

UNIVERSITY OF GLASGOW

Academic Standards Committee - Friday 29 May 2009

Departmental Programmes of Teaching, Learning and Assessment: Report of the Review of Department of Mechanical Engineering held on 25 and 26 February 2009

Ms Jane McAllister, Clerk to the Review Panel

Review Panel:

Professor Andrea Nolan	Vice Principal (Learning, Teaching and Internationalisation), Convener
Professor Andrew Moore	Heriot Watt University, External Subject Specialist
Ms Sophie Hall	Students' Representative Council
Professor John Davies	Department of Electronics and Electrical Engineering, Cognate member
Dr Laura Martin	Senate Assessor on Court
Dr Sarah Mann	Learning and Teaching Centre
Ms Jane McAllister	Senate Office, Clerk to the Panel

1. Introduction

- 1.1 The Department of Mechanical Engineering is one of four Departments in the Faculty of Engineering. It is active in research and teaching and its quality profile, as part of a joint submission with Aerospace Engineering, in the 2008 Research Assessment Exercise was 10% at 4*, 35% at 3*, 40 % at 2* and 15% at 1*, and a GPA score of 2.4. The Department provides taught courses at both undergraduate and postgraduate levels and is home to a number of leading research groups. These are part of a long tradition of cross-departmental research collaboration and interdisciplinary research between the Departments of Mechanical Engineering and Aerospace Engineering in particular, and between them, the two departments support five major cross-departmental research groupings in Dynamics, Fluid Dynamics, Materials, Rehabilitation Engineering and Systems and Control. The undergraduate courses provide the educational base for those who seek to become Chartered Mechanical Engineers. They are accredited by the Institution of Mechanical Engineers (IMechE) and are thus recognised internationally. The Department of Mechanical Engineering's teaching is underpinned by its research activity and its programmes are founded on the expertise of staff and close links with other departments, including the other Departments in the Faculty of Engineering and the Glasgow School of Art. In 2006, the Department received a Learning and Teaching Infrastructure Fund (LTIF) grant totalling £321,000. This amount was allocated across the Department's Laboratories and used to make significant improvements to the learning environment and facilities available. The Department is currently involved in

the establishment of a collaborative arrangement with the Management Development Institute of Singapore that will bring students into the later years of the Mechanical and Mechanical Design Engineering.

- 1.2 The Department last underwent internal review in April 2003. The conclusion of this review was positive and the Review Panel left with the impression of a well organised and managed department. Students were positive about their experiences and staff were engaged with the development and enhancement of learning and teaching. A number of recommendations arose from the 2003 review, set against an acknowledgement that the Department was functioning well. The Review Panel for the current Review noted the Department's responses to the recommendations that were submitted to Academic Regulations Committee¹ in February 2005². The Panel considered that, although the Department had provided the reasoning behind its responses, many of the recommendations had not been addressed in the spirit of enhancement in which they were intended. The Panel also noted that the process for scrutiny of responses by Academic Standards Committee had been strengthened considerably for reviews that have taken place since session 2004-5.
- 1.3 The Self Evaluation Report was prepared by Dr Donald Ballance (Head of Department), Dr Graham Green (Head of Teaching) and Dr J Howell (Senior Adviser of Studies). A draft of the report was discussed at a meeting of the Departmental Teaching Committee in September 2008 and subsequently Learning and Teaching Centre staff were consulted for advice in October. The Report was then made available to student representatives and discussed at Staff-Student Liaison Committees (SSLCs) in October. It was also discussed at an Industrial Liaison Committee (ILC) meeting in November. Circulation of the document was done mainly through Moodle which was also used to facilitate the gathering of comments. The Department stated in the Self Evaluation Report that the Report was amended in line with comments received, however, the undergraduate students who met with the Panel reported that they had raised an issue of accuracy with regard to meetings with Advisers that had not been taken account of in the final report (see paragraph 4.6.7). The report was then circulated for final comments to all departmental staff, including staff at Glasgow School of Art (GSA) and Graduate Teaching Assistants (GTAs). The Review Panel was impressed by the consultation process adopted and **commends** the Department for its approach.
- 1.4 The Review Panel met with the Deputy Dean, Dr Arthur Whittaker³; the Head of Department, Dr Donald Ballance; and the Head of Teaching, Dr Graham Green. The Panel met with 10 members of staff, 1 probationary member of staff, 3 Graduate Teaching Assistants (GTAs), 2 postgraduate taught (PGT) students and 8 undergraduate students representing all levels of the Department's provision.

2. Background Information

¹ Academic Regulations Committee was renamed Academic Standards Committee at the beginning of session 2005-06.

² It should be noted that the completion of the Report of the Review had been delayed until June 2004 and that the Department's responses were, therefore, submitted within the normal 12 month period after receipt of the report.

³ Dr Whittaker attended in place of the Dean who was away from the University on the days of the Review.

2.1 The Department has 22 members of academic staff, 44 in total, and is based in the James Watt (South) building.

2.2 Student numbers for 2007-08 are:

Students	Headcount	FTE
Level 1	122	122
Level 2	110	110
Level 3	90	70
Level 4	104	91
Level 5	44	44
Undergraduate Total	470	437
Postgraduate Taught	35	35
Postgraduate Research*	35	31.5

*(for information only - research is not covered by the Review)

2.3 The Review Panel considered the range of provision offered by the Department. The following programmes are available as Master of Engineering (5 years), Bachelor of Engineering (4 years) and Bachelor of Science (3 years):

- Mechanical Engineering (ME)
- Mechanical Engineering with Aeronautics (MEA)
- Mechanical Engineering with Electrical Engineering (MEE) – (recruitment ceased in 2006)
- Mechanical Design Engineering (MDE)
- Product Design Engineering (PDE)
- Mechanical Engineering (European Curriculum) (MEEC)

The degree programmes mentioned above, with the exception of the MEE, are accredited by the Institution of Mechanical Engineers (IMechE) and are due for re-accreditation in 2010. The MEE programme, which is no longer recruiting, has not had sufficient graduates to be accredited; however, students on this programme will be accredited on an individual basis. The Department intends to seek further accreditation from the Institution of Engineering Designers (IED) and from the Royal Aeronautical Society (RAeS) at that time. This action has been planned in response to requests from students who consider that it will improve the employability of the Department's graduates.

2.4 The Department also offers a range of postgraduate taught (PGT) degree programmes at MSc and PG Diploma levels. These programmes have all been introduced since the last internal review in 2003:

- Mechanical Engineering (commenced Sept 2005)
- Mechanical Engineering and Management (commenced Sept 2005)
- Mechanical Engineering with Desalination (commenced Sept 2008)
- Chemical Engineering and Management (commenced Sept 2008)

2.5 The Department accesses teaching from the Department of Management in the Faculty of Social Sciences; the Department of Chemistry in the Faculty of

Physical Sciences provides a major contribution to the Chemical Engineering and Management postgraduate taught degree programme. The Department also accesses teaching from Law, Economics and all of the other departments in the Faculty of Engineering

3. Overall aims of the Department's provision and how it supports the University Strategic Plan

- 3.1 The Review Panel noted from the Self Evaluation Report that the Department stated the aim of its provision as being to “provide the strong academic education needed to equip graduates with the broad range of skills a chartered engineer will need, both today and in the future, to meet the challenges of a diverse range of roles that might be taken, both at home and abroad”. The Department suggests in the Self Evaluation Report that its aim supports the University's strategic aim “to be renowned internationally for enquiry-led learning” by promoting through its programme aims and intended learning outcomes “a learning environment that enables students to develop confidence, independence, critical thinking, and understanding of mechanical engineering”. The Panel was satisfied that the evidence provided supported these statements although some work on the communication of these overall aims through programme specifications might be of benefit (see paragraph 4.1.2).

