

The aim of Annual Monitoring is to maintain quality and improve provision through identifying action that can be taken to improve future student experience.

This form should be used to capture a focused and concise reflective summary of annual monitoring activity at school and subject level. Bullet list format is encouraged.

College	Science and Engineering comprising the Schools of Chemistry; Computing Science; Engineering; Geographical and Earth Sciences; Mathematics and Statistics; Physics and Astronomy; Psychology.
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## Reflection

What is working well?

All of the schools reported instances of good practice. Often these are subject specific approaches, which do not necessarily transfer well to other disciplines. In this college report, I have selected some examples from the SAMS which could have wider applicability.

- In the report on their accreditation visit, the Royal Society of Chemistry commented that “the students said the Staff/Student Committee was taken seriously and actions from suggestions have been taken forward. Both these aspects build trust and add to the student experience.” (Chemistry)
- Lecture notes from previous years available to students on Moodle. (Chemistry)
- Scalable periodic table available for visually impaired students. (Chemistry)
- Practices such as the employment of continuous assessment tasks, inverted classroom, small-group tutorials and personalised feedback have worked well across the board (Physics and Astronomy).
- The student societies are well-integrated within the School, with members responsible for arranging lectures and other events; this has led to enhanced student interaction across the different courses (Physics and Astronomy).
- Continuous dialogue between PGT students and the MSc programmer convenor, via semi-formal timetabled meetings and informal social meetings, leads to enhanced cohesion in the cohort (Physics and Astronomy).

What needs work?

From my perspective as the College Quality Officer, I would have liked to develop a more efficient method of integrating the reporting on PGT courses within a shorter timeframe. One possibility would be to have the school PGT convenors review the UG SAMS at their December meeting and feedback any additional issues. This could turn the PGT reporting into an addendum to the UG SAMS/CAMS instead of necessitating separate reports for PGT. One CAMS per year - albeit with an addendum - would be better than two.

## Action Plans

What actions are being taken forward?

Pastoral support will be improved by having the same tutor teach tutorials and practicals – therefore students will meet with a regular staff representative on a weekly basis, as well as having access to an identifiable class secretary and year tutor. (Psychology)

The use of Teleform in essays and lab reports marking will be rolled out so that administration time can be reduced and feedback returned to students sooner. (Psychology)

## Good Practice

What practices are innovative (and working well)?

OCR scanning of test and exam papers in some classes allows electronic versions of some assessments to be provided to students, making available enhanced feedback. (Physics and Astronomy but already being done in e.g. Engineering and see above for Psychology)

Additional training of PhD demonstrators (by teaching staff) was implemented in Astronomy 1 this year and has been very successful, leading to enhanced engagement and marked increase in both ability and confidence of those demonstrators when interacting with the undergraduate students. (Physics and Astronomy)

Many lecturers have gone back to an interactive “chalk-and-talk” method of lecturing and this has proved very popular with students who, in the past, have complained of “Death by Powerpoint”. Why do “chalk-and-talk” at all? Because our topics rely heavily on mathematics and when we (the professional researchers) “do maths”, we do it with a pen and a piece of paper. (Physics and Astronomy)

The Head of School, in partnership with the Student Learning Service and the Glasgow University Tech Society, organised a series of events in April 2015 (including jogging, yoga, knitting and other events) targeted at all students, with the aim of combating stress ahead of the April / May exam diet. (Computing Science)

The reports from the Software Engineering students on their summer placements are now being assessed at a one-day “placements conference” held in late September in the Medical School Atrium. The Level 4 Software Engineering students give oral presentations followed by further details on a poster. Level 3 Software Engineering students attend to learn more about the experience, which they will face the following year. Also industrial contacts attend to enable them to promote their own placements. (Computing Science, with a similar approach having been mentioned by Psychology last year)

The way in which Computing manage projects, from allocation to assessment, is the gold standard, and often commented on positively. The project management system allows students to be allocated to projects using optimal matching algorithms, and also allows staff to record their marks and detailed comments when assessing projects. Similarly, project readers are allocated to mark projects using optimal matching algorithms, taking into account reader preferences and marking “targets”. (Computing Science)

What practices should be recommended?

