Quality Improvement Plan for the Department of Chemistry

Recommendations to the Department

U.1 Consider re-branding as a Department of Pure and Applied Chemistry

Department Response: While the department understands the reason for suggesting a change in the department name, on balance, a Department of Pure and Applied Chemistry would probably not reflect the current activities and ambitions of the Department. Indeed, this change may be off-putting to potential undergraduate students and does not reflect the very interdisciplinary nature of the research expertise and activities of members in the department, which extend far beyond the traditional boundaries of pure and applied chemistry.

Action: No action required.

U.2 Continue with planned changes to make the final-year courses more attractive. Consider a 4th-year module in "Industrial Chemistry" or equivalent.

Department Response: Plans to introduce changes to both 3rd year and 4th year of the MH201 programme, to allow some specialisation for students who would like to concentrate on specific areas of chemistry in year 3 and 4 are underway. In addition to maintaining core competencies, students will be able to make one of three choices; Take a broad range of modules covering all aspects of chemistry, specialise in synthetic chemistry or in physical and analytical chemistry. This will enhance the student experience, reduce class sizes and we hope will encourage more students to retain chemistry to 4th year. This will require additional academic and technical staff in addition to more lab space, particularly for 4th year projects and advanced labs, which currently have to be delivered in the research labs. Research labs are currently under pressure for space as postgraduate student numbers increase and undergraduate labs are at maximum capacity. The planned changes are likely to increase the number of students wishing to pursue chemistry as a degree option and therefore additional space to address the growing numbers and safety concerns in the lab will need to be addressed by the university.

Action: Planning of new modules to facilitate streaming has begun and a proposal for the programmes committee will be prepared in this academic year.

U.3 Help all faculty to apply for grants. Introduce an application mentoring system. Provide more conference funds. Help exploit all the possible links to business.

Department Response: All staff are eager to help colleagues to apply for grants and staff often share proposals in advance of submission for review. Additional support is provided by the research development office, the technology transfer office and graduate studies (where appropriate). To further assist academic staff, the department will create a "toolkit" of good practice in grant writing to be shared with all PIs in the department, which will allow staff who have been successful in applying for grants to share materials with others.

The university has an academic travel grant scheme, which the majority of staff use. In addition, the department provides flexible research funds to all members of academic staff that can be used for conference travel. Should the department budget increase, additional provision for conference travel will be made.

Action: A shared space with access for all academic staff will be created to allow sharing of materials and best practice in grant writing.

U.4 Persevere on interfacing with Life Sciences

Department Response: There is already a high level of cooperation between the department of chemistry and the department of biology for the delivery of undergraduate programmes, through both the omnibus programme and a number of denominated degree programmes. There is also a long history of collaboration between individual members of both departments, including several PhD graduates co-supervised by academic staff in chemistry and biology. The recent launch of the Kathleen Lonsdale Institute for Human Health provides a platform to encourage and support further collaboration between the two departments.

Action: No action required.

U.5 Focus "open-door" policy on targeted students; widen on-line support to all.

Department Response: The significant increase in undergraduate students in recent years has led to increased workload in dealing with student queries. However, the department feels strongly about maintaining equal access to academic staff for all students. Most academic staff use an appointment system to manage student meetings and this has become a more widely used practice in recent years, which helps with workload management. An increase in academic staff numbers would alleviate this additional workload. Moodle is available to and used by all students and provides a means to communicate with students and share resource materials. Additional supports are provided to 1st year students, with small group teaching to those seeking extra tuition. The department will also begin more formal staff-student forum meetings in 2019/2020, with representatives from each programme and year to ensure that the department has regular input from the undergraduate students.

Action: Staff-student forum meetings will begin in 2019/2020 with the Head of Department. Minutes will be recorded and action items will be discussed at the next staff meeting. The minutes and department response will be posted on Moodle.

Institutional/Strategic Recommendations

S.1 Invest in modern laboratory space to address current safety concerns:

- Build an undergraduate laboratory with ~ 100 student capacity for 1st year students.
- Upgrade "synthetic" project/research space.

Institution Response:

The recommendation from the panel is very welcome. The department has worked exceptionally hard to ensure that students are working in a safe environment. However, additional teaching space for undergraduate students and refurbishment of research space would allow us to use resources more effectively and to be more creative in how we deliver our programmes and perform research. We will work with the University management to improve physical infrastructure for the department.

S.2 Examine the available evidence and consider setting a threshold student-entry CAO point.

Institution Response:

The points for entry to programmes within the Faculty of Science and Engineering are set by the admissions office in discussion with the Dean of the Faculty. We will work constructively with Admissions and the Dean of the Faculty to ensure that we attract and retain the best students.

S.3 Urgently increase staffing in Chemistry to 20+. Look at ways to enhance the synergy between Chemistry, Physics and Biology Departments

Institution Response:

The department would like to grow in line with the recommendation of the panel. The Human Health Institute and Hamilton Institute on campus are both interdisciplinary research institutes that have helped to improve research interactions between departments across the faculty. Additionally, the departments work together to deliver several undergraduate programmes. However, there is capacity for additional interactions. Mechanisms to allow synergies in research that currently falls outside of the activities of the existing research institutes would enhance these interactions. These could include interdisciplinary PhD studentships, better social spaces for researchers to meet and discuss research and improvements in physical infrastructure to ensure that researchers work closer together. We will continue to work with the University to improve staffing levels in chemistry and to enhance research interactions between departments.

S.4 Improve communication between senior management and academics

Institution Response:

The academic staff in the department always value the interactions with senior management when the opportunities arises and we would welcome mechanisms to allow these interactions to occur more frequently.

S.5 Examine how HoD are supported.

Institution Response:

Additional administrative support for HoDs and departments would be very welcome. The department will continue to work with the University administration to make the case for additional administrative support.