4. An Evaluation of the Student Learning Experience

4.1 Aims

- 4.1.1 The Review Panel noted that programme specifications were available for all of the Department's programmes and programme aims were clearly set out in all. The programme aims support the Department's overall Learning and Teaching Strategy and align with the Engineering Benchmark Statement and the Scottish Credit and Qualifications Framework (SCQF). The programme aims also meet the requirements for accreditation by the Institution of Mechanical Engineers and were supported by the Department's Industrial Liaison Committee.
- 4.1.2 The Review Panel noted some inconsistencies in the programme specifications for the Postgraduate Taught programmes particularly with regard to the expression of Intended Learning Outcomes (ILOs). The Panel **recommends** that all of the Department's programme specifications are reviewed and updated, where necessary, to ensure that they are consistent in format, and in the way ILOs are expressed. Programme Specifications should be written in a style that is readily accessible to students and other stakeholders and should clearly demonstrate how the ILOs align with the assessment of the programme (see paragraph 4.2.2). The Department should refer to guidance on Programme Specifications, ILOs and the Code of Assessment available from the Senate Office website and should seek advice from the Learning and Teaching Centre Academic Development Unit Faculty Contact.

4.2 Intended Learning Outcomes (ILOs)

- 4.2.1 The Review Panel noted that the aims and Intended Learning Outcomes (ILOs) for each degree programme are provided to students via the Undergraduate and Postgraduate (taught) Student Handbooks. They are also described by the lecturer at the beginning of a course and set out in course descriptions which are available from the Departmental website and through links in MOODLE. The Department, in the Self Evaluation Report, reported that student feedback indicated that these methods of communicating the aims and ILOs were satisfactory.
- 4.2.2 The first and second year undergraduate students who met with the Review Panel expressed the view that the ILOs did not become meaningful to them until the end of the course they related to. The students suggested that it would be helpful if the Department could provide further clarification on what activities each of the ILOs related to and how the ILOs would be used in assessment (see paragraph 4.1.2). The Panel considers that the information currently provided to students on ILOs is good but suggests that the Department improves the clarity of the information on ILOs for students by identifying which ILOs relate to which activities, either in the Handbooks, course descriptions or at the beginning of each activity. The Panel **recommends** that the Department ensure that the information provided to students on ILOs explains clearly how assessment activities, both formative and summative, align with the ILOs (see paragraph 4.1.2).

4.3 Assessment, Feedback and Achievement

Feedback on Assessment and Achievement

- 4.3.1 The Review Panel noted from the Self Evaluation Report that the Department made use of a wide range of mechanisms to provide students with feedback on their academic achievement. The Panel also was aware that responses on assessment and feedback obtained through the National Student Survey (NSS) had indicated significant concern of students in this area: only 44% of students agreed that "Feedback on my work had been prompt"; 31% had agreed that "I have received detailed comments on my work; and 43% agreed that "Feedback on my work has helped me clarify things I did not understand. The Head of Department reported that, in the past, the Department had not been clear on the format and types of feedback it was offering to its students and that it had recently become apparent through the NSS and First year Student Experience Survey that students were not fully aware of the feedback opportunities they were experiencing. The Department accepted that it needed to improve on the communication of what students could expect in terms of feedback and had agreed that, from the beginning of session 2009-10, a statement would be included in all course descriptions regarding the particular feedback opportunities available for that course. The staff who met with the Panel were aware of the need to help students recognise when they were being given feedback and commented that simply stating "I am giving you feedback now" might be useful. The Panel **recommends** that the Department implements further additional or improved mechanisms for increasing student awareness and understanding of the opportunities to receive feedback that are offered by the Department. The Panel further suggests that the Department consult students to determine the most valuable types of feedback. This should be done to ensure that students are able to obtain maximum learning benefit from the feedback they receive and

to ensure that the responses the students give to assessment and feedback related questions in student satisfaction surveys are as informed, and therefore as useful, as possible.

- 4.3.2 The Department's courses all involved tutorials that were described as problem solving sessions normally involving around 30 students with the lecturer and several demonstrators. The Department's view was that the discussion and feedback provided during these tutorials was a key element of feedback on learning. The first and second year undergraduate students who met with the Review Panel agreed that tutorials provided a very good forum for informal feedback and the third, fourth and fifth year undergraduate students who met with the Panel confirmed this, adding that the tutorials were as useful as the effort students put into them. The Panel **commends** the Department for its valued and effective tutorial provision.
- 4.3.3 The Review Panel asked the students with whom they met what other forms of feedback on assessment they received and heard that there were not many opportunities to hand in work for feedback on progress. It was reported that, for examinations, they only received their marks but that laboratory reports were returned with comments. The Department had considered the potential to return all examination scripts to students in the early years of the programme. However, concerns had been expressed that this could create problems of students comparing solutions and questioning the marking decisions. The staff who met with the Panel also noted that a significant opportunity for feedback had been lost with the removal of class exams during semesterisation. However the emphasis on other opportunities (such as tests and quizzes on Moodle) had been increased to compensate.
- 4.3.4 The Review Panel had noted from the Self Evaluation Report that the summative assessment of Mathematics and Engineering Science courses was based on examinations and asked the third, fourth and fifth year undergraduate students with whom they met whether they preferred a balance that favoured more continuous assessment or end of year examinations. The students responded that they would prefer increased amounts of project work. The issue of increased project or practical work is discussed further at paragraph 4.4.7 below.
- 4.3.5 The postgraduate taught students who met with the Panel were also asked for their views on the balance of assessment methods. They reported that some of their courses were assessed solely by examination, which they believed was not optimal. Members of the Panel noted that this was a particular concern for students who were new to the UK University System. The staff who met with the Panel explained that the material in such courses was particularly suited to being assessed by examination. The students were concerned that a judgement based on their performance on one occasion could be detrimental if they happened to be feeling unwell on the day of the examination or had other circumstances that prevented them performing to the best of their abilities. The Panel **recommends** that the Department review and amend the assessment of its postgraduate taught programmes to ensure that all provide a range of assessment methods.

4.4 Curriculum Design, Development and Content

- 4.4.1 The Review Panel noted the significant activity in the development and introduction of four postgraduate taught programmes since the last internal review in 2003 and the successful recruitment of a cohort of 35 students. The

postgraduate students who met with the Panel were satisfied with their experience so far and reported that there was a good sense of community amongst the cohort. The staff who met with the Panel also agreed that the increased numbers of postgraduate taught students in the Department was beneficial despite the financial gains from tuition fees being shared with the Faculty.