Making available material from Moodle of a previous year. (Chemistry – details in the ‘working well’ section)

## Closing Loops

What progress has been made on actions identified in last annual monitoring cycle?

Matters wholly within the control of teaching staff within the School have been addressed and implemented on a regular basis, preventing them from worsening. Unfortunately, there remain logistical and administrative issues at levels beyond that which staff in the School are able to address. These are all problems which have been reported to higher levels (College/ University) before now but have not been addressed at those levels as yet.(Physics and Astronomy)

An issue in relation to accommodation did occur as lectures had been split across as many as four rooms and there were issues with the echo 360 system which had been used to stream lectures live, which meant some students had poor access to live lectures. This issue was beyond the control of the School and fed back to central college and university Teaching and Learning committees. In semester 2 lectures were delivered in one room and this provided a greatly enhanced learning experience and students were much happier with this. (Psychology)

**What matters (if any) need to be brought to the College or University's attention?**

College

Members of academic staff continue to bear the brunt of administrative duties e.g. collating and formatting exam papers, inputting information into MyCampus, monitoring class lists etc. This seriously detracts from their teaching and research activities The School of Chemistry was promised a Teaching Administrator several years ago which would have had a huge beneficial impact (Chemistry)

Administration levels continue to be extremely high and the employment of a dedicated teaching administrator would ease this burden on staff, allowing them time to prepare and teach more effectively. (Physics and Astronomy ; also reported by Psychology and by GES)

A great deal of time and effort is expended managing the following at school level and other schools do the same. It would be better if the University provided centralised support for the following:

- 1) Attendance monitoring software. We have our own software system for this but other (non CS) schools are probably struggling more than we are. (Computing Science)
- 2) Generation of spreadsheets for exam boards. Once again we have our own software but MyCampus ought to be providing this functionality. (Computing Science)

Attendance is poor in many lectures. Penalising students for non-attendance has been avoided so far but this might need to be reconsidered. One External Examiner commented on poor attendance at Level 4 courses. At the exam board meetings the Head of School requested that every course coordinator consider how he/she can improve attendance at classes without simply shifting all of the responsibility onto the students. Some course coordinators, for example, are increasingly employing regular quizzes during classes to positive encourage engagement with the course. (Computing Science) Issue previously reported by Engineering

The School needed teaching accommodation for 300 plus students. In Semester 1, week 1 the larger halls were still being used for administrative purposes. (Psychology)

Printing large volumes on the new printers remains a concern, with printers supplied to teaching spaces operating at a fairly slow speed, lack of integrated stapling options (useful for printing student workbooks), and central IT support sometimes querying the volume of printing required during teaching sessions. (Psychology)

On several occasions at the end of semester when many classes had submission deadlines, the pull print system could not cope and the deadlines had to be extended. (Engineering)

Admin staff in Engineering have reported that the cost of printing has increased with the new pull printing system. This is in line with the estimates that IT Engineering staff produced before the new system was imposed. (Engineering)

University

Lack of admin support has been mentioned above in the College comments but it is relevant under the University heading. (all schools)

Overall, teaching staff are (and have been) working at absolute capacity for a number of years. This is becoming more visible as a problem when looking for project supervisors. All staff are under pressure not just to teach but to the carry out world-class research. With increasing student numbers at all levels, the numbers of staff available to supervise PGT projects over the summer months is a particular pinch point; more staff are needed to balance out the increase in student numbers. Despite this, student feedback indicates a high-level of satisfaction with the teaching and School as a whole. Indeed, the Astronomy 1 classhead (Morag Casey) won the SRC "Best Teacher in Science and Engineering" award in 2014-15. (Physics and Astronomy with similar comments from Engineering in the past particularly in relation to MSc project supervision over the summer period)

The University views transnational education as an exciting opportunity. However, the reviews of the Engineering TNE activities at both SIT and UESTC have identified that there is a impact on staff workload, which not always recognised, and which inevitably reduces the time staff have available to spend on their research and on their teaching in Glasgow. If the extra demands on staff time are not managed carefully, staff morale will suffer and valued staff will leave. This concern applies also to admin staff. (Engineering)

## Hot Topics

Do you have any comments on the following topics?

