

The Chemistry Clinic

Overview

Summary

'The Chemistry Clinic': A Knowledge Exchange (KE) placement for integrated Masters students in the fourth year of courses MChem Chemistry, Chemistry with Drug Discovery and Forensic and Analytical Chemistry in the Chemistry Department.

Context

Department of Chemistry

Contact Details

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Themes

Interdisciplinarity

Rationale

The 'Chemistry Clinic' was established in September 2013 in the Department of Pure and Applied Chemistry at the University of Strathclyde. Integrated Masters programmes contain a compulsory Placement. Previously, students would choose between an Industrial or Research Placement, depending on career objectives. It became clear from discussions with students, however, that there was a cohort which had a desire to work in non-traditional, but chemistry-based businesses where marketing, business skills and commercial awareness are as important as chemical knowledge. Additionally, the Department has strong industrial links with many SMEs, and larger companies. A number of these companies often approach the Department to request support in solving a chemical problem that has arisen in their business but, in many cases academic staff do not have the time to devote to finding a solution. Marrying these two points together, the 'Chemistry Clinic' was created and is now offered as an alternative to the Research and Industrial Placements. At the heart of the Chemistry Clinic is student engagement. Groups of students are organized into 'firms' and work alongside academic supervisor(s). The team are co-workers in working with businesses to provide solutions to their chemical problems.

Potential SME partnerships come to the Department through a number of routes: the intermediary of the Interface Networks or by direct approach in the form of short (usually <3 month) projects. There is an initial free consultation to identify the needs of the company and the parameters of the project. Students liaise with the SME to identify specific requirements, identify expertise and capability within the Department (or wider University) and help draw up work programmes, at all times mentored by their academic supervisors. Once the project, time lines and a small fee have been agreed, contracts are put in place to formalise the structure. The Clinic then undertakes the appropriate experimental work, prepares interim reports and pro-actively maintains contact with the companies during the lifetime of the project to best ensure the project deliverables are realised.

Students will also participate in a series of employability activities to further enhance their range of skills. These activities will include business organisation, ethics and marketing training. Additionally, they will have the opportunity to be involved in other Knowledge Exchange activities at the University/School interface.

Successes

Three years of students have not only appreciated their Knowledge Exchange experiences at the Chemistry Clinic and delivered projects on time and in budget, but they have contributed to the success of the departments KE interactions and school liaison arrangements. The Chemistry Clinic has successfully interacted with a wide variety of enterprises, from SMEs to global companies, and generated an excellent level of turnover.

Challenges

The throughput of projects can be difficult to control, as there can be periods of both extreme activity and inactivity. Due to the teaching elements and training this can be managed, however better control over industry levels of interaction would be beneficial.

Lessons Learnt

Training is heavily weighted to the start of the placement year which helps with team building and developing the KE projects. A regular interaction with the students maintains a balanced work flow and develops time management.

Scalability

The team numbers have ranged from four to eight students, and will be influenced by the number of KE projects available. We have found that a team of four work very well together, and larger groups were grouped in to smaller teams.

Suggestions for Transferability

This Knowledge Exchange based student project would translate well to other departments. It not only develops the students, but provides a service to industry which would not be feasible otherwise.

Links

<http://www.strath.ac.uk/research/subjects/chemistry/chemistryclinic/>

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