- 4.4.2 The Head of Department reported that the Department had made use of some existing MEng undergraduate modules in the design of the postgraduate taught programmes as they had, initially, been unsure of the level of demand. He reflected that there were some issues regarding the differentiation of the MSc and MEng programmes in terms of how they respectively map onto the Scottish Credit Qualifications Framework and noted that it was an area of challenge for the future. The lack of clarity with regard to the differentiation between the MSc and MEng programmes and its potential for affecting recruitment to the MSc programmes, i.e. that students who had completed an MEng had no interest in progressing to a postgraduate taught MSc, had also been a concern for the Review Panel. The Department was encouraged to monitor the situation in partnership with the student community. The postgraduate students who met with the Panel were aware that they shared some classes with fifth year undergraduates but had not encountered any problems thus far, e.g. with the pace of the course.
- 4.4.3 The Review Panel asked whether an MSc programme focussed on Rehabilitation Engineering was under consideration, since this was clearly a research strength of the department and source of staff expertise. The Head of Department stated that the Department favoured a measured approach to introducing new programmes and did not envisage having an MSc programme in each research area. He reported that the Department had only recently introduced the MSc in Chemical Engineering and were now considering the possibility of a programme focussed on Automotive Engineering. With regard to an MSc in Rehabilitation Engineering, it was recognised by the Head of Department that there was potential in the Department to offer such a programme but no enthusiasm for proceeding due to a perceived lack of demand from Industry.
- 4.4.4 The Review Panel discussed the Department's decision to end recruitment to the Mechanical Engineering with Electrical Engineering programme and heard that recruitment had been disappointing since the beginning of the programme in 2002. This was attributed, by the Head of Department, to the preference of industry for specialist engineers rather than for graduates with a broader knowledge base. It was noted that the programme had initially attracted excellent students and the Head of Department indicated that the potential of such a programme might be revisited through an exploration of what adjustments might make the programme more appealing to students and to industry. It was reported that an undergraduate programme in biomedical engineering was under development and in which the Department of Mechanical Engineering was collaborating with the Department of Electronics & Electrical Engineering and the Faculty of Biomedical and Life Sciences. This particular area, under the influence of a particular member of staff, was becoming a strength of the Department and an area in to which it was believed good students would be attracted.

Management Studies

4.4.5 The undergraduate students who met with the Review Panel expressed considerable dissatisfaction with the relevance to engineering of the current provision and content of management courses, and expressed concern about the quality of the teaching. They were aware that there was a requirement from the IMechE that accredited programmes contain an element of management studies and that the Department was exploring potential improvements or alternative provision. The students also reported that the textbook for the course was supplemented by online material and that it was necessary to purchase a new copy to obtain a working access code. The Panel was concerned to hear that the lecturer of the course was also the author of the textbook and considered this to be inappropriate. The Head of Teaching reported that he had met with the Department of Management and, so far, had had a good response with regard to improving the courses provided for fourth and fifth years: it had been agreed to resolve issues with the later years of the programme first. Consideration was also being given to reducing the number of credits devoted to management studies and to the potential for combining management or professional studies with project work or the First Year Interest Groups. At Faculty level, some initial development work was being done with the assistance of staff from the Learning and Teaching Centre to explore the potential for the First Year Interest Groups to be developed into a new, credit-bearing course. The Panel **commends** the Department for their attention and responsiveness to student feedback in relation to the provision of management courses and **recommends** that the Department and Faculty as a matter of priority continue to pursue a means to satisfy the requirements of the IMechE for management or professional studies in a way that is relevant and satisfying to the students throughout the programmes. The Department should also continue to monitor student satisfaction with the provision as changes are implemented.

Research Led Teaching

4.4.6 The Review Panel was interested to hear how the Department's research activity influenced and informed its teaching having noted that one of the Department's research strengths, Rehabilitation Engineering, did not appear in the curriculum. The Head of Department reported that a course entitled "Advanced Control Engineering" effectively covered the subject area of rehabilitation engineering. He explained that the process for changing the content of the course was less onerous than proposing an entirely new course and, therefore, the title of the course had remained the same despite incremental change to the content. The Panel **recommends** that the Department address this apparent anomaly and reconsider whether the title of the "Advanced Control Engineering" accurately reflects the course content and take forward the appropriate approval procedures to make the necessary changes. Consideration should also be given to whether there are any other courses in a similar position within the Department's provision.

Project and Practical work

4.4.7 At various points during the discussions and in the documentation provided for the Review, it was noted that students frequently requested increased opportunities for practical and project work. Some of the third, fourth and fifth year undergraduate students who met with the Review Panel reported that they were about to finish a group project. All of those involved felt that it had been a good experience but were disappointed by the focus on design rather

than build. The Postgraduate students who met with the Panel also expressed a wish for more practical experience, industrial visits or other liaison with industry. The staff who met with the Panel pointed to the difference between education and training and stated that the Department's emphasis was, as it should be at University level, on education in the theory of engineering subjects. However, the desirability of more project/practical work was recognised by the staff and the Department was taking all steps available to it to provide as much practical work as its current budgets for staff time and laboratory space would allow. Staff expressed the view that, no matter how much practical work was included in the programme, the students would always request more. The Panel encourages the Department to offer more practical or project based work, particularly in the later years of the undergraduate programmes and in Masters level programmes, which would allow students to experience the process from design through to build. It was reported that it was easier to provide practical work in some areas of the subject than others. The Mechanics Club was set up by the Department to offer more opportunities to gain practical experience and the Formula Student Project also helps to provide additional opportunities. The Department also encourages students to gain experience of manufacturing process etc through vacation work and placements. The Department provides students with information on companies that will offer vacation work and other opportunities for placements and projects, including those available through the Careers Service's Club-21 placement scheme, through a Moodle forum

4.5 Student Recruitment

- 4.5.1. The Review Panel noted the relative success and retention of students who had been admitted with low entry qualifications in the past. The Panel noted that the number of students being recruited to Engineering has been a problem and that the Department and the Faculty had agreed to a lower entry tariff to improve the number of students recruited. However, it has now been recognised that this policy has affected other problem areas, such as student retention and progression, and it has now been agreed that the tariff for entry, in particular the need for good achievement levels in maths, will be increased as part of a Faculty wide policy. The Department's response to this issue is discussed further at paragraph 4.6.4 below.
- 4.5.2 The Review Panel was pleased to hear from the postgraduate taught students with whom they met that they had chosen the University of Glasgow because of its international reputation. They considered that this reputation would be important for them and their future employment prospects. They also expressed a view that the desalination programme was a unique attraction. The students reported that their experience had matched their expectations.

4.6 Student Progression, Retention and Support

Student Retention/Progression

- 4.6.1 The Review Panel asked the Head of Department for his views on the Department's performance with regard to student retention; the data presented to the Panel as part of the documentation had indicated lower than University average levels of student completion and somewhat disappointing levels of year 1 student continuation. The Head of Department noted that this issue has been a significant priority for the Department for many years. He reported that three sets of issues had been identified in the Department. The

first of these was lack of student engagement at an early stage, which was reflected in poor year 1 continuation rates and low progression rates from year 1 to 2. The second set of issues related to those students who progressed to year 2 but with some difficulty. These students often continued to struggle, hampered by the need to catch up throughout year 2 and onwards and were thus susceptible to drop out before completion. The final set of issues related to those who attended only compulsory components of the programme and did not complete other work.