1. In developing the campus across all sites, what kind of teaching spaces would benefit/support your teaching? Please note if your comments are specific to a specific campus e.g. Crichton, Garscube, Gilmorehill etc.

Many of the most successful schools in Science and Engineering have set out to mould their students into a community because this makes for a more fulfilling student experience and thereby helps retention. It often starts with holding as many as possible of their lectures and labs in the 'home' building. This successful approach has implications for the proposed teaching hub.

Roller boards may seem mundane and even old fashioned but staff and students have sound reasons for preferring them.

2. Please comment on your experience of lecture recording.

Lecture recording is not widespread across Science and Engineering. Some staff believe that it inhibits the type of lecturing that can be carried out. Some lecturers do produce podcasts and some (not all) students in those classes listen to them. There has been no concerted push from the student body in Science and Engineering for more lecture recording. It is very rare for students to request to record lectures themselves.

3. Are there any other topics you wish to comment on?

The following problems, reported frequently during the last 5 years, have recurred this year. It appears as if there has been little progress resolving them.

### Room Booking.

Nobody doubts that the timetabling team has a difficult job: there are a shortage of suitable teaching rooms of different types from very large lecture theatres to small group tutorial rooms. However, over the years the room refurbishment programme has exacerbated the problem by equipping new rooms predominantly with fixed boards or panelled boards instead of roller boards. For teaching, roller boards are more practical – the previous working disappears one line at a time as the board is moved up. This is particularly important for mathematical analysis, which is a fundamental part of many (perhaps the bulk of) lectures in Science and Engineering.

There are many valid criteria for requesting a room change: increased student numbers; lack of the correct AV or board type; or the desire to teach in the 'home' building. In particular, this may be to foster cohort identity (aiding retention) or to permit experimental demonstrations. Although it may occasionally be possible for staff involved to arrange a swap directly, the onus should be on Central Timetabling to respond to requests. They must appreciate that their initial allocation of rooms based on projected numbers is only the first step in an iterative process. In that context, it seems to most academics that using the room allocations from the previous year as a starting point would be more sensible than the present approach, which appears to start afresh each year. All this does is to leave us annually with a different set of problems.

A continuing bone of contention is the lack of consultation when lecture rooms are refurbished. I was the local academic staff representative when Rankine 408 was revamped about 5 years ago. My comments were ignored. Other, more recent renovations of rooms 106,107 and 108 in the Rankine Building have been much more successful. However, Physics have reported that the refurbishment of Kelvin 257 this summer did not install the type of boards they wanted. I think that the type of equipment to be installed in a room should be an academic decision with IT/AV services providing advice on how to achieve the required setup. Academics are the users of the equipment and should have the final say in what is installed.

### Administration

Several years ago, the CAMS and SAMS suggested that increased admin support within schools or, even better, at subject level, was necessary to alleviate the difficulties created by MyCampus. This suggestion was referred back to the colleges, which were asked to consider allocating money from their existing budgets. This response rather missed the point. Money allocated centrally to prop up MyCampus might have achieved more if allocated from the centre to employ extra admin staff at subject or discipline level. It was clear from the CAMS and SAMS that MyCampus had failed to provide easy to use student enrolment software. Speaking personally as an adviser, I

believe that the current load on advisers during August and September is intolerable. Much of it involves timetabling issues (some real but a lot imaginary), which could be sorted by admin staff if more were available. This opinion is shared by many of my fellow advisers.

At present in MyCampus, students are allowed to choose which lab classes they will attend. This often results in an uneven distribution of students across the available timetabled slots or overfills the labs needed for students taking particular combinations of classes. These issues are currently tackled by configuring MyCampus to restrict some labs to particular categories of students. However, this hybrid approach, with some students free to choose and some constrained, only partially controls this problem. Allocating all students to lab sections based on a 'big picture' view of the logistical problem seems a more rational approach. Indeed the SLP team were told this in an open meeting of Science and Engineering staff before MyCampus was rolled out.

Institutionally, the University has lost the art of listening.