that the Head of Registry and Clerk of Senate consider holding more exams in the evenings to allow for some increased flexibility in the scheduling of exams. [Paragraph C.3]

For the attention of: The Head of the Registry

Clerk of Senate

Response: Registry

A review of the Summer 2007 examination timetable for Aerospace Engineering shows that examinations in the department were distributed as follows

7 between Tuesday 8 and Thursday 10 May
4 between Tuesday 15 and Friday 18 May
6 between Wednesday 23 and Friday 25 May
2 between Tuesday 29 and Wednesday 30 May

Provisional timetables are circulated to academic departments prior to publication and feedback sought. Efforts are made where possible to respond to requests from departments and spread examinations throughout the allotted period. However the need to balance the competing demands of different departments across the University, the constraints of the amount of available and suitable examination accommodation, together with a desire to minimise the number of evening and Saturday examinations mean that it is often not possible to provide departments with their ideal timetable.

Response: Former Clerk of Senate

The Acting Director of Registry has reported separately with regard to liaison with departments over draft examination timetables.

Following discussion with the Acting Director examination timetables for the winter and summer diets in 2006, 2007 and 2008 have been studied. In the winter diets of 2006 and 2007 there were 7 Aerospace examinations for Level Two students, and possibly one examination in an "outside" subject. Given that there were only 10 examination days it was inevitable that there would be a concentration of this number of examinations. At Levels One, Three, Four and Five there were fewer examinations and therefore the appearance of a more even spread of winter diet examinations. In the spring diet, Level Two students, in keeping with students in the other years of the programme, had fewer examinations and there was a reasonable spread over the four week examination period. In January 2008, Level Two students had 6 Aerospace examinations and a wider spread timetable.

During the period reviewed, Registry actively sought to avoid timetabling evening and Saturday examinations, following complaints from other departments raised at Senate about the difficulties posed by such arrangements.

The introduction of the new academic structure in 2008-09 and telescoping of the summer examination diet will necessitate considerable restructuring of the examination timetable, with

a return to examinations being held in the early evening and on Saturdays, and while every effort will be made to avoid the clustering of examinations for individual students, it remains to be seen whether this will overcome the problems highlighted in the Review.

Recommendation 14:

The Review Panel recommends that the Department considers the provision of desktop space for students to gain access to IT services either via a wireless network, or via network points. [Paragraph C.6.2.2 (iv)]

For the attention of: The Head of Department

Response:

The Department has continued to improve the IT facilities for students through a managed upgrade process of its computing equipment, in particular the undergraduate cluster. Furthermore, since the DPTLA review additional wireless access points have been made available to aerospace students on level 7 of the James watt building.

Recommendation 15:

The Review Panel recommends that the departmental website, which is a key resource for students, be updated on a regular basis to ensure that information is current and accurate. [Paragraph C.4.2]

For the attention of: The Head of Department

Response:

Over the period since the DPTLA review, web pages have been moved over to the T4 system, and an overall academic coordinator for web pages has been identified. In addition, a procedure is in place for staff to update course information annually.

Recommendation 16:

The Review Panel recommends that the Department looks into the possibility of acquiring a MATLAB Licence for use off-campus by students. [Paragraph C.6.2.3.]

For the attention of: The Head of Department

Response:

The Department has been in contact with IT services regarding the terms of the current site licence for MATLAB, with a view to extending this to cover off campus access. However, we have been informed that this option has been investigated and rejected due to prohibitive cost. It should be noted, however, that MATLAB is available on all University CSCE machines, including the Library, and therefore can be accessed across the Campus day and night.