- 4.6.2 The Review Panel noted that the Department had undertaken a number of initiatives to improve retention. The Panel **commends** the Department on its efforts in this regard, particularly in relation to Level 1, and encourages the Department to monitor closely the impact of such initiatives on student continuation and retention data. The Panel discussed the impact of these further throughout the meetings with students, staff and the Head of Department.
- 4.6.3 The Head of Department reported that the First Year Interest Groups were very valuable for those students who participated fully. They were also very valuable for the fourth year students who were involved as mentors. The Head of Department expressed the view that he was keen for this initiative to continue and reported that the Department was considering introducing some credit bearing element to encourage students to engage fully [see paragraph 4.4.5 above], as some students did not engage well with these. The first and second year undergraduate students who met with the Review Panel expressed the view that there had been some disorganisation within some groups where people had dropped out part way through. However, they regarded the activity as much more worthwhile than the management course.
- 4.6.4 The Head of Department reported that the entry tariff would be significantly increased for the 2010 intake, particularly in relation to achievement in mathematics. This had been done in response to University data analysis which provided evidence that students who began their University studies with higher grades were more likely to complete their degree. This conclusion was further supported by a report by the Sutton Trust which showed a strong correlation between entry qualifications and student retention. The Department hoped to see a positive impact on retention as a result of increasing the entry tariff, as they believed the current and previous tariffs to have been set at a low level, especially for those students taking A-levels.
- 4.6.5 It was reported that the Department was experimenting with early assessment and attendance monitoring in Mathematics classes to identify students who were struggling in first year at an early stage. The Review Panel asked the staff with whom they met if there were any other formal mechanisms in place to identify students having difficulty with the work. The staff responded that there were no specific mechanisms. The Head of Department informed the Panel that formal interviews at the beginning of the session for years 1 to 4 were being considered. The purpose of these would be to establish whether individual students were attending and to identify and deal with any potential problems before they became unmanageable.
- 4.6.6 It was noted that an element of the non-completion rate was contributed by those who were not in attendance past the first week of their first year and that this could be improved by identifying and removing them from the student records system before the census date in late November. It was reported that the Department had used new texting facilities to identify first week leavers in

October 2008. Noting that a student who had effectively withdrawn would not be checking their student email, it had been suggested that the texting approach was more likely to achieve a good response. The Department was involved in the University's pilot of this approach and contributed to a report submitted to Education Policy and Strategy Committee. The staff who met with the Panel confirmed that they had had a good response from students who were otherwise out of touch. The Review Panel asked if, at least some of, these students had simply made the wrong choice of programme. The Head of Department agreed with this interpretation and expressed the view that the Department had a responsibility to make sure that applicants were aware of what to expect from an engineering programme, including what would be expected of them. To address this, the Faculty had introduced pre-arrival packs to allow applicants to see what the programme involved before they arrived and to familiarise themselves with the programme and Department as quickly as possible after arrival.

Student Support

- 4.6.7 The Review Panel asked the first and second year undergraduate students with whom they met if they had opportunities to access support on a one-to-one basis. The students confirmed that support was available on request and, in their experience, staff had responded well to their requests. The first and second year undergraduate students who met with the Panel also informed them that they had not met with their Adviser of Studies. Some had had communication with their Adviser but none had had a formal meeting, and they considered this to be a deficit in the departmental approach to supporting students. The students raised this as a point of clarification having read a statement in the Self Evaluation Report that implied that they met with their Advisers on a regular basis and were able to quickly establish a relationship with them. The students confirmed that they had commented on this during the consultation phase of the drafting of the Self Evaluation Report. The Panel asked the first and second year students with whom they met for their impression of who was responsible for ensuring they got any support they needed. The students responded that they felt the onus was on them and that they would prefer the Department to take a more active role in this respect. The students praised the approach adopted by the Head of department in speaking to year groups at the beginning of the session.
- 4.6.8 The Review Panel asked the staff with whom they met to confirm arrangements for student meetings with Advisers. The staff reported that students were encouraged to see their adviser of studies at the beginning of each year. Students were required to attend an individual meeting with an Adviser at the beginning of first year. However, it was clarified that these meetings took place in a computer suite and were not private. The staff who met with the Panel were confident that students who needed attention from their Adviser received it. An example was given that all second year students who had two or more re-sits were invited to meet with their Adviser of Studies. The Panel **recommends** that the Advisers of Studies ensure that all their students have the opportunity to meet with them at least once a year in a private setting to offer support of a pastoral nature, and that first year students meet up with their advisers on two occasions. The Department should consider the optimal timing of such meetings in relation to student drop-out and providing support during the first year of study.
- 4.6.9 The postgraduate students who met with the Review Panel were very satisfied with the support they received from staff, reporting that they were

encouraged to contact members of staff with any problems and that they had always received a prompt response.

- 4.6.10 The Review Panel noted that the postgraduate taught Programmes could start either in September or January. During discussion, it became apparent that one of the students who had started in January had not had an opportunity to attend a formal induction process and had not received a copy of the Department's Postgraduate Student Handbook. The Panel was concerned that the lack of formal induction in January could place some students at a disadvantage in terms of the information they received about their programmes and result in them having a lower awareness of support and other facilities available to them. Therefore, the Panel **recommends** that the Faculty offer a second induction session for postgraduate taught students arriving in January.
- 4.6.11 A postgraduate taught student who met with the Review Panel reported that, as a foreign national, he had difficulty in opening a bank account in order that he could pay his fees. He suggested that the Registry could be more flexible in the methods of payment accepted. He reported that otherwise his experience of arriving at the University and starting on his programme had been good.
- 4.6.12 The Review Panel asked the postgraduate taught students with whom they met if they had made use of the Careers service. They confirmed that they had and had found the service and its staff helpful.

Impact of changes to the structure of the academic year

- 4.6.13 The Review Panel queried the impact of the new structure of the academic year. The Head of Department reported that the move to holding examinations in December had marginally improved the workload balance between semesters 1 and 2. He also had noted some improvement in engagement in semester 1 which he believed was because students could no longer leave revision until the Christmas break. There had been some problems with the timetabling of the December examinations. The Department's examinations had been scheduled early in the timetable close to the end of teaching leaving students with only one day of revision time. He urged the University to consider moving the beginning of the session to a week earlier. The Panel **recommends** that the University take account of the ability of departments to allow time for revision before examination periods when the effectiveness/success of the new academic year structure is reviewed at the end of this session. The Head of Department reported that students had been positive about the examinations before Christmas and that no negative comments had been received since.
- 4.6.14 The Head of Department also reported that the shorter standard examination duration during the December diet of exams meant that it was now not possible to continue previous practice of allowing a choice of questions with at least one question on each aspect of the course. He commented that reducing the number of questions meant that students now had to study the whole curriculum rather than concentrating, for example, on three out of five areas because they could not now guarantee that all topics would be included in the questions. He noted that the effect of this was positive from the staff perspective as it prevented students avoiding topics they found difficult.
- 4.6.15 The undergraduate students who met with the Review Panel reflected the Department's description of impacts of the changes but added that there had

also been a clash with submission dates for coursework with service courses run by the Department of Electrical and Electronic Engineering. This had been reported to the Staff:Student Liaison Committee and a new post-Christmas deadline for some courses was being considered.

4.7 The Quality of Learning Opportunities

4.7.1 The Review Panel **commends** the commitment of staff to improving the student experience as demonstrated by their responsiveness to student feedback through the Staff:Student Liaison Committees and other fora.

4.7.2 The Review Panel was interested to hear about the operation of the “100%” tests. The Head of Department explained that the tests covered basic, “need to know” material. Before the tests, examples were worked through in class on the board. 60-70% of students achieve 100% at the first attempt; those who failed to were given another opportunity to take the test after one week. The week between attempts was to allow students to seek help and improve on problem areas at tutorials. The papers of any student taking the test for a third time or more would be marked immediately by a member of staff and an indication given, e.g. on page 1, of where mistakes had been made. Help could be sought if the student was unable to pinpoint their mistakes. The progress of students who had taken three or more attempts at the tests would be monitored and they would be targeted for help in future, where necessary. The Head of Department viewed the tests as a very useful diagnostic tool and also useful in terms of confirming attendance and noted that the students who struggled with the 100% tests tended to be those with non-standard entry qualifications but it is not limited to these students only. The first and second year undergraduate students who met with the Panel appreciated the 100% tests because they received immediate feedback on their performance which helped them with their learning. They also expressed appreciation of the effort put in by Dr Ballance, in running the tests and reported that his commitment had a motivating effect that inspired greater efforts on their part. The Panel **commends** the Department for its approach to the 100% tests which has created a learning experience that is highly valued by students.

4.7.3 The staff who met with the Review Panel reported that students were encouraged to use Moodle forums to pose questions and to discuss solutions with their peers. The discussions were moderated by the lecturer responsible for the course who would intervene if the student contributors were not on the right track. It was felt that this type of forum improved interaction among the year group. The Panel asked if all staff used Moodle in this way and was informed that not all staff were currently using it, but that the practice was spreading with more staff approaching the Department’s resident expert for advice. It was not clear to the Panel how such innovation was systematically spread among departmental staff. Therefore, the Panel **recommends** that the Department consider how the experience of successful innovation in learning and teaching could be shared across the Department with a view to inspiring enthusiasm and wider uptake by staff members.

4.7.4 It was noted that there had been objections from some staff to posting lecture notes online through Moodle or on websites. It was reported that handouts were always made available at lectures even if notes were not online. The Review Panel questioned whether there should be a departmental policy requiring lecture notes to be made available online with a view to compliance with disability legislation that requires institutions to take a proactive approach

and to anticipate student needs. The staff who met with the Panel were confident that reasonable adjustments were made to accommodate different student needs and that the lecturers on the relevant courses were aware of and were accommodating where specific needs had to be met. The Panel reminded the Department that a Guide for Academic Staff on supporting students with disabilities had recently been developed (Note: this was circulated to Heads of Academic Departments, Dean and Associate Deans via email on 18 December 2008). The Panel encourages the Department to review their procedures to ensure they are in accordance with the Guide and enable the Department to ensure that the required adjustments are made for disabled students.

Study Abroad

4.7.5 The Review Panel asked the third, fourth and fifth year students with whom they met about their experience, if any, of study abroad. They responded that very few of the students they knew had chosen to study abroad in third year. It was suggested that more students could be encouraged to go abroad by better promotion within the Department of the opportunities available, including any where foreign language skills were not necessary. From their experience of students who had come to Glasgow, they considered study abroad to be a valuable experience in terms of learning from different approaches to study and work.

Equal opportunities

4.7.6 The Review Panel noted that the Department responded fully to instructions received from the student disability service regarding any students who they were involved with. The Panel was also pleased to hear that the Department had assisted a profoundly deaf student through to successful completion of their studies. It was highlighted that the presence of experts in rehabilitation engineering was very helpful particularly with their expertise in ethical considerations.

4.7.7 The Review Panel had been deeply concerned by a statement in the Self Evaluation Report that "Issues of discrimination amongst the student body are often encountered during the first year of the degree programme". The Head of Department clarified that this referred to incidents of comments scrawled on attendance lists being passed around classes that occurred and had to be addressed every year. He reassured the Panel that the Department was satisfied that it amounted to childish behaviour and conveyed no malice. He also reassured the Panel that the Department had not received any complaints from individuals about their treatment by other students or staff. In addition, he informed the Panel that he intended to incorporate instructions about acceptable standards of behaviour in future inductions.

4.8 Resources for Learning and Teaching

Departmental Management

4.8.1 The Review Panel noted that, at present, the Department does not operate a full workload model only a teaching load model. The Panel questioned the usefulness of this model without the inclusion of information on research and administration commitments. The Head of Department clarified that the teaching load model was not used as the sole basis for allocation of work but as an additional source of information alongside administration and research

information. He explained that, while it was relatively straightforward to quantify teaching loads, metrics were required for other activities and it was considered by the Department that a subjective judgement based, for example, on the value of grants held and students supervised was sufficiently accurate for the purpose. The Head of Department acknowledged the advantages of operating a full workload model but was not convinced that it would, ultimately, be any more effective than the current, subjective approach. The Panel noted that the Head of Department had the highest teaching load and the staff who met with the Panel agreed that, in an ideal world, this was not appropriate. However, it was explained that the current Head of Department had traditionally taken responsibility for the large first year mathematics class and that this contributed to his high teaching load. The staff who met with the Panel expressed the view that the current Head of Department was leading by example and, through his personal commitment to teaching, was improving the profile of teaching in the Department. Nonetheless, the Panel remained concerned with regard to the sustainability of the Head of Department's workload. Furthermore, the Panel **recommends** that the Department implement a full workload model in accordance with any available Faculty guidance in order to ensure that roles and workload are balanced for all staff including the Head of Department.

- 4.8.2 The Review Panel commented on the flat management structure adopted by the Department and queried whether it was sustainable in the long term. The Panel was also not clear on how effectively Performance and Development Review (P&DR) could work within the current structure. The Head of Department responded that the Department was of intermediate size and hence difficult to subdivide into groups that would still be large enough to remain effective. The staff who met with the Panel expressed the view that the current Head of Department had devolved various responsibilities to other members of staff and felt that they could negotiate relief from other duties if they were taking on a new responsibility. They felt the allocation of tasks within the Department was fair. The Panel heard that the membership of the Teaching Committee comprised those members of staff who had responsibility to oversee teaching strategy. The Panel noted that the group was small, but was told by staff that others were invited to input where relevant. It was admitted that the majority of the discussion of the Teaching Committee focussed on tactics rather than strategy. There was some strategic discussion at the beginning of each session to establish annual goals and desirable developments. The Panel had become aware during the course of the day that many new developments were taking place within the Department but had not gained a sense of strategic direction or of a complete awareness amongst staff of the main issues for the Department, Faculty and University. The Panel, therefore, **recommends** that the Department review its management and committee structure to promote two-way communication between its leaders and staff. Consideration should be given to widening the membership of the Teaching Committee and increasing its focus on strategy. The Panel also **recommends** that a Departmental Strategy be developed under the umbrella of a Faculty Strategy.
- 4.8.3 The Head of Department reported that the Faculty of Engineering was planning a major restructuring and that it was not yet clear what form that would take. There was reluctance to change any departmental structures until more direction was received from the Faculty. The Review Panel accepted this approach as pragmatic, but re-iterated the need for a strategy

within which to prioritise teaching and learning developments and enhancement.

- 4.8.4 The Head of Department expressed the view that the Department's collaborations were a particular strength of the department, for example, the Product Design Engineering programme offered jointly with the Glasgow School of Art. It was noted that this experience was being transferred to the Postgraduate taught programmes through collaborations with the Departments of Chemistry and Management. The staff who met with the Review Panel were enthusiastic about looking for opportunities to develop cross faculty collaboration and it was hoped that the forthcoming restructuring of the Faculty would facilitate this further.

Thermodynamics

- 4.8.5 The Review Panel noted that concerns had been expressed by students at Staff:Student Liaison Committees regarding the expertise that would be available in the Department for teaching Thermodynamics after the forthcoming retirement of a particular member of staff. The Head of Department explained that it was difficult to appoint thermodynamics specialists and that this difficulty was in common with other institutions offering the subject; however, he was confident that the expertise of staff remaining in the Department was sufficient to maintain the standard of teaching in the early years and that honours options would be adjusted to align with available expertise and research strengths for the later years of the programmes.

Resources

- 4.8.6 The Head of Department reported that the Department wished to undertake more teaching development activities but that the opportunities to do so were restricted by the time available given the importance of maintaining the Department's research output at the same time. The Head of Department also reported that there were concerns about the physical resources available to the Department. The Review Panel noted that, in 2006, the Department had received a substantial award (£321k) from the Learning and Teaching Infrastructure Fund (LTIF) that had been used to improve laboratories. The Head of Department further explained that the ongoing expense of running practical laboratories meant that more use was being made of simulation at a time when students were requesting more opportunities to gain experience in "making" objects. Also, levels of technician support had had to be reduced over the past few years (the number of technicians had reduced from 30 to 12) which meant that most laboratories no longer had a "resident" technician, solely for financial reasons. The Head of Department told the Panel that the Department was not short of ideas and solutions but was constrained by the resources available to implement them. The Panel, therefore, **recommends** that the Department identifies strategic priorities for development and investment in teaching and learning on an annual basis for discussion with the Dean and the Faculty Management Group as part of the University's annual planning and budgeting cycle, and that this is carried out as a matter of priority. This will allow for full consideration of the potential for resources to be combined with other departments within the Faculty to facilitate new developments, e.g. around promoting student retention and enhancing the first year experience.

Lecture Theatres

4.8.7 The Review Panel noted from the Self Evaluation Report, Committee minutes and from a tour of facilities that the Department had some concerns regarding the level of input from academic staff into the refurbishment of lecture theatres. The Self Evaluation Report stated that “The main problem arises from the need to have either a significant area of board available for writing during the lecture period. There are a significant number of courses where “chalk and talk” is considered by the lecturing staff, and by the students, to be the most effective way of lecturing. Additionally, wherever electronic presentations are being made, it is essential to be able to write on a board to illustrate additional points. This is not possible in some of the newly refurbished lecture theatres.” In response to this point, Estates and Buildings confirmed that the manner in which lecture theatre refurbishments were planned had been significantly changed as a result of the work carried out by the Learning Spaces Working Group. Increased engagement with academic users was now being pursued prior to any refurbishment project in order that the pedagogical needs of the users could be better understood and catered for. However, it was pointed out that, where Central Room Bookings controlled space was concerned, there would always be multiple user groups with multiple needs which made it more difficult to consult every user and to meet all needs.

Graduate Teaching Assistants

4.8.8 The Review Panel met with three postgraduate research students who had taken on roles as Graduate Teaching Assistants (GTAs) and Laboratory Demonstrators. The GTAs confirmed that they were required to attend the statutory training for GTAs where this was appropriate to their experience and that they received support from the Department on the specific aspects of their roles. They felt able to seek help from the member of staff responsible for the course but reported that the tutorials and laboratories that they were involved with were straightforward and they had not found it necessary to seek assistance from staff. They confirmed that they were not required to undertake any marking or assessment.

4.8.9 The GTAs who met with the Review Panel reported that the Department employed a significant number of GTAs/Demonstrators and that a sense of community had developed among them. The Panel asked if there were formal opportunities for the group to meet and was told that there were too many GTAs for it to be practical for everyone to meet together. The GTAs expressed the view that formal meetings would be unnecessary as all those involved were known to each other and communicated regularly on an informal basis.

4.8.10 The Review Panel asked the GTAs with whom they met if they had had opportunities to receive feedback from students on their teaching. The GTAs explained that they routinely asked students at the end of each session if everything was OK and if they had understood everything. The GTAs told the Panel of their satisfaction when their students thanked them at the end of a session. In addition, the GTAs also received feedback from the lecturer responsible for the course who would observe their teaching on occasion.

4.8.11 The Review Panel asked the GTAs with whom they met what action they would take if they became aware that a student was struggling with coursework. The GTAs reported that they would invite the student to wait

behind or to visit them in their offices to offer additional tutoring. The GTAs expressed the view that it was important for students to gain a good understanding of the material in the early years of the programme in order to make good progress later. If it became apparent that the student was still having difficulties or did not take up the offer of additional help, the GTAs would refer the matter back to the Lecturer.

5. Maintaining the Standards of Awards

- 5.1 The Review Panel **commends** the Department on the level of its consultation with industry through the Industrial Liaison Committee and its accreditation relationships with professional bodies which were considered particularly valuable in terms of ensuring the employability of the Department's graduates.

Grade Profiles

- 5.2 The Review Panel noted that the grade profile in many courses showed two separate peaks: one at or around grade A; and the other at or around the pass level. The Head of Department responded that the first peak could be explained by the format of the examinations or class tests where the need for interpretation of the questions had been minimised. If students knew the correct techniques to apply in each question, it was relatively simple to achieve a high mark. The second peak at the pass rate represented those students whose approach was to do the bare minimum amount of work required to pass. The Panel asked if extra revision opportunities were provided to students who were genuinely struggling. The Head of Department reported that students were given guidance on how to approach revision and had opportunities to do past papers and direct questions to lecturers. He noted that where specific revision sessions had been offered attendance had been very poor.

Staff development

- 5.3 The Review Panel asked the staff with whom they met about the opportunities available for staff development. The staff expressed the view that their ability to take up opportunities was constrained by the time available. The Panel also discussed opportunities for sharing and reflecting on good teaching practice with the staff that they met. The staff reported that there was no formal process but that staff met to discuss practice either in person or through email. The lack of a staff room to meet and discuss work over coffee was cited as limiting on this. There was a reliance on colleagues who took an interest in particular areas to disseminate information around the Department. One member of staff reported that he had found membership of the Higher Education Academy useful in keeping himself informed of current developments in teaching. The Panel asked if staff felt there was recognition of teaching effort within the Department. The staff responded that the current Head of Department had brought an emphasis on teaching as the primary purpose of the Department but that the recent Research Assessment Exercise (RAE) and its associated income had shifted the emphasis back to research. The Panel **recommends** that the Department formalise a means of promoting staff development in teaching, learning and assessment and suggests that consideration be given to establishing an annual Learning and Teaching Review Day where issues could be raised, discussed and good practice shared. The Department should also consider using Performance and Development Reviews (P&DR) or an Annual Review Day to recommend,

and encourage staff to attend, relevant CPD opportunities such as those available through the Learning and Teaching Centre and the Higher Education Academy and its Subject Centre.

New Lecturer Development Programme (NLTP)

- 5.4 The Review Panel met with the Department's one probationary lecturer. The probationary lecturer reported that she was enrolled on the New Lecturer Development Programme (NLTP) and had been finding it useful. She also reported that she felt well supported by her colleagues in the Department, was learning from them and able to ask them for help when needed e.g. when writing examination questions for the first time. The probationary lecturer confirmed that a mentor had been appointed but that she had only had one meeting to date. She confirmed that her workload was reasonable and allowed her time to participate fully in the NLTP.
- 5.5 The probationary lecturer told the Review Panel that her experience of the University had been generally good although there had been an issue with her work permit. Human Resources had not applied for a work permit in advance, resulting in a delayed start date because she had had to return home and apply herself. She stated that it had taken six months between applying for the job and taking up post and expressed appreciation that colleagues in the Department had been very supportive during that time. She also reported that she had not been able to begin with her research as quickly as she would have expected because the equipment and start up funding that she had expected to be in place on her arrival was not, despite her delayed start date. She reported that she was currently applying for funding to purchase the specific equipment that she required.

6. Assuring and Enhancing the Quality of the Students' Learning Experience

National Student Survey

- 6.1 The Review Panel noted that, despite the overall student satisfaction being below average for University, the Department had achieved good results in the National Student Survey questions on "staff are good at explaining things", "assessment arrangements and marking have been fair" and for the questions on Learning Resources. The Head of Department reported that a good level of response had already been received in the NSS 2009 and that the level of publication at departmental level had been reached. The staff who met with the Panel had been surprised at how low the overall scores had been for the Department in the 2008 survey. In relation to feedback on assessment where the response to the question "I received detailed comments on my work" was 22% below the University average, the staff expressed the view that students had perhaps not recognised the different forms of feedback that were being provided [feedback on assessment is discussed further in paragraph 4.3.1 - 4.3.4 above]. The other area where the Department's results were significantly below the University average and the institutional benchmark of 80% were for the questions "the criteria used in marking have been clear in advance" and "any changes in the course or teaching have been communicated effectively". Issues related to the first of these questions are discussed in paragraph 4.1.2 and 4.2.2 above. The second issue of communicating proposed course changes was not discussed by the Panel during the Review.

Student Feedback Questionnaires

- 6.2 The first and second year undergraduate students who met with the Review Panel expressed the view that there was little or no monitoring of the questionnaires returned at the end of courses and that they did not see any benefit from them because they were always completed at the end of courses. The students acknowledged that issues did get addressed and were generally resolved and the action that had been taken was reported through Staff:Student Liaison Committees. They told the Panel of example that they considered to be good practice whereby a lecturer had realised that a problem existed with his course and had initiated dialogue with the class on how it should be resolved. The dialogue had been continued via polls on the class Moodle and the level of consultation had been greatly appreciated by the students. The staff who met with the Panel expressed the view that the formal mechanisms for obtaining students views operated well but accepted that there was room for improvement in making use of informal feedback opportunities. It was agreed that the first year interest groups and mentoring schemes had potential to help in this. The Panel **recommends** that the Department consider extending the practice of regular, ongoing dialogue with students on courses as widely as possible. With regard to the end of course questionnaires, it was suggested that the Department email members of the class that had participated in the questionnaire with a short bullet point list of the main issues that had been raised and copy the same message to the students enrolled in the course in the following year.
- 6.3 The probationary lecturer who met with the Review Panel reported that she was not aware of student feedback other than that provided for her own area, but confirmed that overall issues were discussed at departmental meetings. She reported that she had received feedback and had analysed it as part of the NLTP and was now considering how to use the information to improve her course. In response to a question from the Panel, she reported that she had not seen the students since receiving the feedback to provide them with the results.
- 6.4 The Review Panel asked the staff with whom it met to clarify the Department's practice in dealing with student questionnaires. The Panel was informed that the Head of Department and the member of staff concerned would see the completed questionnaires and that the member of staff would respond to and report on any actions taken in the course review reports. Most members of staff also posted the results of the questionnaires on student notice boards or outside their offices. Feedback from semester 2 courses was also routinely provided to the next class at the beginning of the next session. It was noted that, although most staff followed the same practices, there was no departmental policy on the handling of questionnaires. The staff who met with the Panel noted that the students tended to pick up on practices they appreciated and to request the same of other staff. The Panel **recommends** that the Department clarify its procedures for dealing with the results of student feedback questionnaires and communicates this policy to all staff to ensure that the results and any actions taken in response are effectively communicated back to students. The Department should also ensure that similar procedures are put in place to communicate more widely actions taken in response to issues raised at Staff:Student Liaison Committees.

Staff:Student Liaison Committees

- 6.5 The undergraduate and postgraduate taught students who met with the Review Panel considered that the Staff:Student Liaison Committees (SSLCs) were conducted effectively and that their feedback was listened to and acted upon. An example was given of the consideration and proposal of changes to entrepreneurship courses as a result of student feedback. Comments were made that the SSLCs were limited in how reactive they could be as they only met twice per session. It was acknowledged that the minutes of the SSLCs were available online but that communication of the outcomes or actions taken as a result of issues raised at SSLCs could be improved (see paragraph 6.4 above). The students also confirmed that student representatives had been invited to join the Departmental Committee but that no one had volunteered as yet. The Department is encouraged to follow up on this

External Examiners

- 6.6 The staff who met with the Review Panel reported that the Head of Department received the external examiners reports and submitted them to the Departmental Committee for discussion and decisions on what action should be taken in response. It was noted that external examiners had made positive criticisms that had led to significant changes such as improvements to projects and improvements in the explanations given to students of marking schemes.

Annual Course Review

- 6.7 Although the Review Panel, did not discuss the Department's policy on Annual Course Review on the day of the review, it had noted from the documentation that, although the procedure being used by the Department was in line with that recommended by the University, an out of date version of the University annual monitoring proforma was being used. The Panel considered that it was important to use the most recent proforma as comment on current issues was required and noted that these were subject to change each session. The Panel **recommends** that the Department update their annual Course Review forms in line with the standard proformas provided by the University (<http://senate.gla.ac.uk/ga/acmr/index.html>) as a matter of priority to ensure that comments are gathered on the relevant, current issues.

7. Summary of Perceived Strengths and Areas for Improvement in Learning and Teaching

Key Strengths

- The commitment of staff to improving the student experience
- The full accreditation of all programmes by the Institution of Mechanical Engineers (IMechE) that contributes to the employability of graduates
- Consideration and support for initiatives aimed at improving retention
- The attention and responsiveness of the Department to student
- Excellent levels of consultation with industry by means of the Industrial Liaison Committee ensuring relevance of programmes is maintained
- The recent development of a number of postgraduate taught programmes and the successful recruitment of students to them

- Collaborations with other institutions and departments and the willingness to extend these and embark on new initiatives
- The consultation process employed in preparing the Self Evaluation Report
- Examples of good practice in seeking ongoing dialogue and feedback with students using Moodle
- Cohort Activity Days
- '100%' assessment tests which were considered to be a good example of assessment for learning and highly valued by students
- Valued and effective tutorial provision

Areas to be improved or enhanced

- Development of a Departmental Strategy
- Departmental Management and Organisation
- Management Studies Provision in the early years of the undergraduate programme
- Student Support
- Aims and Intended Learning Outcomes
- Student Feedback
- Assessment and feedback practices
- Course Development and Review
- Project and Practical Work

Conclusions and recommendations

Conclusions

The Review Panel commends the Department on its awareness of and willingness to address issues as they arise. A number of recommendations have been made to support staff in enhancing the quality of the student experience, and the management of teaching and learning in the Department. The Panel welcomed the Department's engagement with current University priorities, e.g. enhancing student retention, and its endeavours to meet the challenges of addressing them. The Panel felt that the Self Evaluation Report could have given a better overview and impression of the strategic direction of the Department, which would have given the Panel and departmental staff a clearer framework for discussion. However, the discussions with the Head of Department, and staff and students of the Department satisfied the Panel that the Department was generally reflecting on its practices in teaching, learning and assessment and was seeking to engage students as partners in improving the student experience.

Recommendations

The recommendations interspersed in the preceding report are summarised below. The recommendations have been cross-referenced to the paragraphs in the text of the report to which they refer. They are grouped by the areas for improvement/enhancement noted above and are ranked in order of priority.

Departmental Strategy

Recommendation 1:

The Review Panel **recommends** that a Departmental Strategy be developed under the umbrella of a Faculty Strategy. [*paragraph 4.8.2*]

For the attention of: **The Head of Department**

Recommendation 2:

The Review Panel **recommends** that the Department identifies strategic priorities for development and investment in teaching and learning on an annual basis for discussion with the Dean and the Faculty Management Group as part of the University's annual planning and budgeting cycle and that this is carried out as a matter of priority. This will allow for full consideration of the potential for resources to be combined with other departments within the Faculty to facilitate new developments, e.g. around promoting student retention and enhancing the first year experience. [paragraph 4.8.6]

For the attention of: **The Head of Department and the Dean of the Faculty**

Departmental Management and Organisation

Recommendation 3:

The Review Panel **recommends** that the Department review its management and committee structure to promote two-way communication between its leaders and staff. Consideration should be given to widening the membership of the Teaching Committee and increasing its focus on strategy. [paragraph 4.8.2]

For the attention of: **The Head of Department**

Recommendation 4:

The Review Panel **recommends** that the Department implement a full workload model in accordance with any available Faculty guidance in order to ensure that roles and workload are balanced for all staff including the Head of Department. [paragraph 4.8.1]

For the attention of: **The Head of Department and the Dean of the Faculty**

Recommendation 5:

The Review Panel **recommends** that the Department formalise a means of promoting staff development in teaching, learning and assessment and suggests that consideration be given to establishing an annual Learning and Teaching Review Day where issues could be raised, discussed and good practice shared. The Department should also consider using Performance and Development Reviews (P&DR) or an Annual Review Day to recommend, and encourage staff to attend, relevant CPD opportunities such as those available through the Learning and Teaching Centre and the Higher Education Academy and its Subject Centre. [paragraph 5.3]

For the attention of: **The Head of Department**

Recommendation 6:

The Review Panel **recommends** that the Department consider how the experience of successful innovation in learning and teaching could be shared across the Department with a view to inspiring enthusiasm and wider uptake by staff members. [paragraph 4.7.3]

For the attention of: **The Head of Department**

Management Studies

Recommendation 7:

The Review Panel **recommends** that the Department and Faculty as a matter of priority continue to pursue a means to satisfy the requirements of the IMechE for management or professional studies in a way that is relevant and satisfying to the students throughout the programmes. The Department should also continue to monitor student satisfaction with the provision as changes are implemented. *[paragraph 4.4.5]*

For the attention of: **The Head of Department and the Associate Dean for Teaching**

Student Support

Recommendation 8:

The Review Panel **recommends** that the Advisers of Studies ensure that all their students have the opportunity to meet with them at least once a year in a private setting to offer support of a pastoral nature, and that first year students meet up with their advisers on two occasions. The Department should consider the optimal timing of such meetings in relation to student drop-out and providing support during the first year of study. *[paragraph 4.6.7 and 4.6.8]*

For the attention of: **The Head of Department**

Recommendation 9:

The Review Panel **recommends** that the Faculty offer a second induction session for postgraduate taught students arriving in January. *[paragraph 4.6.10]*

For the attention of: **The Head of Department**

Aims and Intended Learning Outcomes (ILOs)

Recommendation 10:

The Review Panel **recommends** that all of the Department's programme specifications are reviewed and updated where necessary, to ensure that they are consistent in format, and in the way ILOs are expressed. Programme Specifications should be written in a style that is readily accessible to students and other stakeholders and should clearly demonstrate how the ILOs align with the assessment of the programme. *[paragraph 4.1.2 and 4.2.2]*

For the attention of: **The Head of Department**

Recommendation 11:

The Review Panel **recommends** that the Department ensure that the information provided to students on ILOs explains clearly how assessment activities, both formative and summative, align with the ILOs. *[paragraph 4.2.2 and 4.1.2]*

For the attention of: **The Head of Department**

Student Feedback

Recommendation 12:

The Review Panel **recommends** that the Department clarify its procedures for dealing with the results of student feedback questionnaires and communicates its policy to all staff to ensure that the results and any actions taken in response are effectively communicated back to students. The Department should also ensure that similar procedures are put in place to communicate more widely actions taken in response to issues raised at Staff:Student Liaison Committees. [paragraph 6.4 and 6.5]

For the attention of: **The Head of Department**

Recommendation 13:

The Review Panel **recommends** that the Department consider extending the practice of regular, ongoing dialogue with students as widely as possible. [paragraph 6.2]

For the attention of: **The Head of Department**

Assessment

Recommendation 14:

The Review Panel **recommends** that the Department review and amend the assessment of its postgraduate taught programmes to ensure that all provide a range of assessment methods. [paragraph 4.3.5]

For the attention of: **The Head of Department supported by L&T Centre staff**

Recommendation 15:

The Review Panel **recommends** that the Department consider implementing further additional or improved mechanisms for increasing student awareness and understanding of the opportunities to receive feedback that are offered by the Department. The Panel further suggests that the Department consult students to determine the most valuable types of feedback. This should be done to ensure that students are able to obtain maximum learning benefit from the feedback they receive and to ensure that the responses the students give to assessment and feedback related questions in student satisfaction surveys are as informed, and therefore as useful, as possible. [Paragraph 4.3.1]

For the attention of: **The Head of Department**

Course Development and Review

Recommendation 16:

The Review Panel **recommends** that the Department update their annual Course Review forms in line with the standard proformas provided by the University (<http://senate.gla.ac.uk/ga/acmr/index.html>) as a matter of priority to ensure that comments are gathered on the relevant, current issues [paragraph 6.7]

For the attention of: **The Head of Teaching/Chair of Teaching Committee**

Recommendation 17:

The Review Panel **recommends** that the Department reconsider whether the title of the “Advanced Control Engineering” accurately reflects the course content and take forward the appropriate approval procedures to make the necessary changes. Consideration should also be given to whether there are any other courses in a similar position within the Department’s provision. *[paragraph 4.4.6]*

For the attention of: **The Head of Department**

Recommendations for the Attention of the University

Recommendation 18:

The Review Panel **recommends** that the University take account of the ability of departments to allow time for revision before examination periods when the effectiveness/success of the new academic year structure is reviewed at the end of this session. *[paragraph 4.6.13]*

For the attention of: **Academic Structures Implementation Group (Chair – Professor David Watt)**